



Johannesburg Renewable Energy Coalition
Committed to cooperating on the promotion of renewable energy

JREC Renewable Energy Policies and Measures Database

HTTP://JREC.IEA.ORG

REPORT

for the period: January 2004 – January 2005

Contract No. B7-8110/2003/371369/SUB/C2

Prepared by:
International Energy Agency - Renewable Energy Unit

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Table of Contents

1.	Introduction	5
2.	Background	5
3.	Project approach	6
4.	Deliverables	7
5.	Results	7
6.	Recommendation for further work	8

Appendix 1 – Focal Points of Johannesburg Renewable Energy Coalition

Appendix 2 – JREC Countries that have adopted renewable energy targets

Appendix 3 - Technical Reference for Criteria and Procedures

Appendix 4 – Mid-term Activity Report

Appendix 5 – JREC website information

JREC Renewable Energy Policies and Measures Database

Report for the Period January 2004-January 2005

1. Introduction

The Johannesburg Renewable Energy Coalition (JREC) was established at the World Summit on Sustainable Development (WSSD) in 2002. The objective of JREC is to promote renewable energy and to increase of the share of renewable energy sources in the global total primary energy supply, through facilitating international co-operation. These are considered essential elements to achieving sustainable development at national and global levels. As of February 2005, JREC counts 88 member countries¹. The European Commission (EC) hosts the JREC Secretariat since the 1st International JREC Conference, held in Brussels, Belgium, in June 2003. The JREC Secretariat aims to deliver selected global services to the JREC members and stakeholders. Whilst services and products are developed with due care, they do not necessarily represent the official position of the European Commission or the JREC Member states. To ensure synergies, the JREC Secretariat maintains close contacts with the EC-based secretariat of the European Union Energy Initiative (www.EUEI.org), as well as other relevant Partnership Secretariats (such as the Renewable Energy and Energy Efficiency Partnership (REEEP), the Global Forum on Sustainable Energy (GFSE), etc.).

The International Energy Agency (IEA), established in 1974 in response to energy crisis, is an autonomous agency linked to the Organisation for Economic Co-operation and Development (OECD). The IEA is the energy forum for 26 Member countries and the European Commission. IEA Member governments agree to work together to maintain and improve energy security, promote rational energy policies in a global context, improve the world's energy supply and demand structure by developing alternative energy sources and increasing efficiency and assist in the integration of energy and environmental policies.

2. Background

In January 2004, the EC established an agreement with the Renewable Energy Unit of the International Energy Agency to work on the identification and inventorying of existing national and regional policies and measures, related to renewable energy (RE) in JREC Member countries².

The objective of the project was to provide a global platform for enhancing the awareness and knowledge of renewable energy policies and measures, and to strengthen capacity of renewable energy stakeholders to assimilate and generate knowledge about the potential contribution of renewable energy to sustainable development.

The project was to create a global searchable, web-based database of renewable energy policies and measures in JREC countries. The non-IEA JREC Member countries were thought to be primary beneficiaries of this project. The project was designed to also allow IEA JREC Member countries to provide additional information, for example, on renewable energy targets that were not included in the current IEA Policies and Measures database.

The JREC Policies and Measures Database project is one of two principal response measures sponsored by the JREC Secretariat following the international and regional

¹ <http://europa.eu.int/comm/environment/climat/johannesburg.htm>

² Contract No. B7-8110/2003/371369/SUB/C2

consultation meetings in 2003. The principal response measure is the JREC Patient Capital Initiative³.

The JREC Policies and Measures Database project follows a consensus amongst JREC Members that policies and targets are important for demonstration of governments' vision related to renewable energy technologies, and hence for the development of renewable energy markets and for guiding investments.

3. Project approach

The JREC Secretariat and the IEA Policy Team agreed on the "Technical Reference for Criteria and Procedures"⁴. This document provided guidance for the JREC stakeholders on the operational aspects of the project and described what information needed to be collected, along with the collection and verification process. It also contains the criteria for what can be included in the database, and features definitions of policy types and renewable energy technologies.

In the project execution, the JREC Secretariat lead, guided and drove the programme, made key decisions in consultation with its members and the IEA Policy Team. At the outset of the project, the JREC Secretariat requested JREC Member governments⁵ to nominate national JREC representatives. The JREC Governments nominated officially 10 JREC Focal Points. On the other hand, for the purpose of the project, the IEA Policy Team, in collaboration with the JREC Secretariat, compiled a comprehensive list of JREC contacts that were instrumental in providing and verifying information. The IEA Policy Team utilised also IEA government contacts to verify information for the countries that are both JREC and IEA Members.⁶

The experts in JREC countries were requested to develop information regarding renewable energy policies and measures and other information needed, compile it on an agreed form and communicate it to the IEA Policy Team. Government official were asked later to verify the provided information for posting.

The IEA Policy Team collected the information provided by the JREC stakeholders, and reviewed it for completeness and compliance with the guidelines and definitions provided in this document. The data was supplemented with information collected from the media and other sources and inserted into the database. Once the complete information was verified by a JREC government official, it was posted it on the JREC website.

To collect, verify, post, and update relevant renewable energy policies and measures of JREC countries, a clear procedure and conscientious process was established and agreed upon. They are presented in the above mentioned "Technical Reference for Criteria and Procedures".

The co-ordination of the project, entering policy information into the database, as well as the management and maintenance of the database and website was carried out by the IEA Policy Team with the JREC Secretariat always being consulted on vital issues.

The JREC Renewable Energy Policies and Measures website was publicly launched at the International Conference for Renewable Energies in Bonn, on 1 June 2004, as planned. After the launch of the database, a regular maintenance and continuous collection of information followed.

³ For more information, please see <http://europa.eu.int/comm/environment>

⁴ Technical Reference for Criteria and Procedures is attached in Appendix 3.

⁵ Letter from Commissioner M. Wallström, dated 24.30.2004, ref. CAB.D(2004)8466

⁶ The full list of JREC Contacts is attached in Appendix 1.

Due to limited scope of the current project both in terms of budget and timing, it was agreed that at least every official national target, and one verified policy per country was included for each JREC country for which there was an official JREC national official charged with verifying policies.

4. Deliverables

The following list presents all deliverables agreed at the outset of the project and delivered during the implementation. The results are described in detail in section 5 below.

4.1. Technical Reference for Criteria and Procedures

This document agreed by the JREC Secretariat and JREC Members and the IEA Policy Team was made available to all interested parties in February 2004.

4.2. Database of JREC country information and policies

The database structure was set up by the IEA in February 2004.

4.3. A publicly accessible website presenting information on JREC Countries.

A publicly accessible web site was launched at the International Conference for renewable Energies in Bonn, on 1 June 2004.

4.4. Mid-term Activity Report.

An interim report and a related presentation describing the status of the project was delivered to the Commission by the IEA Policy Team on 2 December 2004. A copy is attached in Appendix 4.

5.5. Presentation on the database and website at the International Conference for Renewable Energies, 1-4 June 2004.

The IEA Policy Team made a presentation of the database and website at the Conference JREC Side Event on 3 June 2004. In addition, it featured a live presentation of the JREC website at the IEA stand throughout the Conference.

4.6. Final Project Activity Report.

This document constitutes the Final Project Activity Report.

5. Results

The JREC Policies and Measures database and website contains targets, renewable energy policies 37 JREC Member countries, and renewable energy statistics for 50 JREC Member countries. To maintain the integrity of the JREC website, only policies and targets that have been verified and confirmed by the country governments are featured on the JREC website. The additional information presented along policy information includes vital statistics, renewable energy capacity by technology and overall energy supply mix.

The JREC Policies and Measures database can be accessed at <http://jrec.iea.org> and is open to the public.

At the time of writing, the JREC website features 297 renewable energy policies adopted by 37 countries. The types of policies that can be found on this website include policies targeting rural electrification, the use of feed-in tariffs, grants and rebates, tax exemptions and credits, all with the aim to increase the use of renewable energy in JREC countries. The JREC website features also 32 countries that have adopted renewable energy targets⁷. Targets for different countries differ, as some have adopted renewable energy targets as a percentage of total primary energy supply (TPES) originating from renewable energy sources and others electricity targets from renewables.

It should be mentioned that the current project did not provide for an analysis of available policies and measures.

The complete printout of all posted information is featured in Appendix 5 of this Report.

6. Recommendation for further work.

There remain still a number of other policies that are currently in the pipeline, i.e. they have been placed in the database but are not yet featured on the website, because they have yet to be verified by respective governments. Currently, there are renewable energy policies for eight JREC Member countries that are awaiting confirmation and verification by relevant governments before they can be posted on the website. These countries include:

- Argentina
- Fiji
- Cook Islands
- Barbados
- Israel
- Cuba
- Bolivia
- Uganda

In addition to those countries, and as part of the process of keeping the website information current, the IEA Policy Team maintains its efforts at keeping all already posted information to date.

It is understood that the JREC Secretariat intends to continue and expand the JREC Database and Website. It is also understood that the European Commission/JREC Secretariat also intends to offer the database as a tool for the international community including established initiatives such as EUEI⁸, REEEP⁹, REN21¹⁰, GVEP¹¹, and GFSE¹², as well as to support collaborative efforts and projects within technology and policy networks. The IEA Policy Team will therefore prepare a new proposal to the JREC Secretariat. The proposal will take into account the desire to provide full coverage of JREC countries with regard to renewable energy policies and measures and related statistical information and will put forward for consideration a global analysis of renewable energy markets and policies to offer additional value to the JREC process. Once agreed upon, this will provide a basis for further collaboration of the JREC Secretariat and the IEA Policy Team to reach the JREC aim to enhance the awareness

⁷ The full list of those countries is attached in Annex 2.

⁸ European Union Energy Initiative

⁹ Renewable Energy and Energy Efficiency Partnership

¹⁰ Renewable Energy Network

¹¹ Global Village Energy Partnership

¹² Global Forum for Sustainable Energy

and knowledge of renewable energy policies and measures, and to strengthen stakeholders' capacity to assimilate and generate knowledge about renewable energy for sustainable development.

Appendix 1

JREC Contacts

Note: The names in bold typeface have been officially communicated by JREC Governments.

Last Name	First Name	Organisation	Position
Argentina			
Barbaro	Nestor	Comision Nacional de Energia Atomica	Head of Special Projects and Programs
Servant	Mónica	Dirección Nacional de Promoción	Secretaría de Energía
Barbados			
Moore	Rawleston	Caribbean Planning for Adaptation to Climate Change	Ministry of Health and Environment
Belgium			
Autrique	Henri	Federal Public Service Economy, PMEs, Self-Employed & Energy (formerly the Ministry of Economic Affairs)	Counsellor
Mahieu	Nancy	Ministry of Economic Affairs - DGEnergy	Special Advisor to DG for International Energy Policy
Botswana			
Sekgabo	Midas	Department of Energy	Head of Renewable Energy Section
Brazil			
Coelho	Suani	Centro Nacional de Referência em Biomassa (CENBIO)	Executive Secretary
Cook Islands			
Nooroa	Mata	Energy Division	Director of Energy
Croatia			
Zegon	Velimir	Energy Institute Hrvoje Pozar - Department for Renewable Energy Sources and Energy Efficiency	Engineer in Biomass and Waste Utilisation Programme

Cuba			
Curbelo Alonso	Alfredo	Geprop Center for Management of Priority Projects and Programmes	Director of Division for Innovation and Energy
Cyprus			
Antoniou	Antonis	Environment Service - Ministry of Agriculture, Natural Resources and Environment	Senior Officer
Charalambous	Anthi	Cyprus Institute of Energy	Chemical Engineer
Kassinis	Solon	Head of the Energy and Environment Section	Ministry of Commerce, Industry and Tourism
Denmark			
Pacudan	Romeo	Riso National Laboratory	Senior Economist
Estonia			
Laaniste	Madis	Ministry of Economic Affairs and Communication	Head of Energy Efficiency and Renewables Division, Energy Department
Gambia			
Saho	Bah	Director of Energy	Office of the President
Ghana			
Ahiataku-Togobo	Wisdom	Ministry of Energy	Head of Renewable Energy Unit
Kenya			
Karekezi	Stephen	AFREPREN	Director
Latvia			
Budreiko	Aija	Forest Resources & Forest Economics, Ministry of Agriculture	Head of Forest Information & Statistics
Rochas	Claudio	Ekodoma	Project Manager

Lithuania			
Gelumbauskas	Zilvaras	Energy Agency	Deputy Head of the Integration and Foreign Relations Division
Mali			
Diarra	Mamadou	Ministere des Mines de l'Energie et de l'Eau	Director
Togola	Ibrahim	Mali - Folkecenter	Regional Director
Marshall Islands			
Muller	Frederick	Ministry of Resources and Development	Permanent Secretary
Mauritius			
Awotar	Rajen	Friends of the Earth Mauritius	Executive Chairman
Pather	S.	Ministry of Public Utilities	Permanent Secretary
New Zealand			
Calman	Stuart	Energy and the Environment	Manager
Palau			
Decherong	Gregorio	Palau Energy Department	Manager
Papua New Guinea			
Raturi	Atul	University of Technology	
Philippines			
Borra	Teresita	Energy Utilization Management Bureau, Department of Energy	Director
Manalac	Eduardo	Department of Energy	Undersecretary
Sibayan	Fort	Renewable Energy Management Division	

Poland			
Cybulska-Witkiewicz	Renata	Ministry of the Environment	Counsellor to the Minister
Gierulski	Krzysztof	EC Baltic Renewable Energy Centre	Vice Director
Kaminska	Dorota	Ministry of the Environment	Senior Inspector
Kozak	Malgorzata	Energy Regulatory Authority	Expert
Mizak	Jacek	Department of International Cooperation	Deputy Director
Surma	Tomasz	Ministry of Economy, Labour and Social Policy	Specialist
Wisniewski	Grzegorz	EC Baltic Renewable Energy Centre	Director
Wnuk	Ryszard	Krajowa Agencja Poszanowania Energii (KAPE)	Expert
Singapore			
Hassan	Hazri	International Relations Department	Senior Assistant Director
Ong	Seng	National Environment Agency	Head of Resource Conservation Department
Slovak Republic			
Marias	Miroslav	Ministry of Economy	State Counsellor, Head of EU Agenda Unit
Novak	Juraj	Ministry of Economy of the Slovak Republic	Main Counsellor, Energy Policy Department
Slovenia			
Solinc	Hinko	Ministry of Environment, Spatial Planning and Energy	Advisor to the Government
South Africa			
Mehlwana	Mongameli	Mineral and Energy Policy Centre	Acting Director
Nassiep	Kevin	Department of Minerals and Energy	Chief Director for Energy Planning
Otto	Andre	Department of Minerals and Energy	Energy Planning
Sweden			
Guldbrand	Lars	Division for Energy and Primary Industries - Ministry of Industry, Employment and Communications	Deputy Director

Tonga			
Malolo	Tevita	Ministry of Lands, Survey and Natural Resources	Surveyor General
Trinidad			
Adams	Oswald	Ministry of Energy and Energy Industries	Senior Chemical Engineer
Turkey			
Erdil	Erzat		
Öz	Sebahattin	General Directorate of Electrical Power Resources Survey and Development Administration	Manager of Solar and Other Renewable Energy Division
Uyar	Tanay	Marmara University	Head Energy Section
Uganda			
Isingoma	James	Ministry of Energy and Mineral Development	Senior Energy Officer
Kabagambe-Kaliisa	Fred	Ministry of Energy and Mineral Development	Permanent Secretary
Kasozi	Godfrey	CERTRUD	Program Director
Mubiru	Paul	Ministry of Energy	Commissioner for Energy
United Kingdom			
Curren	Jonathan	Energy for Sustainable Development Ltd	Senior Energy Consultant
Yemen			
Otman	Adel	Public Electricity Corporation	Renewable Energy Director

Appendix 2

JREC Member Countries with Renewable Energy Targets

<i>Country</i>	<i>Renewable Energy Targets</i>
Austria	78.1% of electricity output by 2010
Belgium	6% of electricity output by 2010
Brazil	Additional 3300 MW from wind, small hydro, biomass by 2016
Cyprus	6% of electricity output by 2010
Czech Republic	5-6 % of TPES by 2010 8-10% of TPES by 2020 8% of electricity output by 2010
Denmark	29% of electricity output by 2010
Estonia	5.1% of electricity output by 2010
Finland	35% of electricity output by 2010
France	21% of electricity output by 2010
Germany	12.5% of electricity output by 2010
Greece	20.1% of electricity output by 2010
Hungary	3.6% of electricity output by 2010
Ireland	13.2% of electricity output by 2010
Italy	25% of electricity output by 2010
Latvia	6% of TPES (excluding large hydro) by 2010 49.3% of electricity output by 2010
Lithuania	12% of TPES by 2010 7% of electricity output by 2010
Luxembourg	5.7% of electricity output by 2010
Mali	15% of TPES by 2020
Malta	5% of electricity output by 2010
Netherlands	12% of electricity output by 2010
New Zealand	30 PJ of new capacity (including heat and transport fuels) by 2012
Norway	7 TWh from heat and wind by 2010
Poland	7.5 % of TPES by 2010 (Development Strategy of Renewable Energy Sector) 14 % of TPES by 2020 (Development Strategy of Renewable Energy Sector) 7.5% of electricity output by 2010
Portugal	45.6% of electricity output by 2010
Singapore	Installation of 50,000 m ² of solar thermal systems by 2012 Complete recovery of energy from municipal waste
Slovak Republic	31% of electricity output by 2010
Slovenia	33.6% of electricity output by 2010
Spain	29.4% of electricity output by 2010
Sweden	60% of electricity output by 2010
Switzerland	3.5 TWh from electricity and heat by 2010
Turkey	2% of electricity from wind by 2010
United Kingdom	10% of electricity output by 2010

Appendix 3

JREC Policies and Measures Database

Technical Reference for Criteria and Procedures for Data Collection, Verification and Posting

Prepared by:
International Energy Agency/Renewable Energy Unit
Reviewed by:
The Johannesburg Renewable Energy Coalition Secretariat
and selected JREC Member experts

September 2004

Table of Contents

1.	Background	
2.	Introduction	4
3.	Procedure	4
3.1.	Collection of Information	4
3.2.	Verification of Information	5
3.3.	Posting of Information	6
3.4.	Database maintenance and website	6
4.	More information	6
	Annexes	
	Annex 1 – Policy Template	7
	Annex 2 – Target Template	9
	Annex 3 – Criteria and Definitions	11
	Annex 4 – Johannesburg Renewable Energy Coalition	15

JREC Policies and Measures Database

Technical Reference for Criteria and Procedures for Data Collection, Verification, and Posting

1. Background

The Secretariat of Johannesburg Renewable Energy Coalition (JREC)¹⁴ has established an agreement with the Renewable Energy Unit of the International Energy Agency (IEA)¹⁵ to work on identifying and inventorying existing national and regional policies and measures, related to renewable energy (RE) in JREC Member countries.

The purpose of the project is to provide a **global** platform for enhancing the awareness and knowledge of renewable energy policies and measures, and to strengthen renewable energy stakeholders' capacity to assimilate and generate knowledge about renewable energy for sustainable development.

The aim is to create a **global** searchable, web-based database of renewable energy policies and measures in JREC countries. The primary beneficiaries of this project are the non-IEA JREC member countries. The project will also allow IEA JREC Member countries to provide additional information on renewable energy targets to the extent it is not included in the current IEA Policies and Measures database.

The JREC Policies and Measures Database will build on the successful IEA Policies & Measures Database which was launched in May 2003. This IEA database provides information on current renewable energy policies and measure in 26 IEA Member countries, and is regularly updated to reflect additional information and new developments, including terminations of existing policies.¹⁶

The JREC Policies and Measures Database project is the second principal response measure sponsored by the JREC Secretariat following international and regional consultation meetings organised by JREC partners in 2003.¹⁷ It follows a consensus amongst JREC Members that policies and targets are important for demonstration of governments' vision related to renewable energy technologies, and hence for the development of markets and for guiding investments.

¹⁴ The *Johannesburg Renewable Energy Coalition (JREC)* was established at the WSSD and currently counts 87 member countries (See Information Note N° 1 in [Annex 4](#) for more information on JREC objectives and members). Out of the 87 JREC Countries, 21 are members of the International Energy Agency (IEA). The *JREC Secretariat* is hosted by the European Commission since the 1st International JREC Conference, held in Brussels (Belgium) during the 2003 Green Week. By hosting the Secretariat, the European Commission aims to deliver a global service to the JREC members and stakeholders. Whilst services and products are developed with due care, they do not necessarily represent the official position of the Commission or the JREC member states. To ensure synergies, the JREC Secretariat maintains close contacts with the EC-based secretariat of the EU Energy Initiative (see www.EUEI.org), as well as other relevant Partnership Secretariats (such as REEEP, GFSE, etc.), and the JREC Secretariat supporting the 2004 International Conference for Renewable Energies.

¹⁵ The *International Energy Agency (IEA)*, established in 1974 in response to energy crisis, is an autonomous agency linked with the Organisation for Economic Co-operation and Development (OECD). The IEA is the energy forum for 26 Member countries and the European Union. IEA Member governments agree to work together to maintain and improve energy security, promote rational energy policies in a global context, improve the world's energy supply and demand structure by developing alternative energy sources and increasing efficiency and assist in the integration of energy and environmental policies.

¹⁶ The database is accessible via www.iea.org/dbtw-wpd/textbase/pamsdb/re_webquery.htm

¹⁷ The first principal response measure is the launching of the so-called JREC Patient Capital Initiative. More information on the JREC PCI and on the international and regional JREC conferences can be found on the information exchange site of the JREC secretariat (<http://forum.europa.eu.int/Public/irc/env/ctf/home>). A JREC website is under development.

2. Introduction

This document contains the *Technical Reference for Criteria and Procedures* and provides guidance for the JREC stakeholders on the operational aspects of the project. It describes what information needs to be collected, and the collection and verification process. It details the criteria for what should be included in the database, and provides definitions for the different policy types and renewable energy technologies that will be used as search criteria in the database.

The JREC Secretariat leads, guides and drives the programme, makes key decisions in consultation with its members and the IEA Policy Team. The JREC Secretariat requested JREC members to nominate national representatives of the JREC Policy Information Providers and Information Verifiers.

The JREC Information Providers and Information Verifiers (see below) develop the information about policies and measures and other information needed, compile it on an agreed form, communicate it to the IEA Policy Team, and verify it for posting.

The IEA Policy Team collects the information provided by the JREC stakeholders, and reviews it for completeness and compliance with the guidelines and definitions provided in this document. It supplements this with information from the media and other sources, input it into the database, receives verification of the recorded information from the JREC Policy Network Verifier, and posts it on the JREC web site.

Supportive groups may be asked to supplement the collection and verification of information.

3. Procedure

To collect, verify, post, and update relevant renewable energy policies and measures in JREC countries, a clear procedure and conscientious process has been established and agreed upon. These are presented below.

3.1. Collection of Information

The information is collected at the national level and also on international level through relevant international organisations. It is collected through policy templates presented in Annexes:

Annex 1 presents a Policy Template to include information on national legislation, i.e. policies and measures adopted at the level of national government. This template can be used by international organisations to provide information on multi-national measures and goals.

Annex 2 presents a Target Template to include information on national renewable energy policy targets. This template should be used to include general and operational targets, which are included in national policies and measures. Whilst such targets should not necessarily be an integral part of a law, they must have an official character, e.g. included in government programmes, green and white papers.

The filling in of the templates should be in principle performed by an official of the JREC Member State Government via a JREC Information Provider. The IEA Policy Team may also fill in a template but will need to seek agreement on the proposed policy with the JREC Information Provider.

In order to be sure that all policies and technologies are consistent in the database, templates should be filled in using the provided common definitions and criteria for inclusion in the database. The definitions are presented in [Annex 3](#).

The process of collection of information is co-ordinated by the IEA Policy Team that, through exchanges with the JREC Policy Information Providers, completes and corrects the policies and measures templates.

Important notes

- For each policy or target a new template must be used.
- Consideration is given to JREC Member countries which do not currently have any national initiatives for renewable energy:
 - In the case **where policies and measures are being developed** but not yet adopted, a brief description of nature and status of the said policies and measures can be provided in the box "Other Information" of the template. The available/targeted renewable resources and markets in that country can also be included.
 - In the case **where there are no policies and measures to be noted**, a brief country profile and description of the renewable resources and markets in that country can be provided in the box "Other Information" of the template.
- Whilst the merits and importance of local action and initiatives for the development of renewable energy sources is well-recognised, current project resources do not permit to include policies and measures established by local authorities unless they have been specifically endorsed at the national level. For the same reasons, similar policies and measures established by non-governmental organisations cannot be included at this stage.
- Whilst the merits and importance of tracking historical action and initiatives for the development of renewable energy sources is well-recognised, current project resources do not allow for inclusion of historical policies and measures.

3.2. Verification of Information

Once the IEA Policy Team and JREC Policy Information Providers agree that the sheet is correct, it will then be classified as an "un-audited" report and ready for submitting for vetting by an appropriate government official from the JREC Member Country. The purpose of getting the participating government's vetting of the policies is to assure the credibility of the web site. In this regard, the responsibility for the final approval of each policy lies with the JREC Member. In March 2004, the JREC Secretariat requested JREC Members to appoint such a government official (Policy Verifier). The list of JREC Policy Verifiers is intended to be posted on the JREC web site.

Important notes

- The verification process will ensure accuracy of the information provided rather than a statement on the effectiveness of the policies and measures. Whilst recognising that the effectiveness of renewable energy policies depends on many elements, including the effectiveness of the overall energy and socio-economic regulation in place, such assessment is beyond the scope of this project.

3.3. Posting of Information

Once endorsed, the policy information will be made publicly available on the project web site.

3.4. Database maintenance and website

The co-ordination of the project, entering policy information into the database, as well as the management and maintenance of the database and website will be carried out by the IEA Policy Team.

4. More information

For more information regarding JREC Policies and Measures Database please contact:

Mr Peter Tulej, peter.tulej@iea.org
Renewable Energy Unit
International Energy Agency
9 rue de la Fédération
75739 Paris
France
T + 33 1 40 57 67 07
F + 33 1 40 57 67 49

Annex 1

Policy Template

PLEASE USE A NEW TEMPLATE FOR EACH POLICY

SUMMARY INFORMATION	
1. Country:	
2. Policy name:	
3. General policy objective(s):	
4. Year of introduction:	
5. Date from which the policy is operational:	
6. Termination date (if applicable):	
7. Website address:	
8. Agency responsible for implementation:	
9. Funding (if available):	
10. POLICY DESCRIPTION	
Please provide information on the policy under consideration.	
11. Type of Policy: (a) Type of policy: Framework Policy <input type="checkbox"/> Regulation <input type="checkbox"/> Programme <input type="checkbox"/> (b) Type of policy instruments included: 3rd Party Finance <input type="checkbox"/> Bidding Systems <input type="checkbox"/> Capital Grants <input type="checkbox"/> Consumer Grants/Rebates <input type="checkbox"/> Excise Tax Exemptions <input type="checkbox"/> Fossil Fuel Taxes <input type="checkbox"/> General Energy Policy <input type="checkbox"/> Government Purchases <input type="checkbox"/> Green Pricing <input type="checkbox"/> Guaranteed Prices/Feed in <input type="checkbox"/> Investment Tax Credits <input type="checkbox"/> Net Metering <input type="checkbox"/> Obligations <input type="checkbox"/> Production Tax Credits <input type="checkbox"/> Property Tax Exemptions <input type="checkbox"/> Public Awareness <input type="checkbox"/> RD&D <input type="checkbox"/> Regulatory and Administrative Rules <input type="checkbox"/> Rural electrification <input type="checkbox"/> Sales Taxes <input type="checkbox"/> Tax Exemptions <input type="checkbox"/> Tradable Certificates <input type="checkbox"/> Voluntary Programmes <input type="checkbox"/> Other (specify below) <input type="checkbox"/>	12. Type of Renewable Energy covered: All renewables <input type="checkbox"/> Bioenergy <input type="checkbox"/> Biofuel <input type="checkbox"/> Geothermal <input type="checkbox"/> Geothermal Heat <input type="checkbox"/> Geothermal Electricity <input type="checkbox"/> Hydropower <input type="checkbox"/> Hydrogen (from renewable energy sources) <input type="checkbox"/> Ocean energy <input type="checkbox"/> Offshore wind <input type="checkbox"/> Onshore wind <input type="checkbox"/> Solar photovoltaics <input type="checkbox"/> Solar thermal <input type="checkbox"/> Solar concentrating power <input type="checkbox"/> Waste (organic) <input type="checkbox"/> Other (specify below) <input type="checkbox"/>

13. OTHER INFORMATION
14. SELF ASSESSMENT
15. REVIEWERS CONTACT DETAILS

Notes on filling out Policy Template:

1. Country to which the policy refers. When providing information on multi-national measures and goals please include all countries that subscribed to the policy.
2. Policy name – title given to the policy by the member government(s), or the closest English translation of this title.
3. Overall policy objective(s) being pursued (e.g. security of supply, electrification, sustainable energy supply, etc.)
4. Year that the policy came into force.
5. Date from which the current policy was operational.
6. Date at which the policy will terminate.
7. Official website address (where available) which gives further information regarding this particular policy – most useful are contact numbers or downloadable application forms. Alternatively, list e-mail, telephone, fax and mailing address.
8. This should refer to the agency or government department which holds direct responsibility for implementation of this policy – it should include their contact details.
9. If available, this should refer to the total amount of funds available for the implementation of this particular policy and amount of funds available per individual application. For example total funds per year allocated to this specific policy, and/or total budget allocated over the entire lifetime of the policy.
10. The description of the policy should provide as many details as possible.
13. Other information includes comments related to items 11 and 12.
14. Brief and optional statements on the effectiveness of the reported policy or measure.

Important!

- For each policy or target a new template must be used.
- Consideration is given to JREC Member countries which do not currently have any national initiatives for renewable energy:
 - In the case **where policies and measures are being developed** but not yet adopted, a brief description of nature and status of the said policies and measures can be provided in the box “Other Information” of the template. The available/targeted renewable resources and markets in that country can also be included.
 - In the case **where there are no policies and measures to be noted**, a brief country profile and description of the renewable resources and markets in that country can be provided in the box “Other Information” of the template.
- Whilst the merits and importance of local action and initiatives for the development of renewable energy sources are well-recognised, current project resources are limited and cannot extend to cover policies and measures established by local

authorities unless they have been specifically endorsed at the national level. For the same reasons, similar policies and measures established by non-governmental organisations cannot be included at this stage.

For an electronic version of the template and for more information on filling in the template please contact: lily.alisse@iea.org

Please e-mail completed template to lily.alisse@iea.org or fax to the IEA at +33 1 40 59 35 28

Annex 2

Target Template

PLEASE USE A NEW TEMPLATE FOR EACH TARGET

SUMMARY INFORMATION										
1. Country:										
2. Target name:										
3. Socio-economic objective pursued:										
4. Year:										
5. Dates when the target is operational:										
6. Target dates:										
7. Website address:										
8. Agency responsible for implementation:										
9. TARGET DESCRIPTION										
Please provide information on targets that are under consideration.										
<p>10. Type of Targets Please check the relevant box.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%;">Binding Target</th> <th style="width: 35%;">Indicative Target</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">General Target</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td style="text-align: center;">Operational Target</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table> <p>Other (specify below) <input type="checkbox"/></p>		Binding Target	Indicative Target	General Target	<input type="checkbox"/>	<input type="checkbox"/>	Operational Target	<input type="checkbox"/>	<input type="checkbox"/>	<p>11. Type of Renewable Energy targeted:</p> <ul style="list-style-type: none"> All renewables <input type="checkbox"/> Bioenergy <input type="checkbox"/> Biofuel <input type="checkbox"/> Geothermal <input type="checkbox"/> Geothermal Heat <input type="checkbox"/> Geothermal Electricity <input type="checkbox"/> Hydropower <input type="checkbox"/> Hydrogen (from renewable energy sources) <input type="checkbox"/> Ocean energy <input type="checkbox"/> Offshore wind <input type="checkbox"/> Onshore wind <input type="checkbox"/> Solar photovoltaics <input type="checkbox"/> Solar thermal <input type="checkbox"/> Solar concentrating power <input type="checkbox"/> Waste (organic) <input type="checkbox"/> Other (specify below) <input type="checkbox"/>
	Binding Target	Indicative Target								
General Target	<input type="checkbox"/>	<input type="checkbox"/>								
Operational Target	<input type="checkbox"/>	<input type="checkbox"/>								
12. OTHER INFORMATION										
13. SELF ASSESSMENT										
14. REVIEWERS CONTACT DETAILS										

Notes on filling out Target Template:

1. Country to which the target refers. When providing information on regional (trans-national) targets please list all countries that subscribed to the target).
2. Target name – title given to the target by the member government(s), or the closest English translation of this title.
3. List general and/or specific socio-economic target objective(s) being pursued (e.g. sustainable development, security of supply, reduced dependency on imported fuels, rural electrification, climate change (adaptation/mitigation), employment, etc.)
4. Year when the target was announced.
5. Date from which the target is operational.
6. Date by which the target is to be reached.
7. Government website address (where available) which gives further information regarding this particular target– most useful are contact numbers or downloadable application forms.
8. This should refer to the government department or agency which holds direct responsibility for implementation of this target – it should include their contact details.
9. If the target is associated with a specific policy, please note the policy title in the target description. The description of the target should also include targets that are under consideration.
12. Other information includes comments related to items 10 and 11.
13. Brief and optional statements on the effectiveness of the reported target.

Important!

- For each target a new template must be used.
- Whilst the merits and importance of local action and initiatives for the development of renewable energy sources are well-recognised, current project resources are limited and cannot extend to cover targets established by local authorities unless they have been specifically endorsed at the national level. For the same reasons, similar targets established by non-governmental organisations cannot be included at this stage.

For an electronic version of the template and for more information on filling in the template please contact: lily.alisse@iea.org

Please e-mail completed template to lily.alisse@iea.org or fax to the IEA at +33 1 40 59 35 28

Annex 3

Criteria and Definitions

1. Policy and Target Selection Criteria

1.1. Policy Selection Criteria

The criteria have been carefully selected by the IEA Policy Team and the JREC Secretariat to ensure that the database remains clear and features only policies that potentially have a tangible benefit to the deployment of renewable energy. These include the following:

- a) The measures can be either national or regional.
- b) The measures will be enacted legislation or administrative actions (not simply press statements).
- c) The measures will offer either incentive (e.g. financial) or impose obligation for increasing renewable energy (this includes national and multi-national targets).
- d) Due to their significance, policies addressing increased costs of externalities from fossil fuel generation will also be included.

1.2. Target Selection Criteria

- a) The target can be either national or regional.
- b) The target will be either an enacted legislative or administrative action, it can be included in a green or white paper, or in a relevant government programme (not simply press statements).

2. Definitions

2.1. Definition of Targets

National or Regional Renewable Energy Targets to be included in the database are defined as follows:

- a) Binding targets are usually linked to financial consequences for non-complying parties.
- b) Indicative targets may have some form of sanctions although usually without financial implications.
- c) A general target is a stated objective to ensure that a certain amount of Total Primary Energy Supply (TPES) on the national market comes from renewable energy sources by a certain date.
- d) An operational target is a stated objective to ensure that a certain amount of electricity, heat, or fuels, on the national market comes from renewable energy sources by a certain date. Can also relate to the development of a certain market segment (e.g., solar, wind, etc).

2.2. Types of Policies

3rd Party Finance

A financing arrangement where the government assumes risk. Examples include favourable lending schemes, such as providing low interest loans, in which banks guarantee the cash flow of a project to reduce investor risk.

Bidding Systems

A competition scheme where the contracts to build projects with the lowest generation costs are chosen. The principal mechanism is a guaranteed price, which is based on a function of the power pool wholesale price plus a technology-specific premium that is paid by electricity consumers.

Capital Grants

A percentage of the investment costs in renewable energy purchase and installation covered by government-financed schemes directed towards suppliers of energy.

Consumer Grants/Rebates

A percentage of the investment costs in renewable energy purchase and installation covered by government-financed schemes directed towards end-users of energy.

Excise Tax Exemptions

Tax policies exempting renewables which can offset the higher cost of using renewables and may also increase renewables' competitiveness.

Fossil Fuel Taxes

Carbon taxes or taxes on other pollutants such as SO_x and NO_x from use of fossil fuels. This can indirectly benefit renewables in terms of bringing their prices down in comparison to fossil fuels.

General Energy Policy

General energy policies often define in a general sense the role of renewable energies in a country's energy portfolio.

Government Purchases

Government purchases of renewable energy systems at above-market rates which acts as a type of investment incentive to industry.

Green Pricing

A service giving customers the option to support an increased level of utility company investment in renewable energy technologies through payment of an additional amount on the electric bill to cover the incremental cost of the renewable energy.

Guaranteed Prices/Feed in

A guaranteed price per unit of electricity that a utility, supplier, or grid operator is required to pay for renewable electricity from privately owned generators. The government establishes the tariff rate.

Investment Tax Credits

Tax credits and exemptions applied to either the installation or purchase of renewable energy equipment.

Net Metering

Net metering allows customers with qualifying renewable energy generating systems to "bank" any excess electricity generated from their systems for later use. A single meter is used to measure the electricity flows between the customer generator and the utility.

The customer pays only for the electricity used “net” of the electricity generated over the entire billing cycle.

Obligations

Most obligations are based on the final product (kWh of electricity or litres of liquid fuel) although some are based on capacity. Renewable energy portfolio standards, also known as quota systems, place an obligation on suppliers to provide a set quantity or percentage of their supply from renewable energy sources. These systems typically do not distinguish between the different renewable energy sources. Targets are a form of obligation, which determine different levels of obligation for each renewable technology, sometimes with a penalty for non-compliance.

Production Tax Credits

Private entities generating electricity from renewables normally subject to taxation are eligible for a production tax credit for the electricity they produce. Production tax credits are normally set as a price per kWh.

Property Tax Exemptions

Property owners are exempt from paying taxes on properties using renewable energies, therefore reducing their tax payments.

Public Awareness

Programmes put in place to create and increase awareness about the opportunities and benefits of renewable energy installations.

RD&D

Programmes and schemes aimed at technological advancement of renewable energy technologies. These include publicly funded projects such as education schemes or demonstration sites to create awareness about the opportunities and benefits of renewable energy installations.

Regulatory and Administrative Rules

Market regulations put in place by the government oftentimes to ensure successful deployment such as market liberalisation schemes, or ensuring access to the grid.

Rural electrification

A policy where the main focus is to provide electricity to rural areas of a country.

Sales Tax Rebates

VAT reduction or refund for private retailers of renewable energy. These customer-owned systems recover a portion of the up-front capital costs more quickly after the investment is made.

Tax Credits

Tax credits applied to either the installation or purchase of renewable energy equipment.

Tradable Certificates

Renewable energy certificates provide a mechanism to track and register renewable electricity production. Certificates can be used to document compliance with quota systems or can be sold to end-use customers in a voluntary green power market. The creation of a certificate allows the renewable energy attribute to be sold or traded separately from the physical electricity product.

Voluntary Programmes

Government “request” energy suppliers to buy electricity generated by renewables, where the supplier agrees to pay the retail price of electricity to the facility that generates the power.

2.3. Definitions of Renewable Energy Technologies

Bioenergy:

Solid Biomass

Biomass is defined as any plant matter used directly as fuel or converted into other forms before combustion. Included are wood, vegetal waste (including wood waste and crops used for energy production), animal materials/wastes, sulphite lyes, also known as "black liquor" (an alkaline spent liquor from the digesters in the production of sulphate or soda pulp during the manufacture of paper where the energy content derives from the lignin removed from the wood pulp) and other solid biomass.

Charcoal produced is also included here. Since charcoal is a secondary product, its treatment is slightly different than that of the other primary biomass. Production of charcoal (an output in the transformation process) is offset by the inputs of primary biomass into the charcoal production process. The losses from this process are included in the transformation sector. Other supply (e.g. trade and stock changes) as well as consumption are aggregated directly with the primary biomass. In some countries, only primary biomass is reported.

Gas from Biomass

Biogas is derived principally from the anaerobic fermentation of biomass and solid wastes and combusted to produce heat and/or power. Included in this category are landfill gas and sludge gas (sewage gas and gas from animal slurries) and other biogas.

A second source of biogas is thermal gasification of biomass. Included here is the production of synthesis gas, either for subsequent combustion or for conversion to transportation fuels, hydrogen, fertilisers or chemicals (or a combination of these).

Biofuel

Liquid biomass includes bio-additives and bio-fuels such as bioethanol, biodiesel, biomethanol, biodimethyl-ether and bio-oil.

Geothermal

Energy available as heat emitted from within the earth's crust, usually in the form of hot water or steam. It is used for electricity generation or directly as heat in its primary form.

Hydropower

Hydro refers to potential and kinetic energy of water converted into electricity in hydroelectric plants. Hydro includes output from pumped storage plants. The IEA considers small hydropower to be less than 10MW and large hydropower to be more than 10MW.

Ocean Energy

Mechanical energy derived from tidal movement or wave motion and exploited for electricity generation.

Wind (Offshore/Onshore)

Kinetic energy of wind exploited for electricity generation in wind turbines.

Solar Photovoltaics (PV)

Solar radiation exploited for electricity generation by photovoltaic cells.

Note: Passive solar energy for direct heating, cooling or lighting of dwellings or other buildings is not included.

Solar Thermal

Solar radiation exploited for hot water production and/or electricity generation by flat plate collectors or solar thermal-electric plants.

Note: Passive solar energy for direct heating, cooling or lighting of dwellings or other buildings is not included.

Solar Concentrating Power

Concentrating solar power technologies use reflective materials such as mirrors to concentrate the sun's energy. This concentrated heat energy is then converted into electricity.

Waste (Organic)***Renewable Municipal Waste***

Renewable municipal solid waste consists of the biodegradable part of municipal waste products that are combusted directly to produce heat and/or power and comprises wastes produced by the residential, commercial and public services sectors that are collected by local authorities for disposal in a central location. Biodegradable hospital waste is included in this category.

Annex 4

Johannesburg Renewable Energy Coalition (JREC)

(as of end 2003)

1. Introduction

Paragraph 19 (e) of the WSSD Plan of Implementation states that there is a need to "...with a sense of urgency, substantially increase the global share of renewable energy sources with the objective of increasing its contribution to total energy supply". The «...the role of national and voluntary regional targets as well as initiatives...» was recognized in these conclusions (adopted on September 4, 2002). Therefore, the EU together with a number of like-minded countries launched the "declaration on the way forward on Renewable Energies" (see The Coalition Declaration below).

2. Members

The group of countries, since known as the Johannesburg Renewable Energy Coalition, has received wide support since its launch in September 2002. As of today, 88 countries joined the Coalition and more are expected to do so.

There were 66 founding members (see header in The Coalition Declaration for a full list). In addition to the EU15, the initiative was co-sponsored by 51 countries including all EU Acceding Countries¹⁸, Iceland, Norway, Switzerland, New Zealand, and the Alliance of Small Island States (AOSIS)¹⁹. Four countries (Argentina, Brazil, Chile, and Uganda) supported the initiative from the floor at the WSSD and have later confirmed their position, bringing the total of "founding" members to 70. Since the launch in September 2002, 14 (should this be updated to reflect current situation? 18 countries to include Morocco, Ghana etc?) more countries confirmed their participation, i.e. Afghanistan, Bosnia-Herzegovina, Bolivia, Botswana, Burkina Faso, Colombia, Congo, Democratic Republic of Congo, Kenya, Mali, Serbia and Montenegro, Israel, The Gambia, The Philippines, Singapore, South-Africa and Yemen (see The Coalition Members below).¹

More countries have expressed a positive attitude towards the Coalition, including Canada, Croatia, Gabon, Georgia, Kyrgyzstan, Lebanon, Malaysia, Mexico, Morocco (add in paragraph before?), Nigeria, Peru, Rwanda, Sudan, Syria, Tanzania, and Tunisia.

JREC develops its activities in close partnership and with the support of a broad stakeholder community, including business, NGOs and academia. JREC membership is nevertheless the privilege of national governments.

3. Objectives & Roadmap

JREC Members have expressed their support for the JREC Declaration launched during the 2002 WSSD in Johannesburg (see The Coalition Declaration below). Members particularly acknowledge that time-bound targets are important instruments to express a government's vision and to develop and implement integrated policies. Members as well as the business and finance community have repeatedly stated that targets and robust enabling environments are indeed critical for developing the emerging renewable energy markets and for attracting the investments needed to achieve a significant increase in the share of renewable energy.

¹⁸ Malta and Cyprus as well as subscribing individually to the Joint Declaration are also members of AOSIS and this is taken into account in calculating the number of countries.

¹⁹ AOSIS includes 36 countries (see The Coalition Members below). Together they represent one fifth of the total membership of the United Nations.

JREC acknowledges that the respective member-governments are best placed to develop and adopt ambitious national or regional time-bound targets. JREC has therefore adopted the so-called “bottom-up approach” and is developing its strategy and action plan on this basis.

JREC Members are equally committed to identifying and removing financing gaps & obstacles, including obstacles for the effective delivery of existing – but often untapped – public and private resources needed to develop and strengthen renewable energy markets with a particular focus on the needs of developing country members.

JREC is developing its priorities and action plan through informal high-level conferences and meetings, where appropriate adding dedicated sessions on to international conferences and meetings covering the broader energy debate to avoid duplication and overlaps. JREC conferences are serving as a high-level platform to increase the regional and international awareness of the actions undertaken by pro-active governments thereby also assisting them in attracting interest from the finance and business community.

In view of the upcoming World Conference for Renewable Energy, the following JREC road map was agreed in June 2003:²⁰

Four key International Conferences:

- The Brussels Conference (3-4 June, 2003)
- The Danish Conference (17-19 September, 2003, Sonderborg)
- The 4th Session of the GFSE (18-20 February, 2004, Vienna)
- The International Conference for Renewable Energy (1-4 June, 2004, Bonn)

Four Regional Meetings:

- The Latin American & Caribbean Renewable Energy Conference (29-30 October, 2003, Brasilia)
- The African Energy Conference (19-20 November, 2003, Nairobi)
- The European Renewable Energy Conference (19-21 January, 2004, Berlin)
- The Asian Renewable Energy Conference (TBD, Spring 2004)

Regional workshops

- The Renewable Energy and Energy Efficiency Partnership (REEEP) meetings in Asia, Africa and Latin America (Fall, 2003)

4. More Information

For additional information, please contact the JREC Secretariat at the European Commission: Thomas.Verheye@cec.eu.int; Tel: ++32 (2) 295 96 39; Fax: ++32 (2) 296 99 70) or visit <http://forum.europa.eu.int/Public/irc/env/ctf/home>.

²⁰ The conclusions from the respective meetings and relevant links will be made available at the web-site mentioned under point 4.

The Coalition Declaration

**BULGARIA, CYPRUS, CZECH REPUBLIC, ESTONIA,
THE EUROPEAN UNION, HUNGARY, ICELAND, LATVIA, LITHUANIA, MALTA, NEW
ZEALAND, NORWAY, POLAND, ROMANIA, SLOVAKIA, SLOVENIA, THE ALLIANCE
OF SMALL ISLAND STATES, SWITZERLAND and TURKEY**

“THE WAY FORWARD ON RENEWABLE ENERGY”

1. We express our strong commitment to the promotion of renewable energy and to the increase of the share of renewable energy sources in the global total primary energy supply. We fully endorse the outcome of the World Summit on Sustainable Development, considering it a good basis for further international co-operation, and intend to go beyond the agreement reached in the area of renewable energy.
2. Increasing the use of renewable energy is an essential element to achieve sustainable development at national and global level. Renewable energy can provide important new ways to reduce pollution, diversify and secure energy supply and help provide access to energy in support of poverty eradication. Furthermore, the burning of fossil fuels is the biggest source of greenhouse gas emissions and these emissions need to be reduced to mitigate the adverse effects of climate change in order to achieve the ultimate objective of the United Nations Framework Convention on Climate Change to prevent dangerous climate change.
3. We commit ourselves to co-operate in the further development and promotion of renewable energy technologies. Recognising the sense of urgency as expressed in paragraph 19(e) of the Johannesburg Plan of Implementation, we will work together to substantially increase the global share of renewable energy sources, with regular review of progress, on the basis of clear and ambitious time bound targets set at the national, regional and hopefully at the global level.
4. We have adopted, or will adopt, such targets for the increase of renewable energy and we encourage others to do likewise. We are convinced that this will help to implement the necessary policies to deliver a substantial increase in the global share of renewable energy sources. Such targets are important tools to guide investment and develop the market for renewable energy technologies.
5. We commit ourselves to working with others to achieve this goal, especially through the partnership initiatives being taken which could contribute to expanding the use of renewable energy, as well as forthcoming international conferences on renewable energy.

The Coalition Members

Europe – EU (25)

1. Austria
2. Belgium
3. Denmark
4. Finland
5. France
6. Germany
7. Greece
8. Ireland
9. Italy
10. Luxembourg
11. The Netherlands
12. Portugal
13. Spain
14. Sweden
15. United Kingdom
16. Cyprus
17. Estonia
18. Hungary
19. Latvia
20. Lithuania
21. Malta
22. Poland
23. Slovakia
24. Slovenia
25. Czech Republic

Europe – EITs (3)

26. Bulgaria
27. Romania
28. Turkey

Other Industrialised Countries (6)

29. Bosnia-Herzegovina
30. Iceland
31. New Zealand
32. Norway
33. Serbia and Montenegro
34. Switzerland

Latin America (5)

35. Argentina
36. Bolivia
37. Brazil
38. Chile
39. Colombia

Africa (10)

40. Botswana
41. Burkina Faso
42. Congo Brazzaville
43. Democratic Republic of Congo
44. Ghana
45. Kenya
46. Mali

47. South Africa
48. The Gambia
49. Uganda

Middle East and Asia (4)

50. Afghanistan
51. Israel
52. The Philippines
53. Yemen

Aosis –South China Sea (1)

54. Singapore.

Aosis –Pacific Ocean (12)

55. Cook Islands
56. Federated States of Micronesia
57. Fiji
58. Kiribati
59. Marshall Islands
60. Nauru
61. Papua New Guinea
62. Solomon Islands
63. Tonga
64. Tuvalu
65. Vanuatu
66. Western Samoa

Aosis –Caribbean (14)

67. Antigua and Barbuda
68. Bahamas
69. Barbados
70. Belize
71. Cuba
72. Dominica
73. Grenada
74. Guyana
75. Jamaica
76. St. Kitts and Nevis
77. St. Lucia
78. St. Vincent and the Grenadines
79. Suriname
80. Trinidad and Tobago

Aosis –Atlantic Ocean (3)

81. Cape Verde
82. Guinea-Bissau
83. Sao Tome and Principe

Aosis –Indian Ocean (4)

84. Comoros
85. Maldives
86. Mauritius
87. Seychelles

Appendix 4
Mid-term Report and Presentation

JREC Renewable Energy Policies and Measures Database and Website

Update

The JREC Policies and Measures database and website contains targets, renewable energy policies, and renewable energy statistics for a number of different JREC member countries. To maintain the integrity of the JREC website, only policies and targets that have been verified and confirmed by the country governments are featured on the JREC website.

At present time, the JREC Policies and Measures database indicates that 32 countries have adopted renewable energy targets. These countries are listed in Annex 1 to this report. Targets for different countries differ, as some have adopted renewable energy targets for TPES from renewable energy sources and others electricity targets from renewables.

A total of 37 countries have adopted and implemented 297 government-confirmed and verified renewable energy policies, all of which have been inputted the JREC Policies and Measures database and can be found on the JREC website. The types of policies that can be found on this website include policies targeting rural electrification, the use of feed-in tariffs, grants and rebates, tax exemptions and credits, all with the aim to promote the use of renewable energy in JREC countries.

There are also a number of other policies that are currently in the pipeline, i.e. they have been inputted into the database. These policies are not yet featured on the website, because, they have yet to be verified by respective governments. Currently, we have renewable energy policies for eight JREC member countries that need to be confirmed and verified by government, before they can be listed on the website. These countries include:

- Argentina
- Fiji
- Cook Islands
- Barbados
- Israel
- Cuba
- Bolivia
- Uganda.

In addition to these eight countries, and as part of the process of keeping the website information current, we are also updating all of the renewable energy policies for all IEA countries which are JREC Member countries.

1 December 2004
Renewable Energy Unit, International Energy Agency

Annex 1. JREC Member Countries with Renewable Energy Targets

<i>Country</i>	<i>Renewable Energy Targets</i>
Austria	78.1% of electricity output by 2010
Belgium	6% of electricity output by 2010
Brazil	Additional 3300 MW from wind, small hydro, biomass by 2016
Cyprus	6% of electricity output by 2010
Czech Republic	5-6 % of TPES by 2010 8-10% of TPES by 2020 8% of electricity output by 2010
Denmark	29% of electricity output by 2010
Estonia	5.1% of electricity output by 2010
Finland	35% of electricity output by 2010
France	21% of electricity output by 2010
Germany	12.5% of electricity output by 2010
Greece	20.1% of electricity output by 2010
Hungary	3.6% of electricity output by 2010
Ireland	13.2% of electricity output by 2010
Italy	25% of electricity output by 2010
Latvia	6% of TPES (excluding large hydro) by 2010 49.3% of electricity output by 2010
Lithuania	12% of TPES by 2010 7% of electricity output by 2010
Luxembourg	5.7% of electricity output by 2010
Mali	15% of TPES by 2020
Malta	5% of electricity output by 2010
Netherlands	12% of electricity output by 2010
New Zealand	30 PJ of new capacity (including heat and transport fuels) by 2012
Norway	7 TWh from heat and wind by 2010
Poland	7.5 % of TPES by 2010 (Development Strategy of Renewable Energy Sector) 14 % of TPES by 2020 (Development Strategy of Renewable Energy Sector) 7.5% of electricity output by 2010
Portugal	45.6% of electricity output by 2010
Singapore	Installation of 50,000 m2 of solar thermal systems by 2012 Complete recovery of energy from municipal waste
Slovak Republic	31% of electricity output by 2010
Slovenia	33.6% of electricity output by 2010
Spain	29.4% of electricity output by 2010
Sweden	60% of electricity output by 2010
Switzerland	3.5 TWh from electricity and heat by 2010
Turkey	2% of electricity from wind by 2010
United Kingdom	10% of electricity output by 2010

Presentation

JREC RENEWABLE ENERGY POLICIES & MEASURES DATABASE



Project

Searchable web-based database of policies, measures and targets for JREC Countries.



Database

- Database of renewable energy policies, measures and targets in JREC Member Countries.
- Searchable by 3 criteria:
 - country
 - RE target
 - renewable energy technology
- Managed and maintained by the IEA in collaboration with the JREC Secretariat.



Purpose

- ✓ Increase use of renewables
- ✓ Capacity building
- ✓ Encourage policy reform
- ✓ Transparency and information dissemination
- ✓ Encourage target-setting



Methodology

- IEA and JREC developed Technical Reference for Collection and Verification of Information.
- JREC established a formal process for collecting and verifying information - the JREC Policy Network.

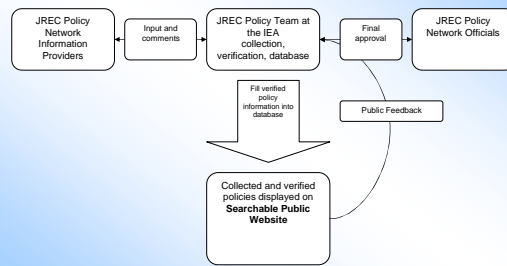


JREC Policy Network

- Information Providers – experts filling in policy templates.
- Information Verifiers - officials endorsing policy entries.



Process



Criteria

- National targets for renewable energy
- National or regional
- Legislative or administrative actions
- Incentive
- Impose obligation for increasing renewable energy
- Policies addressing increased costs of externalities from fossil fuel generation



Policies

- | | |
|--|--|
| <ul style="list-style-type: none"> • 3rd Party Financing • Bidding Systems • Capital Grants • Consumer Grants/Rebates • Excise Tax Exemptions • Fossil Fuel Taxes • General Energy Policy • Government Purchases • Green Pricing • Guaranteed Prices/Feed in • Investment Tax Credits • Net Metering | <ul style="list-style-type: none"> • Obligations • Production Tax Credits • Property Tax Exemptions • Public Awareness • RD&D • Regional Policies • Regulatory and Administrative Rules • Rural electrification • Sales Tax Rebates • Sales Taxes • Tax Exemptions • Tradable Certificates • Voluntary Programmes |
|--|--|



JREC.IEA.ORG



Features

- First ever database of so many countries.
- Valuable for policy analysts and private sector.
- Compliments JREC PCI.
- Today houses more than 300 verified policies and targets!



Conclusions

- Policy transparency through web services can inform and support market growth.
- The JREC web site will strengthen the coherency of JREC Member policies.
- Collected information contributes to the analysis of global market and policy trends.



Appendix 5

Information posted on the JREC Renewable Energy Policies and Measures Website

<http://jrec.iea.org>



Johannesburg **R**enewable **E**nergy **C**oalition
Committed to cooperating on the promotion of **renewable energy**

Argentina

Region Latin America

Source: IEA

Renewable Energy Policies and Measures

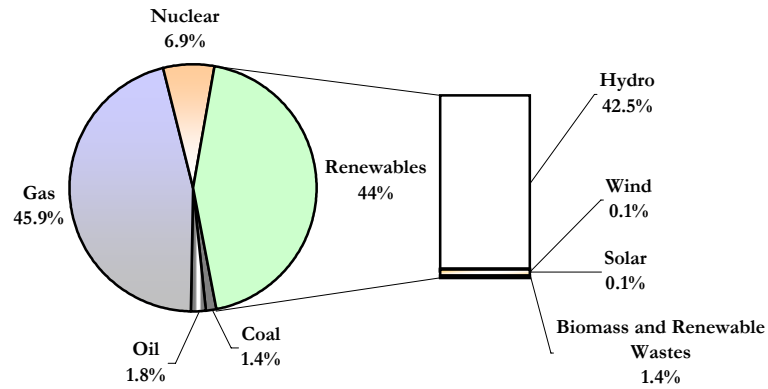
Information currently unavailable.

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Argentina](#)
- [Shares of TPES 2002 - Argentina](#)
- [Electricity Generation by Fuel 2002 - Argentina](#)

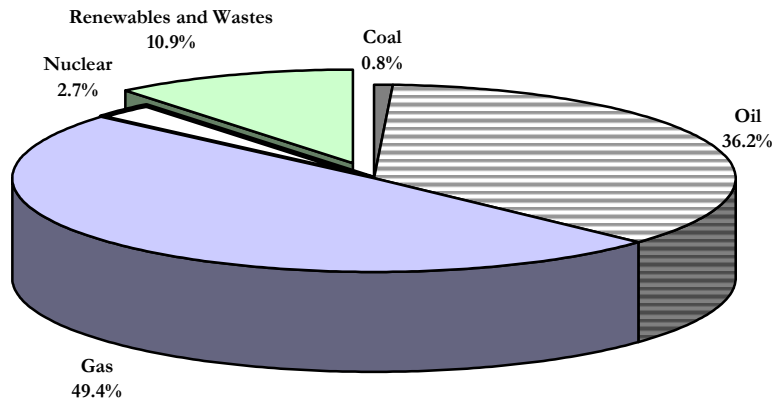
[JREC Home](#) | [Contact us](#) | [JREC Technical Reference](#)
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Argentina - Electricity Generation by Fuel 2002



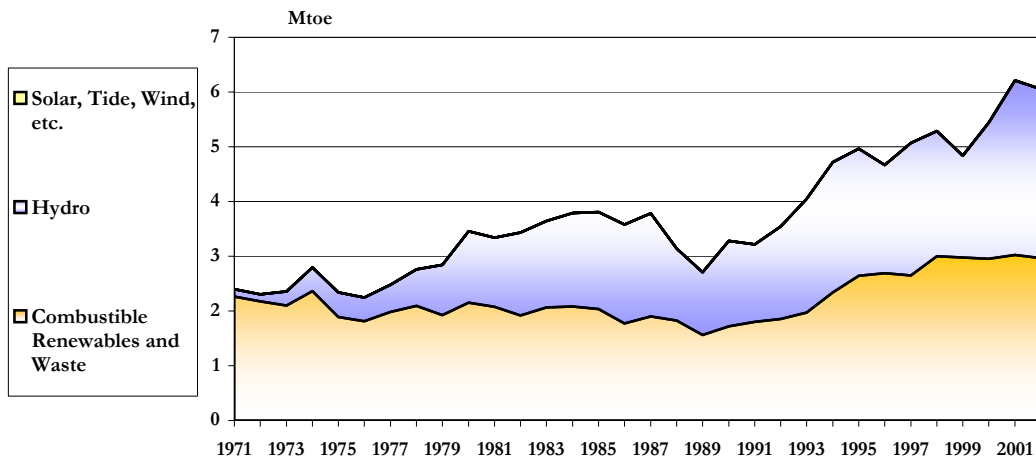
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 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

Argentina - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Argentina - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Austria

Region Europe - EU
Renewable energy target(s) 78.1% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Eco-Plants Feed-In Tariffs](#)
2. [Renewable Energy Targets](#)
3. [National Climate Strategy 2000-2008/12](#)
4. [Federal Environment Fund](#)
5. [Climate Strategy 2010](#)
6. [Pact on Tax Revenue Sharing](#)
7. [Labelling of Electricity Bills](#)
8. [Housing Creation and Refurbishment](#)
9. [Green Electricity Act](#)
10. [Eco-Tax](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Austria](#)
- [Shares of TPES 2002 - Austria](#)
- [Electricity Generation by Fuel 2002 - Austria](#)

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Eco-Plants Feed-In Tariffs

<i>Country</i>	Austria
<i>Effective from</i>	2001
<i>Description</i>	<p>According to the Electricity Act 2000, the provincial governments set minimum prices (feed-in tariffs) for energy purchased by grid operators from plants recognised as eco-plants. These prices are based on the average cost of generating electricity from these plants, including the value of electricity used, as well as past or on-going subsidies.</p> <p>If the expenses from purchasing the electricity at fixed tariffs exceed the revenue from sales, the grid operator will be reimbursed for the balance between the minimum of purchase price and the proceeds achieved. The required sums are raised by a surcharge on the network tariff (paid by the consumer) which is set by the provincial government. This surcharge is set annually on the basis of the additional expenses incurred in the previous year.</p> <p>Only the Province of Vorarlberg introduced new feed-in tariffs. Valid from 1 October 2001 the tariffs in ATS per kWh were: Solid biomass: from 1.3 to 1.8 for existing plants; 1.3 - 2.2 for new plants. Liquid biomass: 1.7 for existing plants, 2 for new plants. Biogas: 1.2 -1.55 for existing plants, 1.71 -2.2 for new plants. Wind: 1.5 for new plants. PV: 7 for existing plants, 5 -10 for new plants, depending on capacity.</p> <p>The equalisation levy for eco-electricity is ATS 1.59/kWh. The surcharge on the network tariff is Gr 1.11/kWh (ATS 0.008/kWh)</p>
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Onshore wind•Offshore wind•Solar photovoltaics
<i>Contact</i>	<ul style="list-style-type: none">•Provincial Governments•Elektrizitaets-Control GmbH
<i>URL</i>	www.e-control.at
Source: IEA	

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Renewable Energy Targets

<i>Country</i>	Austria
<i>Effective from</i>	2000
<i>Description</i>	<p>One of the measures introduced by the Energy Liberalisation Act in July 2000 (Electricity Act 2000) is the obligation to purchase green power and to reach minimum ? eco-targets.?</p> <p>Distribution system operators are required to purchase electricity from recognised eco-plants up to a certain share of their electricity sales to final consumers (shares are to be at least 1% in 2001; 2% in 2003; 3% in 2005 and 4% in 2007). Purchase prices are regulated. The grid operators can resell these amounts of electricity to final consumers or to electricity traders. If the minimum percentage amount is exceeded, the grid operator can sell the excess amount to other operators of distribution grids.</p> <p>Qualifying eco-plants include wind, PV, geothermal, biomass, biogas, digester and sewage gas, as well as co-firing and multi-fuelled plants using a high proportion of biofuels, and combustion of wastes containing a high percentage of bio materials. The final decision on qualification is made by the provincial governments.</p> <p>The eco-electricity market is monitored by Elektrizitats-Control GmbH. An equalisation levy is imposed on the grid operators unable to prove the required share of eco-electricity.</p>
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Bioenergy•Geothermal•Offshore wind•Onshore wind•Solar photovoltaics•Waste (organic)
<i>URL</i>	www.e-control.at
Source: IEA	

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National Climate Strategy 2000-2008/12

<i>Country</i>	Austria
<i>Effective from</i>	2000
<i>Description</i>	The Austrian government is elaborating the National Climate Strategy based on a 1999 study, which is in the last stage of consultation with relevant stakeholders. The Climate Strategy consists of seven packages of measures (space heating/private consumption, electricity and heat production, transport, industry, waste management, agriculture and forestry, and other greenhouse gases).
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Federal Ministry of Agriculture, Forestry, Environment and Water Management
<i>URL</i>	www.ji-cdm-austria.at/en/klima/nationale_klimapolitik.php
Source: IEA	

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Federal Environment Fund

<i>Country</i>	Austria
<i>Effective from</i>	2001
<i>Description</i>	<p>The Federal Environment Fund is enabled to fund environment projects with a total budget frame of more than € 40 million annually. Over the past years, increasing priority has been given to projects related to climate change. In 2000, 70% of the funding was dedicated to projects with direct implications for GHG emissions, and that share will be extended. For the budget periods 2001 and 2002, the total budgetary frame has been increased to reach € 40 million and € 47 million, respectively, after an average of € 36 million during past years. All additional funding (€ 15 million for both years) will be channelled to climate change purposes. Over the past years, funding focused on biomass and biogas district heating, entrepreneurial biomass central heating systems, solar panels and energy efficiency measures, small hydro and wind power stations and thermal renovation of entrepreneurial buildings. Since the Austrian Electricity Law stipulates that feed-in tariffs have to be set at figures that make the production of electricity from renewable sources competitive, the Federal Ministry of Environment is planning to phase out subsidies for those technologies.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•General Energy Policy•Capital Grants
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€ 40 Million (2001)
<i>Contact</i>	<ul style="list-style-type: none">•Federal Ministry of Agriculture, Forestry, Environment and Water Management•Kommunalkredit Austria AG

Source: IEA

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Climate Strategy 2010

Country	Austria
Effective from	2001
Description	The burden-sharing agreement within the EU to meet Kyoto commitments requires Austria to reduce its greenhouse gas emissions by 13% below 1990 figures by the 2008-2012 period. Against this background the Federal Ministry of Agriculture, Forestry, Environment and Water Management in co-operation with the relevant ministries, unions and the Länder developed a strategy to meet the target. ? Climate Strategy 2010? contains packages of measures for seven areas (room heating and other small consumers; electricity and heat production; waste management; mobility; industry, agriculture and forestry and other gases) and aims to achieve an annual reduction of more than 17 million tonnes of CO2-equivalents.
Policy type	<ul style="list-style-type: none">•Regulatory and Administrative Rules•Obligations
Renewable energy	All renewables
Contact	Federal Ministry of Agriculture, Forestry, Environment and Water Management

Source: IEA

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Pact on Tax Revenue Sharing

<i>Country</i>	Austria
<i>Effective from</i>	2001
<i>Description</i>	This new pact on tax revenue sharing between the Federation, the Länder and the municipalities, allows more flexibility for housing support schemes. The Federal Act on Revenue Sharing now explicitly suggests spending part of the funds for greenhouse gas (GHG) mitigation measures. The Länder receive a total of € 1.78 billion annually from the Federation under the title of ? housing support.? Although that money can also be spent for purposes other than housing (on improving infrastructure, for example). The GHG mitigation effect from housing support schemes therefore largely depends on specific political intentions followed by the individual Länder. The conferences of the environment and finance ministers of the Länder governments have declared their political willingness to spend a relevant part of the money for climate change purposes in order to achieve the targets indicated in the Austrian Climate Strategy 2010.
<i>Policy type</i>	<ul style="list-style-type: none">•Regulatory and Administrative Rules•General Energy Policy
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Länder
Source: IEA	

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Labelling of Electricity Bills

<i>Country</i>	Austria
<i>Effective from</i>	2000
<i>Description</i>	According to the Energy Liberalisation/Electricity Act 2000, electricity suppliers in Austria are required to show the primary energy mix used to generate the electricity they supply on their customers' electricity bills. Provincial governments are responsible for ensuring that this information is correct. In case of incorrect specifications, administrative fines are implemented; in case of repeated infractions the party will lose its right to supply. However, electricity suppliers have the option to show the average European energy mix used on the bills instead of the actual domestic energy mix.
<i>Policy type</i>	Public Awareness
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Provincial Governments
Source: IEA	

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Housing Creation and Refurbishment

<i>Country</i>	Austria
<i>Effective from</i>	2001
<i>Description</i>	The personal income tax law specifies a variety of special expenses, for example the purchase of solar and biomass technologies for residences, that can be deducted from income. This is capped at € 2 920 per year for ordinary tax payers. An additional deduction of € 2 920 for single income households, and € 1 460 is granted if there are at least three children. Only 25% of the amount may be deducted from the income.
<i>Policy type</i>	Tax Credits
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Solar photovoltaics•Solar thermal
<i>Funding</i>	Maximum €7300 per annum
<i>URL</i>	www.e-control.at
Source: IEA	

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Green Electricity Act

<i>Country</i>	Austria
<i>Effective from</i>	2002
<i>Description</i>	<p>In 2002, the National Council and Federal Council passed the new Green Electricity Act. The main content of the EU Directive from October 2001 has been implemented and the proportion of energy generated from renewable energy sources increased. The Green Electricity Act governs the aid for green energy and combined heat and power generation throughout the country. Through this act, fees for eco-power, which vary from state to state, will be replaced with a uniform fee for power generated by combined heat and powerplants, renewable sources and small hydro power plants. The total cost of aid for green energy, following a nation-wide attainment of the goal, is much lower than it would have been for attaining the objective individually in each federal state. The supply tariffs for the green plant operators are the same throughout Austria. The government support renewable generation plants with a maximum € 275 million per year, down from € 400 million per year.</p> <p>The objectives set out in the Green Electricity Act are to generate 9% of electricity from small-scale hydroelectric plants and 4% from eco plants. This is to be achieved by providing aid in the form of supply tariffs until 2008 so that the overall objective of 78.1% of electricity from renewable sources can be reached (the rest being generated from large-scale hydro).</p> <p>Other changes include: The certificate system for small-scale hydroelectric power stations expired at the end of 2002. As of 1 January 2003, there was no longer a quota obligation for the network operators and no compensation payments. All operators of green plants have the right to a listing of the certification of origin by the network operators. The electricity identification system, which specifies the source of energy used for electricity generation on consumer bills, will be standardised after a transitional period up to 1 July 2004 and then all electricity suppliers must identify a standard composition on consumer bills (? standard dealer mix?).</p> <p>The Act guarantees payment of feed-in tariffs for thirteen years at the following rates (per kWh): Small hydro power, depending upon the amount of electricity fed into the grid: from € 0.0315 to € 0.0568 for existing plants, from € 0.0331 to € 0.0596 for refurbished plants, from € 0.0378 to € 0.0625 for new plants. PV: € 0.47 for plants > 20 kWpeak, € 0.60 for plants < 20 kWpeak. Wind: € 0.078 for new plants. Geothermal: € 0.07. Wood chips: € 0.102 to € 0.16. Waste with high bio-share: € 0.027 to € 0.128. Co-firing in fossil fuel plants: € 0.03 to € 0.065. Biofuels: € 0.1 for plants > 200 kW, € 0.13 for plants < 200 kW. Biogas: € 0.0725 to € 0.165. Landfill gas: € 0.03 for plants > 1 MW, € 0.06 for plants < 1 MW.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Obligations•Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€ 400 million/year before 2002 € 275 million/year after 2002
<i>Contact</i>	<ul style="list-style-type: none">•Federal Ministry of Agriculture, Forestry, Environment and Water Management•Federal Ministry of Justice
<i>URL</i>	www.e-control.at
Source: IEA	

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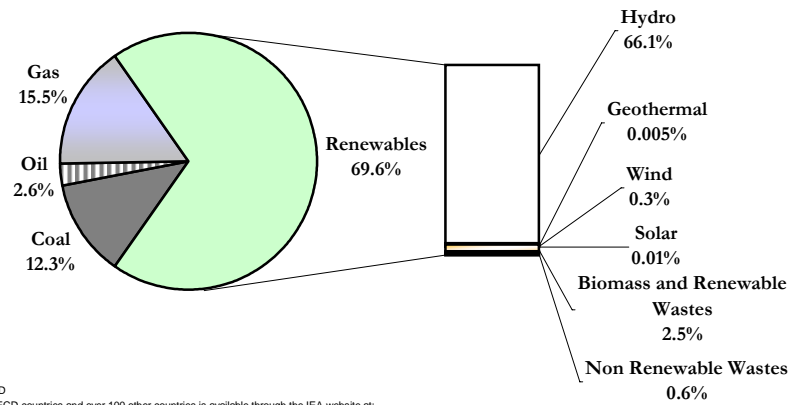
Eco-Tax

<i>Country</i>	Austria
<i>Effective from</i>	1995
<i>Description</i>	<p>A modest tax on oil products was introduced in 1995 and a similar tax on gas and electricity in 1996. The goal of these taxes was to raise revenue, not to affect patterns of energy consumption. In 2000, the tax on gas and electricity was doubled for budgetary reasons, without exemption for renewable energy sourced electricity.</p> <p>The competitiveness of biomass improved due to higher oil prices, so the tax made an economic difference for the biomass sector. Biodiesel differed slightly as it was largely exempt from the mineral oil tax for some time and received a total exemption starting in 2000.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Fossil Fuel Taxes•Excise Tax Exemptions
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Bioenergy

Source: IEA

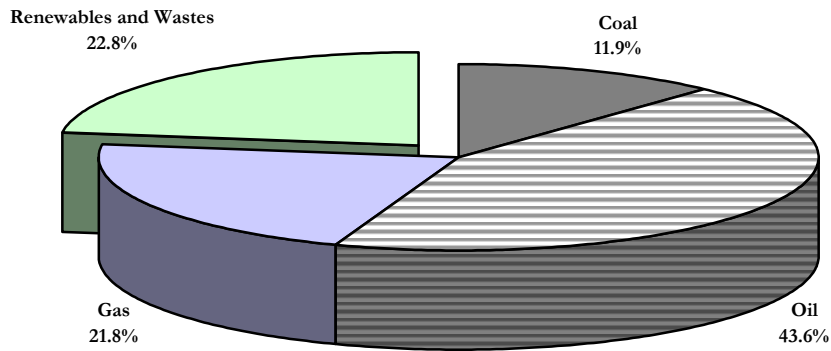
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Austria - Electricity Generation by Fuel 2002



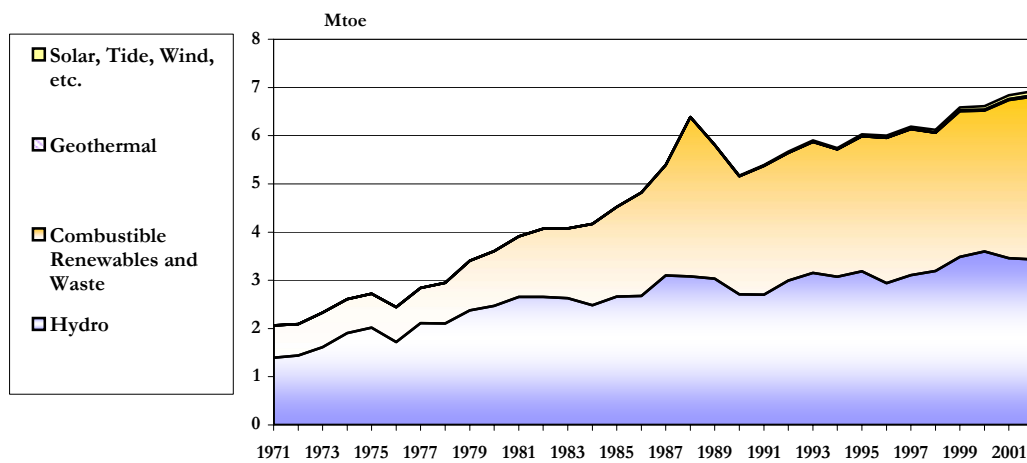
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<http://www.iea.org/Textbase/stats/index.asp>

Austria - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Austria - Total Primary Energy Supply from Renewables (Mtoe)



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Belgium

Region Europe - EU
Renewable energy target(s) 6% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. Green Certificates Scheme - Flanders
2. Soltherm Wallonia
3. Support for pre-feasibility studies - Wallonia
4. Offshore Wind Farm Authorisations Procedures
5. Access to the Grid (Renewables and CHP)
6. Green Certificates Scheme - Wallonia
7. Green Certificate Scheme - Federal
8. Support for solar - Flanders
9. Support for Solar - Brussels Region
10. Tax Deduction for Environment-Friendly Investments
11. Financial support for demonstration projects - Flanders
12. Electricity Distribution - Flanders
13. Pilot Programme for biofuels in cars
14. Decree 15.12.1993
15. Wallonia's 1995 Environment Plan for Sustainable Development
16. Electricity Market Regulation
17. Investment Subsidy - Wallonia
18. UREBA - Wallonia

Statistical Information on Renewable Energy

- Total Primary Energy Supply from Renewables (Mtoe) - Belgium
- Shares of TPES 2002 - Belgium
- Electricity Generation by Fuel 2002 - Belgium

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Green Certificates Scheme - Flanders

<i>Country</i>	Belgium
<i>Effective from</i>	2001
<i>Description</i>	<p>This decree both fosters the production of electricity from renewable energy and implements the Electricity Decree of July 2000. From the 1st of January 2002, every electricity supplier has the obligation to buy a certain amount of green certificates from green electricity producers. This amount is 0.8% from total electricity supply in 2002, 1.2% in 2003, 2% in 2004, to reach 6% in 2010. The suppliers are obligated to surrender their certificates on an annual basis to the Flemish regulator (the VREG). If the supplier does not comply with this obligation, they are fined € 75 per missing certificate in 2003, € 100 in 2004 and € 125 in 2005. The fines go into a Renewable Energy Fund. VREG provides a list of suppliers and green electricity producers, prices of green certificates and a green certificate relational database on its website.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Obligations•Tradable Certificates
<i>Renewable energy</i>	All renewables
<i>Contact</i>	<ul style="list-style-type: none">•Flemish Administration for Natural Resources and Energy•The Flemish Regulator, VREG
<i>URL</i>	www.energiesparen.be www.vreg.be

Source: IEA

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Soltherm Wallonia

<i>Country</i>	Belgium
<i>Effective from</i>	2000
<i>Description</i>	<p>The Walloon Soltherm programme was established in May 2000. The objective is to develop a sustainable solar water heating industry in the region over a ten-year timeframe. The target is for 200 000 m² of panels to be installed in the region by 2010. 75% of the capacity should be installed through building renovations and the remaining 25% from new construction.</p> <p>Goals for the first year of the action plan (2000) included the installation of 150 pilot systems to create sufficient experience and enable the emergence of a viable private sector. The next phase included the training of new technicians, architects and public sector staff in charge of promoting these technologies. Once this has been completed, a promotional campaign will target all stakeholders from households, as well as private and public sector decision makers. The residential market will be targeted first, to be followed by the larger community-use projects.</p> <p>Individual grants currently start from € 1 500 (for up to 4 m² of panels) and can be supplemented by local institutions (the communes and provinces) as well as gas and electricity distribution companies. Grants offered to households are between € 1 875 and € 3 000. The Walloon Region provides additional support to the municipalities active in using solar thermal energy. In 2003, most of the mixed ? intercommunales? of gas and electricity distribution offered a € 1 250 grant to individuals and small and medium enterprises (SMEs). The Walloon Region also pays for solar auditing for communities.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•RD&D•Consumer Grants / Rebates•Obligations•Public Awareness
<i>Renewable energy</i>	Solar thermal
<i>Contact</i>	<ul style="list-style-type: none">•Soltherm•3E
<i>URL</i>	energie.wallonie.be/xml/index.html
Source: IEA	

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Support for pre-feasibility studies - Wallonia

<i>Country</i>	Belgium
<i>Effective from</i>	1990 (updated in 1994)
<i>Description</i>	The Walloon Region supports part of the costs of pre-feasibility studies carried out in the private sector to evaluate potential energy efficiency or renewable energy investments within a company. This incentive also applies to costs related to technical certification. The maximum available allowance amounts to: 75% of total feasibility study costs calculated on the basis of quotes provided by ministry-approved independent companies. 60% of total certification costs.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Walloon Energy Ministry, General Directorate for Technologies, Research and Energy
Source: IEA	

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Offshore Wind Farm Authorisations Procedures

<i>Country</i>	Belgium
<i>Effective from</i>	2000
<i>Description</i>	This royal decree, promulgated in December 2000, determined the ad hoc conditions and procedures to deliver the required authorisations for the installation and operation of wind parks in offshore areas.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Offshore wind
<i>Contact</i>	Secrétariat d'Etat à l'Energie et au développement durable
Source: IEA	

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Access to the Grid (Renewables and CHP)

<i>Country</i>	Belgium
<i>Effective from</i>	2000
<i>Description</i>	<p>In April 2000, the federal government decided that all generators of electricity from renewable sources will become progressively free to choose their own electricity supplier if they use more electricity than they are able to generate. Consumers who buy a significant amount of their electricity from renewable sources are also eligible to choose their electricity supplier.</p> <p>The Flemish Parliament approved the decree regarding the liberalisation of the electricity market and marked the following categories as eligible: Producers using quality CHP installations or renewables for electricity generation (up to a certain ceiling). Consumers of renewables-generated electricity by means of a CHP unit (for a certain amount of electricity) or consumers using heat from CHP units or renewables. Consumers using heat from a supplier who generates this heat by means of CHP units or renewables (for a maximum of 500 kWh electricity per GJ heat).</p> <p>In Wallonia, a corresponding decree was approved and aims to gradually open the market for producers using CHP and/or renewables for electricity generation, as well as consumers using renewable electricity and/or electricity generated by means of a CHP unit, or using heat from CHP units or renewables.</p>
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Secretary to Energy and Administrations for Energy, Regional Energy Administrations (ANRE, DGTRE, IBGE-BIM)
<i>URL</i>	www.mineco.fgov.be

Source: IEA

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Green Certificates Scheme - Wallonia

<i>Country</i>	Belgium
<i>Effective from</i>	2002
<i>Description</i>	<p>The decree from July 2002 fosters green electricity, implementing the Electricity Decree from April 2001. This green certificates scheme aims to abate CO2 emissions and obliges each supplier to meet a quota of green electricity within its total supply of electricity. The Walloon government established a target of 3% at the start of the system (July 2003). Further targets have been established of 7% by 2007 and 12% by 2010. The objective of 12% is to be achieved by producing 8% from renewables and 20% from CHP. In the event of non-compliance with the quota obligation, the supplier will be fined € 100; which goes into an energy fund.</p> <p>The Walloon regulator checks the quota obligation every three months and publishes information about green certificates. Additionally, the Walloon government may soon allow green electricity producers the choice of participating in the green certificates system or benefit from a government support system at € 65/MWh.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Obligations•Tradable Certificates
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Walloon Administration for Technology, Research and Energy
<i>URL</i>	energie.wallonie.be www.cwape.be

Source: IEA

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Green Certificate Scheme - Federal

<i>Country</i>	Belgium
<i>Effective from</i>	2002
<i>Description</i>	The Royal Decree on the promotion of electricity produced from renewable energy sources was adopted in July 2002 and came into force 1 July 2003. It addresses two fundamental issues: first, it sets the conditions for issuing green certificates by the federal regulator (CREG) for offshore wind energy production, and second, it states that the grid operator is obliged to buy green certificates issued anywhere in Belgium at minimum prices of € 90/MWh for offshore wind energy, € 50/MWh for onshore wind energy, € 50/MWh for hydro, € 150/MWh for solar energy and € 20/MWh for biomass. The monitored green certificates are valid for five years and are not associated to fixed quotas.
<i>Policy type</i>	Tradable Certificates
<i>Renewable energy</i>	All renewables
<i>Contact</i>	•Federal Minister for Energy •Federal Regulator: CREG
<i>URL</i>	www.energie.mineco.fgov.be www.creg.be

Source: IEA

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Support for solar - Flanders

<i>Country</i>	Belgium
<i>Effective from</i>	2002
<i>Description</i>	Grants for PV panels amounted to 65% of the total investment cost. This programme had a budget of € 1 million in 2002, which has been exhausted. Additionally, most of the communes provide grants of between € 250 and € 750. For solar heating systems, a grant of € 625 was available and most of the communes provided between €250 and €750.
<i>Policy type</i>	Consumer Grants / Rebates
<i>Renewable energy</i>	<ul style="list-style-type: none">•Solar photovoltaics•Solar thermal
<i>Contact</i>	Flemish Administration for Natural Resources and Energy
<i>URL</i>	www.energiesparen.be
Source: IEA	

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Support for Solar - Brussels Region

<i>Country</i>	Belgium
<i>Effective from</i>	2003
<i>Description</i>	The Brussels Region gave grants totalling 35% of investment cost for the purchase and installation of solar water heating systems with a maximum grant not to exceed € 991.59 per household.
<i>Policy type</i>	Consumer Grants / Rebates
<i>Renewable energy</i>	Solar thermal
<i>Contact</i>	Administration of Energy in the Brussels Region
<i>URL</i>	www.ibgebim.be www.curbain.be www.prime-renovation.irisnet.be

Source: IEA

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Tax Deduction for Environment-Friendly Investments

<i>Country</i>	Belgium
<i>Effective from</i>	1992
<i>Description</i>	<p>This policy makes incentives available for environmentally sound investments by industry. It provides capital grants of up to 13.5% of investment costs. Investments are considered eligible if they deal either with energy efficiency, or energy resulting from non-polluting treatment of industrial and urban waste. The policy covers projects dealing with solar, wind, hydro energy, biomass (including biofuels) and geothermal energy technologies as well as RD&D activities that promote environmentally sound technologies.</p> <p>Tax payers are allowed to spread the deductions out over several years. The policy also offers grants totalling 20.5% of the investment and 25.5% for especially innovative companies.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•Investment Tax Credits•RD&D
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Belgium Finance Ministry
<i>URL</i>	www.fiscus.fgov.be

Source: IEA

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Financial support for demonstration projects - Flanders

<i>Country</i>	Belgium
<i>Effective from</i>	1992
<i>Description</i>	Industry and the tertiary sector can benefit from these grants of 50% of the cost of investment promoting the rational use of energy or use of renewable energy sources, primarily biomass.
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•RD&D
<i>Renewable energy</i>	Bioenergy
<i>URL</i>	www.vlaanderen.be/start/index.jsp
Source: IEA	

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Electricity Distribution - Flanders

<i>Country</i>	Belgium
<i>Effective from</i>	2004
<i>Description</i>	Since February 2004, grid managers (low voltage) are obliged, according to the application of the 2001 decree on the promotion of renewables-generated electricity, to offer free distribution of electricity from renewables sources. Additionally, grid access for the suppliers of electricity from renewable sources is fixed at a certain minimum level.
<i>Policy type</i>	Net Metering
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Flemish Ministry Responsible for Energy
<i>URL</i>	www.vreg.be/vreg
Source: IEA	

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Pilot Programme for biofuels in cars

<i>Country</i>	Belgium
<i>Effective from</i>	1995
<i>Description</i>	This pilot programme promotes biofuels for transport in public transport vehicles in the Wallonia region and in Brussels. In 1995, the Flemish government co-financed, with the partnership of the EU project ALTENER, a large-scale demonstration and test programme for biofuels in cars (total funding BEF 8.6 million).
<i>Policy type</i>	<ul style="list-style-type: none">•RD&D•3rd Party Finance
<i>Renewable energy</i>	Biofuel
<i>Funding</i>	BEF 8.6 million
Source: IEA	

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Decree 15.12.1993

<i>Country</i>	Belgium
<i>Effective from</i>	1993
<i>Description</i>	<p>The objective of the decree is to increase energy saving from fossil sources and to foster economic expansion. Companies investing in energy efficiency and renewable energy are eligible to receive subsidies ranging from 10% for medium-sized and large organisations to 20% for small enterprises. The utility sector is excluded from this subsidy.</p> <p>To aid in the further development of the PV market, the Flemish authorities provide an additional subsidy of 65% for the installation of photovoltaic panels, 25% of which is provided by the electricity producers Electrabel and SPE.</p>
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	All renewables

Source: IEA

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Wallonia's 1995 Environment Plan for Sustainable Development

<i>Country</i>	Belgium
<i>Effective from</i>	1995
<i>Description</i>	Wallonia's 1995 Environment Plan for Sustainable Development, which was developed as a plan to reduce CO2 emissions, includes an aim to increase renewable energy use to 3% of energy consumption by 2000 and 5% by 2010.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>Funding</i>	355 million BEF

Source: IEA

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Electricity Market Regulation

<i>Country</i>	Belgium
<i>Effective from</i>	1999
<i>Description</i>	The electricity market law of 1999 was modified in 2001 to stipulate the implementation of public service obligations. It gave rise to technical regulations for connection to the transmission grid and the purchase of electricity, which prioritised green electricity.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables

Source: IEA

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Investment Subsidy - Wallonia

<i>Country</i>	Belgium
<i>Effective from</i>	1992 (updated in 2002)
<i>Description</i>	The Walloon Region subsidises 15% of the investments of any company aiming to increase either their renewable energy production or energy efficiency.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	All renewables

Source: IEA

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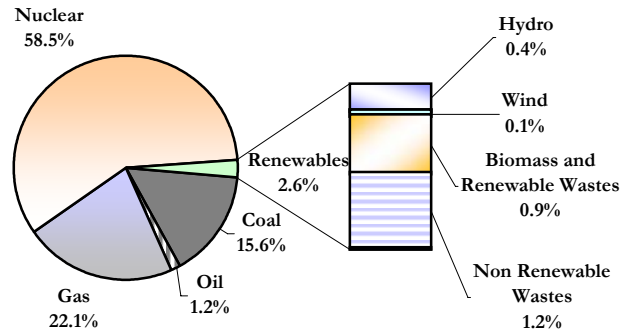
UREBA - Wallonia

<i>Country</i>	Belgium
<i>Effective from</i>	2003
<i>Description</i>	This regional scheme focuses on investment support with a subsidy of 30% to 50% for investments in public buildings.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables

Source: IEA

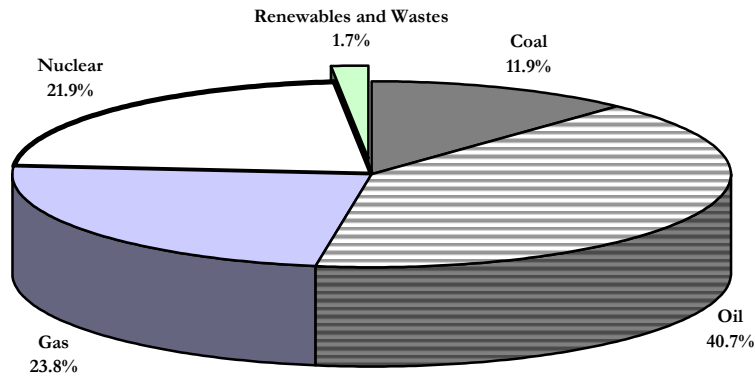
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Belgium - Electricity Generation by Fuel 2002



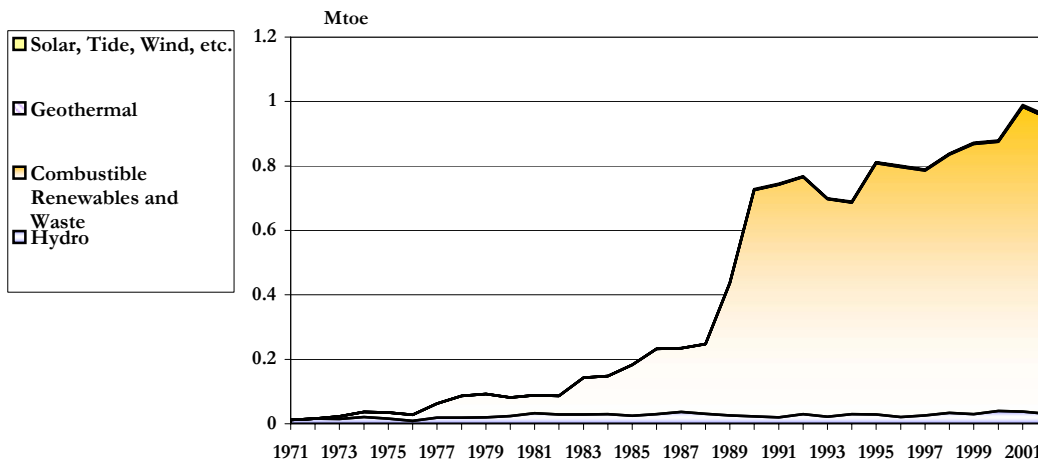
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Belgium - Shares of TPES 2002



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Belgium - Total Primary Energy Supply from Renewables (Mtoe)



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Bolivia

Region Latin America

Source: IEA

Renewable Energy Policies and Measures

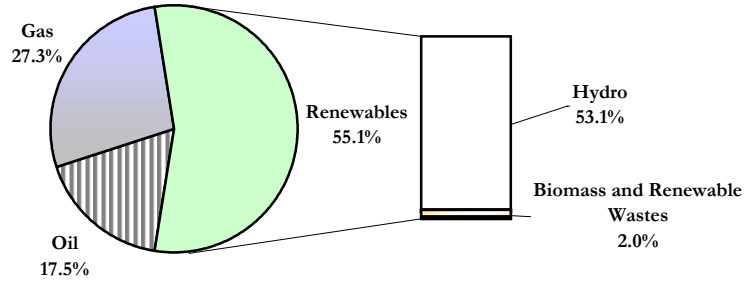
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Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Bolivia](#)
- [Shares of TPES 2002 - Bolivia](#)
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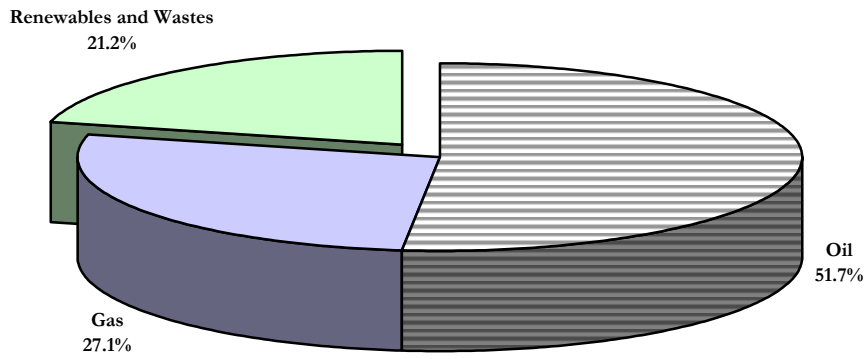
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Bolivia - Electricity Generation by Fuel 2002



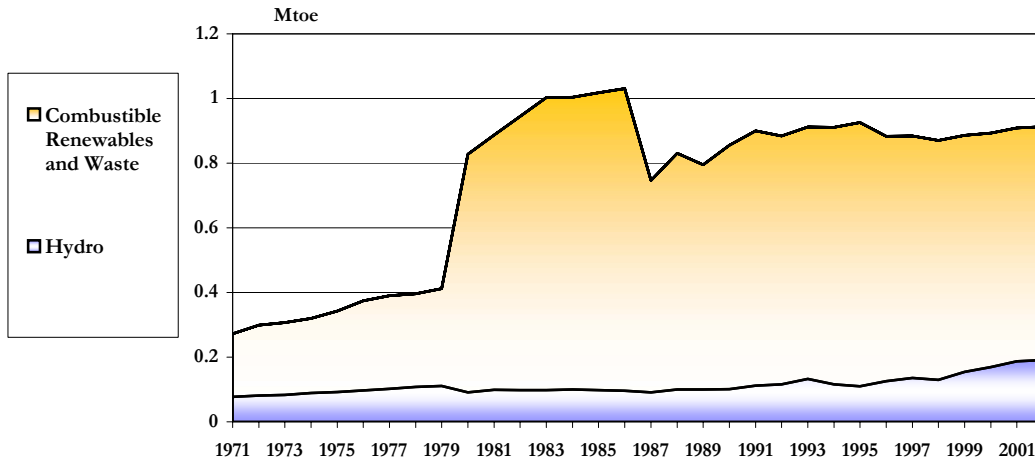
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Bolivia - Shares of TPES 2002



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Bolivia - Total Primary Energy Supply from Renewables (Mtoe)



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Bosnia and Herzegovina

Region Other Industrialised Countries

Source: IEA

Renewable Energy Policies and Measures

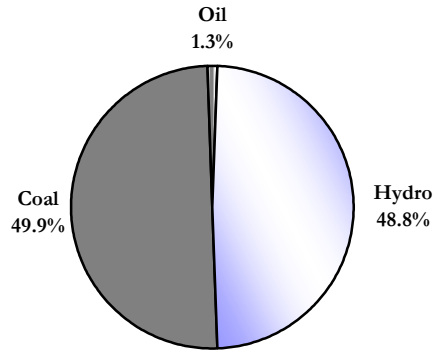
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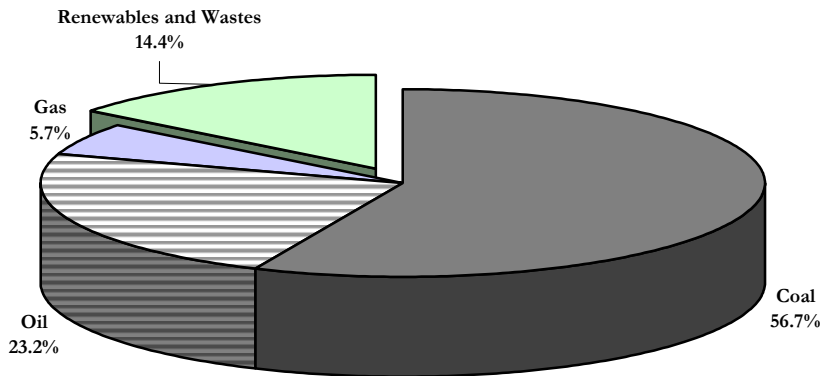
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Bosnia and Herzegovina - Electricity Generation by Fuel 2002



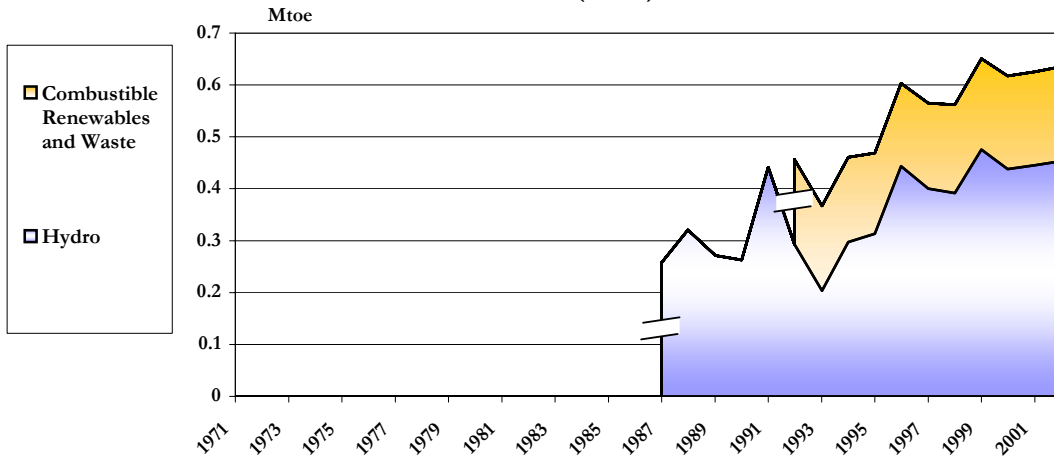
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Bosnia and Herzegovina - Shares of TPES 2002



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Bosnia and Herzegovina - Total Primary Energy Supply from Renewables (Mtoe)



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Brazil

Region Latin America
Renewable energy target(s) Additional 3300 MW from wind, small hydro, biomass by 2016
Source: IEA

Renewable Energy Policies and Measures

1. [The PROINFA Programme](#)
2. [National Programme for Energy Development of States and Municipalities \(PRODEEM\)](#)
3. [Programa Nacional de Electrificação Rural \(National Rural Electrification Programme\)](#)

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- [Total Primary Energy Supply from Renewables \(Mtoe\) - Brazil](#)
- [Shares of TPES 2002 - Brazil](#)
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The PROINFA Programme

<i>Country</i>	Brazil
<i>Effective from</i>	2002
<i>Description</i>	<p>The Brazilian Parliament passed Law 10438 in April 2002. Law 10438 was responsible for the creation of the Programme of Incentives for Alternative Electricity Sources (Programa de Incentivo a Fontes Alternativas de Energia Elétrica-PROINFA) among other programmes. The PROINFA programme is to be implemented in two stages:</p> <p>STAGE 1: 3,300 MW of renewable energy (from wind, biomass and small hydroelectric sources) will be brought on stream before the end of 2007 through a system of subsidies and incentives, which draw on an Energy Development Account funded by end-use consumers through an increase on energy bills (low-income sectors are exempt from this increase). Under the PROINFA rules, the programme will be operated by Eletrobrás, which will buy energy at pre-set preferential prices ("economic values" for each of the three sources) and will market "renewable" electricity. Definitive "economic values" will be published at the end of October 2003 and will have a reference value floor of 70% of the national average supply tariff. Contracts between Eletrobrás and the "renewable" generator are valid for a period of 20 years, are applicable to plants that began production before 2007 and must be signed within 24 months of the publication of Law 10438. The Banco Nacional de Desenvolvimento Econômico e Social (BNDES, the Brazilian National Development Bank) will make special financing programmes available for renewables projects that are eligible for PROINFA.</p> <p>BNDES can finance up to 70% of capital costs (excluding site acquisition and imported goods and services) at the basic national interest rates (TJLP) plus 2% of basic spread and up to 1.5% of risk spread. Interests are not charged during construction and amortization is of 10 years. Payments are due 6 months after commercial operation. Eletrobrás guarantees in the long-term electricity purchasing contracts a minimum income of 70% of the contracted energy during the financing period, as well as a full coverage to exposure risks to the short-term market</p> <p>PROINFA is expected to generate 150 thousand jobs and to leverage private investments of around USD 2.6 bln. Law 10762 mandates a minimum nationalization of 60% in total construction costs, as well as a regionalization criteria, where each State has maximum limits of 20% of total capacity for wind and biomass and 15% for small hydros. Such limits are preliminary: if part of the 1100 MW for each source is not contracted, this available potential will be distributed according to the older environmental permits (all projects are required to have a previous installation licence).</p> <p>STAGE II: Once the 3,300 MW objective has been met, PROINFA will target increasing the share of electricity produced by three renewable sources to 10% of annual consumption within 20 years. In Stage II, PROINFA renewable generators will be required, before December 30th of each year, to issue a number of Renewable Energy Certificates proportional to the amount of clean energy produced by the plant.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Obligations•Tradable Certificates•3rd Party Finance
<i>Renewable energy</i>	<ul style="list-style-type: none">•Onshore wind•Bioenergy•Hydropower
<i>Source:</i>	IEA

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National Programme for Energy Development of States and Municipalities (PRODEEM)

Country [Brazil](#)

Effective from 1996

Description

The National Programme for Energy Development of States and Municipalities was set up to develop 20,000 MW of renewable energy capacity. The Programme involved providing electrical power to schools, health centres, community centres, and water pump systems.

In 2000, PRODEEM served almost 104,000 people in 219 municipalities. The Inter-American Development Bank (IDB) proposed to finance a project for providing electric power to rural residences. The PRODEEM Plan of Action was jointly prepared by the MME and the IDB implemented with a non-reimbursable fund of US\$ 9 million.

From 1996-2000, PRODEEM provided 3 MW power in PV panels to 3050 villages benefiting 604 000 people, for a total investment of 21 million reals (\$), financed from the national treasury funds. In 2000, another 1050 systems were installed that were supposed to benefit an additional 104 000 people. The total budget was 60 million reals (\$) for 2001, when 1086 systems were installed, and another 3000 community systems were tendered through international bidding, with a winning bid of 37 million reals for equipment and installation, along with operation and maintenance for three years.

PRODEEM is a centralised project, which uses a top-down approach to identify sites and install equipments. One of the difficulties faced by the project is identification of suitable locations for equipments that have been purchased in bulk. Under this programme, the central government procured PV panels that were then allocated free of charge to municipalities upon demand. Rather than electrifying individual households, the programme focuses on schools, health facilities, and other community installations.

In 2003, the MME (Secretariat for Energy Development) undertook an exercise in analysing the programme and discussing the means to expand it, according to the recent law for Universal Access to Energy. More recently, PRODEEM and ANEEL have started to sponsor mini-grid pilot projects (with hydro and biomass generation), to test different service provision models.

Policy type Rural electrification

Renewable energy All renewables

Contact Ministry of Mines and Energy (MME)

Source: IEA

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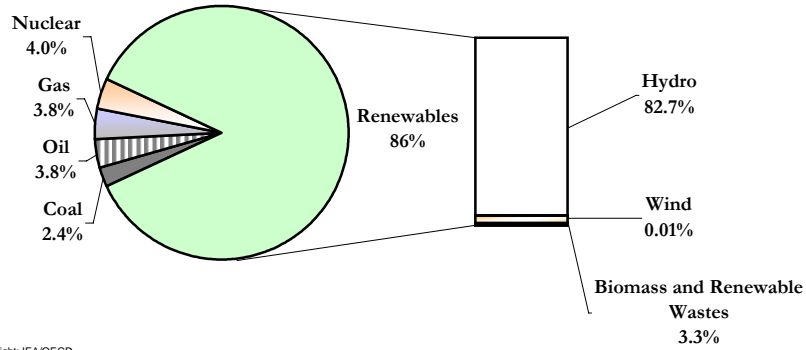
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Programa Nacional de Electrificação Rural (National Rural Electrification Programme)

<i>Country</i>	Brazil
<i>Effective from</i>	1999
<i>Description</i>	<p>In rural areas, the "Luz no Campo" national rural electrification programme set as its goal for its first stage (to 2002) to provide electrical power to one million rural homes, which would benefit approximately five million people. This translates into a demand for resources worth 2.7 million reals. In 2000, contracts with over 40 concessionaires were signed.</p> <p>Meaning ? Light in the Countryside' the project was launched in December 1999, by the federal government address to the stagnation in rural electrification after the restructuring of the power sector. Aimed at connecting nearly a million rural households in the three-year period from 1999-2002, Luz no Campo is the single largest rural electrification programme implemented in Brazil. Initial estimates forecasted an investment of around 1 billion dollars, that is nearly 1000 dollars per new consumer.</p> <p>As of September 2002, 480000 connections had been made, and another 125000 were in process. A total of 823000 new customers have signed contracts. So far, no off-grid connections have been made under the programme, even though this option was considered. This can partly be attributed to the relatively low cost of grid connections, averaging 970 dollars per connection.</p> <p>Rural consumers are typically expected to pay the full costs of the connection, albeit spread over a number of years. Luz-no-Campo lends 75% of the investment to concessionaires on easy terms ? a 6% rate of interest, two-year grace period, and a five to ten year repayment period. Concessionaires finance rural consumers on similar terms, but in some cases the State governments provide partial subsidies, assuming the consumer's contribution.</p> <p>The blank in the programme is the lack of incentive to make low-cost grid connections or take on off-grid projects, except for a couple of specific cases in Minas Gerais, Bahia, and Amazonas.</p>
<i>Policy type</i>	Rural electrification
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Mines and Energy (MME)
<i>Source: IEA</i>	

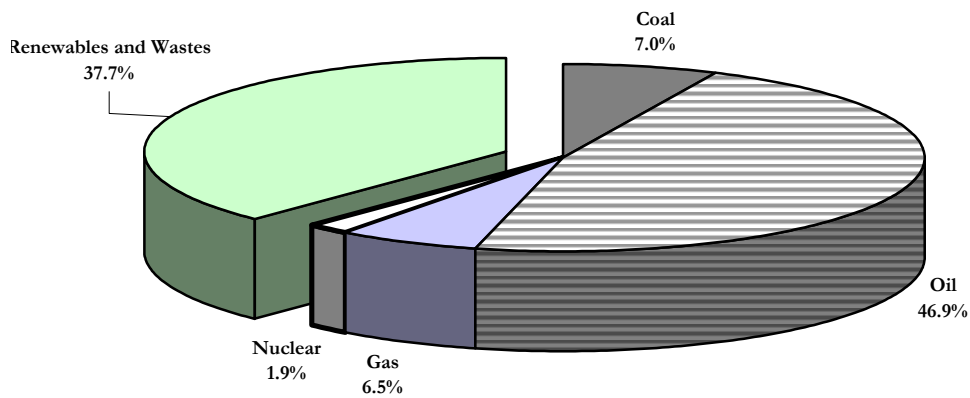
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Brazil - Electricity Generation by Fuel 2002



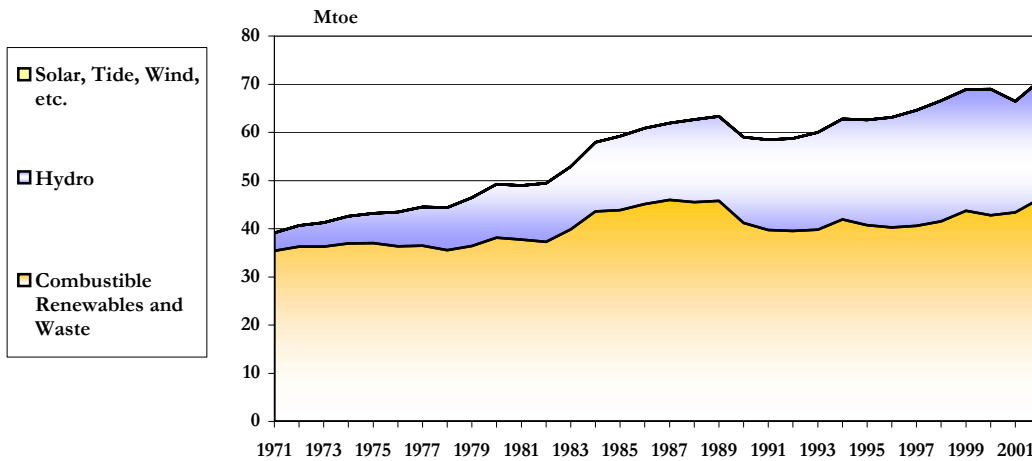
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Brazil - Shares of TPES 2002



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Brazil - Total Primary Energy Supply from Renewables (Mtoe)



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Bulgaria

Region Europe - EITs

Source: IEA

Renewable Energy Policies and Measures

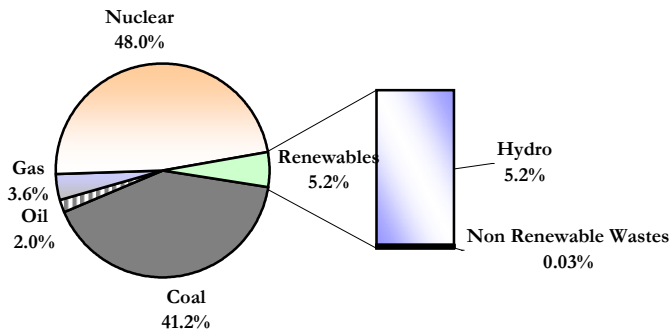
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- [Electricity Generation by Fuel 2002 - Bulgaria](#)

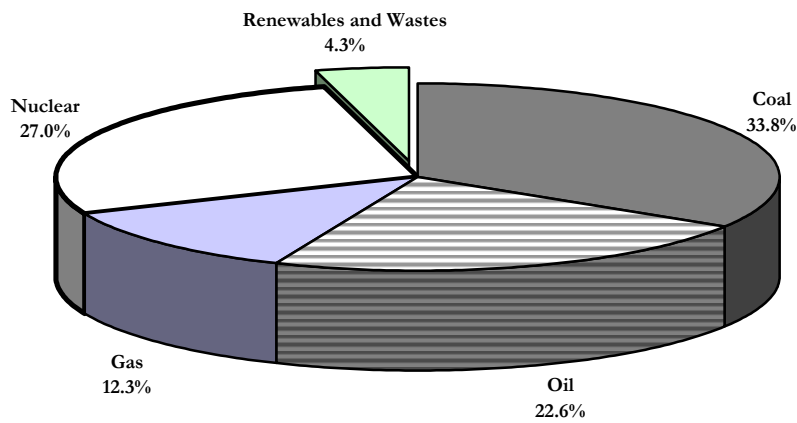
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Bulgaria - Electricity Generation by Fuel 2002



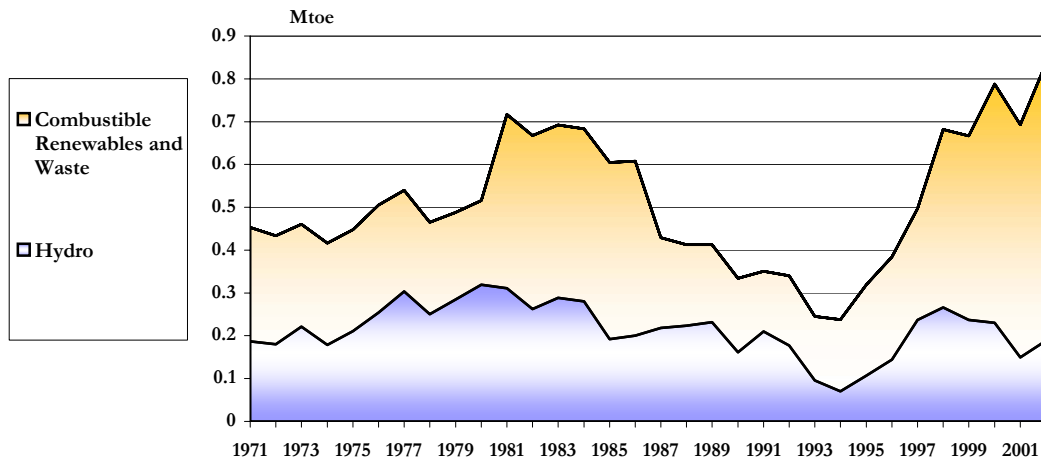
Source: IEA Energy Statistics - Copyright: IEA/OECD
 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

Bulgaria - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Bulgaria - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Chile

Region Latin America

Source: IEA

Renewable Energy Policies and Measures

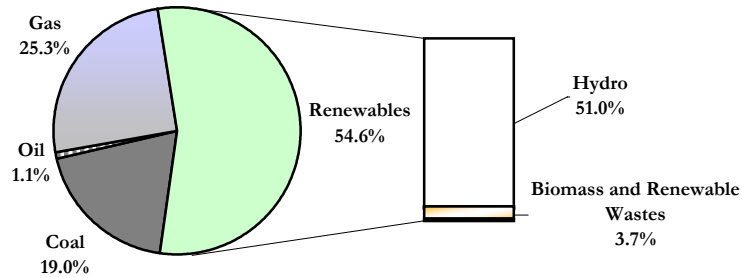
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Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Chile](#)
- [Shares of TPES 2002 - Chile](#)
- [Electricity Generation by Fuel 2002 - Chile](#)

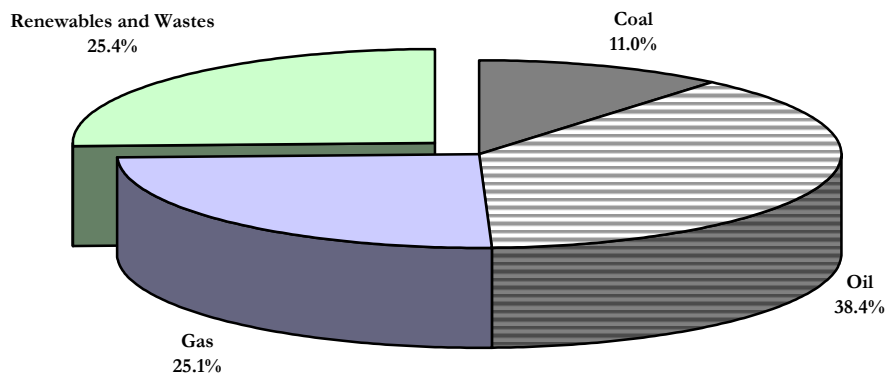
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Chile - Electricity Generation by Fuel 2002



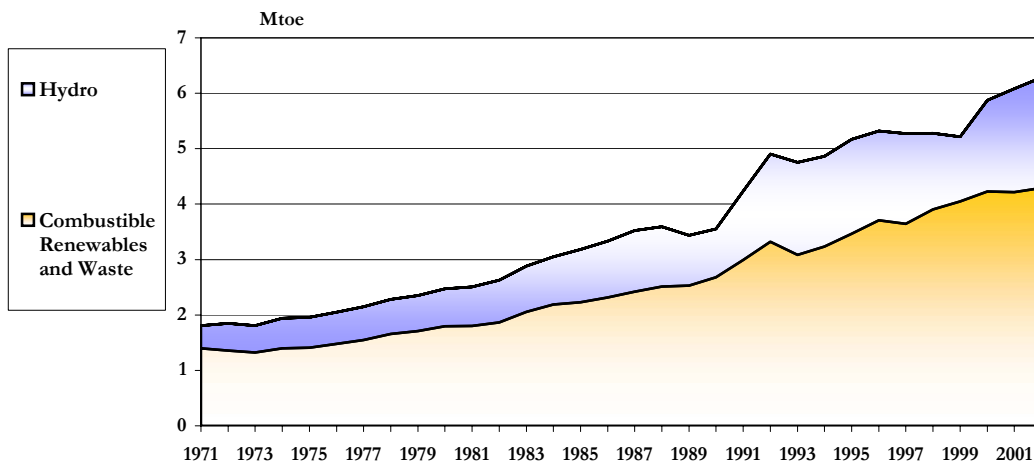
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Chile - Shares of TPES 2002



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Chile - Total Primary Energy Supply from Renewables (Mtoe)



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Colombia

Region Latin America

Source: IEA

Renewable Energy Policies and Measures

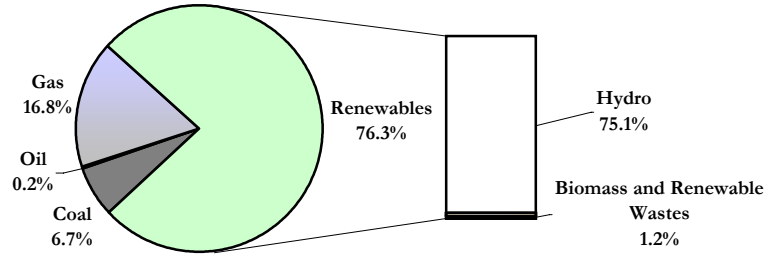
Information currently unavailable.

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- [Total Primary Energy Supply from Renewables \(Mtoe\) - Colombia](#)
- [Shares of TPES 2002 - Colombia](#)
- [Electricity Generation by Fuel 2002 - Colombia](#)

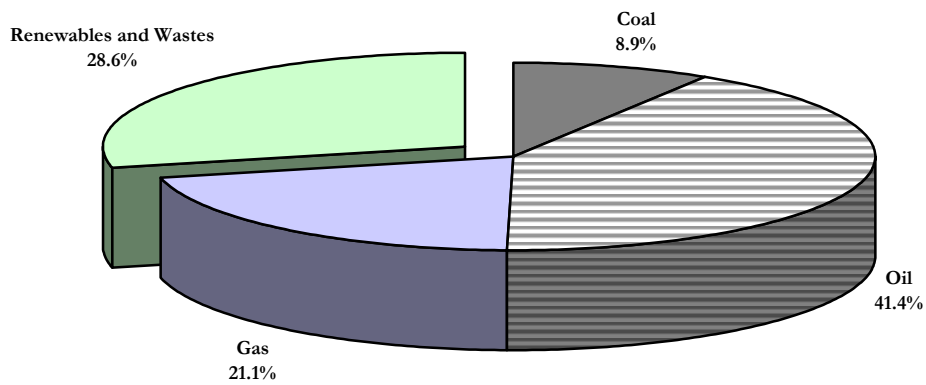
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Colombia - Electricity Generation by Fuel 2002



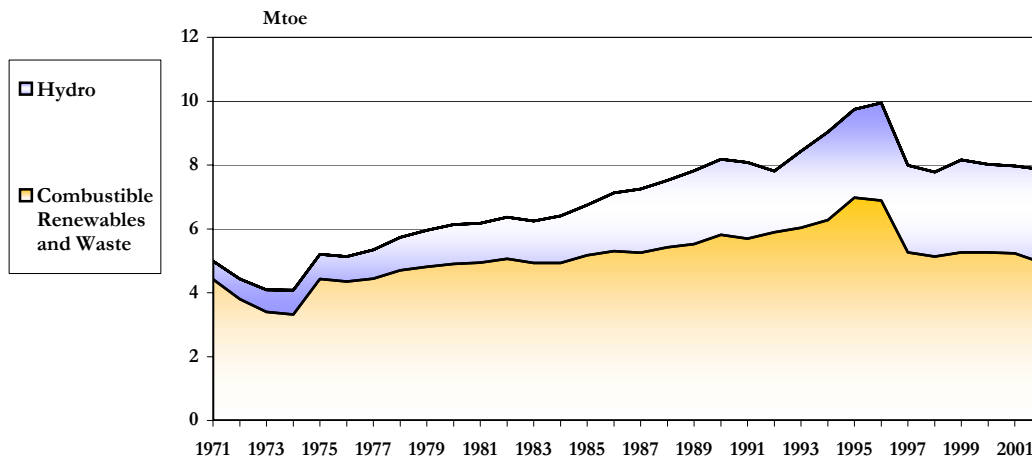
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Colombia - Shares of TPES 2002



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Colombia - Total Primary Energy Supply from Renewables (Mtoe)



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Congo

Region Africa

Source: IEA

Renewable Energy Policies and Measures

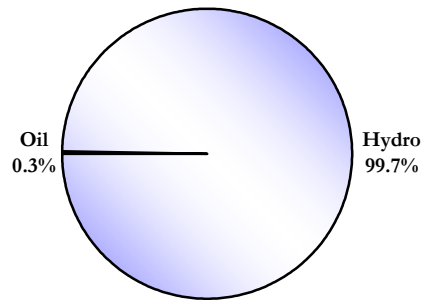
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- [Total Primary Energy Supply from Renewables \(Mtoe\) - Congo](#)
- [Shares of TPES 2002 - Congo](#)
- [Electricity Generation by Fuel 2002 - Congo](#)

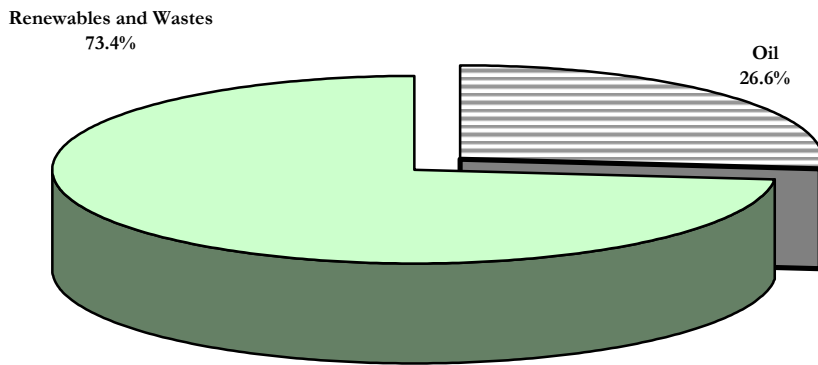
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Congo - Electricity Generation by Fuel 2002



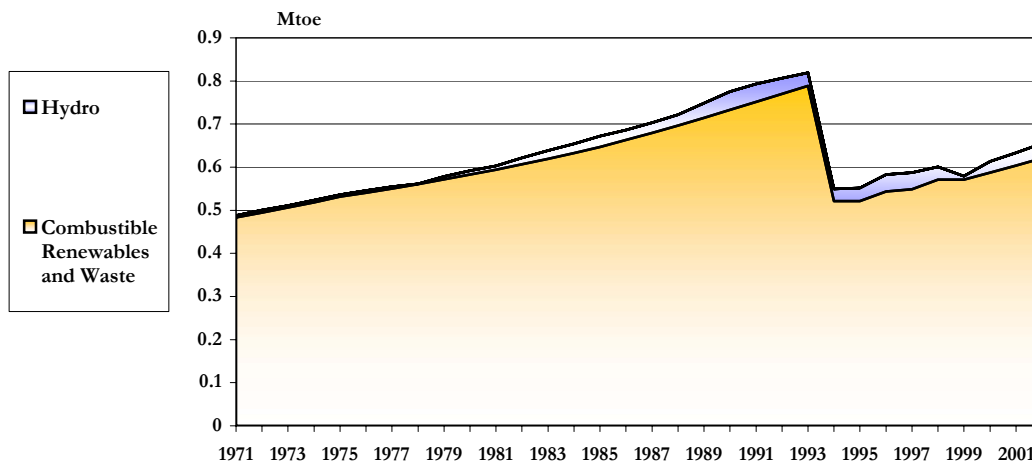
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Congo - Shares of TPES 2002



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Congo - Total Primary Energy Supply from Renewables (Mtoe)



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Cook Islands

Region Aosis - Pacific Ocean
Source: IEA

Renewable Energy Policies and Measures

1. Promote the increased use of appropriate renewable energy technologies, technically and commercially proven, financially and economically viable, and environmentally friendly
2. Promote effective management of grid-connected and stand-alone renewable energy systems
3. Develop local expertise in the installation, operation, management and maintenance of technically and economically proven renewable energy systems
4. Encourage private sector participation in the development and management of rural and remote power systems
5. National Energy Policy: Renewable Energy

Statistical Information on Renewable Energy

Information currently unavailable.

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Promote the increased use of appropriate renewable energy technologies, technically and commercially proven, financially and economically viable, and environmentally friendly

Country	Cook Islands
Effective from	2003
Description	<p>This policy applies three strategies/programmes supported by activities to promote the use of renewable energy technologies:</p> <p>I. Implement a national programme to promote the widespread and sustainable use of proven energy technologies</p> <ul style="list-style-type: none">- Promote the installation of 200 solar water heaters ? by 2013- Install 2 x onshore wind power projects (Southern Group Islands) with a combined capacity of 1.85MW ? by 2013- Install 2 x onshore wind power projects (Northern Group Islands) with a combined capacity of 50kW ? by 2013- Improve existing solar power system in one Northern Group Island ? by 2005 <p>II. Demonstrate the application of renewable energy technologies</p> <ul style="list-style-type: none">- Identify renewable energy project suitable to demonstrate the selected technology ? by 2004- Develop demonstration projects ? by 2013- Provide information in the projects to stakeholders and the public in general ? ongoing <p>III. Develop an environment suitable for the introduction of renewable energy technologies</p> <ul style="list-style-type: none">- Review and revise relevant regulations and acts so as to allow the unrestricted development of renewable energy technologies by 2004
Policy type	<ul style="list-style-type: none">•RD&D•Public Awareness•General Energy Policy
Renewable energy	<ul style="list-style-type: none">•Solar thermal•Solar concentrating power•Solar photovoltaics•Offshore wind•Onshore wind
Contact	<ul style="list-style-type: none">•Energy Division•Power Utilities
Source: IEA	

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Promote effective management of grid-connected and stand-alone renewable energy systems

<i>Country</i>	Cook Islands
<i>Effective from</i>	2003
<i>Description</i>	<p>This policy applies two strategies to achieve effective management of grid-connected and stand-alone renewable energy systems:</p> <p>I. Increase understanding through exposure to renewable energy systems:</p> <ul style="list-style-type: none">- Arrange suitable training attachments in-country and regionally (currently ongoing)- Arrange information transfer through appropriate technical consultancies ? 2003 <p>II. Improved management of renewable energy systems:</p> <ul style="list-style-type: none">- Appropriate policies and regulatory mechanism developed, endorsed and enforced ? by 2004- Training of staff to manage renewable energy systems ? ongoing
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind•Solar photovoltaics•Solar thermal•Solar concentrating power
<i>Contact</i>	<ul style="list-style-type: none">•Energy Division•Public Utilities
Source: IEA	

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Develop local expertise in the installation, operation, management and maintenance of technically and economically proven renewable energy systems

<i>Country</i>	Cook Islands
<i>Effective from</i>	2003
<i>Description</i>	<p>The principle strategy applied by this policy to develop local expertise in the installation, operation, management and maintenance of technically and economically proven renewable energy systems is to increase technical skills in installation, operation, management and maintenance of technically and economically proven renewable energy systems through:</p> <ul style="list-style-type: none">- Identifying training needs to increase skill levels in the installation, operation and management of renewable energy systems- Arranging for participation at suitable regional / international organisations / institutions for training in renewable energy systems.
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind•Solar concentrating power•Solar photovoltaics•Solar thermal
<i>Contact</i>	<ul style="list-style-type: none">•Energy Division•Power Utilities

Source: IEA

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Encourage private sector participation in the development and management of rural and remote power systems

<i>Country</i>	Cook Islands
<i>Effective from</i>	2003
<i>Description</i>	To encourage private sector participation in the development and management of rural and remote power systems, the Energy Division plans to create an environment to facilitate independent development and investment (private sector management) by: II. Reviewing regulatory status with respect to private participation III. Developing options for private participation
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind•Solar concentrating power•Solar photovoltaics•Solar thermal
<i>Contact</i>	<ul style="list-style-type: none">•Energy Division•Power Utilities

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National Energy Policy: Renewable Energy

<i>Country</i>	Cook Islands
<i>Effective from</i>	2003
<i>Description</i>	<p>The goal of the Renewable Energy portion of the 2003 National Energy Policy is to increase the utilisation of renewable energy technologies in the Cook Islands energy sector. The four measures that have been implemented to achieve this objective include:</p> <ol style="list-style-type: none">Promote the increase use of appropriate renewable energy technologies, technically and commercially proven, financially and economically viable, and environmentally friendly.Promote effective management of grid-connected and stand-alone renewable energy systems.Develop local expertise in the installation, operation, management and maintenance of technically and economically proven renewable energy systems.Encourage private sector participation in the development and management of rural and remote power systems.
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind•Solar concentrating power•Solar photovoltaics•Solar thermal
<i>Contact</i>	Energy Division
Source: IEA	

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Cuba

Region Aosis - Caribbean

Source: IEA

Renewable Energy Policies and Measures

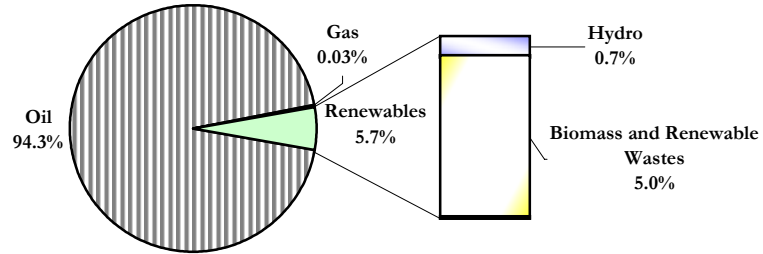
Information currently unavailable.

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Cuba](#)
- [Shares of TPES 2002 - Cuba](#)
- [Electricity Generation by Fuel 2002 - Cuba](#)

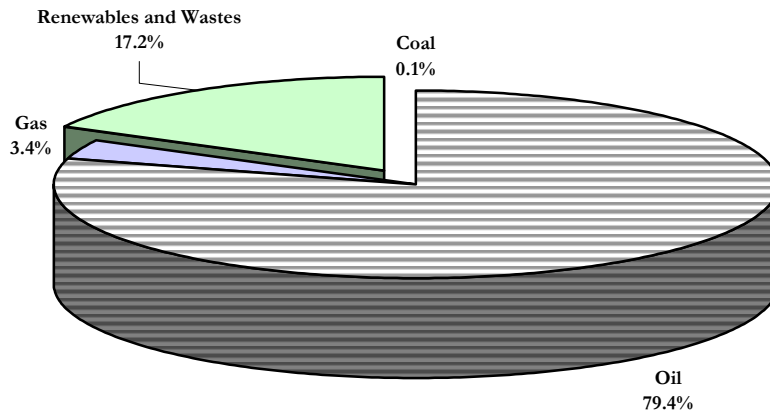
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Cuba - Electricity Generation by Fuel 2002



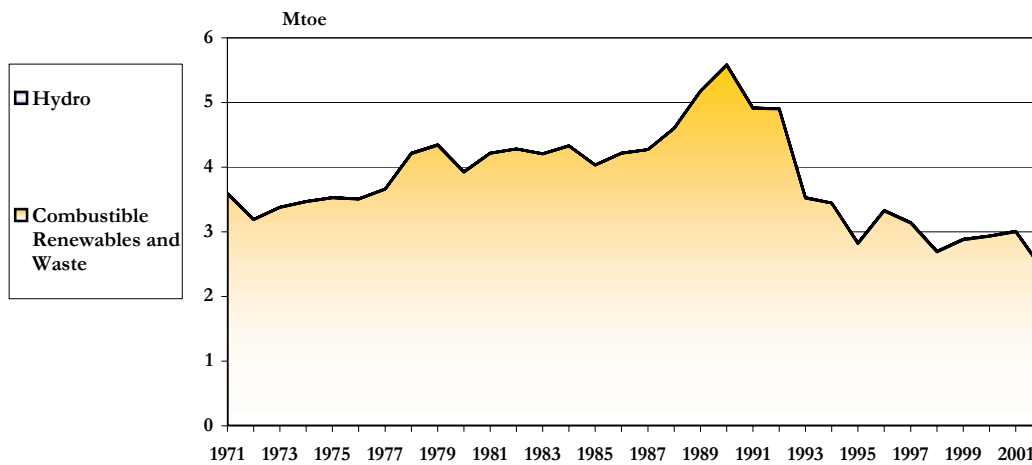
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Cuba - Shares of TPES 2002



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Cuba - Total Primary Energy Supply from Renewables (Mtoe)



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Czech Republic

<i>Region</i>	Europe - EU
<i>Renewable energy target(s)</i>	<ul style="list-style-type: none">•5-6 % of TPES by 2010•8-10% of TPES by 2020•8% of electricity output by 2010

Source: IEA

Renewable Energy Policies and Measures

1. [State Programme to Support Energy Savings and Use of Renewable Energy and Secondary Sources](#)
2. [Energy Management Act](#)
3. [Secondary Legislation on the Methodology for the Purchase of Electricity From Renewables and CHP](#)
4. [National Programme for Economical Energy Management and Use of Renewable and Secondary Energy Resources](#)
5. [New Energy Act](#)
6. [Bill on Promotion of Power and Heat Generation from Renewable Energy Sources](#)
7. [Energy Management Act - Audits](#)
8. [State Energy Policy](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Czech Republic](#)
- [Shares of TPES 2002 - Czech Republic](#)
- [Electricity Generation by Fuel 2002 - Czech Republic](#)

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State Programme to Support Energy Savings and Use of Renewable Energy and Secondary Sources

Country	Czech Republic
Effective from	1991
Description	<p>The State Programme to Support Energy Saving and Use of Renewable and Secondary Sources set up by the Ministry of Industry and Trade in co-operation with other ministries was established in 1991. It is revised each year. The programme for 2000 included energy-saving measures in production, distribution and consumption of energy; wider use of renewable and secondary sources of energy; development of co-generation of heat and electricity; counselling; implementation of low-energy technologies; and educational and promotional activities. The programme is executed by the Czech Energy Agency (CEA) and other ministries. The State Environment Fund is an important participant.</p> <p>Currently it provides the following incentives for renewables: Obligation for distribution companies to purchase electricity and heat generated from renewables based on regulated buy-back tariffs. Exemption from excise taxes for biodiesel fuel (methanol from rape seed). Reduced import duties on renewable energy equipment. Five-year tax relief (income and property) for investment in renewables (small hydropower plants restricted to capacities > 1 MW). Reduced VAT rate (5% instead of 22%) for small facilities (hydropower: 0.1 MW; wind: 0.075 MW; and all solar and biomass units). Exemption from property tax for five years for the conversion of building heating systems from solid fuel to renewable energy. Reduced VAT rate of 5% paid by final consumers of biomass heat, provided that it is a part of district heating system. Direct investment incentives for non-profits, municipalities and individual end-users.</p>
Policy type	<ul style="list-style-type: none">•Excise Tax Exemptions•Consumer Grants / Rebates•Guaranteed Prices / Feed in•Obligations•Property Tax Exemptions•Sales Tax Rebates•Tax Credits
Renewable energy	All renewables
Contact	Czech Energy Agency (CEA)
Source: IEA	

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Energy Management Act

<i>Country</i>	Czech Republic
<i>Effective from</i>	2001
<i>Description</i>	<p>The Energy Management Act (Act No. 406/2000), which entered into force in January 2001, established standards for energy efficiency of heat and electricity production, transmission, distribution and use, energy planning requirements, and energy auditing obligations. It also sets out the obligation to formulate a ? National Energy Policy,? a strategic document with a twenty-year outlook to express the goals of the state in energy management in accordance with economic and social development needs and protection of the environment. It stipulates the preparation of a ? National Programme for Energy Efficiency and Use of Renewable and Waste Energy Sources? . Amendments are expected in 2005.</p> <p>The Act also stipulates mandatory regional energy plans for all fourteen regions and for fourteen towns.</p>
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
Source: IEA	

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Secondary Legislation on the Methodology for the Purchase of Electricity From Renewables and CHP

<i>Country</i>	Czech Republic
<i>Effective from</i>	2001
<i>Description</i>	This Ministerial Decree (No. 252/2001 Coll.) pertains to the purchase of electricity produced from renewable energy sources and combined heat and power (CHP) generation. The decree provides the framework for the administration of power and pricing and tariffs for electricity from renewable and CHP sources.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Industry and Trade
<i>URL</i>	www.eru.cz
Source: IEA	

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National Programme for Economical Energy Management and Use of Renewable and Secondary Energy Resources

<i>Country</i>	Czech Republic
<i>Effective from</i>	2001
<i>Description</i>	The ? National Programme? defines objectives for energy conservation and the use of renewable and secondary energy sources. It complies with economic and social requirements according to the principle of sustainable development and the protection of the environment, and is based on national energy and environmental policies. The most important objectives include a target for renewable energies of 2.9% of energy consumption by 2005, and a reduction in energy intensity. The priority is to promote renewable energy sources and energy-saving projects. Instruments to achieve targets include subsidies from the state budget. The next programme is being prepared and will be valid for 2006 to 2009.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>Funding</i>	CZK 4.2 Billion / year
<i>Contact</i>	Ministry of Industry and Trade, Czech Energy Agency, Ministry of Environment, State Environmental Fund
Source: IEA	

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New Energy Act

<i>Country</i>	Czech Republic
<i>Effective from</i>	2001
<i>Description</i>	<p>The Energy Act, which came into force in January 2001, sets out conditions for business activities and state administration and regulations in energy subsectors, such as electricity, gas and heat, as well as the rights and obligations of individuals. It defines a framework for the liberalisation of the electricity and gas markets and supports the use of renewable energy sources and CHP. It defines conditions for the obligatory purchase of electricity and heat produced from renewables and from CHP. The Energy Act also includes the creation of the Energy Regulation Office.</p> <p>Since 2003 electricity consumers with an annual consumption of more than 9 GWh have the right to choose their supplier. This threshold will gradually be lowered. Full liberalisation of the market is scheduled for 2006. Access to the networks by generators was liberalised in 2003. Generators of electricity from CHP and from renewable sources have the right to sell their electricity to the local distributor. The introduction of competition to the natural gas market will start in 2005. Substantial amendments of the Energy Act are expected in 2004.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Obligations•Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Industry and Trade, Energy Regulatory Office
<i>URL</i>	www.mpo.cz
Source: IEA	

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Bill on Promotion of Power and Heat Generation from Renewable Energy Sources

<i>Country</i>	Czech Republic
<i>Effective from</i>	2003
<i>Description</i>	<p>In November 2003, the Czech Government approved the Act on the Promotion for Electricity and Heat Energy Produced from Renewable Energy Sources, which is currently in the Parliamentary approval process. The Act includes an indicative target of an 8% share from renewables in electricity consumption by 2010. Support for renewables is based on higher and differentiated feed-in tariffs paid by distributors and CEPS (transmission company) for electricity and heat generated from renewables. It will continue until the full opening of the Czech electricity market in 2006.</p> <p>Starting in 2006, only small producers with capacity less than 200 kW and photovoltaic installations will have the right to benefit from feed-in tariffs and the obligatory purchase of their electricity. Electricity from other renewable sources will be sold at market price, but will have the right to sell the green certificates. Selected electricity suppliers will be given a yearly quota for purchases of green certificates with regulated prices set by the Energy Regulation Office (ERO). ERO will also set differentiated prices for the certificates according to the type of renewable used for generation. Suppliers who fail to meet the quota from their own purchases can buy certificates on the open market or face penalties which are equal to three times the amount of the yearly unfulfilled quota. The draft of the new law guarantees that after the law comes into effect, all investors in renewables will recover their initial costs and make a basic profit within fifteen years. This policy is expected to be promulgated in mid-2004.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Obligations•Tradable Certificates•Net Metering
<i>Renewable energy</i>	All renewables
<i>Contact</i>	<ul style="list-style-type: none">•Ministry of Environment•Energy Regulatory Office

Source: IEA

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Energy Management Act - Audits

<i>Country</i>	Czech Republic
<i>Effective from</i>	2001
<i>Description</i>	The Energy Management Act aims to introduce obligatory energy audits in buildings and production sites. The secondary legislation on audits is more specifically the Decree of the Ministry of Industry and Trade N°. 213/2001/Sb., which contains details related to energy auditing. All private facilities with an annual energy consumption of 35 TJ or more are obliged to hire a state-approved auditor to prepare the facility's energy audit every eight years. The same holds for public facilities with an annual energy consumption of 1.5 TJ per year or more.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables

Source: IEA

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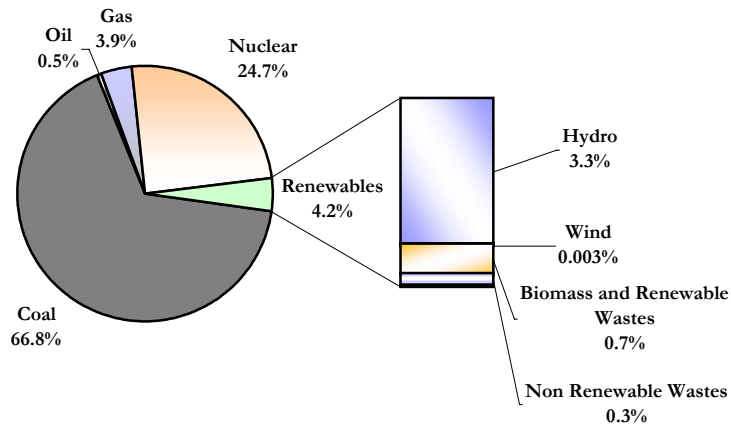
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State Energy Policy

<i>Country</i>	Czech Republic
<i>Effective from</i>	2004
<i>Description</i>	The new State Energy Policy approved by the Government in March 2004 has as one of its highest priorities the increased use of renewables and it sets measures to promote this aim. The State Energy Policy set targets of 15-16% contribution to TPES from renewables sources to be achieved by 2030 and 17% for the share of renewables in electricity consumption. The Policy envisions that biomass will play the most important role in the growth of renewables. It contains incentives and measures to be used for the promotion of renewables as described in the legal and policy acts above.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
Source: IEA	

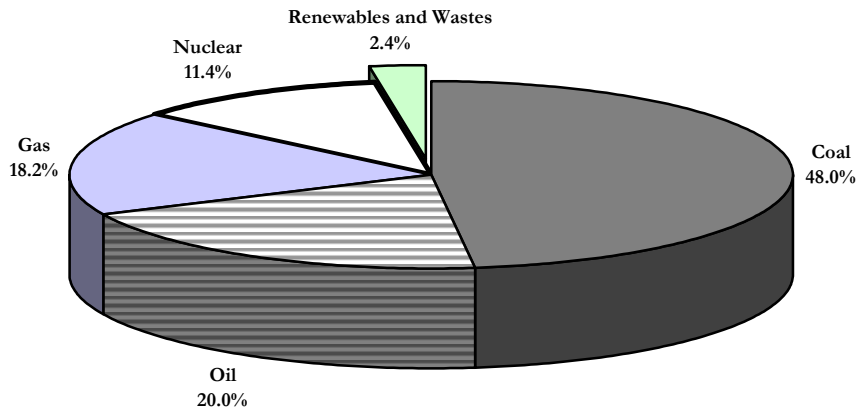
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Czech Republic - Electricity Generation by Fuel 2002



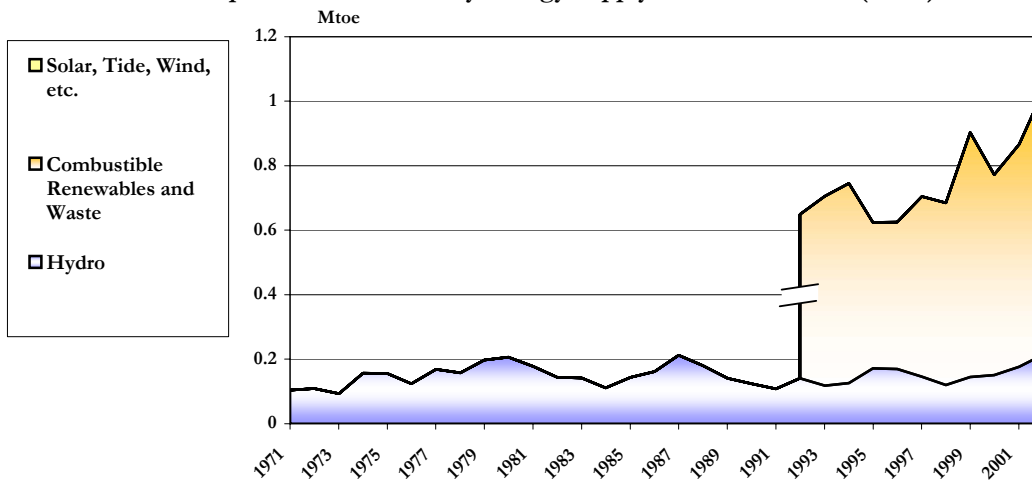
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Czech Republic - Shares of TPES 2002



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Czech Republic - Total Primary Energy Supply from Renewables (Mtoe)



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Democratic Republic of Congo

Region Africa

Source: IEA

Renewable Energy Policies and Measures

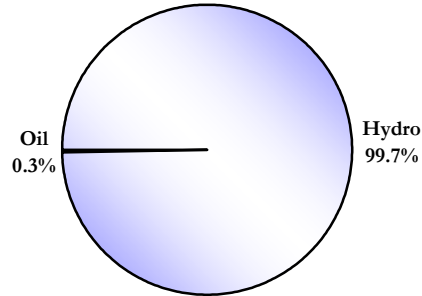
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Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Democratic Republic of Congo](#)
- [Shares of TPES 2002 - Democratic Republic of Congo](#)
- [Electricity Generation by Fuel 2002 - Democratic Republic of Congo](#)

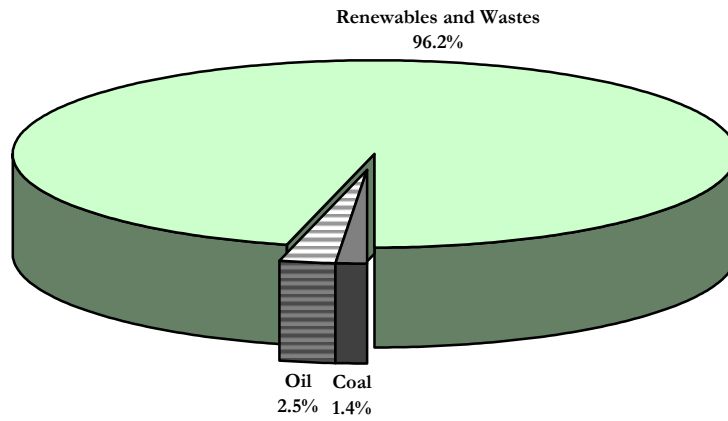
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Democratic Republic of Congo - Electricity Generation by Fuel 2002



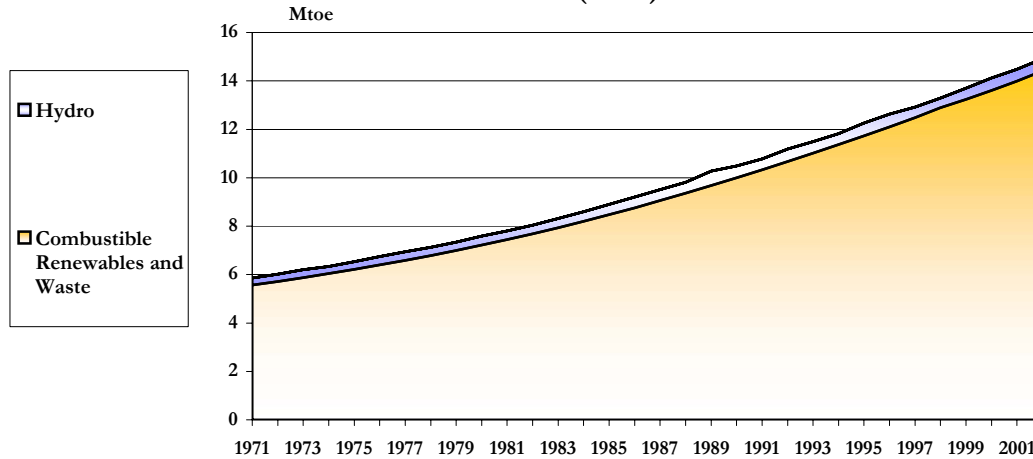
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Democratic Republic of Congo - Shares of TPES 2002



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Democratic Republic of Congo - Total Primary Energy Supply from Renewables (Mtoe)



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Denmark

Region Europe - EU
Renewable energy target(s) 29% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [The Biomass Agreement](#)
2. [The Energy Research Programme \(ERP\)](#)
3. [Wind Energy Co-operative Tax Incentive](#)
4. [Net Metering for Small-scale PV](#)
5. [National Strategy for Sustainable Development](#)
6. [Heat Supply Act](#)
7. [Energy Taxes](#)
8. [SOL-1 000 Project](#)
9. [National RD&D Strategies for Renewable Energy Technologies](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Denmark](#)
- [Shares of TPES 2002 - Denmark](#)
- [Electricity Generation by Fuel 2002 - Denmark](#)

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The Biomass Agreement

Country	Denmark
Effective from	1993
Description	<p>In 1993, the government set an objective to increase biomass use from 50 PJ to 75 PJ by 2000 (10% of total fuel consumption) and to establish two to three large biomass plants before 2003. The two main electricity suppliers (Elsam and Elkraft) were to incorporate the use of 1.2 million tonnes of straw and 0.2 million tonnes of wood in large-scale power plants. These objectives were not met. Modifications to the Biomass Agreement in 1997 and 2000 provided more flexibility in the choice of biomass procured. The targets were maintained but the time for fulfilment was prolonged until 2005.</p> <p>With the modification in 2000, the costs to the utilities for fulfilment of the Biomass Agreement were transferred to electricity consumers as an extra charge.</p> <p>A feed-in tariff provides a ten-year guarantee of DKK 0.30/kWh settlement price and an additional DKK 0.10/kWh until the green certificates market is established and green certificates replace this portion.</p>
Policy type	<ul style="list-style-type: none">•Obligations•Guaranteed Prices / Feed in
Renewable energy	Bioenergy
URL	www.ecd.dk/UK-dk-resleg.htm
Source: IEA	

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The Energy Research Programme (ERP)

<i>Country</i>	Denmark
<i>Effective from</i>	1976
<i>Description</i>	The Energy Research Programme supports the implementation of Danish energy policy. It supports energy projects with strategic/practical perspectives over a two- to three-year time frame. Areas of focus include: oil and natural gas, environmentally benign heat and power production, wind, buildings and solar energy, energy and society, and energy efficiency in products and industrial processes. Financial support of up to 100% is available, though the average support level is about 50% of eligible costs.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Funding</i>	17,4 million € in 1999

Source: IEA

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Wind Energy Co-operative Tax Incentive

<i>Country</i>	Denmark
<i>Effective from</i>	1997
<i>Description</i>	Under this legislation, individuals who participate in wind energy co-operatives (Bürgerwind) are exempt from tax for the first € 400 per year of income and the remainder is taxed at 60% of regular tax rate.
<i>Policy type</i>	Tax Credits
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind

Source: IEA

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Net Metering for Small-scale PV

<i>Country</i>	Denmark
<i>Effective from</i>	1999-2003, 2003
<i>Description</i>	Under this programme, self-generated private electricity is purchased at the same price as the utility company sells its standard electricity. This effectively allows the consumer to run the meter backwards when generating more electricity than is used. No payment for net production per year.
<i>Policy type</i>	Net Metering
<i>Renewable energy</i>	Solar photovoltaics

Source: IEA

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National Strategy for Sustainable Development

<i>Country</i>	Denmark
<i>Effective from</i>	2002
<i>Description</i>	The Danish National Strategy for Sustainable Development aims to establish a framework for societal development that secures economic and social development along with a high level of environmental protection. It takes into account that sustainable development is a common international goal and that Denmark has a strong obligation to promote this development at the international level. In 2002, the Danish government presented a set of indicators coupled with the sustainable development strategy.
<i>Policy type</i>	Public Awareness
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Danish Ministry of Environment and Energy
<i>URL</i>	www.mst.dk/news/08030000.htm

Source: IEA

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Heat Supply Act

<i>Country</i>	Denmark
<i>Effective from</i>	1988
<i>Description</i>	Measures first introduced in the 1988 Heat Supply Act encourage district heating using renewables by prohibiting installation of electric heating in specified residential areas. The prohibition is still in force.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables

Source: IEA

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Energy Taxes

<i>Country</i>	Denmark
<i>Description</i>	<p>Taxation of energy products has a long history in Denmark, dating back to the first tax on petrol introduced in 1917. As of 1980, taxation of a large number of products through the economy was motivated in part by environmental considerations and to save resources, especially energy. Energy taxes comprise taxes and duties on carbon dioxide, sulphur, electricity, natural gas, petrol and specific petroleum products.</p> <p>In 1991, energy taxes were reformed into an energy and carbon tax to reflect Denmark's environmental concerns. A large share of the tax revenues was used for energy efficiency measures and since the tax system came into effect in 1992 it has been expanded. Denmark embarked on a 'green' tax reform to shift the tax burden away from income and towards resource use. This system was put into place between 1994 and 1998. Energy taxes were raised progressively, particularly on coal and electricity consumption, leading to an average increase in taxation on heating and power of 30% from 1994 to 1998. The main effect was that households paid lower income taxes and higher environmental taxes.</p> <p>Based on the Green Tax Package 1995, another reform of the tax system was undertaken between 1996 and 2000 which aimed to increase energy conservation in businesses and industry. The main features were higher CO2 taxes, introduction of a substantial tax on natural gas, differentiation of the energy and carbon taxes according to energy use and phase-in of a sulphur tax. This tax structure has remained, but the tax rates have increased.</p> <p>Tax Rates in 2002: Energy tax: about € 6.8/GJ. Standard CO2 rate: € 13.3/tonne. Sulphur tax: € 2.66/kg of sulphur or € 1.33/kg of SO2.</p> <p>Taxation of electricity is calculated on the basis of the fuel used in production.</p> <p>A large part of the additional revenues from the Green Tax Package are transferred back to companies through reduced taxation on labour, special subsidies for SMEs and subsidies for energy efficiency measures. The CO2 tax is differentiated according to two principles: the process for which the energy is used and whether or not the company has entered into a voluntary agreement to apply energy efficiency measures. The difference between the tax rate with and without voluntary agreements grew significantly between 1996 and 2001.</p> <p>The largest share of tax revenue transfers occurs through reduced taxation on labour. A smaller share is redirected to the industry and service sectors to provide subsidies for energy efficiency measures. About DKK 1.8 billion (€ 242 million) was set aside for these subsidies for 1996-2000. The Danish Energy Agency (now the Danish Energy Authority) established a list of 40 standard solutions for energy efficiency improvements and determined which projects qualify. Eligible projects must increase energy efficiency, reduce CO2 or SO2 emissions or be of a developmental character. Companies can also suggest individual solutions. Applications for support rose from 2 800 in 1996 to 7 000 in 2000.</p> <p>In an evaluation carried out in 1999, the government estimated that the Green Tax Package 1995 resulted in a net decrease of the overall tax burden by DKK 335 million and that CO2 emissions from industry in 2005 would be reduced by 3.8%, corresponding to 2.3 million tonnes. Half of this is due to the taxes and the rest to the subsidy and voluntary agreement schemes.</p> <p>According to a parliamentary decision (Whitsun package) in 1998, energy taxes continued to rise after the phase-in period of the Green Tax Package 1995. For example, households' energy taxes on stationary fuel use rose by 15% to 25% between 1998 and 2000.</p> <p>In 2002, the new government established a general freeze on all taxes. This is a freeze in nominal terms and will therefore lead to reductions in CO2 and energy taxes in real terms.</p> <p>In 2003 the Ministry of Taxation launched an overhaul to reduce the complexity of the Danish tax system. A group has been established with a view to reduce administrative burdens and to improve transparency in relation to energy, CO2 and sulphur taxes. A proposal for simplification is expected in early 2004.</p>
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	Offshore wind
<i>Funding</i>	1996-2000 DKK 1.8 billion (€ 242 Million)
<i>Contact</i>	Danish Energy Authority
<i>Source: IEA</i>	

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SOL-1 000 Project

<i>Country</i>	Denmark
<i>Effective from</i>	2001
<i>Description</i>	The SOL-1 000 is a successor demonstration project to SOL-300 with an objective of 1 000 new PV roof-top system installations. An important element is the development of solar architecture and building integrated systems.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	Solar photovoltaics

Source: IEA

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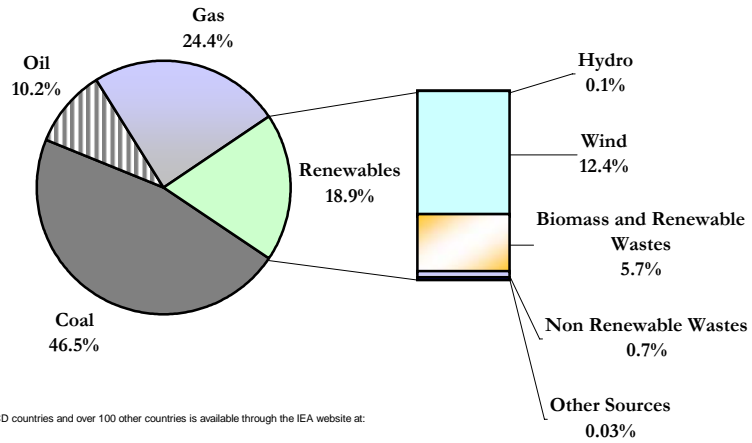
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National RD&D Strategies for Renewable Energy Technologies

<i>Country</i>	Denmark
<i>Effective from</i>	2003
<i>Description</i>	The Danish Energy Authority, in collaboration with the two main utilities (Public Service Obligation ? funded) has elaborated RD&D strategies for fuel cells, biomass, wind energy and photovoltaics. Strategies for bio-fuels, wave energy, hydrogen and the interplay of different renewable energy sources in integrated systems are planned to be developed.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Danish Energy Authority
Source: IEA	

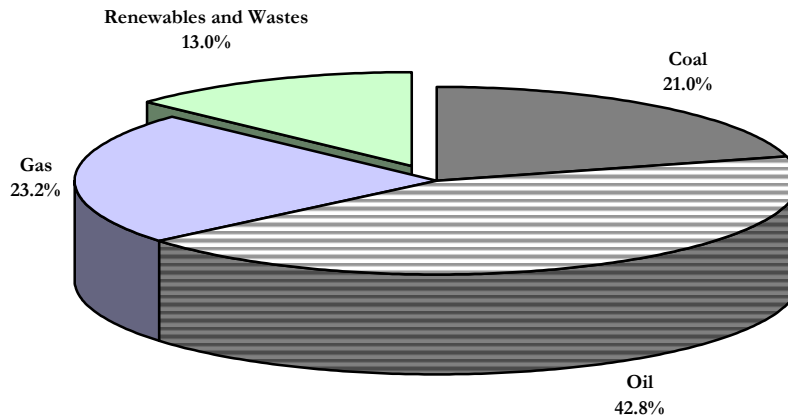
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Denmark - Electricity Generation by Fuel 2002



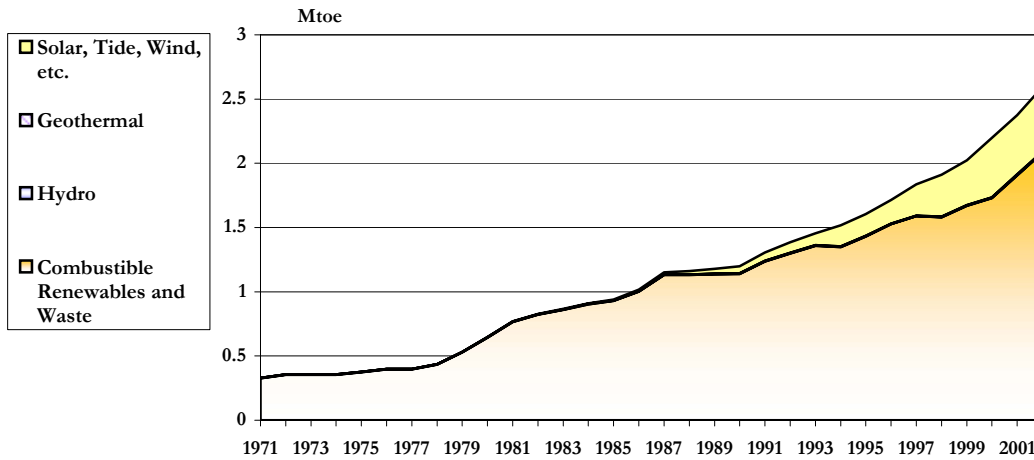
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Denmark - Shares of TPES 2002



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Denmark - Total Primary Energy Supply from Renewables (Mtoe)



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Estonia

Region Europe - EU
Renewable energy target(s) 5.1% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

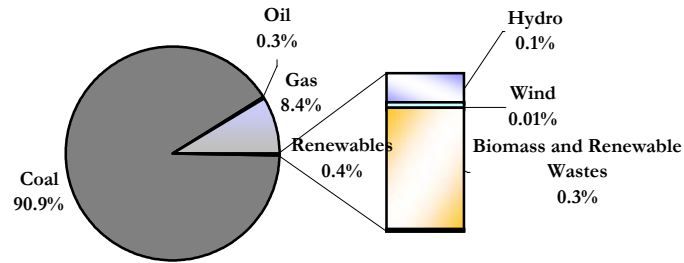
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- [Shares of TPES 2002 - Estonia](#)
- [Electricity Generation by Fuel 2002 - Estonia](#)

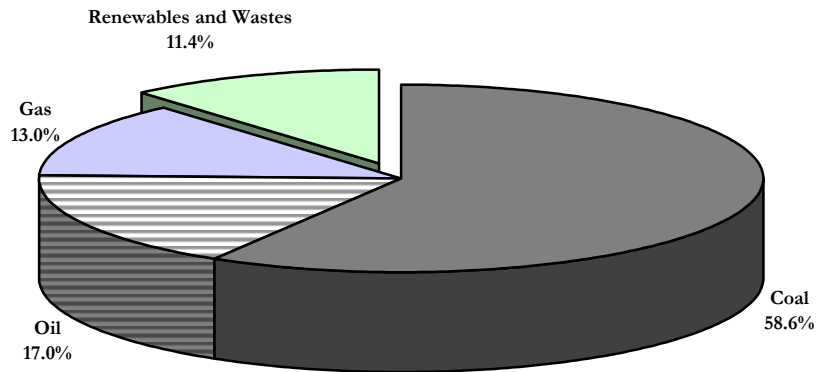
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Estonia - Electricity Generation by Fuel 2002



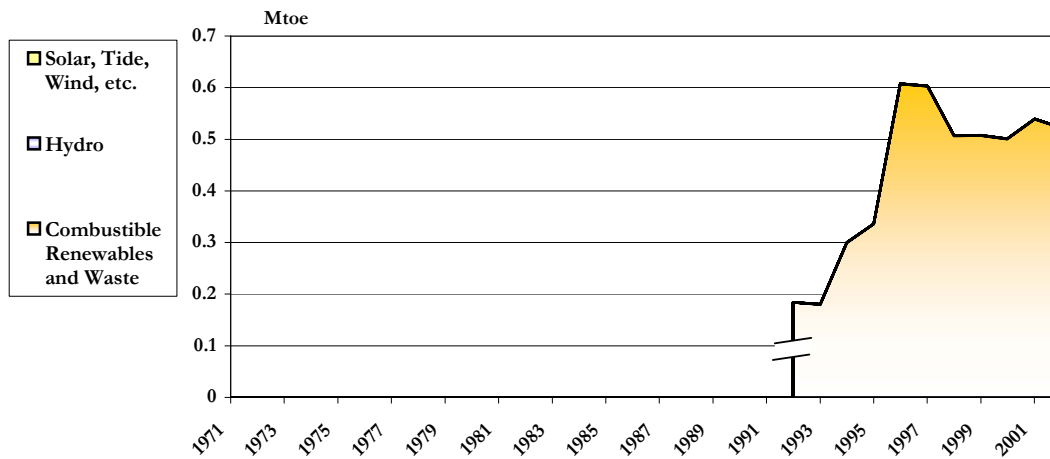
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Estonia - Shares of TPES 2002



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Estonia - Total Primary Energy Supply from Renewables (Mtoe)



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Finland

Region Europe - EU
Renewable energy target(s) 35% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Wood Energy Technology Programme](#)
2. [Action Plan for Renewable Energy Sources](#)
3. [National Climate Strategy](#)
4. [Energy Tax Overhaul](#)
5. [Bioenergy Promotion Programme](#)
6. [Wind Power Programme](#)
7. [Finnish Energy Strategy](#)
8. [Taxation on Electricity at the Distribution Level \(amendments 1/98 and 9/98\)](#)
9. [Small-scale Production and Use of Wood fuels - RD&D Programme](#)
10. [Streams - Recycling Technologies and Waste Management](#)
11. [Densy - RD&D Programme](#)
12. [ClimBus: Business Opportunities in Mitigating Climate Change](#)

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- [Shares of TPES 2002 - Finland](#)
- [Electricity Generation by Fuel 2002 - Finland](#)

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Wood Energy Technology Programme

<i>Country</i>	Finland
<i>Effective from</i>	1999
<i>Description</i>	<p>The National Wood Energy Technology Programme focused on developing the production technology and improving the quality of forest chips from logging residues and small-sized trees.</p> <p>In 1998, energy use of forest chips in Finland amounted to 0.5 million solid-m³. The target of the programme was to reach 2.5 million m³ by 2003. Thus, the annual use of forest chips was to increase five-fold in five years. The target was to be achieved primarily by increasing the production of chips from logging residues from regeneration areas because of their better cost competitiveness. In addition, technology was also developed to promote the energy use of small-sized trees from early thinning because of the great silvicultural benefits involved.</p> <p>Increasing the use of forest chips required further reduction of costs. The cost of chips made from logging residues was competitive against peat and fossil fuels in favourable conditions, but large-scale use presupposed recovery of forest fuels from more difficult stand conditions and over longer distances as well.</p> <p>The programme also aimed to develop quality control and storage of wood fuels. The quality of chips can be seen as a cost factor, since the energy obtained from the chips, emissions and reliability of delivery all depend upon fuel properties. Quality improvement was not confined solely to forest chips. It is just as important for the process residues from the forest industry. For this reason the scope of the programme also included bark, sawdust and other solid wood residues from the forest industry that are suitable for fuel.</p>
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	Bioenergy
<i>Funding</i>	€ 42 m (FIM 250 m) for 1999-2003
<i>Contact</i>	TEKES (National Technology Agency)
<i>URL</i>	www.tekes.fi

Source: IEA

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Action Plan for Renewable Energy Sources

<i>Country</i>	Finland
<i>Effective from</i>	1999
<i>Description</i>	<p>This programme aims to increase the market competitiveness of renewable energy sources as part of the National Climate Strategy of 2001. The target is to increase the use of renewable energy by 50% from the 1995 level (20% of TPES) by 2010. Grants for renewable energy applications account for FIM 200 million (€ 33 million) and subsidies in energy taxation account for FIM 300 million (€ 50 million) annually. The cornerstone of the programme is to enhance use of biomass, which accounts for 90% of the target. Installations using heat pumps cover 4% of the planned extra capacity and both wind farms and hydropower plants each account for 3% of the target. It is expected that solar cell technology will provide 0.5% of the future increase.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Obligations•Capital Grants•Investment Tax Credits
<i>Renewable energy</i>	All renewables
<i>Funding</i>	FIM 200 million (€ 33 million) for grants annually FIM 300 million (€ 50 million) for subsidies in energy taxation annually
<i>Contact</i>	Finnish Ministry of Trade and Industry
<i>URL</i>	www.ktm.fi
Source: IEA	

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National Climate Strategy

<i>Country</i>	Finland
<i>Effective from</i>	2001
<i>Description</i>	<p>Finland's first national climate strategy was published in 2001. According to the business-as-usual scenario of the strategy, Finland's GHG emissions in 2010 would be 14 Mt CO₂ above the 1990 Kyoto target (+0% increase on 1990 levels). The strategy contains the policies and measures to reach the Kyoto target. Increases in energy conservation and the use of renewable energy sources are expected to account for 50% of the emissions reductions by 2010. Programmes for promoting these measures are already in place. The other half of reductions would come from measures related to electricity production. The strategy includes two options: switching from coal to gas or increasing the capacity of nuclear power.</p> <p>The strategy will be revised in 2004.</p>
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>Funding</i>	Annual average expenditures 2000-2010: 130 mill. 1999 €, total expenditures 2000-2010: 1 425 mill. 1999 €
<i>Contact</i>	Ministry of Trade and Industry
<i>URL</i>	www.ktm.fi
Source: IEA	

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Energy Tax Overhaul

<i>Country</i>	Finland
<i>Effective from</i>	2002
<i>Description</i>	Parliament decided to raise all energy taxes by approximately 5% as of 1 January 2003. In keeping with the National Climate Strategy, the scope of energy tax subsidies in electricity generation was expanded to include electricity produced from recycled fuels and biogas. The subsidy for electricity produced from logging chips was also increased (€ 0.069 per kWh). The calculation of taxable fuels in combined heat and power production was changed to provide an additional incentive for CHP.
<i>Policy type</i>	Production Tax Credits
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Trade and Industry
<i>URL</i>	www.ktm.fi
Source: IEA	

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Bioenergy Promotion Programme

<i>Country</i>	Finland
<i>Effective from</i>	1994
<i>Description</i>	This programme aims to increase the use of bioenergy by 25% between 1992 and 2005.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Bioenergy

Source: IEA

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Wind Power Programme

<i>Country</i>	Finland
<i>Effective from</i>	1993
<i>Description</i>	This programme aims to construct 100 MW of wind power capacity in Finland before 2005.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind

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Finnish Energy Strategy

<i>Country</i>	Finland
<i>Effective from</i>	1997
<i>Description</i>	The energy strategy laid out the following role for renewable energy: Guiding energy production structure towards an energy balance with a lower carbon content. Promotion of the use of bioenergy and other indigenous energy. Maintaining a high standard of energy technology. Ensuring the security of supply in the energy sector.
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables

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Taxation on Electricity at the Distribution Level (amendments 1/98 and 9/98)

<i>Country</i>	Finland
<i>Effective from</i>	1997
<i>Description</i>	The revised tax replaced the 1994 combined CO2 and energy tax. It is levied at the distribution level with a refund granted to electricity from renewable sources (€ 0.042 per kWh for biomass and small hydro, and € 0.069 per kWh for wind).
<i>Policy type</i>	<ul style="list-style-type: none">•Fossil Fuel Taxes•Production Tax Credits
<i>Renewable energy</i>	All renewables

Source: IEA

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Small-scale Production and Use of Wood fuels - RD&D Programme

<i>Country</i>	Finland
<i>Effective from</i>	2002
<i>Description</i>	<p>The Finnish Wood Energy Technology Programme is paying increased attention to the small-scale production and use of wood fuels. An important aim is to develop solutions which are economically competitive, reliable and acceptable in terms of emissions for small-scale (usually under 1 MW) wood fuel production, storage, processing, distribution and heat production.</p> <p>Companies' RD&D needs are surveyed to foster research and product development activities and to develop national and international business operations. Problems and development needs are studied and companies are encouraged to implement product development projects, which can be carried out by a single company or jointly by company integrates. Product development projects can be the companies' own projects or joint projects with other companies in their field. The total budget for 2002-2004 is about € 5.2 million, Tekes's share amounts to € 2.9 million.</p>
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	Bioenergy
<i>Funding</i>	2002-2004 € 5.2 million
<i>Contact</i>	National Technology Agency
Source: IEA	

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Streams - Recycling Technologies and Waste Management

<i>Country</i>	Finland
<i>Effective from</i>	2001
<i>Description</i>	<p>STREAMS is a technology programme initiated by Tekes to develop new, internationally competitive technology and business opportunities related to municipal waste streams. STREAMS is partly financed by Tekes and partly by the participating enterprises. Several different technology areas are part of the STREAMS programme, including biotechnology, information technology, material technology as well as technologies for monitoring and analysing. In addition to pure technology projects, STREAMS will cover the development of new service and consulting concepts and products.</p> <p>The sorting and reuse of different waste types, such as paper, metals, glass, plastics and textiles are an essential part of the programme. The total value of the programme is planned to amount to € 26 million, Tekes' share is approximately half.</p>
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	Waste (organic)
<i>Funding</i>	€ 26 million
<i>Contact</i>	National Technology Agency

Source: IEA

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Densy - RD&D Programme

<i>Country</i>	Finland
<i>Effective from</i>	2003
<i>Description</i>	<p>DENSY is the Finnish national technology programme for distributed energy systems. It comprises local small-sized units for producing power, heat or cooling. A wide selection of fuels and production technology are covered. The total budget is estimated to exceed € 50 million.</p> <p>The programme focuses on system integration and commercial services of distributed generation of power, heating and cooling. The focal areas of the programme are: system solutions, integration, industrial production, business concepts, using ICT-technologies and demonstrations.</p> <p>The main objectives of the programme are to assist Finnish industry, especially SMEs in developing products and services for a global market to make Finnish technology known, to build a world-class innovation environment and to produce commercial products for several niche-markets by 2010.</p>
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Funding</i>	> € 50 million
Source: IEA	

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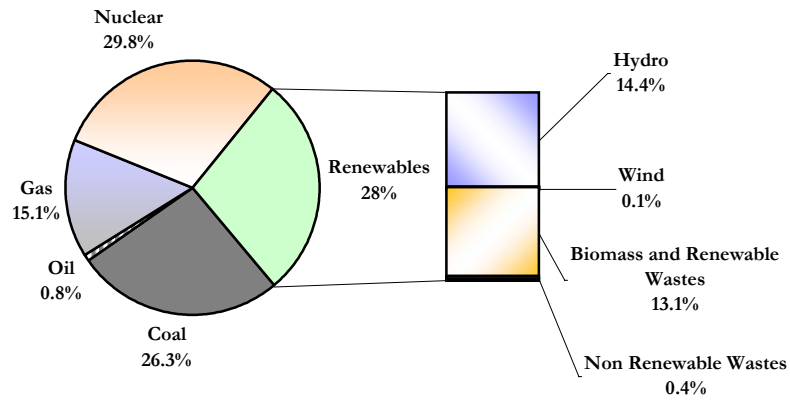
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Energy Investment Aid

<i>Country</i>	Finland
<i>Effective from</i>	1990s
<i>Description</i>	<p>Energy aid is discretionary state aid, intended to develop less CO2-intensive energy production and consumption. It can be granted for energy savings measures, the take-up of new technology or to increase the security and versatility of energy supply. The aid focuses on new technologies and is used to reduce risks associated with them. Aid can be granted within the limits of the parliamentary authorisation included in the state budget.</p> <p>Only enterprises and corporations are eligible for aid. Subsidies are up to a maximum of 40% of investment costs. Projects involving innovative technology have priority.</p> <p>In 1998, investment aid for renewable technologies was FIM 110 million (€ 17 million). The 1999 Action Plan for Renewable Energy Sources planned for FIM 200 million (€ 33 million) per year of government investment aid.</p> <p>Public funding is also made available to renewable energy plants through regional and local incentives.</p> <p>A new financial instrument is to award a €15-30 million demonstration grant every three years for a project using innovative technologies. This is to allow projects to adapt new large-scale technologies to Finnish conditions and to commercialise them.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•RD&D
<i>Renewable energy</i>	All renewables
Source: IEA	

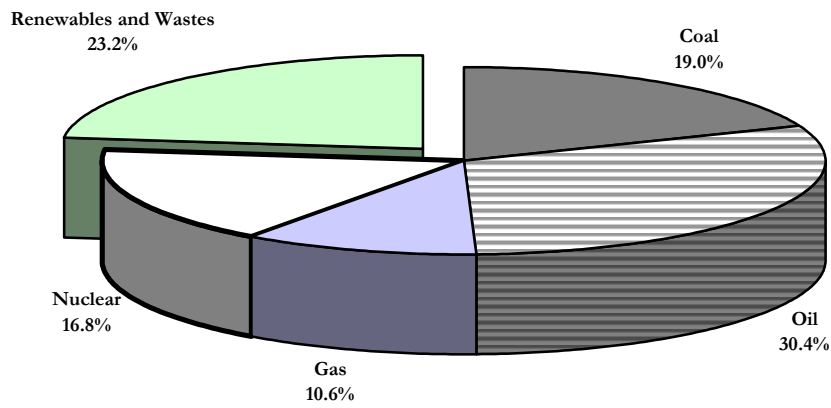
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Finland - Electricity Generation by Fuel 2002



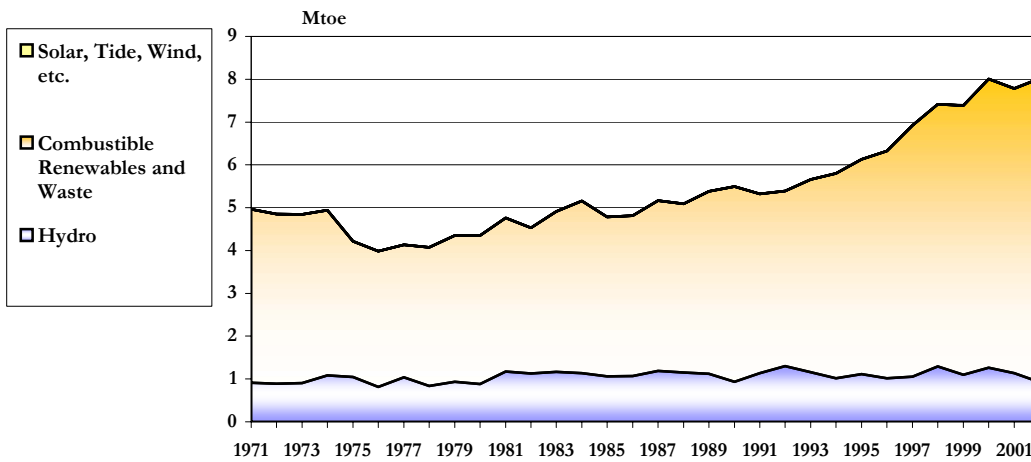
Source: IEA Energy Statistics - Copyright: IEA/OECD
 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

Finland - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Finland - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>



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France

Region	Europe - EU
Renewable energy target(s)	21% of electricity output by 2010
Source:	IEA

Renewable Energy Policies and Measures

1. Crediting System in Favour of Energy Management - FOGIME
2. Renewable Energy Feed-in Tariffs (I)
3. Biogas Program
4. Renewable Energy Purchasing Conditions
5. Wood Energy Programme
6. Biogas Agreement
7. Extension of Tax Credit in Favour of Renewable Energy Equipment in New Housing
8. Extension of Tax Credit for Large Collective Equipment, Renewable Energy Equipment, Thermal Insulation and Heating Regulation Equipment
9. Chauffe-eau Solaires dans les DOM
10. Biofuel Production Programme
11. Electricity Law 2000
12. Contrat de Plan Etat-ADEME
13. Fonds d' Intervention pour l' Environnement et la Maitrise de l' Energie (FIDEME)
14. Renewable Energy Development in Overseas French Islands
15. Lois (Laws) Paul and Girardin
16. Risk Coverage Fund
17. Rural electrification using RES
18. TIPP (tax on Petroleum products)
19. Campaign SOS Climat
20. Solar Water Heaters: ? Plan Soleil?
21. Bioproducts R&D Programme
22. Call for Tender for Renewable Electricity

Statistical Information on Renewable Energy

- Total Primary Energy Supply from Renewables (Mtoe) - France
- Shares of TPES 2002 - France
- Electricity Generation by Fuel 2002 - France



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Crediting System in Favour of Energy Management - FOGIME

<i>Country</i>	France
<i>Effective from</i>	2001
<i>Description</i>	<p>The FOGIME was created in 2000 in co-operation with the French development bank for small and medium size enterprises (SMEs) and ADEME. The guarantee fund for investments in energy sustainability (efficiency and renewables) has a budget of approximately € 17.8 million, of which € 7.62 million comes from ADEME and € 10.21 million come from a branch of the development bank for SMEs (BDPME). This fund guarantees up to € 242 million for loans to the private sector. Its goal is to provide SMEs with the option to obtain loans for energy efficiency and renewable energy investments.</p> <p>This guarantee is only available for SMEs created more than three years ago. Eligible investments include: high performance production, use, recovery and energy storage equipment; energy efficient modifications of production processes and renewables.</p> <p>The guarantee covers medium and long-term risks (2-15 years) and insures the risk taken by the financial institution providing the loan. The guarantee covers 70% of the loan in comparison to 40% average coverage rates for other SME projects covered by BDPME.</p>
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€17.8 million total, €7.62 million from ADEME and €10.21 million from SOFARIS, a branch of the development bank for SMEs (BDPME)
<i>Contact</i>	French Agency for Environment and Energy Management (ADEME)
<i>URL</i>	www.ademe.fr/entreprises/Aides/

Source: IEA

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Renewable Energy Feed-in Tariffs (I)

<i>Country</i>	France
<i>Effective from</i>	2001
<i>Description</i>	<p>All sites qualifying for the mandatory buy-back rates must be under 12 MW of nominal capacity and have been built after the law was adopted. The following feed-in tariffs have been established: Wind Energy: production sites can obtain a 15-year contract which guarantees a € 0.0838/kWh rate for the first five years. The tariff for the next ten years depends on wind conditions. Plants working at full capacity for less than 2 000 hours will continue to get € 0.0838/kWh, while those at full capacity for 3 600 hours per year will receive € 0.0541/kWh. These tariffs apply for the first 1 500 MW of nationally installed capacity, thereafter all tariffs decrease by 10% (only for new projects). These tariffs were applicable until December 2002. The rates decrease 3.3% per year to reflect technology learning. Small Hydro: production sites built after publication of the law or for the marginal production from retrofits increasing production by more than 10% can obtain a 20-year contract which guarantees € 0.0610/kWh for sites with a capacity under 500 kW and € 0.0549/kWh for larger ones. An incentive for regularity of production of up to € 0.0152/kWh is available in winter. Combustible Waste: production sites are guaranteed rates of up to € 0.0456/kWh for medium voltage connections and € 0.0418/kWh for high voltage connections. Biogas from waste: production sites can obtain a 15-year contract which guarantees a € 0.046/kWh rate (without thermal valorisation) or € 0.058/kWh (engine, turbine). Biomass: production sites can obtain a 15-year contract which guarantees a rate of € 0.049/kWh to € 0.0647/kWh (bonus for 70% heat valorisation). Solar (PV or any radiative technology): The rate is € 0.305/kWh in the overseas departments and Corsica, and € 0.0155/kWh in mainland France. It also provides a grant of € 4.6/watt for direct grid-connected installations.</p>
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>Funding</i>	In 2010, approx. 4 000 mil FF for wind (5000 MW), 500 mil FF hydro, 200 mil FF incineration.
<i>Contact</i>	DIDEME, Ministère de l'Economie des Finances et de l'Industrie
<i>URL</i>	www.minefi.gouv.fr/ www.industrie.gouv.fr/cgi-bin/industrie/frame0.pl?url=/energie/sommaire.htm

Source: IEA

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Biogas Program

Country	France
Effective from	1999
Description	The Agency for Environment and Energy Management (ADEME) and Electricité de France (EdF) launched a biogas from landfill call for tender for new power capacity of 15 MW. ADEME and Gaz de France (GdF) agreement: co-operation on survey on anaerobic digestion (technical, marketing, R&D aspects). Support for biogas plants: advice/decision tools for implementation, subsidies for investment costs resulted in four anaerobic digestion units of 20 000 to 110 000 tonnes from biowaste (MSW, agricultural wastes) with additional support from the European Commission, local authorities and public agency water treatment funds.
Policy type	<ul style="list-style-type: none">•Bidding Systems•Capital Grants
Renewable energy	Waste (organic)
Contact	Electricité de France (EDF)
Source: IEA	

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Renewable Energy Purchasing Conditions

<i>Country</i>	France
<i>Effective from</i>	1999
<i>Description</i>	This policy provided the enabling conditions for EDF to purchase electricity produced from renewable sources such as hydro, co-generation, waste incineration and photovoltaics.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables

Source: IEA

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Wood Energy Programme

Country	France
Effective from	1999
Description	<p>To complement a 1994-1998 plan for wood energy and local development, a revised action plan was launched in 1999 for a six-year period to develop thermal uses of biomass (wood waste, forest residues). For district and industrial heating, the programme foresees the installation of 1 000 new wood-based heating systems by 2006. This is estimated to deliver savings of 300 000 toe per year and an annual reduction in CO2 emissions of 700 000 tonnes. It offers assistance in the form of advice/decision tools and investment subsidies. In addition, an experimental action titled ? Call for Tender - Carbon Energy? has been launched for the wood drying industry sector to select biomass projects based on the price of CO2 per tonne. For domestic heating, the programme seeks to maintain the same national wood consumption by 2006 and to improve the energy and environmental efficiency of wood combustion. It includes a communication plan for supporting best practices in wood combustion for public/private operators. Quality labels have been established with manufacturers for wood devices.</p>
Policy type	<ul style="list-style-type: none">•Capital Grants•Obligations•Voluntary Programmes
Renewable energy	Bioenergy
Contact	Agency for the Environment and Energy Resources (ADEME)
URL	www.ademe.fr/htdocs/actualite/dossier/Prgbois.htm
Source: IEA	

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Biogas Agreement

<i>Country</i>	France
<i>Effective from</i>	1999
<i>Description</i>	A waste management company and the state-owned utility, Electricité de France (EdF), signed an agreement to develop renewable energy from landfill methane. The "biogas project" operating during 1999 was centred near the town of Plessis Gassot, home to France's largest municipal waste landfill. The waste management company, which operates the landfill, invested FRF 200 million in the infrastructure to capture the methane gas and burn it to produce 10 MW of electricity. EdF agreed to buy all the electricity production for a term of 12 years at a guaranteed price. A second facility at the same site is expected in 2004.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	Waste (organic)
Source: IEA	

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Extension of Tax Credit in Favour of Renewable Energy Equipment in New Housing

<i>Country</i>	France
<i>Effective from</i>	2002
<i>Description</i>	The finance law of 2003 extended the tax credit for renewable energy equipment in new residences that covers 15% of eligible expenses.
<i>Policy type</i>	Tax Credits
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.industrie.gouv.fr/cgi-bin/industrie/frame0.pl?url=/energie/sommaire.htm

Source: IEA

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Extension of Tax Credit for Large Collective Equipment, Renewable Energy Equipment, Thermal Insulation and Heating Regulation Equipment

<i>Country</i>	France
<i>Effective from</i>	2002
<i>Description</i>	The finance law of 2003 extended the tax credit for the acquisition of large collective equipment, renewable energy equipment and thermal insulation and heating-regulation material to 31 December 2005.
<i>Policy type</i>	Investment Tax Credits
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministere de L'Economie, des Finances et de l'Industrie
<i>URL</i>	www.industrie.gouv.fr/cgi-bin/industrie/frame0.pl?url=/energie/sommaire.htm
Source: IEA	

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Chauffe-eau Solaires dans les DOM

Country	France
Effective from	1999
Description	This programme grants investment support for solar thermal installations in France's overseas departments (DOM). By 2003, the volume of solar water heaters installed was 13 000 representing a surface of solar collectors of 45 000 m ² . The programme's initial objective had already been met in 2000.
Policy type	Consumer Grants / Rebates
Renewable energy	Solar thermal
Contact	ADEME
Source: IEA	

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Biofuel Production Programme

<i>Country</i>	France
<i>Effective from</i>	1990s
<i>Description</i>	This national financial programme aims to develop investments for biofuel production (diester and ethanol). Biofuel production progressed significantly from 1994 to 2000. Consumption of ethanol derived from beets and wheat rose from 38 500 to 90 437 tonnes and consumption of rapeseed and sunflower oil esters rose from 64 400 to 308 870 tonnes.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	Biofuel
<i>Funding</i>	2,3FF/l and Ethanol: 3,29FF/l
<i>Contact</i>	ADEME
Source: IEA	

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Electricity Law 2000

<i>Country</i>	France
<i>Effective from</i>	2000
<i>Description</i>	Part of this law concerns renewable electricity installations for which the network operators (EdF and other distribution network operators) are obliged to purchase electricity at fixed feed-in tariffs. Among other things, it regulates the free access of independent energy producers to the grid and laid the foundation for higher feed-in tariffs for electricity production from renewables and a new tender scheme for renewable energy production capacity.
<i>Policy type</i>	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables

Source: IEA

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Contrat de Plan Etat-ADEME

<i>Country</i>	France
<i>Effective from</i>	2000
<i>Description</i>	This pluriannual contract concerns incentives to foster investments in RE projects (under ADEME umbrella): several RE schemes have been defined and implemented, and a general agreement has been reached between State and ADEME on objectives to be met and funds to be raised and employed on the 2000-2006 period.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	All renewables
<i>Contact</i>	ADEME
Source: IEA	

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Fonds d'Intervention pour l'Environnement et la Maîtrise de l'Energie (FIDEME)

<i>Country</i>	France
<i>Effective from</i>	2001
<i>Description</i>	FIDEME is a fund for environment and energy efficiency, and a specific financial scheme to support private investors (maximum financial share of 25% of the total project costs). Its goal is to promote investments in environment and energy efficiency projects according to classic financial appraisal techniques but with a higher level of risk acceptance, which is balanced by higher commissions and interest rate. In 2001 this mix of private and public funds amounted to € 45 million with € 15 million coming from ADEME, and € 30 million from two partner financiers.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€ 45 million
<i>Contact</i>	ADEME

Source: IEA

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Renewable Energy Development in Overseas French Islands

<i>Country</i>	France
<i>Effective from</i>	1980s
<i>Description</i>	This fiscal scheme was designed for financial, institutional or industrial companies to develop investments for renewable energy in French islands. This scheme has been operating since the 1980s and is still in place today.
<i>Policy type</i>	Investment Tax Credits
<i>Renewable energy</i>	All renewables

Source: IEA

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Lois (Laws) Paul and Girardin

<i>Country</i>	France
<i>Effective from</i>	2000 and 2003
<i>Description</i>	The laws Loi Paul (2001) and Girardin (2003) provide a personal income reduction for private investments in the overseas territories. The income tax reduction is limited to 60% of the income paid by the individuals. This fiscal instrument is largely used by renewable energy operators to attract individual investment.
<i>Policy type</i>	Tax Credits
<i>Renewable energy</i>	All renewables
Source: IEA	

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Risk Coverage Fund

<i>Country</i>	France
<i>Effective from</i>	1980s
<i>Description</i>	The risk coverage fund is dedicated to low enthalpy geothermal plants (with heat distribution networks). It was designed in the early 1980s to cover the risks associated with the long-term exploitation of geothermal sources. The risk coverage scheme was extended in 2000 for 10 years until 2012.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	Geothermal heat

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Rural electrification using RES

<i>Country</i>	France
<i>Effective from</i>	1995
<i>Description</i>	Rural electrification bodies using renewables (PV, hydro or wind) receive funding from the FACE specific fund (decision taken at national level). The grants support up to 65% of investment cost.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	<ul style="list-style-type: none">•Hydropower•Solar photovoltaics•Onshore wind
<i>Funding</i>	100 million Francs
Source: IEA	

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TIPP (tax on Petroleum products)

<i>Country</i>	France
<i>Effective from</i>	1998
<i>Description</i>	TIPP (tax on petroleum products) is the main tax on petroleum products used as fuel (diesel, petrol, LPG; heavy and light oil) or heating fuel. The tax on fossil fuels was modified in 1998 and provides funds to ADEME to support programmes for energy conservation and renewable energy deployment.
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
<i>Contact</i>	ADEME
Source: IEA	

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Campaign SOS Climat

<i>Country</i>	France
<i>Effective from</i>	2001
<i>Description</i>	This campaign aims to raise public awareness of climate protection issues and to inform them of the positive impact that renewable energy utilisation can have on the climate.
<i>Policy type</i>	Public Awareness
<i>Renewable energy</i>	All renewables

Source: IEA

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Solar Water Heaters: "Plan Soleil"

<i>Country</i>	France
<i>Effective from</i>	2000
<i>Description</i>	In 1999, approval was given by the government to the French Agency for Environment and Energy Management (ADEME) to launch Plan Soleil. This plan is designed to support the development of solar hot water heaters. The first phase of this programme, specific to individual solar hot water heaters, was extended to collective applications of solar water heating. The objective is to reach 112 000 m2 per year of collector surfaces installed and 330 000 m2 between 2000 and 2006.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	Solar thermal
<i>Contact</i>	ADEME

Source: IEA

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Bioproducts R&D Programme

<i>Country</i>	France
<i>Effective from</i>	2002
<i>Description</i>	Agriculture for Chemical and Energy (AGRICE), a scientific interest group made up of public and private sector members, supports research on new uses for renewable plant-based products other than foodstuffs. The scope of AGRICE's activity covers primarily the industrial conversion of crop production to chemical (lubricants, surfactants, solvents), energy products (liquid and solid biofuels) and materials (agrimaterials, biopolymers). AGRICE's brief is to stimulate applied technological research. The consortium first tackled work aimed at substituting plant-based products derived from fossils resources. This strategy has been progressively widened to take into account the inherent characteristics of plant-based products. AGRICE's action spans the study of agronomic improvements, project economics, markets and energy and environmental assessments.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Biofuel

Source: IEA

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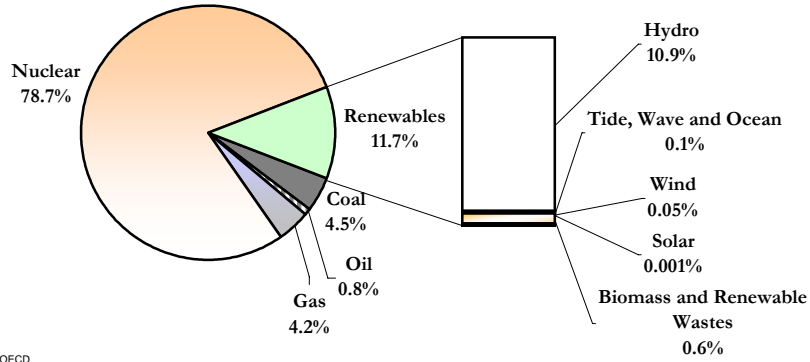
Call for Tender for Renewable Electricity

<i>Country</i>	France
<i>Effective from</i>	2003
<i>Description</i>	<p>A call for tender for renewable energy plants larger than 12 MW. Projects less than 12 MW qualify for feed-in tariffs. Responses are expected in mid 2004 and projects are to be completed by 2007.</p> <p>Onshore wind (2 × 500 MW) Offshore wind (500 MW) Biomass (200 MW) Biogas (50 MW)</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Bidding Systems•Guaranteed Prices / Feed in
<i>Renewable energy</i>	<ul style="list-style-type: none">•Onshore wind•Offshore wind•Bioenergy•Waste (organic)

Source: IEA

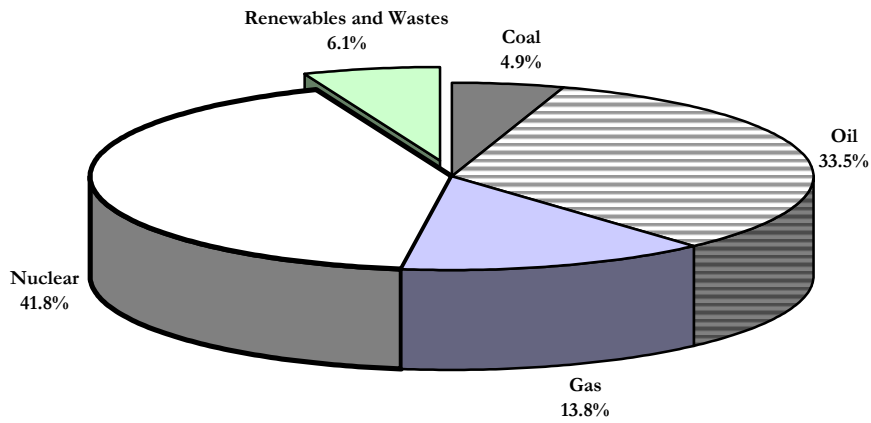
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France - Electricity Generation by Fuel 2002



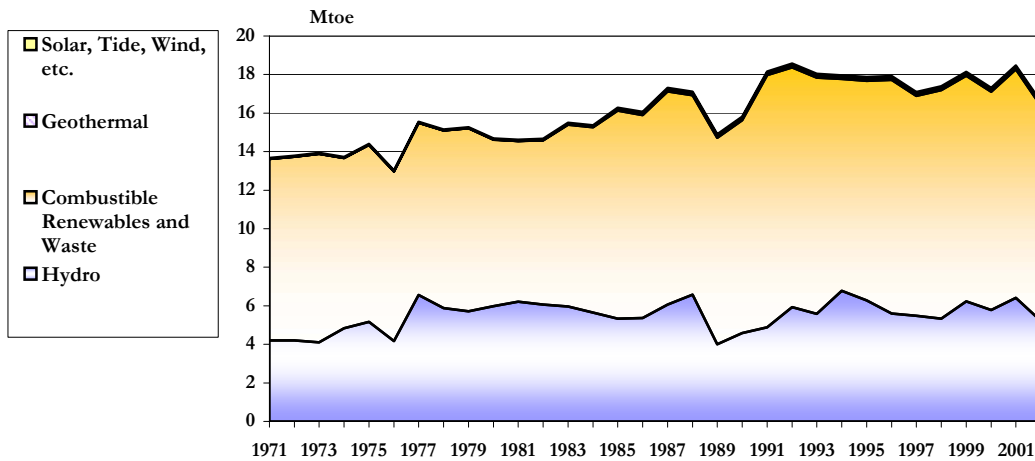
Source: IEA Energy Statistics - Copyright: IEA/OECD
 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

France - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

France - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>



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Germany

Region Europe - EU
Renewable energy target(s) 12.5% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. Fourth Energy Research Programmme
2. Market Stimulation Programme (Marktanreizprogramm)
3. 250 MW Wind Programme
4. Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz EEG)
5. Diverse Soft Loan Schemes
6. Support of the Federal States (? Länder?)
7. ERP-Environment and Energy-Saving Programme
8. Home Grant (? Eigenheimzulage?)
9. Green Electricity
10. Federal Building Codes
11. CO2 Building Restructuring Programme (CO2 Gebäude Sanierungsprogramm)
12. Solarthermie 2000Plus
13. Eco-Tax Reform
14. Combined Heat Power Law (KWK Modernisierungsgesetz)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Germany](#)
- [Shares of TPES 2002 - Germany](#)
- [Electricity Generation by Fuel 2002 - Germany](#)

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Fourth Energy Research Programme

<i>Country</i>	Germany
<i>Effective from</i>	1996
<i>Description</i>	This programme, established in 1996, set the framework for public RD&D support for energy technologies. A successor is planned for mid-2004.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Funding</i>	2001: € 148.27 m, 2002: € 135 m, 2003: € 116 million
<i>URL</i>	www.bmwi.de
Source: IEA	

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Market Stimulation Programme (Marktanreizprogramm)

<i>Country</i>	Germany
<i>Effective from</i>	1999
<i>Description</i>	<p>As a successor of the ? 100 Million Programme,? the Market Stimulation Programme (Marktanreizprogramm), under the auspices of the Ministry of Economics and Technology, was introduced in 1999. Initially an annual budget of € 100 million was allocated over 5 years. For several reasons it was not possible to exempt renewable energy power plants from the eco tax. Nevertheless it was felt that this additional income should be used to the benefit of renewable energy technologies. Thus the annual € 100 million represents the estimated additional tax revenue from renewable energy power plants due to the tax reform.</p> <p>Under this scheme, individuals and small and medium-sized businesses may apply for grants and soft loans for solar collectors, biomass boilers, biogas plants, heat pumps driven with renewable electricity and geothermal heating systems. In addition, schools may apply for grants to install photovoltaic plants. Grants are administrated by the Bundesamt für Wirtschaft and loans by the Kreditanstalt für Wiederaufbau.</p> <p>Originally grants were awarded as follows: flatplate solar collectors < 100 m² € 128/m²; > 100 m² € 64/m²; vacuum solar collectors < 75 m² € 167/m²; > 75 m² € 82/m²; electrical heat pumps < 13 kW € 102/kW; > 13 kW € 51/kW; manual biomass boiler < 50 kW € 41/kW; automatic biomass boiler < 100 kW € 62/kW; > 100 kW € 61/kW; biomass driven combined heat power plants > 100 kW € 185/kW; biogas plants up to 30% of the investment costs.</p> <p>Additionally, larger installations were awarded with soft loans with interest rates 1% below market level. As a result the level of support ranges between 10% and 40% of the investment.</p> <p>Almost 80 000 installations were supported by end of 2001, almost entirely solar thermal collectors.</p> <p>The programme has been amended several times since its introduction, altering the eligible technologies and the level of support.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•3rd Party Finance•Capital Grants•Consumer Grants / Rebates
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Solar photovoltaics•Solar concentrating power•Geothermal
<i>Funding</i>	2000: €102m, 2001: €153 m, 2002: €200m
<i>Contact</i>	The FederalFederal Ministry of Economics and Technology
<i>URL</i>	www.bmwi.de
Source: IEA	

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250 MW Wind Programme

<i>Country</i>	Germany
<i>Effective from</i>	1989
<i>Description</i>	<p>This programme was initiated in June 1989 as a "100 MW Wind Programme" and was extended to the 250 MW Wind Programme in February 1991. The programme provided grants for the installation and operation of wind turbines at suitable sites. The last grants were approved at the end of 1996 for turbines that had to be commissioned by mid-1998. A "Scientific Measurement and Evaluation Programme" (WMEP) is part of the support scheme. All turbines that receive financial support will be monitored for ten years. The programme provided grants of DEM 200 (€ 102)/kW, up to a ceiling of DEM 100 000 (€ 51 300) for facilities larger than 1 MW. Grants up to 60% of the total investment to a maximum of DEM 90 000 (€ 46 000) were provided. Alternatively, the programme provided operating subsidies of DEM 0.06 (€ 0.031) (DEM 0.08 [€ 0.041] until 1991) for every kWh fed into the public grid. This programme promoted 1 560 wind turbines with a total capacity of 362 MW.</p>
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	Onshore wind
<i>Funding</i>	Investment subsidies of up to 25 % to a maximum of 90 000 DM (= 46 016,27 €) were provided. Additionally, the programme provides operation subsidies of up to 6 German Pfennig (= 0,031 €) for every kWh fed into the public grid.
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/GERTables.pdf
Source: IEA	

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Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz EEG)

Country	Germany
Effective from	2000
Description	<p>This Act targets a 12% share for electricity produced from renewable energy by 2010. The Act replaces the Electricity Feed-In Law of 1991. The obligation to give grid access to renewable energy plants and purchase the electricity at premium prices is shifted from the utilities to the grid operators. The tariffs are set for each individual technology, based on its actual generation cost. For an individual plant, the remuneration level stays fixed over twenty years, with the exception of wind power. A high remuneration is paid for a fixed total production of wind electricity. After reaching the limit the remuneration is decreased. The lower remuneration will be paid up to twenty 20 years after commissioning the plant. The remuneration paid for wind power on an average site is € 0.084/kWh over a twenty-year lifetime. Since the remuneration for an individual plant is not adjusted for the inflation rate this means a decrease of remuneration in real terms. From 2002 on, the remuneration paid for newly commissioned plants has been reduced annually to provide stronger incentives for cost reductions. This factor is 5% for photovoltaic installations, 1.5% for wind power plants and 1% for biomass-fueled plants. Since inflation is not considered, the real price decrease is higher than depicted by these rates.</p> <p>The Act also stipulates obligations concerning costs of grid connection and reinforcement. Plant operators have to pay for the grid connection, but the grid operator has to bear the cost of grid reinforcement if necessary.</p> <p>No public budgets are involved. The Act solves the problem of unequal distribution of burdens (as in the EFL) by requiring all electricity suppliers to have the same share of electricity from renewable energy in their fuel mix. For this purpose, grid operators need to balance amounts of electricity remunerated according to the Act in such a way that the share of the EEG electricity is equal on all grids on a three-month basis. Then all electricity suppliers using the public electricity grid are obliged to purchase an equal share of EEG electricity at a price equal to the average remuneration paid for all EEG electricity. This system has the effect that, not only the costs, but also the benefits, in the form of the generated electricity, are shared equally. This distribution mechanism can be characterised as an ex-post quota, where electricity suppliers know only ex post the share of renewable energy electricity they are obliged to purchase. With this design, there is no need to calculate the "real" value of the electricity fed-in. On the other hand, the physical distribution of the renewable energy electricity among all suppliers gives rise to additional costs. The extra costs of regulation are not explicitly known.</p> <p>An additional ordinance issued in 2001 specifies which biogenic substances and which technical processes are eligible for remuneration according to the Renewable Energy Sources Act.</p> <p>Originally, the remuneration to photovoltaic plants was limited to total capacity of 350 MW. In 2002, this cap was increased to 1000 MW. In November 2003, remuneration for photovoltaic installations was further differentiated depending on site specifics.</p> <p>Every two years, the parliament re-evaluates the Act on the basis of a report that is prepared by the Ministries of Economics and Technology, in close consultation with the Ministry of Environment and the Ministry of Agriculture.</p>
Policy type	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Obligations
Renewable energy	All renewables
Contact	Ministry of Economics and Technology
URL	spider.iea.org/pubs/studies/files/reenp2/ren/20-ren.htm
Source: IEA	

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Diverse Soft Loan Schemes

<i>Country</i>	Germany
<i>Effective from</i>	1999
<i>Description</i>	Beyond the two ERP soft loan schemes and the CO2 Building Restructuring Programme, several other soft loans schemes exist which indirectly support renewable energy technologies. Among these are the ? DtA Umweltschutz- Bürgschaftsprogramm,? the KfW-Mittelstandsprogramm, the KfW-Umweltprogramm, which applies to enterprises, and the KfW-Infrastrukturprogramm, which applies to municipalities. Investments in environmentally-sound technologies including renewable energy technologies are supported with soft loans and loan guarantees. Credit terms range from ten to twenty years and interest rates are 1 to 2% below market interest levels. The Kreditanstalt für Wiederaufbau (KfW), Deutsche Ausgleichsbank (DtA) operates the programmes.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables
Source: IEA	

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Support of the Federal States (? Länder?)

<i>Country</i>	Germany
<i>Effective from</i>	1985
<i>Description</i>	While funds available at the federal level or due to federal law have been the main driver for the deployment of renewable energy technologies, the federal states (Länder) have also provided considerable support. Some states have been more active than others.
<i>Policy type</i>	<ul style="list-style-type: none">•RD&D•3rd Party Finance•Capital Grants
<i>Renewable energy</i>	All renewables
Source: IEA	

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ERP-Environment and Energy-Saving Programme

<i>Country</i>	Germany
<i>Effective from</i>	1990
<i>Description</i>	The public bank Deutsche Ausgleichsbank (DtA) (Kreditanstalt für Wiederaufbau KfW from 2003) provides low-interest loans to specified renewable energy projects. Only private companies may apply. The credit term for these loans ranges between ten and twenty years with a two to five year redemption holiday. The interest rate is 2% below market level and there is a 50% lending limit. These loans may be combined with the ERP-Environment Programme.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind•Bioenergy•Hydropower•Solar thermal•Solar photovoltaics

Source: IEA

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Home Grant (?Eigenheimzulage?)

<i>Country</i>	Germany
<i>Effective from</i>	1995
<i>Description</i>	Under this programme households may receive federal grants for purchasing houses and flats. The grant is up to € 256 per year over eight years if solar thermal collectors or heat pumps are installed. Heat pumps need to supply at least four times the energy they require as electrical input. The grant is paid out annually by reducing personal tax payments.
<i>Policy type</i>	<ul style="list-style-type: none">•Consumer Grants / Rebates•Tax Credits
<i>Renewable energy</i>	Solar thermal
Source: IEA	

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Green Electricity

Country [Germany](#)

Effective from 1996

Description

Under this programme electricity from renewable energy sources is marketed as green electricity at premium prices. This is an additional offer by utilities and electricity suppliers. Such programmes do not necessarily lead to new capacity of renewable energy plants since electricity may be also marketed from existing plants. There have been two phases in the dissemination of these offers in Germany, prior to and after the liberalisation of the electricity market in 1998.

In the initial phase, utilities marketed green electricity with green tariffs. They offered the electricity with a surcharge and the funds from the surcharge were supplemented by the utility and used for installing new renewable energy capacity, mostly photovoltaic. The utility could pass the burden on to electricity customers.

After deregulation, independent electricity suppliers also started to market green electricity. In 2000, 132 different companies offered green electricity. The market share, however, was less than 1% of total electricity supply.

Several independent certification schemes exist to ensure independent monitoring of the origin of the electricity. Moreover, some of these certification schemes monitor whether the funds are invested in new plants.

Although not a government programme, the state has supported green electricity in two respects. Before liberalisation, regulatory authorities accepted extra costs from green tariffs. After liberalisation, state agencies started to purchase green electricity.

Policy type Green Pricing

Renewable energy All renewables

Source: IEA

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Federal Building Codes

<i>Country</i>	Germany
<i>Effective from</i>	1998
<i>Description</i>	The 1998 amendment of the federal building codes (Baugesetzbuch) excluded wind power plants and hydropower plants from the general ban on building in the undeveloped outskirts (? Außenbereich?). Thereby, both of these technologies achieved the same legal status as nuclear power plants. Biogas plants may attain the same privilege if they are mainly fuelled with substrate from the surrounding areas. Municipalities may overrule these privileges by disclosing suitable areas for renewable energy installations in their land use planning. Wind power installations cannot be contested as long as no such municipal plans are in place.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	<ul style="list-style-type: none">•Onshore wind•Hydropower•Bioenergy

Source: IEA

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CO2 Building Restructuring Programme (CO2 Gebäude Sanierungsprogramm)

<i>Country</i>	Germany
<i>Effective from</i>	2000
<i>Description</i>	The CO2 Reduction Programme primarily targets energy saving measures in buildings. Renewable energy technologies for heating purposes also may benefit, however, the credit volume for renewable energy installation was only 2% of the total credit volume awarded. The Kreditanstalt für Wiederaufbau operates the programme. Loans are provided with an interest rate 2% below market interest level.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables
Source: IEA	

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Solarthermie 2000Plus

<i>Country</i>	Germany
<i>Effective from</i>	2004
<i>Description</i>	This programme is a successor of the ? Solarthermie2000? programme. It aims to increase the annual solar contribution to heat and hot water demand with individual solar thermal installations from the current 10-30% to 60%. In particular, seasonal storage is sponsored. Grants up to 50% of the investment costs are provided.
<i>Policy type</i>	<ul style="list-style-type: none">•RD&D•Capital Grants•Obligations
<i>Renewable energy</i>	<ul style="list-style-type: none">•Solar concentrating power•Solar photovoltaics•Solar thermal
<i>Contact</i>	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
<i>URL</i>	www.solarthermie2000plus.de/st2kplus/index.php
Source: IEA	

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Eco-Tax Reform

<i>Country</i>	Germany
<i>Effective from</i>	1999
<i>Description</i>	<p>With the passage of the eco-tax reform, taxes (? Mineralölsteuer?) on gasoline, diesel, natural gas and liquid gas were increased. At the same time, a special tax on electricity (? Stromsteuer?) was introduced. The first stage of the reform increased the tax on diesel and gasoline by € 0.0307/litre, for heating oil by €0.0205/litre, natural gas € 0.00164/kWh, and for liquid gas € 0.01278/kg. The electricity tax was € 0.0102/kWh. In late 1999, the second stage of the eco tax reform was adopted, increasing the tax rate annually by € 0.0307/litre, € 0.0026/kWh in the following four years. On 1 January 2004, the tax was € 0.006698/litre for gasoline and € 0.004857/litre for diesel. The tax on electricity was € 0.0205/kWh on the same date. Heating oil is taxed € 0.06125/litre and natural gas € 0.55/kWh. Some exemptions, reduced tax levels, and compensations for energy intensive industry, commuters and low-income households apply.</p> <p>In 2002, biofuels were exempt from the oil tax until the end of 2008. The law requires that the federal finance ministry draw up a report with the help of other relevant ministries every two years to chart progress in the market introduction of biofuels, and to examine price developments of biomass, crude oil and automobile fuels. The first report was due March 2004. If deemed necessary, the ministry may recommend adjusting the size of the tax break for biofuels.</p> <p>Since the law increases the price of fossil energy, it enhances the competitive position of renewable energy technologies in the heating and transport markets. Biodiesel particularly benefits since taxes on transport fuels are high. Electricity generation from renewable energy does not benefit directly from the tax because all electricity is taxed irrespective of the fuel used for generation. However, eco-tax revenues from electricity generated with renewable energies are used to finance the ? Marktanzreizprogramm? .</p>
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
<i>Source: IEA</i>	

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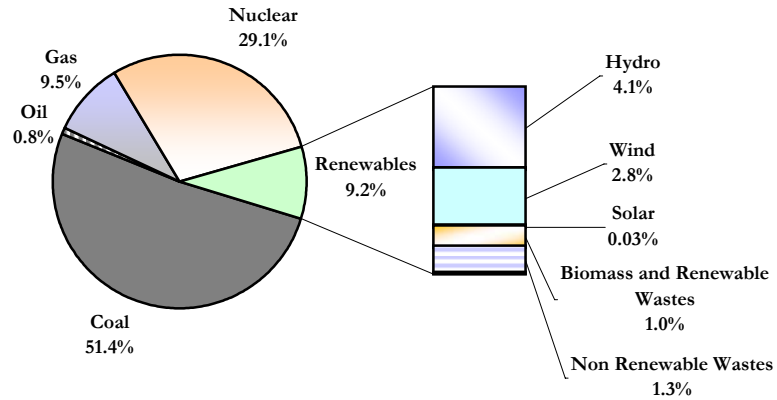
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Combined Heat Power Law (KWK Modernisierungsgesetz)

<i>Country</i>	Germany
<i>Effective from</i>	2002
<i>Description</i>	<p>This law replaces the 2000 law on combined heat power (CHP) (? KWKVorschaltgesetz?). Both laws are primarily intended to promote large CHP plants that were affected by decreasing electricity prices as a consequence of liberalisation. At the same time the share of CHP-produced electricity is to be increased, aiming at lowering CO2 emissions by 23 million tonnes by 2010. Half of this target is to be achieved by the CHP law, the other half by a voluntary agreement with industry.</p> <p>The importance of this law for renewable energy technologies is minor since the Renewable Energy Sources Act (EEG) provides more favourable conditions for these technologies. Only renewable energy technologies not covered by the EEG may benefit. This includes co-firing of biomass in fossil-fuelled power plants and biomass-fired CHP larger than 20 MW.</p> <p>The law requires grid operators to purchase electricity from CHP plants and pay a premium on top of the market price. Premiums depend on technology and the age of the plant. The premium cannot be combined with other support, particularly not with the EEG. The burden from paying the premium is spread equally over all grid operators with the same principle as with the EEG.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Obligations•Production Tax Credits
<i>Renewable energy</i>	Bioenergy
Source: IEA	

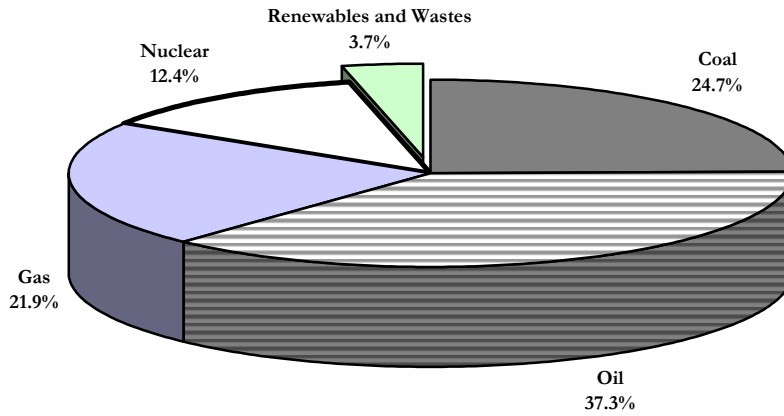
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Germany - Electricity Generation by Fuel 2002



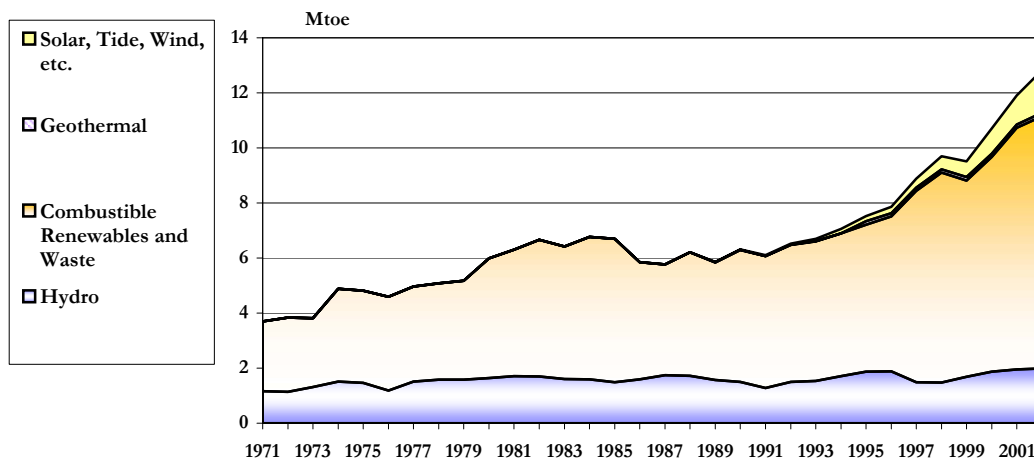
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Germany - Shares of TPES 2002



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Germany - Total Primary Energy Supply from Renewables (Mtoe)



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Ghana

Region Africa

Source: IEA

Renewable Energy Policies and Measures

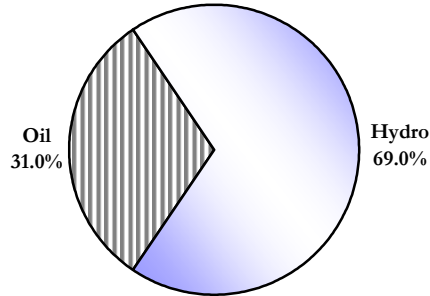
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Statistical Information on Renewable Energy

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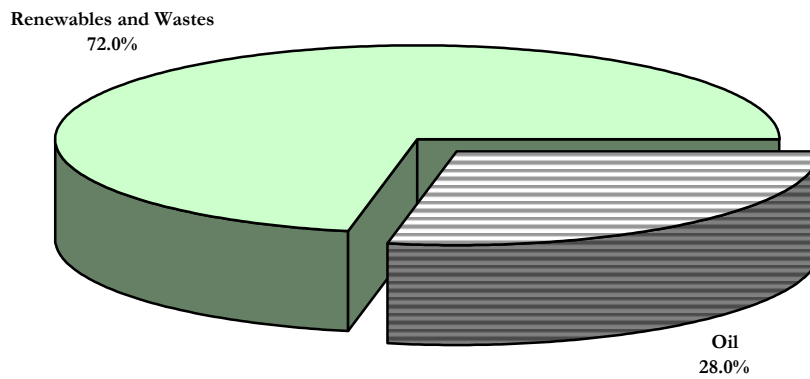
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Ghana - Electricity Generation by Fuel 2002



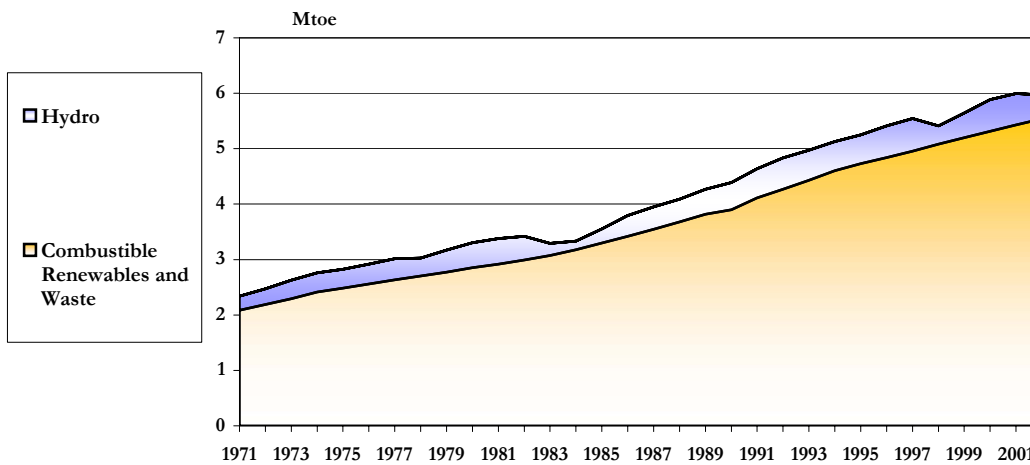
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Ghana - Shares of TPES 2002



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Ghana - Total Primary Energy Supply from Renewables (Mtoe)



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Greece

Region Europe - EU
Renewable energy target(s) 20.1% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Aid to Market Penetration of Renewables ? New Development Law 1998](#)
2. [Plan for Domestic Actions](#)
3. [Pilot Projects Regarding Renewable Energies](#)
4. [Exploitation of Geothermal Potential \(Law 1475/84\)](#)
5. [Law 1559/85](#)
6. [Law 2244/94](#)
7. [Law 2364/95](#)
8. [Law 2941/2001](#)
9. [Siting of wind turbines \(Law 2689/87\)](#)
10. [National Operational Programme for Competitiveness](#)
11. [Founding decree of the Centre for Renewable Energy Sources \(CRES\)](#)
12. [Law 2773/99](#)
13. [New Law on the Exploitation of Geothermal Potential \(Law 3175/2003\)](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Greece](#)
- [Shares of TPES 2002 - Greece](#)
- [Electricity Generation by Fuel 2002 - Greece](#)

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Aid to Market Penetration of Renewables ? New Development Law 1998

<i>Country</i>	Greece
<i>Effective from</i>	1998
<i>Description</i>	Incentive systems have been implemented by the Development Law 2601/98 to increase the market penetration of renewables and co-generation. This law replaced the previous one (Law 1892/90), and the Operational Programmes for Energy and Competitiveness. These mechanisms provide a maximum 35% grant for investments in power generation and a maximum 75% deduction from taxable income for the residential and service sectors for solar heating systems. Greece does not intend to establish a green certificate system in the near future but considers it a viable option in the long term.
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•Tax Credits
<i>Renewable energy</i>	All renewables
Source: IEA	

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Plan for Domestic Actions

<i>Country</i>	Greece
<i>Effective from</i>	1999
<i>Description</i>	Greece has put into place the necessary directives for streamlining the procedures for renewable energy penetration, and is in the process of financing a new comprehensive national plan for domestic actions to reduce greenhouse gas emissions by almost 25 Mtoe of CO2 by 2012.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
Source: IEA	

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Pilot Projects Regarding Renewable Energies

<i>Country</i>	Greece
<i>Effective from</i>	1999
<i>Description</i>	Several studies and pilot applications regarding the exploitation of renewable energies have been carried out by the Centre for Renewable Energy Sources (CRES), which is the official coordinating body for the promotion of renewable energies in Greece.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Centre for Renewable Energy Sources

Source: IEA

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Exploitation of Geothermal Potential (Law 1475/84)

<i>Country</i>	Greece
<i>Effective from</i>	1984
<i>Description</i>	This law asserts that the exclusive right of exploitation of geothermal energy belongs to the state, which, in turn, reserves the right to assign this to other public sector entities. In such cases, these entities have to prove the benefits of such investments. It must be assured that water quality will not be affected and rights cannot be undertaken for less than 15 years.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Geothermal

Source: IEA

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Law 1559/85

<i>Country</i>	Greece
<i>Effective from</i>	1985
<i>Description</i>	<p>This law regulates matters concerning alternative forms of energy and special matters concerning the production of electricity from conventional fuels, among other things. It allows third parties to produce a limited amount of electrical power from renewables energy sources. Production is essentially limited to the satisfaction of producers' needs and any surplus energy can only be sold to the Public Power Corporation (PPC), not to third parties.</p> <p>The capacity of grid-connected renewable energy power plants of auto producers cannot exceed three times the total installed capacity of the producer's equipment/energy needs when the resource is wind, solar or hydro; for geothermal energy the limit is twice the installed capacity and for cogeneration to the same capacity. In accordance with Law 1416/84 local governments can produce with the aim of selling all production to the PPC.</p>
<i>Policy type</i>	Net Metering
<i>Renewable energy</i>	<ul style="list-style-type: none">•Geothermal•Hydropower•Offshore wind•Solar photovoltaics•Solar concentrating power•Onshore wind•Solar thermal

Source: IEA

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Law 2244/94

Country	Greece
Effective from	1994
Description	<p>? Law 2244/94 constitutes the cornerstone of Greek national policy for the stimulation of renewable energy sources and it can be said to be the first step in the development of a systematic framework of action.? It was the main regulatory tool for the production of electricity by independent producers.</p> <p>The law aimed to provide incentives to motivate investments in renewable energy electricity generation (tariff rates are defined at pragmatic values) and it opened up the electricity market to the private sector even though the Public Power Corporation (PPC) remains the exclusive electricity buyer and retailer.</p> <p>Through this law, production by both auto-producers and independent producers was liberalised up to 50 MW. Auto-producers may counterbalance 80% of the electrical energy produced using renewables (90% for local authorities, government organisations and farm co-operatives) with their electricity consumption from the PPC network. Other provisions of the law included the removal of restrictions for the exploitation of small water falls, the simplification of bureaucracy involved in the permitting of renewable energy installations and the setting up of an improved pricing system.</p>
Policy type	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Regulatory and Administrative Rules
Renewable energy	All renewables
Source: IEA	

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Law 2364/95

<i>Country</i>	Greece
<i>Effective from</i>	1995
<i>Description</i>	<p>This law establishes the Board for Energy Planning and Control (BEPC). Since 1995, Law 2364 has provided tax exemptions to households buying renewable equipment such as solar water heaters; 75% of the purchase value of renewable equipment can be deducted from taxable income.</p> <p>This legislation incorporates one of the most direct incentives for the development of renewable energy technologies to date. Article 7, paragraph 17 of Chapter B states, ? the costs of the purchase and installation of domestic appliances for the use of natural gas and renewable energy sources can be deducted (up to 75%) from the individual's taxable income. This includes installations for common use and the percentage of deduction corresponds to the proportion of ownership for legal entities, 75% or 100% is amortized from profits over a period of years.? It has been estimated that this benefit can yield a real reduction in installation costs of up to 30%.</p>
<i>Policy type</i>	Tax Credits
<i>Renewable energy</i>	All renewables
<i>Source: IEA</i>	

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Law 2941/2001

<i>Country</i>	Greece
<i>Effective from</i>	2001
<i>Description</i>	This law supplemented Law 2773/99 with certain provisions concerning renewables, including: The definition of general terms and conditions, for which it may be allowed to install renewable energy facilities on forestry lands. The characterisation of all renewable energy projects as public utility status, which gives them the same rights and privileges in land expropriation procedures as those given to public works, independent of the legal status of the project owner (private or public).
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
Source: IEA	

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Siting of wind turbines (Law 2689/87)

<i>Country</i>	Greece
<i>Effective from</i>	1987
<i>Description</i>	This legislative measure defines criteria for the siting of wind turbines within the boundaries of inhabited areas, in uninhabited, rural areas and in industrial areas.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Onshore wind

Source: IEA

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National Operational Programme for Competitiveness

<i>Country</i>	Greece
<i>Effective from</i>	2000
<i>Description</i>	<p>Measure 2.1 of the Subprogramme of the NOPC/CSF III (2000-2006) is devoted to providing grants to private investments in renewables, the rational use of energy and small-scale (< 50 MW) co-generation. The total budget of the programme is approximately € 3 445 million; € 505 million for renewable applications, € 340 million for rational use of energy and € 343 million for CHP, mainly with natural gas.</p> <p>The main provisions concerning renewable energy investments include: Wind parks, conventional solar thermal units: 30%. Small hydro, biomass, geothermal, high-tech solar thermal units, passive solar: 40%. Photovoltaics: 50%. (eligible investment costs vary by technology)</p> <p>The level of the subsidy is independent of the geographical region. Own capital required: 30% (minimum) of the total investment cost. Minimum investment cost required: € 44 000. Maximum investment cost subsidised: € 44 million.</p> <p>Compared to the first Operational Programme for Energy (OPE 1994-1999), the new programme gives more support to geothermal, PV and passive solar systems. As in the first OPE its objective is to stimulate renewable energy technology investment.</p>
<i>Policy type</i>	Consumer Grants / Rebates
<i>Renewable energy</i>	All renewables
<i>Funding</i>	The total budget of the programme is approximately € 3 445 million; € 505 million for renewable applications, € 340 million for rational use of energy and € 343 million for CHP, mainly with natural gas

Source: IEA

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Founding decree of the Centre for Renewable Energy Sources (CRES)

<i>Country</i>	Greece
<i>Effective from</i>	1987
<i>Description</i>	The CRES is a legal entity whose primary aim is to promote renewable applications (solar, wind, hydro, geothermal, biomass) and energy efficiency.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Geothermal•Hydropower•Offshore wind•Onshore wind•Solar concentrating power•Solar photovoltaics•Solar thermal

Source: IEA

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Law 2773/99

Country	Greece
Effective from	1999
Description	<p>This law, enacted in 1999:</p> <p>(1) Gives renewables priority in network dispatching if the installed capacity does not exceed 50 MW, or in the case of hydropower 10 MW. The priority right also covers the power surplus of auto-producers within these same capacity limits. The law obliges the Transmission System Operator and the Public Power Company to provide connection to new generators but, in practice, the development of wind power in some mountain and island areas is slowed down by the need to simultaneously extend transmission networks.</p> <p>(2) Established buy-back systems for electricity generated from renewables in the interconnected and non-interconnected networks. In the interconnected network the Public Power Corporation (PPC) pays the generator a price which is composed of an energy and a capacity charge. The energy charge is 90% of the energy part of the medium-voltage domestic end-use tariff and the capacity charge is 50% of the capacity part of same tariff. In the non-interconnected islands, PPC pays only for energy, not capacity. The price paid by PPC is 70% of the low-voltage end-use tariff, except for co-generators using renewable energy who receive 90% compensation. In 2001, the average buy-back tariff was € 0.0616/kWh in the interconnected system and € 0.0731/kWh on the islands.</p> <p>(3) Introduced a 2% tax on electricity production from renewables at the local level. The revenues are used for projects to increase public acceptance of wind power.</p>
Policy type	<ul style="list-style-type: none">•Net Metering•Guaranteed Prices / Feed in•Public Awareness
Renewable energy	All renewables
Source: IEA	

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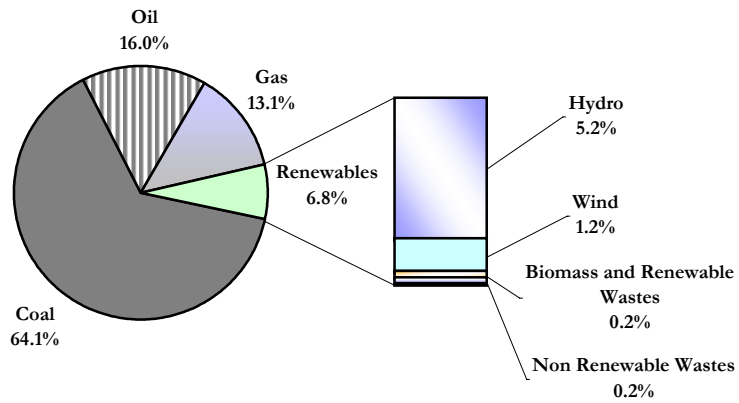
New Law on the Exploitation of Geothermal Potential (Law 3175/2003)

<i>Country</i>	Greece
<i>Effective from</i>	2003
<i>Description</i>	The exclusive right of the state for the exploitation of geothermal energy is asserted again in this law; however, the state can assign this role to private investors.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Geothermal

Source: IEA

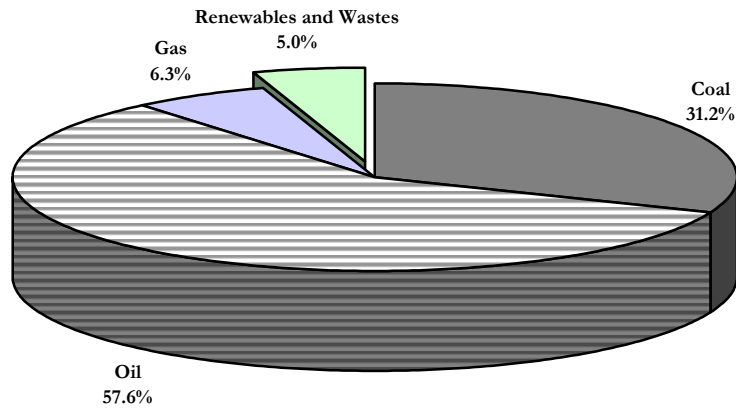
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Greece - Electricity Generation by Fuel 2002



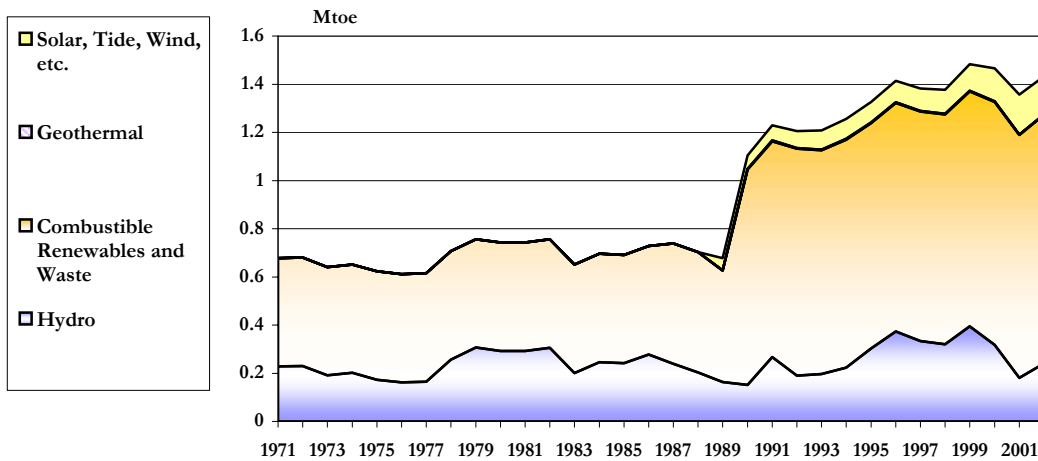
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Greece - Shares of TPES 2002



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Greece - Total Primary Energy Supply from Renewables (Mtoe)



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Hungary

Region Europe - EU
Renewable energy target(s) 3.6% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Funding under the Energy Saving Strategy and Action Plan](#)
2. [Electricity Act - Green Certificates Scheme](#)
3. [Electricity Act](#)
4. [Energy Conservation and Energy Efficiency Improvement Action Programme](#)
5. [German Coal Aid Revolving Fund](#)
6. [Energy Saving Action Plan](#)
7. [Energy Saving Credit Programme](#)
8. [Hungarian Energy Policy Principles and the Business Model of the Energy Sector](#)
9. [ISPA: Instrument for Structural Policies for Pre-Accession](#)
10. [KAC-Environmental Target Fund](#)
11. [New Environmental Tariff](#)
12. [Environment Protection and Infrastructure Operational Programme \(EIOP\), Environment friendly energy management](#)
13. [Government resolution on the use of biofuels](#)
14. [Environmental Impact Assessments](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Hungary](#)
- [Shares of TPES 2002 - Hungary](#)
- [Electricity Generation by Fuel 2002 - Hungary](#)

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Funding under the Energy Saving Strategy and Action Plan

<i>Country</i>	Hungary
<i>Effective from</i>	2000
<i>Description</i>	<p>In 2000, the Hungarian government allocated HUF 1 billion (US\$ 4 million) from the state budget to support energy efficiency and renewables as planned in the Energy-Saving Strategy programme adopted in 1999. The programme aims to increase energy efficiency by 3.5% a year, reduce CO2 emissions by 5 Mt per year and increase renewables from 28 PJ in 1999 to 50 PJ in 2010. An action plan adopted in 2000 includes grants to perform energy audits, improve the energy management of local governments and increase energy efficiency.</p> <p>The Hungarian government plans to allocate HUF 5 billion a year (US\$ 20 million per year) from 2002 to 2010 to finance the programme.</p>
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Funding</i>	HUF 1 Billion in 2000 HUF 5 Billion per year from 2002 - 2010
<i>Contact</i>	Ministry of Economic Affairs
Source: IEA	

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Electricity Act - Green Certificates Scheme

<i>Country</i>	Hungary
<i>Effective from</i>	2001
<i>Description</i>	The Hungarian Parliament approved the new Act on Electricity in 2001. The Act entered into force on 1 January 2003 and allows the gradual introduction of competition. The first step was opening up 35% of the market. The Act includes the possible use of a green certificates system, which will be regulated by a secondary legislative process.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables

Source: IEA

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Electricity Act

<i>Country</i>	Hungary
<i>Effective from</i>	2001
<i>Description</i>	<p>The 2001 Electricity Act offers the possibility for independent electricity producers using renewables with a capacity above 100 kW to benefit from a feed-in tariff. The tariff is the same for all renewable energy sources and is adjusted annually for inflation. It is paid by the main electricity producer (MVM) when a power plant is connected to the transmission network, or by the local service provider if the independent producer is connected to the distribution network. The purchase of renewable electricity is mandatory. The tariff is regulated by the Ministry of Economy and Transport.</p> <p>The 2001 Electricity Act also includes a reference to the intent to move towards a portfolio-based system, met by a renewable energy obligations and tradable green certificates. The details have not yet been set out.</p>
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Economy and Transport
Source: IEA	

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Energy Conservation and Energy Efficiency Improvement Action Programme

<i>Country</i>	Hungary
<i>Effective from</i>	1999
<i>Description</i>	<p>This programme was established in the framework of government resolution 1107/1999 following the National Energy Saving and Energy Efficiency Improvement Programme of 1995. The new programme defines the following targets by 2010: Reduce energy intensity by 3.5% per year, assuming an annual growth of GDP of 5% and a growth rate of energy consumption of 1.5% per year. Save 75 PJ per year (1.8 Mtoe) of primary energy. Reduce emissions by 50 kt per year of SO₂ and 5 Mt per year of CO₂. Increase renewable energy production from 28 PJ to 50 PJ per year (1.2 Mtoe per year).</p> <p>Initial funding for the Action Programme was provided by the Economic Development Fund of the Ministry of Economy and Transport. The initial budget allocation was HUF 1 billion per year in 2000. The budget for 2001 increased to HUF 2 billion, and was supplemented by an additional HUF 3 billion from the Housing Programme of the Széchenyi Plan, which was earmarked for funding of energy efficiency measures in the housing sector.</p> <p>The Housing Programme is managed by the Building Department of the Ministry of Economy and Transport. The decree also establishes the possibility of using part of the planned Environmental Emission Fee for the Programme. The Energy Saving and Energy Efficiency Action Programme includes fifteen actions.</p> <p>The main highlights of the actions relating to the promotion of renewables are: Increased heat production from biomass, geothermal, wastes and solar energy. ? 20 000 roofs with solar collectors? by 2010 programme.</p>
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Geothermal•Solar photovoltaics•Solar thermal•Waste (organic)
<i>Funding</i>	2000 HUF 1 billion 2001 HUF 5 billion
<i>Contact</i>	Hungarian Energy Centre
<i>Source: IEA</i>	

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German Coal Aid Revolving Fund

<i>Country</i>	Hungary
<i>Effective from</i>	1991
<i>Description</i>	<p>This energy saving programme started in 1991 with an original target to provide financing for the private sector to support energy efficiency investments and reduce environmental pollution. The German Coal Aid Revolving Fund (GCARF) is administered by the Hungarian Credit Bank. Its scope has been expanded to include municipalities. The main objectives are to replace traditional energy sources with renewable or waste-related energy sources, to induce energy saving in businesses and to reduce energy waste at the lowest possible cost. The preferential interest is one-third of the central bank's base rate with an additional 2.5% interest. From 1991 to 2002 the total amount of investments approved for ? live projects? was HUF 14.4 billion, of which HUF 11.9 billion was made up of preferential credits.</p> <p>In 2000, the GCARF allocated more than HUF 1 billion in preferential credit for SMEs, which resulted in energy savings of 325 TJ per year and total investment of HUF 1.6 billion. In 2001, a total of HUF 0.89 billion was spent on renewable investments from preferential credit. In 2002, the amount of the preferential credit was increased to HUF 1.51 billion. A total investment of HUF 3.53 billion resulted in 1.04 PJ energy savings.</p>
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables

Source: IEA

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Energy Saving Action Plan

<i>Country</i>	Hungary
<i>Effective from</i>	1996
<i>Description</i>	<p>The Energy Saving Action Plan focuses on the penetration of renewables, energy efficiency improvements, energy efficiency labelling and education, information, and technology innovation.</p> <p>It is unclear to what extent the objectives of the Programme have been achieved. According to critics, in general performance has been poor, attributed to a lack of co-ordination among the institutions involved, limitations to the application of DSM by utilities, problems with enforcing building standards, a lack of awareness campaigns to accompany the introduction of labels, and a lack of substantial incentives for renewable energy.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Public Awareness•RD&D
<i>Renewable energy</i>	All renewables
Source: IEA	

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Energy Saving Credit Programme

<i>Country</i>	Hungary
<i>Effective from</i>	1996
<i>Description</i>	In the framework of the Energy Saving Credit Programme (ESCP) programme, the total investment spent on energy efficiency projects has been HUF 4.692 billion (€ 17.6 million), of which HUF 3.554 billion was for preferential credit. So far, the ESCP has focused on funding energy savings programmes at the municipal level, modernisation of district heating systems and the development of energy service company (ESCO) financing. The funds are provided by a local bank ? winner of an annual tender through which the interest rate of the loan (the lowest offer) is set. Part of the subsidy is a grant provided by the Economic Development Fund of the Ministry of Economic Affairs. Applications are evaluated by the bank and by an Inter-Ministerial Committee which analyses the technical feasibility and the level of energy saving.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables
Source: IEA	

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Hungarian Energy Policy Principles and the Business Model of the Energy Sector

<i>Country</i>	Hungary
<i>Effective from</i>	1999
<i>Description</i>	In 1999, the government adopted an energy policy following domestic and EU developments (e.g., privatisation of the Hungarian energy sector, the EU liberalisation Directives, the Kyoto commitments). The core objective is to prepare the Hungarian energy sector for EU accession. Consequently, major emphasis has been given to guidelines for establishing competitive markets and price regulation for electricity and natural gas. Energy conservation, renewable energy, district heating and environmental protection are also a part of the policy.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Funding</i>	HUF 5 billion a year from 2002 to 2010

Source: IEA

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ISPA: Instrument for Structural Policies for Pre-Accession

<i>Country</i>	Hungary
<i>Effective from</i>	2000
<i>Description</i>	<p>This policy finances major environmental and transport infrastructure projects. With an annual budget of € 1.040 billion, ISPA comes under the responsibility of the Regional Policy Directorate General.</p> <p>Together with PHARE and aid for agricultural development, Agenda 2000 proposed structural aid for EU applicant countries amounting to some € 1 billion per year for the period 2000-2006. This aid is mainly directed to align the applicant countries with community infrastructure standards, particularly ? and by analogy with the Cohesion Fund ? in the transport and environmental spheres. Following on from the European Council's conclusions, the European Commission proposed a regulation on an instrument for structural policies for pre-accession (ISPA), based on Article 235 of the Treaty. Given its similar objectives, it was considered appropriate for ISPA to broadly follow the approach of the revised Cohesion Fund.</p>
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Funding</i>	Annual Budget of € 1.040 billion
<i>Contact</i>	Regional Policy Directorate General

Source: IEA

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KAC-Environmental Target Fund

<i>Country</i>	Hungary
<i>Effective from</i>	2003
<i>Description</i>	<p>In 2003 the fund became part of the 'Green Source' environmental programme of the Ministry of Environment and Water. It subsidises the KAC and the Water Management Target Fund (VICE).</p> <p>In 2003, in the framework of the KAC, there were calls for applications under six topic areas, which were financed by HUF 4.11 billion: Green Village, green city. Waste management. Healthy environment. Nature protection. Social programmes. Landscape settlement.</p> <p>In 2003, in the framework of the VICE, there were calls for applications under four topic areas, which were financed by HUF 4.332 billion: Investments to improve water supply. Establish sewage systems. Placing and cleaning sewage. Investments for water protection.</p>
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Environment and Water
<i>Source: IEA</i>	

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New Environmental Tariff

<i>Country</i>	Hungary
<i>Effective from</i>	2004
<i>Description</i>	The New Environmental Burden Tariff was introduced in 2004. This tariff applies to air, water and soil pollution and is regulated by the 2003/89 decree. An established percentage of the tariff rate is to be paid in 2004 and is to be planned to reach 100% by 2008. The tariff is to be paid every three months by registered polluting sources (e.g., industrial facilities) for Nox and CO2 emissions and solid substances.
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Environment
Source: IEA	

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Environment Protection and Infrastructure Operational Programme (EIOP), Environment friendly energy management

<i>Country</i>	Hungary
<i>Effective from</i>	2003
<i>Description</i>	Measure 1.7 of the EIOP entitled ? Environment friendly energy management? deals with increasing the use of renewable energy sources and energy efficiency. Subsidies are available (between 125 million HUF and 300 million HUF per project) and the amount granted depends on project size. The objective of the measure is to increase the use of RES and energy efficiency, in addition to decreasing CO2 emissions and developing rural regions. Investments are available for the following technologies: conversion and supply of fuels, biomass, geothermal energy, solar collector, wind power plant, photovoltaics, small hydro plant (defined as <5MW), community investments and energy efficiency developments.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	All renewables
<i>Funding</i>	4.2 billion HUF
<i>Contact</i>	Energy Centre Hungary, Ministry of Economy and Transport
<i>URL</i>	www.nfh.hu

Source: IEA

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Government resolution on the use of biofuels

<i>Country</i>	Hungary
<i>Effective from</i>	2004
<i>Description</i>	According to the Government resolution 2233/2004. (IX. 22.) Hungary has an obligation to increase the use of biofuels in transport to 0,4-0,6% by 2005. This proportion should reach 2% by 2010.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	Biofuel
<i>Contact</i>	Ministry of Economy and Transport

Source: IEA

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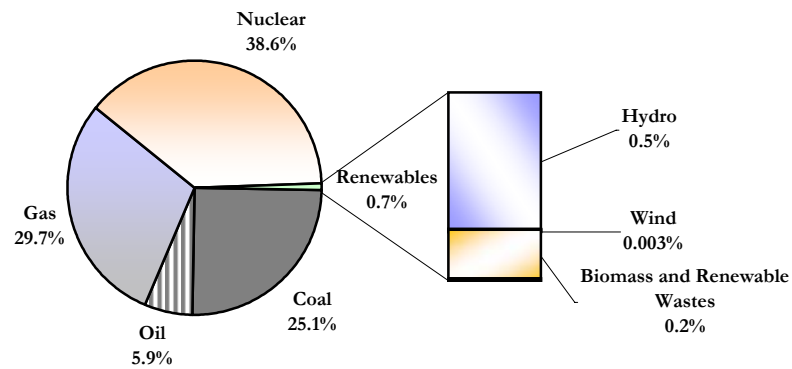
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Environmental Impact Assessments

<i>Country</i>	Hungary
<i>Effective from</i>	2001
<i>Description</i>	The Government resolution 20/2001. (II. 14.) states there is an obligation to prepare an environmental impact assessment for plants listed in the resolution, whose operation can significant affect the environment. These plants include hydro plants (from 20 MW), geothermal power plants (from 20 MW), and wind power plants from 2 MW and from 200 kW if located on protected natural areas.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	<ul style="list-style-type: none">•Hydropower•Onshore wind•Geothermal
<i>Contact</i>	Ministry of Environment and Water
<i>URL</i>	www.kvvm.hu
Source: IEA	

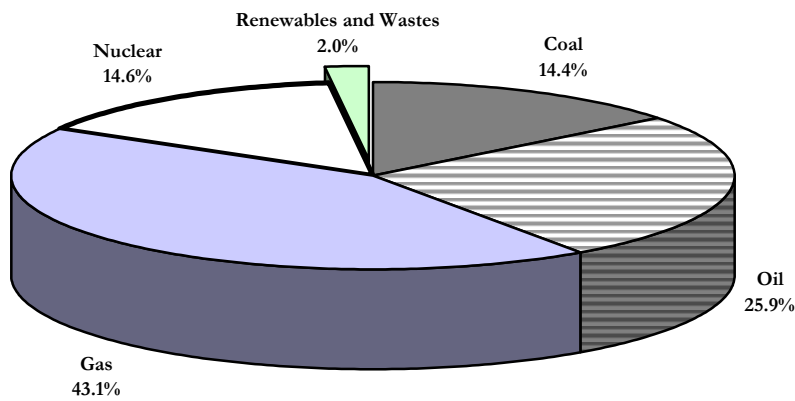
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Hungary - Electricity Generation by Fuel 2002



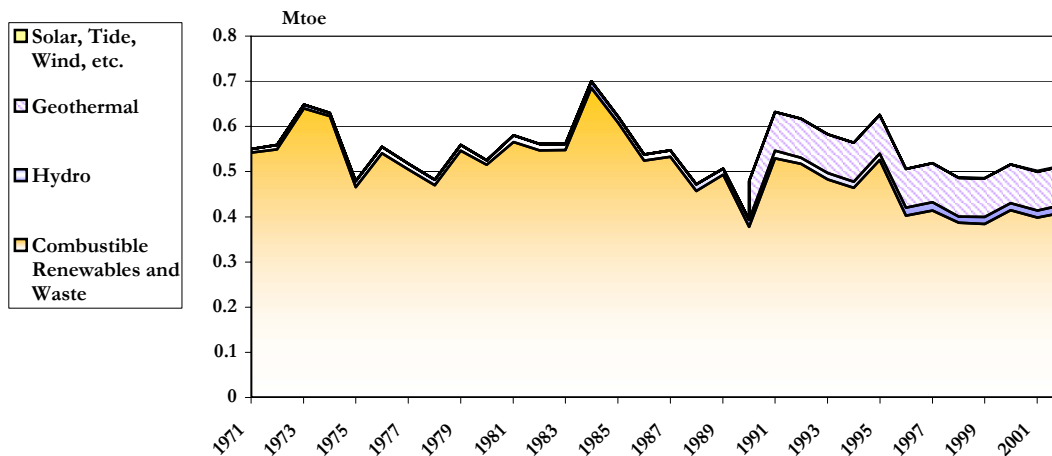
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<http://www.iea.org/Textbase/stats/index.asp>

Hungary - Shares of TPES 2002



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Hungary - Total Primary Energy Supply from Renewables (Mtoe)



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Iceland

Region Other Industrialised Countries

Source: IEA

Renewable Energy Policies and Measures

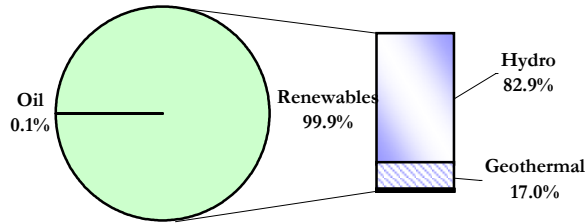
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Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Iceland](#)
- [Shares of TPES 2002 - Iceland](#)
- [Electricity Generation by Fuel 2002 - Iceland](#)

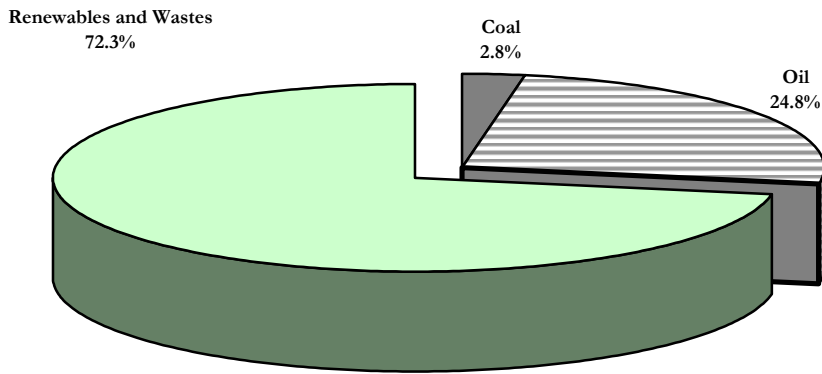
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Iceland - Electricity Generation by Fuel 2002



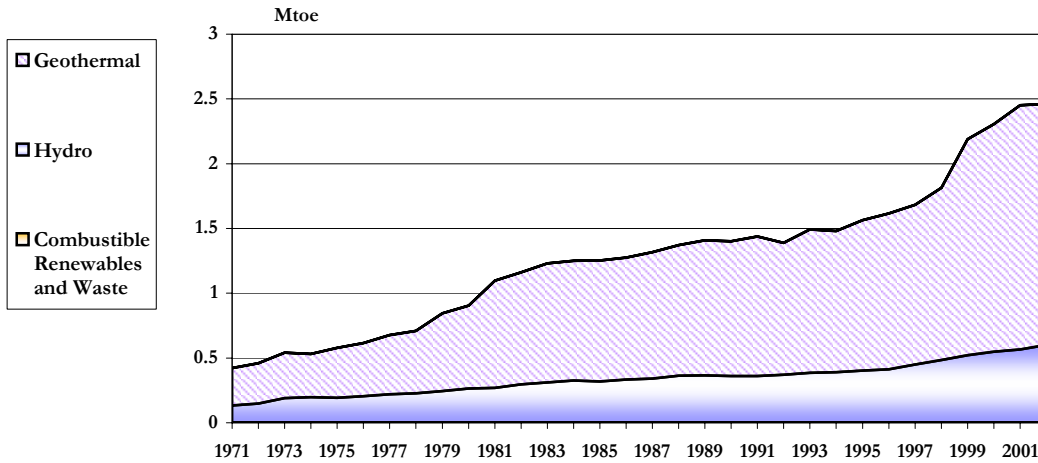
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Iceland - Shares of TPES 2002



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Iceland - Total Primary Energy Supply from Renewables (Mtoe)



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Ireland

Region Europe - EU
Renewable energy target(s) 13.2% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Irish National Development Plan Elements](#)
2. [Green Paper on Sustainable Energy](#)
3. [Strategy for Intensifying Wind Energy Development Report](#)
4. [House of Tomorrow Programme](#)
5. [Sustainable Energy Ireland \(SEI\)](#)
6. [Renewable Energy Research, Development & Demonstration](#)
7. [Electricity Regulation Act 1999](#)
8. [Third Party Access](#)
9. [Tax Relief](#)
10. [Business Expansion Scheme Tax Relief](#)
11. [Promotion of European Programmes](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Ireland](#)
- [Shares of TPES 2002 - Ireland](#)
- [Electricity Generation by Fuel 2002 - Ireland](#)

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Irish National Development Plan Elements

<i>Country</i>	Ireland
<i>Effective from</i>	1999
<i>Description</i>	The National Development Plan allocated a total investment of €67 million for renewable energy sources from 2000 to 2006. The main items supported by this fund are: Reinforcement and upgrade of grid to support increased use of renewables. Support the delivery of additional renewable energy supplies. Encourage new participants in renewable energy market by supporting small-scale projects.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€67 million
<i>URL</i>	www.environ.ie/DOEI/doi/pub.nsf/0/7b4b1c5ae65de1c080256b76005df33e/\$FILE/3501_EconomicP1.pdf
<i>Source: IEA</i>	

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Green Paper on Sustainable Energy

<i>Country</i>	Ireland
<i>Effective from</i>	1999
<i>Description</i>	<p>A Green Paper on Sustainable Energy published by the Department of Public Enterprise proposed the introduction of a carbon or energy tax scheme along with a tradable permit system to provide an incentive for industry to reduce emissions. One possibility discussed in the paper is to use revenue generated from a carbon tax or permit scheme to fund grants for energy audits and investments in energy equipment.</p> <p>The Green Paper set some targets for renewable energy sources in Ireland, which include: Increasing the percentage of total primary energy requirement (TPER) to be derived from renewable energy sources to 3.75% by 2005 from 2% in 2000. Increasing the percentage of electricity generated from renewable sources from 6.3% in 2000 to 12.39% by 2005. This includes installing an extra 500 MW of renewable electricity capacity by 2005.</p>
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.dcmnr.gov.ie/display.asp/pg=557
<i>Source: IEA</i>	

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Strategy for Intensifying Wind Energy Development Report

<i>Country</i>	Ireland
<i>Effective from</i>	2000
<i>Description</i>	In July 2000, the Renewable Energy Strategy Group published a report "Strategy for Intensifying Wind Energy Deployment" examining the aspects of, and constraints to, further development of wind energy in Ireland. The strategy recommended is designed to meet the targets set for the deployment of renewable energy at least cost, and focuses on three key elements: electricity markets, electricity networks and spatial planning. The aim is to secure an additional 500 MW of renewable-energy-based electricity-generating capacity by 2005.
<i>Policy type</i>	<ul style="list-style-type: none">•Regulatory and Administrative Rules•Obligations
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind
<i>Contact</i>	Department of Public Enterprise
Source: IEA	

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House of Tomorrow Programme

<i>Country</i>	Ireland
<i>Effective from</i>	2001
<i>Description</i>	The House of Tomorrow Programme offers support for research, development and demonstration projects aimed at generating and applying technologies, products, systems, practices and information leading to more use of sustainable energy in Irish housing. The main focus of the programme, which has a proposed five-year budget of € 21.1 million, is on stimulating widespread uptake of superior energy planning, design, specification and construction practices in both the new-home-building and home-improvement markets.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€ 7.4 million over 5 years
<i>Contact</i>	Irish Energy Centre
<i>URL</i>	www.sei.ie

Source: IEA

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Sustainable Energy Ireland (SEI)

<i>Country</i>	Ireland
<i>Effective from</i>	2002
<i>Description</i>	The Sustainable Energy Act established a new government body: Sustainable Energy Ireland (SEI) (formerly the Irish Energy Centre). SEI's functions are to: Promote and assist environmentally and economically sustainable production, supply and use of energy. Promote and assist energy efficiency and renewable sources of energy. Promote and assist the reduction of greenhouse gas emissions and transboundary air pollutants associated with the production, supply and use of energy. Promote and assist the minimising of the impact on the environment of the production, supply and use of energy. Promote and assist research, development and demonstration of new energy technologies. Provide advice, information and guidance to government officials and to energy suppliers and users.
<i>Policy type</i>	Public Awareness
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€89m
<i>Contact</i>	Sustainable Energy Ireland
<i>URL</i>	www.irish-energy.ie

Source: IEA

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Renewable Energy Research, Development & Demonstration

<i>Country</i>	Ireland
<i>Effective from</i>	2002
<i>Description</i>	<p>Under the National Development Plan, € 16.25 million has been made available for an RD&D programme for renewable sources of energy and related topics.</p> <p>The main aim of this programme is to stimulate the deployment of renewables that are close to the market and to assess and develop technologies that have significant prospects for the future.</p> <p>Partial funding is available for two types of projects: Projects demonstrating particular renewable energy technologies or applications which, although at or near commercial viability and having potential for replication, currently face market barriers due to lack of expertise, knowledge or market confidence. Research and development into innovative technologies, systems or marketing approaches which support the commercial exploitation of renewables, including applied research and development, technology transfer and adaptation and market research/feasibility studies.</p> <p>Full funding is available for the following two types of project: Public good research studies and investigations that contribute to the development and delivery of strategies, policies, standards and practices encouraging the deployment of renewable energy (mainly commissioned by separate Invitations for Tender). Commissioned public good research activities directed at increasing the value and impact of the programme results, which will ultimately be used to inform policy (commissioned by separate Invitations for Tender).</p>
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€16.25M
<i>Contact</i>	Sustainable Energy Ireland
<i>URL</i>	www.sei.ie
Source: IEA	

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Electricity Regulation Act 1999

<i>Country</i>	Ireland
<i>Effective from</i>	1999
<i>Description</i>	<p>The Electricity Regulation Act benefits renewable energy in the following ways: Full deregulation of the electricity market for renewable electricity in advance of full liberalisation of the overall electricity market. Priority dispatch given to electricity generated from renewables. The establishment of the Commission for Energy Regulation (CER) with a remit to encourage R&D in renewables. In the liberalisation of the electricity market in Ireland, special consideration was given to renewable electricity suppliers in granting them access to all consumers in advance of full market opening. Renewable electricity generators and suppliers are also advantaged in that they only have to balance aggregated annual renewable electricity supply and demand to qualify as a ? green? electricity supplier, rather than that for each half hour metering and trading period. One renewable electricity supplier has been successful in developing a renewable electricity market and is also involved with the development and operation of wind farms. However, few other wind farm owners have opted to sell generated electricity within the deregulated electricity market, as the guaranteed term of the government price support scheme is the best vehicle for attracting financing. Also, the base level price, or ? spill price,? which nondispatchable electricity generators can command when selling their electricity within the electricity market without a supply contract is currently considered too low to be viable. The independent electricity supply market is in the early stages of development with few relationships formed between renewable electricity generators and independent suppliers.</p>
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>URL</i>	history.cer.ie/ELECTRICITY%20REGULATION.pdf
<i>Source:</i>	IEA

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Third Party Access

<i>Country</i>	Ireland
<i>Effective from</i>	1996
<i>Description</i>	A decision was made by the Irish Government in 1996 to make third-party access for new renewable energy projects legally possible (i.e., electricity can be sold at a premium price to a customer other than the national grid).
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables

Source: IEA

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Tax Relief

<i>Country</i>	Ireland
<i>Effective from</i>	2002
<i>Description</i>	<p>The tax relief scheme, part of Finance Act 1998, came into effect in 1999. Corporate equity investments in certain renewable energy projects, namely hydro, solar, wind power and biomass, are eligible for tax relief in the form of a deduction from a company's profits for an investment in new ordinary shares in a qualifying company. The relief is capped at 50% of all capital expenditure (excluding land), net of grants, on a single project up to I£ 7.5 million. Investment by a company or group of companies in more than one qualifying energy project is capped at I£10 million per year. The Department of Public Enterprise certifies qualifying renewable energy projects and thereafter the Revenue Commissioners administer the tax relief.</p> <p>With the reduction in corporation tax over the last number of years, the benefits associated with this scheme have diminished. The tax relief scheme was extended in 2002 until December 2004.</p>
<i>Policy type</i>	Investment Tax Credits
<i>Renewable energy</i>	<ul style="list-style-type: none">•Hydropower•Solar photovoltaics•Offshore wind•Onshore wind•Bioenergy
<i>URL</i>	www.finance.gov.ie
Source: IEA	

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Alternative Energy Requirement AER VI

<i>Country</i>	Ireland
<i>Effective from</i>	2003
<i>Description</i>	<p>Six Alternative Energy Requirement (AER) competitions were held between 1995 and 2003. Under the AER scheme, winning bidders are entitled to a 15-year power purchase agreement whereby the ESB buys the electricity output of the winning facility at the bid price. The additional cost of electricity procured under the AER schemes is spread across all electricity consumers. The prices paid by the ESB are increased annually in line with the Consumer Price Index. For each competition a quota is set for the amount of electricity to be sourced from each technology, e.g., wind, hydro, biomass/waste.</p> <p>In AER I, the unit price was fixed and applicants were entitled to bid for capital grants. In subsequent competitions, a price cap for each renewable technology was set instead of a fixed price.</p> <p>Winning bidders in AER III were also entitled to apply for a capital grant under the ERDF Economic Infrastructure Operational Programme 1994-1999.</p> <p>Under AER V, the securing of planning permission as a precondition for entering the competition was introduced.</p> <p>Under AER VI (2003-2005), front weighting of the bid price was provided for, allowing a price increase of 35% for the first 7.5 years of the contract followed by an associated decrease of 35% for the remaining 7.5 years. AER VI aims to ensure that the 500 MW target for renewables based electricity-generating capacity is reached by 2005. (www.dcmnr.gov.ie/energy)</p>
<i>Policy type</i>	Bidding Systems
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.dcmnr.ie/display.asp?pg=802
<i>Source: IEA</i>	

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Business Expansion Scheme Tax Relief

<i>Country</i>	Ireland
<i>Effective from</i>	1984
<i>Description</i>	The Business Expansion Scheme (BES) was introduced in 1984 as an incentive to private investors to invest long-term equity capital in companies (particularly new and smaller ones) operating in certain sectors of the economy that would otherwise find it difficult to raise such funding and would instead have to rely on loan finance. The scheme was initially set to operate for three years and has been renewed on a regular basis since then. Investments in renewable energy companies qualify for BES relief. Individual investors holding a BES equity investment for a minimum period of five years can benefit from tax relief, at their marginal tax rate, in respect of investments up to € 31 750 per year. The aggregate amount that a company can raise under the BES was increased under the Finance Act 2004 from € 750 000 to € 1 000 000.
<i>Policy type</i>	Investment Tax Credits
<i>Renewable energy</i>	All renewables
Source: IEA	

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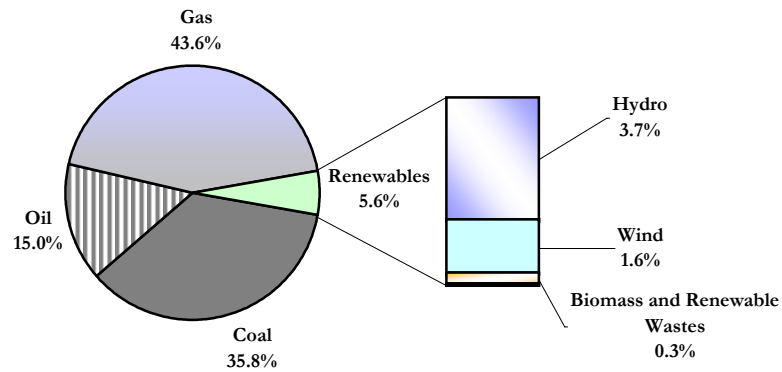
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Promotion of European Programmes

<i>Country</i>	Ireland
<i>Description</i>	<p>Sustainable Energy Ireland (SEI) is the statutory authority responsible for the promotion of the Sustainable Energy Systems element of the European sixth framework programme (FP6) in Ireland.</p> <p>SEI has made various efforts to create awareness of the FP6, and to encourage high quality Irish participation, including: Information dissemination on recent developments/new calls for proposals. Hosting a number of national information days for new calls for proposals. Initiating a competitive feasibility study process to enable the Irish energy research community to prepare high quality proposals. Targeted e-mails to specific technology groups, containing information on particular conferences, publications, etc. National contact point service ? provides continuing support to all prospective proposers in terms of advice and help in preparing proposals, via telephone, e-mail and face-to-face meetings. Networking/partner search ? facilitates partner search by advising prospective proposers of potential partners and by attending various brokerage sessions organised by the Commission. National delegate role ? representation at the Energy Programme Committee meeting;</p> <p>SEI is also responsible for the promotion of the recently launched energy framework programme, Intelligent Energy for Europe (EIE).</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Public Awareness•RD&D
<i>Renewable energy</i>	All renewables
Source: IEA	

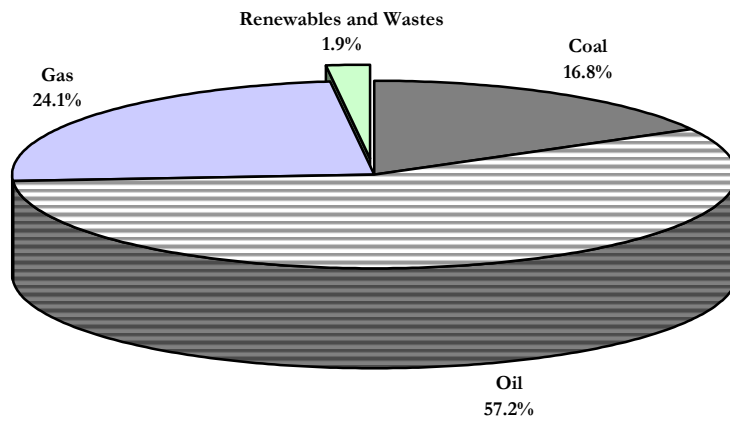
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Ireland - Electricity Generation by Fuel 2002



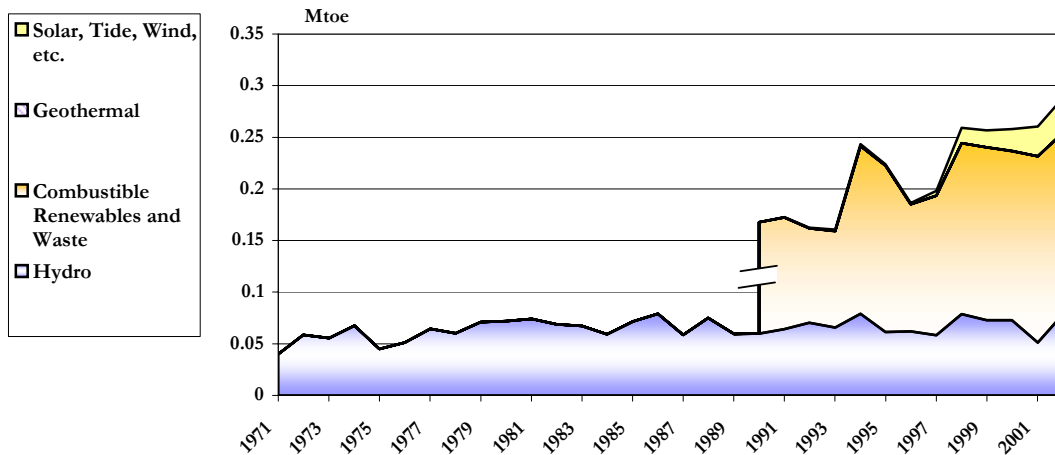
Source: IEA Energy Statistics - Copyright: IEA/OECD
 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

Ireland - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Ireland - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>



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Israel

Region Middle East and Asia

Source: IEA

Renewable Energy Policies and Measures

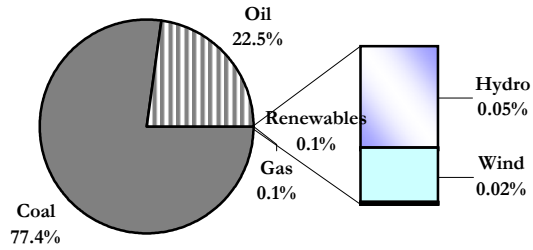
Information currently unavailable.

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Israel](#)
- [Shares of TPES 2002 - Israel](#)
- [Electricity Generation by Fuel 2002 - Israel](#)

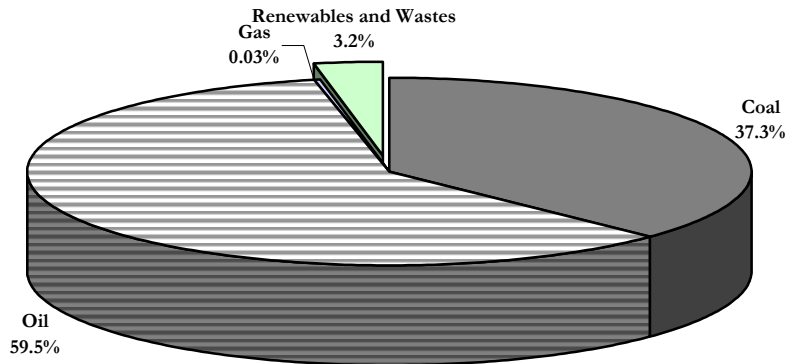
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Israel - Electricity Generation by Fuel 2002



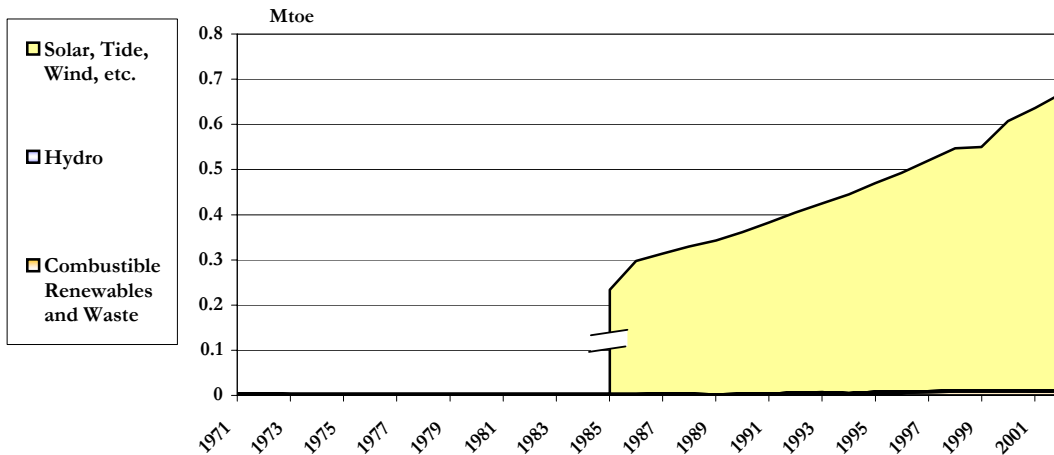
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Israel - Shares of TPES 2002



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<http://www.iea.org/Textbase/stats/index.asp>

Israel - Total Primary Energy Supply from Renewables (Mtoe)



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Italy

Region Europe - EU
Renewable energy target(s) 25% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Production From Small PV Installations - PV Roofs](#)
2. [2% Renewables Target - Green Certificates](#)
3. [Carbon Tax](#)
4. [Tax Reduction for Fuels with Lower Environmental Impact](#)
5. [Tax Credit for Geothermal Energy and Biomass](#)
6. [Voluntary Climate Pact](#)
7. [Fund for Greenhouse Gas Emissions Reduction, Energy Efficiency and Sustainable Energy](#)
8. [Grant for Solar Thermal Research](#)
9. [CIPE 2000](#)
10. [CIPE resolution](#)
11. [Provisions of CIPE 137/98 and 126/02](#)
12. [Legislative Decree 112 and 96; Constitutional laws 03/2001 and 239/04](#)
13. [Decree 1999](#)
14. [Decrees of Ministry of Industry 24 April 2001 and Ministry of Production Activities 20 July 2004](#)
15. [Financial law 448/98](#)
16. [Financial Law of 8 Dec. 1995 No. 549](#)
17. [Law 9/91 and Law 10/91](#)
18. [Voluntary Agreement - ENEL](#)
19. [Legislative Decree 387/03 Implementing Directive 2001/77/EC](#)
20. [CIPE - White Paper on Renewable Energy and Provision of Minister of Production Activities 7 February 2003](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Italy](#)
- [Shares of TPES 2002 - Italy](#)
- [Electricity Generation by Fuel 2002 - Italy](#)

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Liberalisation of Electricity Production From Small PV Installations - 10000 PV Roofs

<i>Country</i>	Italy
<i>Effective from</i>	2000
<i>Description</i>	<p>Law 133/99 allowed local exchanges (purchase and sale) of electricity between grid managers and small auto-producers of electricity from photovoltaic plants of less than 20 kW of installed capacity.</p> <p>Electricity produced is covered under a net metering arrangement, as defined by the provision n. 224/00 of the Authority for Electricity and Gas.</p> <p>This regulation fosters the implementation of the project "PV roofs" promoted by the Ministry of the Environment and ENEA (the Italian National Agency for New Technologies, Energy and Environment).</p> <p>Two directorial decrees of the Ministry of the Environment (2000 and 2001) funded the PV roof programme with additional funding coming from the regions. Installations on the order of 8-9 MW are expected.</p>
<i>Policy type</i>	Net Metering
<i>Renewable energy</i>	Solar photovoltaics
<i>Funding</i>	€32.5 M + €18 M (from regional sources)
<i>Contact</i>	<ul style="list-style-type: none">•Authority for Electric Power and Gas•Ministry of Environment and Territory

Source: IEA

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2% Renewables Target - Green Certificates

Country	Italy
Effective from	1999
Description	<p>The 1999 Electricity Liberalisation Act and Decrees from Italy's Ministries of Trade and Industry and of Environment (MICA Decree 11/11/99) required Italian energy producers and importers (producing or importing more than 100 GWh/year) to ensure that, starting from 2002, 2% of all electricity supplied to the national market came from plants fed by renewable sources entered in operation after 1 April 1999. The government can increase the quota to meet the renewable energy target (see legislative decree 387/2003). Suppliers can fulfill the obligation by buying green certificates from entitled new renewable energy plants, by building new renewable energy plants, or by importing electricity from new renewable energy plants from countries with similar instruments on the basis of reciprocity. The MAP Decree 18/3/02 integrated and partially modified the MICA Decree 11/11/99, by introducing the category of partial refurbishment (only for geothermal and hydropower) to be granted tradable green certificates. The legislative decree 387/03 increased the minimum quota of 0.35% per year from 2005 to 2007, with the quota reaching 3.05% in 2007.</p>
Policy type	<ul style="list-style-type: none">•Obligations•Tradable Certificates
Renewable energy	All renewables
Contact	<ul style="list-style-type: none">•Ministry of Environment and Territory•Ministry of Production Activities
URL	www.minindustria.it
Source: IEA	

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Carbon Tax

<i>Country</i>	Italy
<i>Effective from</i>	1999
<i>Description</i>	<p>A progressive carbon tax approved in 1998 was inaugurated in 1999 and fully phased-in by 2005. This new tax applies to all energy products; the existing tax structure on other fuels will be retained.</p> <p>Carbon tax rates on fossil fuels are (in ITL):</p> <p>Coal (tonne) 1999: 5 084; Natural Gas (m3) 1999: 0.87; Fuel oil (tonne) 1999: 1 286;</p> <p>The expected annual increase in tax rates did not occur. The law 30 december 2004, n. 311, canceled the provision</p>
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
<i>Contact</i>	President of the Ministers Cabinet
<i>Source: IEA</i>	

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Tax Reduction for Fuels with Lower Environmental Impact

<i>Country</i>	Italy
<i>Effective from</i>	2000
<i>Description</i>	<p>The financial law approved in 2000 established a reduced excise tax (€ 289.2 per 1 000 litres) for fuels having a low environmental impact, such as bio-ethanol, ETBE and biofuel additives to unleaded gasoline. The law exempt such fuels from the excise taxes up to 0.1 Mt per year to be used as transportation fuel during a three-year period expiring on 30 June 2005.</p> <p>Prior to that, biodiesel was granted full exemption (403,21 € /1000 l) from excise for a three-year period, which expired on 30 June 2004, within a limit of 0.3 Mt/year.</p> <p>The law of 30 December 2004, n. 311, grants biodiesel full exemption from excise tax, within a limit of 0.2 Mt/year, over a five-year period starting on 1 January 2005 through 31 December 2010.</p>
<i>Policy type</i>	Excise Tax Exemptions
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Bioenergy
<i>Contact</i>	Ministry of Finance
Source: IEA	

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Tax Credit for Geothermal Energy and Biomass

<i>Country</i>	Italy
<i>Effective from</i>	2000
<i>Description</i>	Under the financial law approved in 2000, users connected to either a geothermal or biomass fuelled district-heating grid receive a tax credit equal to € 20.65/kWh of power committed.
<i>Policy type</i>	Tax Credits
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Geothermal heat
<i>Contact</i>	Ministry of Finance
Source: IEA	

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Voluntary Climate Pact

<i>Country</i>	Italy
<i>Effective from</i>	1999
<i>Description</i>	In 1998, industry organisations, environmental NGOs, and other groups in Italy concluded an agreement with the government, under which they agree to curb CO2 emissions; improve energy efficiency in the industrial, energy, and transport sectors; and promote the use of renewable energy. This pact serves as a framework for specific voluntary agreements with individual signatories, such as one agreement involving twenty specific projects to be carried out by a company's energy and chemicals division. The projects include measures to promote energy efficiency and the use of renewable energy as well as plans for the development of products such as biofuels made from recycled vegetable oil, zinc-based batteries for electric cars, and a laundry detergent designed to be used at low temperatures.
<i>Policy type</i>	Voluntary Programmes
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Italian Environment Ministry
Source: IEA	

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Fund for Greenhouse Gas Emissions Reduction, Energy Efficiency and Sustainable Energy

<i>Country</i>	Italy
<i>Effective from</i>	2000
<i>Description</i>	A financial law, approved at the end of 2000, established a fund for the reduction of atmospheric emissions and the promotion of energy efficiency and sustainable energy sources. The fund was to be financed from 3% of the receipts accruing from the carbon tax law. Among other activities, the fund was expected to finance up to 80% of the cost of programmes for installation of solar collectors (mostly PV), particularly in southern Italy, and reforestation programmes to increase absorption of CO ₂ . Up to present, however, no financial resources have been made available for the fund.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	Solar photovoltaics
<i>Contact</i>	Ministry of Finance / Ministry of the Environment

Source: IEA

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Grant for Solar Thermal Research

<i>Country</i>	Italy
<i>Effective from</i>	2001
<i>Description</i>	€ 57.1 million were provided in 2001 and 2002 by the Italian Parliament to ENEA (the National Agency for New Technology, Energy and the Environment) for the development of solar thermal-electric generation.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	Solar thermal
<i>Funding</i>	€57.1 Million over three years
<i>Contact</i>	<ul style="list-style-type: none">•National Agency for New technology, Energy and the Environment (ENEA)•Ministry of Environment•Ministry of Production Activities
<i>URL</i>	www.minambiente.it www.minindustria.it

Source: IEA

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CIPE 2000

<i>Country</i>	Italy
<i>Effective from</i>	2000
<i>Description</i>	CIPE resolution of February 2000, also known as the Biomass Fuels National Plan (PROBIO) aims to promote the deployment of biomass to replace fossil fuels through incentive systems. This is projected to affect mainly the agricultural, transport and energy sectors.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	Bioenergy
<i>URL</i>	www.jrc.es/cfapp/eneriure/Reports/ITA%20agr.pdf
Source: IEA	

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CIPE resolution

<i>Country</i>	Italy
<i>Effective from</i>	1999
<i>Description</i>	CIPE resolution of December 1999, also known as the ? National Programme for the Valorisation of Agricultural and Forestry Biomass (PNVBAF)? and the ? National Programme for the Energy Valorisation of Biomass (PNERB),? fixes goals for the reduction of greenhouse gases (3-4% by 2010/12), recouping of renewable energy from agro-forestry products and by-products, and development of eco-compatible agricultural methods and increasing the use of energy crops.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	Bioenergy
<i>URL</i>	www.jrc.es/cfapp/eneriure/Reports/ITA%20agr.pdf
Source: IEA	

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Provisions of CIPE 137/98 and 126/02

<i>Country</i>	Italy
<i>Effective from</i>	1998
<i>Description</i>	These provisions resulted from the Kyoto Protocol and commits Italy to a reduction of 18-20 Mt of CO2 through the specific use of renewable energy sources.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/ITAtables.pdf

Source: IEA

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Legislative Decree 112 and 96; Constitutional laws 03/2001 and 239/04

<i>Country</i>	Italy
<i>Effective from</i>	1998
<i>Description</i>	<p>These legislative decrees in 1998 and 1999 specify the institutional arrangement, i.e., jurisdiction, of the state, regions and local authorities. The legislative decree 112/98 sets out that the ? state is responsible for the elaboration and definition of energy objectives and guidelines and for action to address and co-ordinate energy planning at the regional level.? The region is charged with the responsibility of drawing specific regional energy plans including renewables potential. Decree 96/99 specifies how the transfer of competencies is to be accomplished.</p> <p>An amendment to Article 117 of the Constitution, introduced by constitutional law 03/2001, made the production, transport and national distribution of energy part of the ? concurrent list of legislation? .</p> <p>Concurrent legislation means that the central government sets the policies, the main guidelines and the general objectives by law, while the regions determine specific laws and rules to achieve the said objectives. Law 239/04 more precisely defines the responsibilities of the State and the regions in the energy sector.</p>
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
Source: IEA	

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Decree 1999

<i>Country</i>	Italy
<i>Effective from</i>	1999
<i>Description</i>	This decree, passed in September 1999, concerns the provisions and norms of Environmental Impact Valuations. It states that EIV regulations are applicable to certain categories of industrial plants, including wind power plants, on the basis of regional government decisions.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind•Waste (organic)
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/ITatables.pdf
Source: IEA	

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Decrees of Ministry of Industry 24 April 2001 and Ministry of Production Activities 20 July 2004

<i>Country</i>	Italy
<i>Effective from</i>	2002
<i>Description</i>	Two decrees in 2001 defined quantitative targets, functioning and implementation of programmes related to energy conservation and efficiency as they relate to the opening of the electricity and gas markets. Solar-thermal, photovoltaics and biomass are eligible for support. The targets are gradual and progressive from 2002-2006. Due to a delay in the application of the 2001 Decrees, these decrees were subsequently substituted by the decrees of Ministry of Production Activities 20 July 2004, which postponed targets to the period 2005-2009.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	<ul style="list-style-type: none">•Solar thermal•Solar photovoltaics•Bioenergy•Geothermal
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/ITatables.pdf
Source: IEA	

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Financial law 448/98

<i>Country</i>	Italy
<i>Effective from</i>	1999
<i>Description</i>	Law 448/98 reduced the percentage deduction for individuals and private companies for renewables and energy saving measures related to houses and buildings from 41% (previously established by the Financial Law 449/97) to 36%. The benefit has been renewed by other subsequent norms.
<i>Policy type</i>	Property Tax Exemptions
<i>Renewable energy</i>	<ul style="list-style-type: none">•Solar photovoltaics•Solar thermal
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/ITables.pdf
Source: IEA	

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Financial Law of 8 Dec. 1995 No. 549

<i>Country</i>	Italy
<i>Effective from</i>	1996
<i>Description</i>	Renewable energy projects and energy conservation projects are financed through excise levies on petrol. This law additionally allowed the regions to impose a regional tax on petrol and natural gas. This law also signified the end of financing of renewables and energy conservation projects through Law 10/91.
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.agores.org/Publications/Enerlure/Italy21.pdf
Source: IEA	

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Law 9/91 and Law 10/91

<i>Country</i>	Italy
<i>Effective from</i>	1991
<i>Description</i>	<p>Law 9/91 and Law 10/91 achieved great success in promoting distributed electricity generation and preparing the conditions needed for a liberalised electricity market. Industrial companies and municipal utilities were allowed to produce power for their own needs and excess electricity generated would be bought by the national grid.</p> <p>The Laws, along with CIP 6/92, are concerned with the rational use of energy, energy saving, renewable energy sources and assimilated sources. Law 9/91 created reference rules for the electricity sector with the goal of implementing Italy's National Energy Policies (PEN).</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.agores.org/Publications/Enerlure/Italy21.pdf
<i>Source: IEA</i>	

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Voluntary Agreement - ENEL

<i>Country</i>	Italy
<i>Effective from</i>	1999
<i>Description</i>	Italy's ENEL signed an agreement with the Ministry of the Environment to cut greenhouse gas emissions, an accord which will require an investment of ITL 8 to 10 trillion (US\$ 3.8-4.8 billion) by 2006. The announcement was made during the presentation of ENEL's 1999 Report on the Environment. According to the agreement, emissions of carbon dioxide will be reduced by 20% from 1990 levels as part of a programme that will require all ENEL's plants to increase production efficiency and invest in renewable resources. Subsequent provisions, such as minimum quota obligations on renewable electricity and targets on energy efficiency in final uses, made mandatory some ENEL voluntary initiatives
<i>Policy type</i>	<ul style="list-style-type: none">•Voluntary Programmes•Obligations
<i>Renewable energy</i>	All renewables
Source: IEA	

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Legislative Decree 387/03 Implementing Directive 2001/77/EC

Country	Italy
Effective from	2003
Description	<p>The Decree entered into force on 15 February 2004 and sets out in twenty articles a national framework for the promotion of renewable energy sources and particularly for their use in micro-generation plants. The decree adopts a definition of renewable energy sources and electricity produced from renewables contained in article 2 of the EC Directive 2001/77/EC. Consistent with the Directive, the Decree sets a timetable for the periodic reporting, review and monitoring, by the Ministry of Productive Activities, of progress towards the implementation of the objectives. It also sets for the period 2005-2007 a 0.35% annual rate of increase of the minimum share of electricity produced from renewable energy sources that should be fed to the national grid and deadlines for the MPA to plan further increments over the periods 2007-2009 and 2010-2012.</p> <p>Sanctions are established for non-compliance and applied by the Regulatory Authority (AEEG) based on the reports of the grid manager (GRTN). To assess the exploitable energy potential from biomass, an ad-hoc experts committee has been created to help design appropriate legislation. A six-month deadline is also set for the adoption of legislation and criteria (minimum requirements, possibility to accumulate incentives, preferential tariffs, capacity targets, use of green certificates) for granting incentives to power produced from solar energy.</p> <p>The Decree includes specific provisions which favour biomass and hybrid plants (i.e., those producing part of their power from renewables) over fossil fuel plants in dispatching. A five-year programme agreement between the MPA and ENEA on RD&D measures to support renewables and energy efficiency has been established. Regional targets for renewable-based electricity are encouraged and regional governments can establish their own plans for renewables support.</p> <p>Specific articles address the issue of certification of origin for electricity produced from renewables, which can be requested for plants producing more than 100 MWh per year from GRTN. Conditions under which the electricity produced can be sold in the power market or purchased by GRTN are indicated. Specific rules are set for the streamlining of authorisation procedures for plants and infrastructure devoted to power production from renewables.</p> <p>Article 17 of the Decree extends the benefits granted to renewables to waste and fuels derived from waste, including the non-biodegradable fraction of urban, agricultural and industrial waste mentioned in articles 31 and 33 of the legislative Decree no. 22 of 5 February 1997. This is subject to another decree (to be adopted by MPA in the future) specifying the exact types of waste admitted and the allowable emission limits from plants that use them as fuels.</p> <p>However, the energy sources assimilated to renewables in Law 10/91 and the goods, products and substances originating in production of energy are excluded from the benefits of DLGS 387. This removes a peculiarity of earlier legislation that granted the same subsidies as those given to renewables to CHP (whatever the fuel used and including refinery waste such as tar).</p>
Policy type	<ul style="list-style-type: none">•Obligations•RD&D
Renewable energy	All renewables
Source: IEA	

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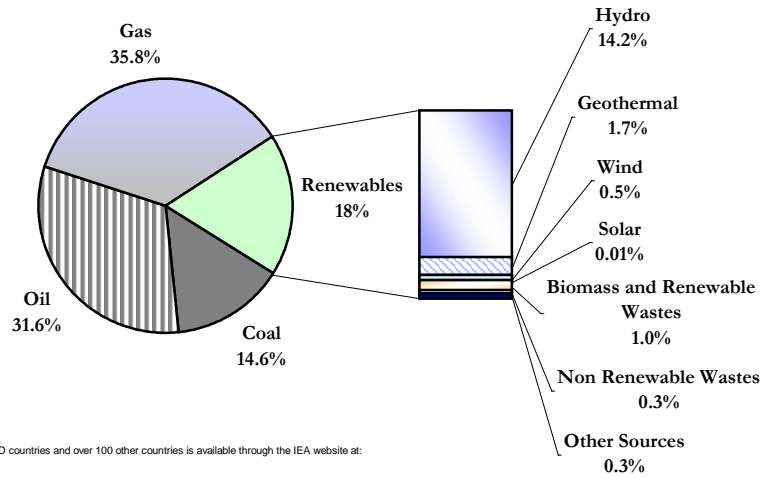
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CIPE - White Paper on Renewable Energy and Provision of Minister of Production Activities 7 February 2003

<i>Country</i>	Italy
<i>Effective from</i>	1999
<i>Description</i>	The CIPE (resolution 126 of August 1999) sets the targets for supply of each renewable energy technology by 2008-2012. A provision of the Minister of production activities of 7 February 2003, set out specific targets on electricity from renewables, according to the European directive 2001/77/EC.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
Source: IEA	

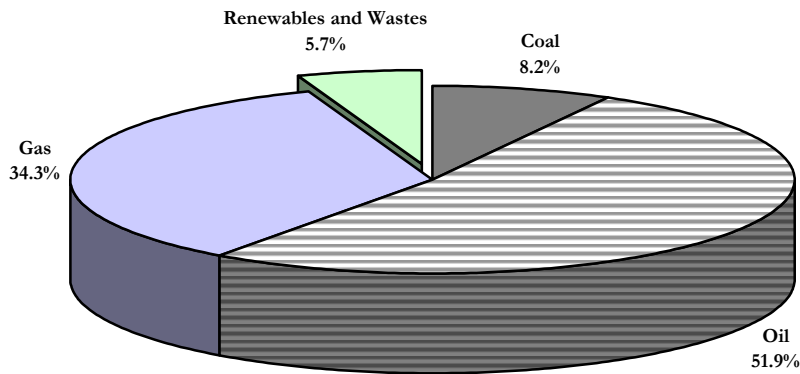
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Italy - Electricity Generation by Fuel 2002



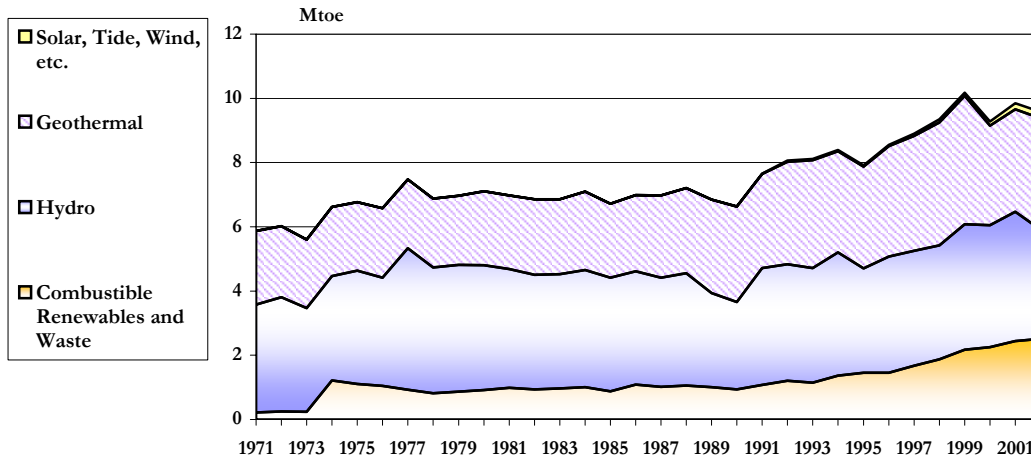
Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Italy - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

Italy - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Jamaica

Region Aosis - Caribbean

Source: IEA

Renewable Energy Policies and Measures

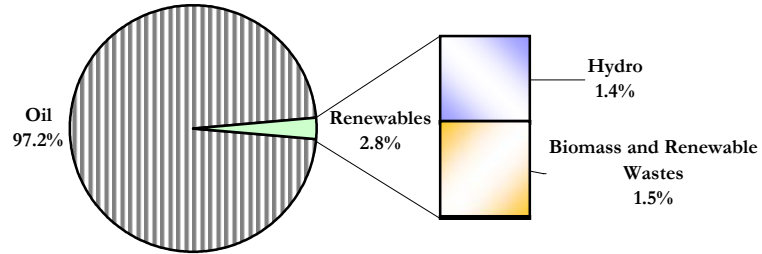
Information currently unavailable.

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Jamaica](#)
- [Shares of TPES 2002 - Jamaica](#)
- [Electricity Generation by Fuel 2002 - Jamaica](#)

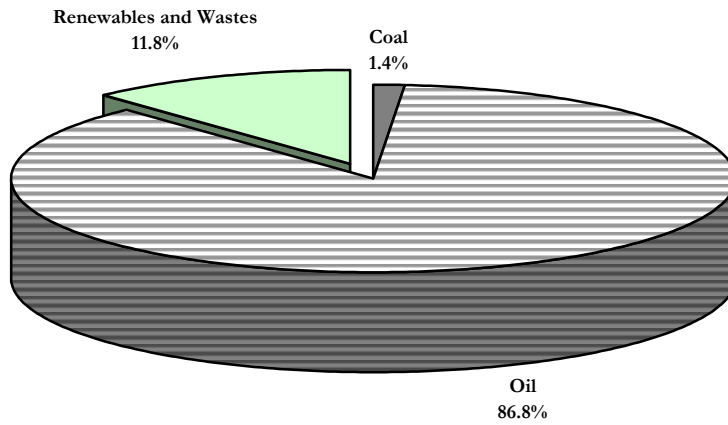
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Jamaica - Electricity Generation by Fuel 2002



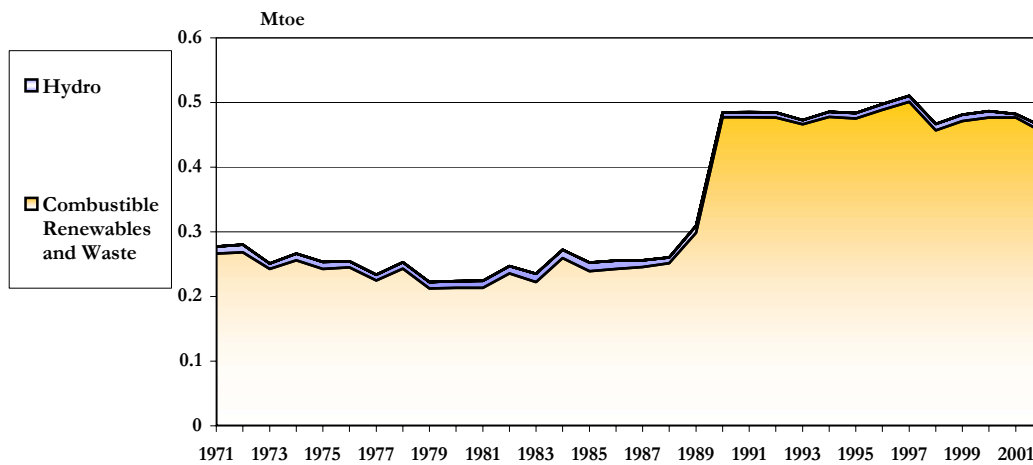
Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Jamaica - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Jamaica - Total Primary Energy Supply from Renewables (Mtoe)



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Kenya

Region Africa

Source: IEA

Renewable Energy Policies and Measures

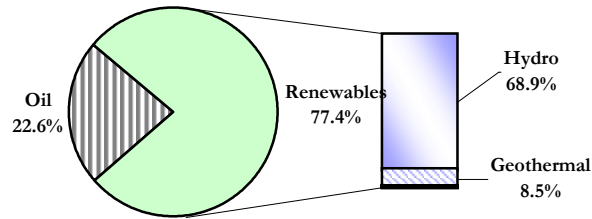
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Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Kenya](#)
- [Shares of TPES 2002 - Kenya](#)
- [Electricity Generation by Fuel 2002 - Kenya](#)

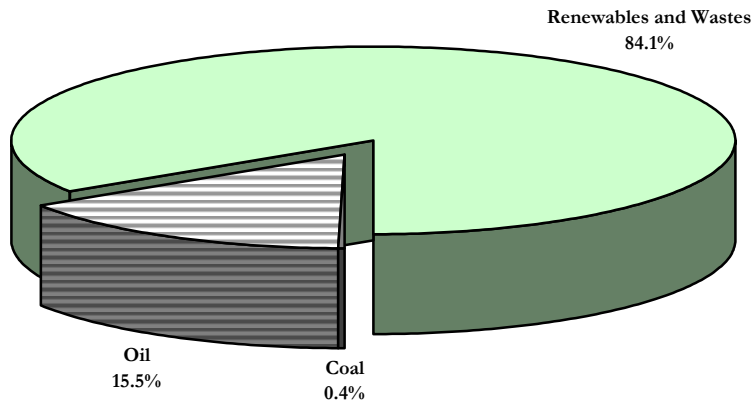
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Kenya - Electricity Generation by Fuel 2002



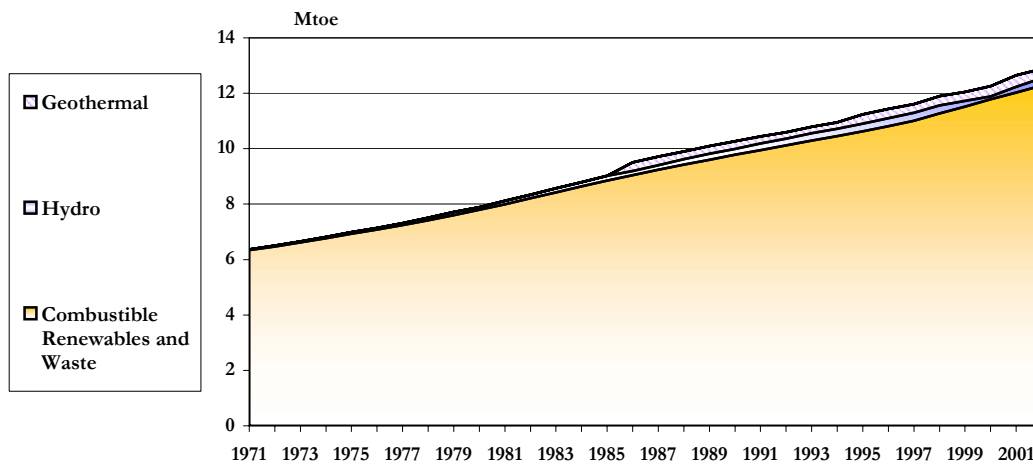
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Kenya - Shares of TPES 2002



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Kenya - Total Primary Energy Supply from Renewables (Mtoe)



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Latvia

<i>Region</i>	Europe - EU
<i>Renewable energy target(s)</i>	•6% of TPES (excluding large hydro) by 2010 •49.3% of electricity output by 2010

Source: IEA

Renewable Energy Policies and Measures

1. [National Energy Program](#)
2. [Law on Energy](#)
3. [Energy Policy in the Electricity Sector](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Latvia](#)
- [Shares of TPES 2002 - Latvia](#)
- [Electricity Generation by Fuel 2002 - Latvia](#)

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National Energy Program

<i>Country</i>	Latvia
<i>Effective from</i>	1997
<i>Description</i>	The National Energy Program defines activities for the reliable supply of energy resources in the country until the year 2020. The program states that the energy supply has to comply in quality and quantity with the requirements of consumers, at the lowest possible cost and with the least impact on the environment. Increasing the use of local energy production from RES is key issue in the Program. However, no particular target for energy production from RES has been defined.
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Economy
<i>URL</i>	www.em.gov.lv

Source: IEA

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Law on Energy

<i>Country</i>	Latvia
<i>Effective from</i>	1998
<i>Description</i>	<p>Policy Objectives include:</p> <ol style="list-style-type: none">1) Ensuring efficient use of energy and enhancing energy supply efficiency by means of balanced energy consumption;2) Ensuring an uninterrupted, reliable, high quality supply energy to users, diversifying the types of fuel to be used. Enhancing energy supply reliability as well as improving the distribution and supply of energy ;3) Establishing favourable conditions for the use of domestic, renewable and secondary energy resources and the diversified structure of the imported energy resources;4) Fostering the development of the energy market, transit, modernisation of infrastructure, and transparency in the gradual system of setting prices and tariffs;5) Giving energy users the right to choose the source of energy to be used;6) Establishing a favourable investment environment;7) Promoting economically justified competition;8) Facilitating and minimising the impact of energy use upon the environment and application of environmentally friendly technologies. <p>Articles of the Law that relate specifically to Renewable Energy Supply include: (Article 2)</p> <p>The current Law regulates the energy industry through the infrastructure of the national economy, which involves the generation of energy resources and the utilisation thereof, the purchase, transformation, storage, transmission, distribution and supply of different types of energy to the energy users, and energy consumption. The Law also stipulates the procedure of transmission in the energy industry and the organisation and development principles for operation of energy supply utilities.</p> <p>(Article 4)</p> <p>Energy policy is a part of the national economy policy of the country and its implementation strategy is stipulated by the Cabinet of Ministers in the Latvian National Energy Program that is developed for a period of 15 years and adjusted periodically every five years, based on scientific research, changes and developments in the national economy, as well as international factors having an impact upon the energy industry and energy supply in the country.</p> <p>The Law has been operational since the 6th of October 1998 (Vestnesis, No. 273 dd. 22.09.1998) passed by the Parliament of the Republic of Latvia.</p> <p>Amendments were made to the Law on 10 May 2001 that came into effect on 1 June 2001. Further amendments were adopted in 2002 including: Requirements for CHP stations and the procedure to set the price for the purchase of excess electricity (CMR N. 9). A higher power purchase price is set if domestic energy sources (including peat as a local energy source) are used; Regulations on total installed capacities for each type of electricity generation if RES are utilized (CMR Nr. 28); Regulations for the installation and dislocation of electricity production capacities if RES are used for the production of electricity (CMR Nr.29).</p> <p>Tariffs defined in the Law previously referred to the average customers tariffs. In January 2003, the price has decreased and is now sometimes subject to approval by the Regulator.</p>
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables
<i>Contact</i>	The Cabinet of Ministers of the Republic of Latvia
<i>URL</i>	www.sprk.gov.lv/index.php?id=1115&sadala=192
<i>Source: IEA</i>	



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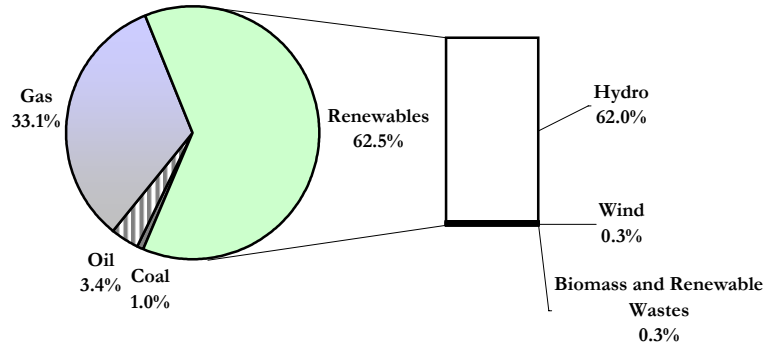
Energy Policy in the Electricity Sector

<i>Country</i>	Latvia
<i>Effective from</i>	2001
<i>Description</i>	<p>The main objective of Energy Policy in the Electricity Sector is promoting of the development of power sector in accordance with balanced and sustainable development of national economy. Promotion of the use of renewable and local energy resources as well as coordination of environmental protection and energy production, transportation and consumption costs are among the tools to achieve the objectives in the electricity sector.</p> <p>The Energy Policy in the Electricity Sector sets the objective to foster the promotion of the use of renewable and domestic energy resources, which corresponds to approximately 6% of renewable electricity (with large hydro power plants excluded) in the balance of the total electricity consumption.</p>
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables

Source: IEA

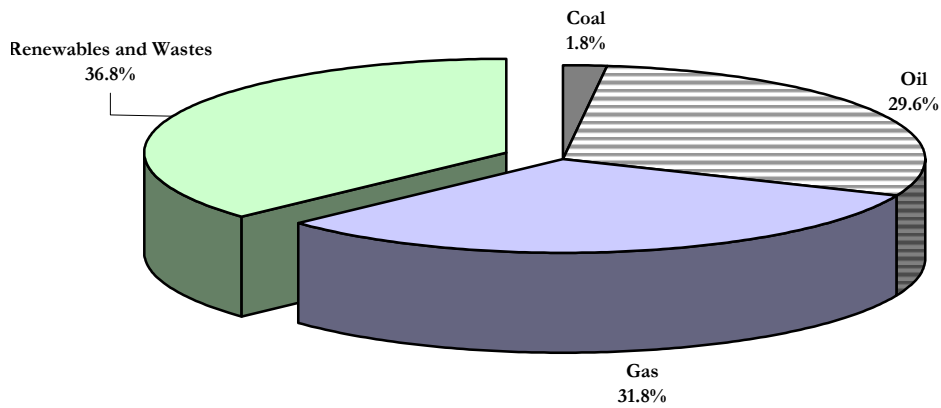
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Latvia - Electricity Generation by Fuel 2002



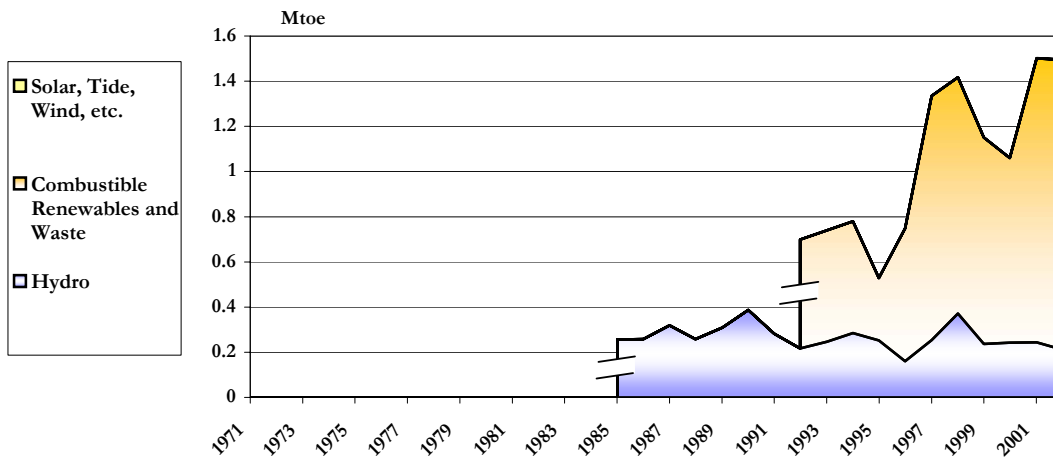
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Latvia - Shares of TPES 2002



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Latvia - Total Primary Energy Supply from Renewables (Mtoe)



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Lithuania

<i>Region</i>	Europe - EU
<i>Renewable energy target(s)</i>	•12% of TPES by 2010 •7% of electricity output by 2010

Source: IEA

Renewable Energy Policies and Measures

1. [Law on Energy of the Republic of Lithuania](#)
2. [National Energy Strategy](#)
3. [National Energy Efficiency Programme](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Lithuania](#)
- [Shares of TPES 2002 - Lithuania](#)
- [Electricity Generation by Fuel 2002 - Lithuania](#)

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Law on Energy of the Republic of Lithuania

<i>Country</i>	Lithuania
<i>Effective from</i>	2002
<i>Description</i>	<p>The Law on Energy defines renewable energy sources as energy derived from natural resources, such as hydropower, solar and wind energy, biomass energy and energy which flows out from the centre to the surface of the earth, i.e. geothermal energy. The Law on Energy stipulates also that the efficient use of renewable energy resources is to be promoted by the state and under the jurisdiction of the Ministry of Economy.</p> <p>The State is to promote the use of renewable energy resources through the provision of soft loans, subsidies and preferential taxes, etc. The National Control Commission for Prices and Energy ("Commission") establishes the purchasing prices of electricity generated from different renewable energy sources. Currently, the highest guaranteed tariff has been established for wind energy due to its initial stage of this energy in Lithuania. The primary parties to benefit from these guaranteed tariffs are generators which use renewable energy resources for energy production. These generators, under the Law on Energy, should have access to the electricity network and must be paid according to the guaranteed (supported) tariffs, to ensure long-term security.</p> <p>The Ministry of Economy will determine the order and conditions of connection to the electricity network.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•3rd Party Finance•Capital Grants•Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Economy
<i>URL</i>	www3.lrs.lt/cgi-bin/preps2?Condition1=198404&Condition2
<i>Source: IEA</i>	

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National Energy Strategy

<i>Country</i>	Lithuania
<i>Effective from</i>	2002
<i>Description</i>	<p>One of the aims of the National Energy Strategy is to increase utilization of indigenous energy resources and the use renewable energy sources by following EU guidelines to reduce the volume of fuel import as well as to create new jobs and to improve environmental standards. Specific measures to achieve this goal include:</p> <ul style="list-style-type: none">- drawing up and updating programmes for the consumption of indigenous energy resources;- encouragement of the extensive use of indigenous energy sources by organisational, economic and financial measures, support to enterprises and increased production and installation of equipment intended for the processing and use of the above-mentioned resources;- implementation of projects for the use of wind, water and solar energy as well as for the consumption of other renewable and waste energy resources . The state will back the implementation of these projects and provide conditions for EU structural and other support funds to be used for achieving the above goals;- provision of conditions for developing the production of biofuels. The existing legislation promoting production and use of the biofuels will be amended and revised on a regular basis;- efforts directed to increasing share of renewables in the primary energy balance by 2010 to 12% and ensuring that the share is close to meeting the requirements of EU directives.
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables
<i>URL</i>	www3.lrs.lt/cgi-bin/preps2?Condition1=197078&Condition2
<i>Source:</i>	IEA

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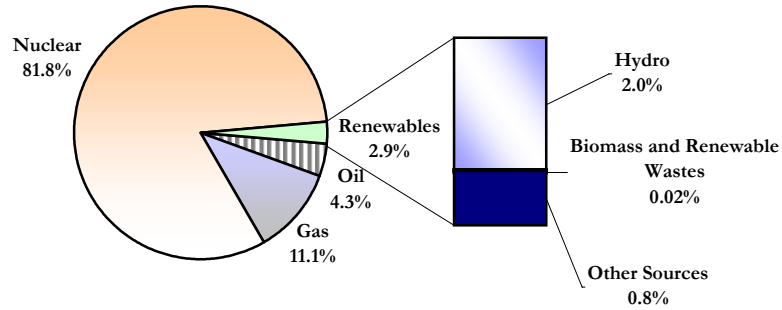
National Energy Efficiency Programme

<i>Country</i>	Lithuania
<i>Effective from</i>	1992
<i>Description</i>	<p>The National Energy Efficiency Programme (NEEP) was established to improve the efficiency of energy use as well as use of renewable energy sources in Lithuania. Programme activities cover five major topics:</p> <ul style="list-style-type: none">- Drafting legislation and regulatory documents for implementation of the National Energy Efficiency Programme;- Renovating buildings and updating their energy facilities;- Usage of renewable, local and secondary energy resources;- Increasing energy efficiency in production processes;- Information dissemination and counselling activities.
<i>Policy type</i>	<ul style="list-style-type: none">•General Energy Policy•Public Awareness
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Energy Saving Programme Directorate
<i>URL</i>	www.ena.lt/en/main_veikla_vartojimas.htm

Source: IEA

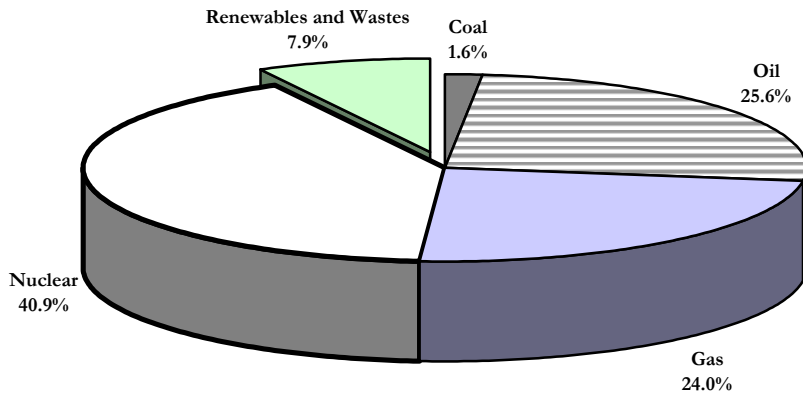
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Lithuania - Electricity Generation by Fuel 2002



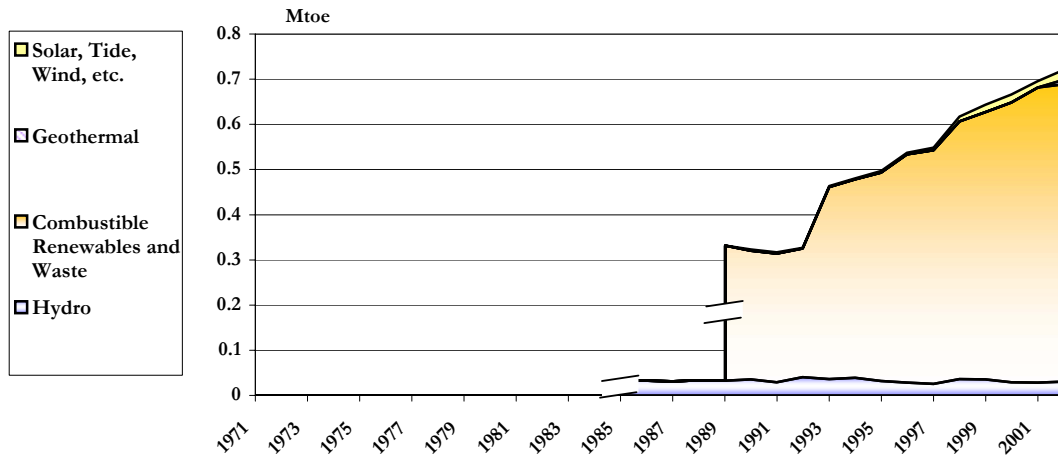
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Lithuania - Shares of TPES 2002



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Lithuania - Total Primary Energy Supply from Renewables (Mtoe)



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Luxembourg

Region Europe - EU
Renewable energy target(s) 5.7% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Renewable Energy Guide](#)
2. [Flexible Depreciation](#)
3. [Reglement Grand-Ducal \(30 mai 1994\)](#)
4. [Reglement Grand-Ducal \(28 Decembre 2001\)](#)
5. [Reglement Grand-Ducal \(17 juillet 2001\)](#)
6. [Energy Efficiency Law](#)
7. [Fund for the Protection of the Environment](#)
8. [Electricity Consumption Tax](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Luxembourg](#)
- [Shares of TPES 2002 - Luxembourg](#)
- [Electricity Generation by Fuel 2002 - Luxembourg](#)

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Renewable Energy Guide

<i>Country</i>	Luxembourg
<i>Effective from</i>	2001
<i>Description</i>	The Ministry of Environment developed a new Renewable Energy Guide in September 2001. This guide, created in collaboration with the Luxembourg Energy Agency, aims to inform people about renewable energy technologies, their possibilities and use. It also serves as an information source on methods to apply for and obtain subsidies under the government scheme for the promotion of renewable energy sources.
<i>Policy type</i>	Public Awareness
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Environment
<i>URL</i>	www.mev.etat.lu/

Source: IEA

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Flexible Depreciation

<i>Country</i>	Luxembourg
<i>Effective from</i>	1989
<i>Description</i>	The objective of this policy is to stimulate the investment in the protection of the environment and energy savings in businesses. It provides accelerated depreciation for income taxes, up to 60% of the investment costs.
<i>Policy type</i>	Investment Tax Credits
<i>Renewable energy</i>	All renewables

Source: IEA

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Reglement Grand-Ducal (30 mai 1994)

<i>Country</i>	Luxembourg
<i>Effective from</i>	1994
<i>Description</i>	The Ministry of Energy supports the production of electricity from renewables by bonuses defined in this regulation, mainly for co-generation systems, wind power and PV.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	<ul style="list-style-type: none">•Onshore wind•Solar photovoltaics

Source: IEA

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Reglement Grand-Ducal (28 Decembre 2001)

<i>Country</i>	Luxembourg
<i>Effective from</i>	2001
<i>Description</i>	The Ministry of the Environment, through this regulation, increased its support for the production of electrical energy. This support takes the form of bonuses whose size is dependent upon the system used. For example, PV receives the largest bonus. This bonus complements the Regulation passed in 1994 concerning the promotion of cogeneration systems, wind power and PV. PV systems are supported for twenty years, while support for other systems is limited to ten years. A digression system is also in place for the bonuses.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Bioenergy•Hydropower•Onshore wind•Solar photovoltaics

Source: IEA

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Reglement Grand-Ducal (17 juillet 2001)

<i>Country</i>	Luxembourg
<i>Effective from</i>	2001
<i>Description</i>	This legislation provides incentives for the installation of renewable systems for private owners including among other technologies, wind energy, PV and low-energy houses.
<i>Policy type</i>	Consumer Grants / Rebates
<i>Renewable energy</i>	<ul style="list-style-type: none">•Onshore wind•Solar photovoltaics

Source: IEA

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Energy Efficiency Law

<i>Country</i>	Luxembourg
<i>Effective from</i>	1993
<i>Description</i>	<p>The Energy Efficiency Law of August 5th 1993 provides the legal basis and sets out energy saving and renewable energy objectives and measures.</p> <p>The feed-in tariffs for electricity produced by renewables derive from the Grand Ducal regulation of 30 May 1994. There are two classes of feed-in tariffs for producers, depending on their size and technology:</p> <ul style="list-style-type: none">- Class 1 renewables (wind, biomass or PV) 1-500 kW: € 0.01 per kWh.- Class 1 CHP 1-150 kW and Class 2 CHP 150 ? 1 500 KW: € 0.01 per kWh - Class 2 renewables 501-1 500 kW: € 0.058 per kWh (day tariff) and € 0.003 per kWh (night tariff). CHP minimum average is 2 500 hours per year of operation and 80% all-over efficiency. <p>Tariff levels are indexed to cost-of-living indices. There is a bonus for wind and PV power. In addition, average peak load deliveries during the three principal annual peak load period's leads to an extra bonus.</p>
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Onshore wind•Solar photovoltaics

Source: IEA

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Fund for the Protection of the Environment

<i>Country</i>	Luxembourg
<i>Effective from</i>	1999
<i>Description</i>	The Fund for the Protection of the Environment is also titled the « Loi du 31 mai 1999 portant institution d'un fond pour la protection de l'Environnement ». This law created a fund to support exemplary and innovative projects by municipalities that benefit the environment.
<i>Policy type</i>	Consumer Grants / Rebates
<i>Renewable energy</i>	All renewables

Source: IEA

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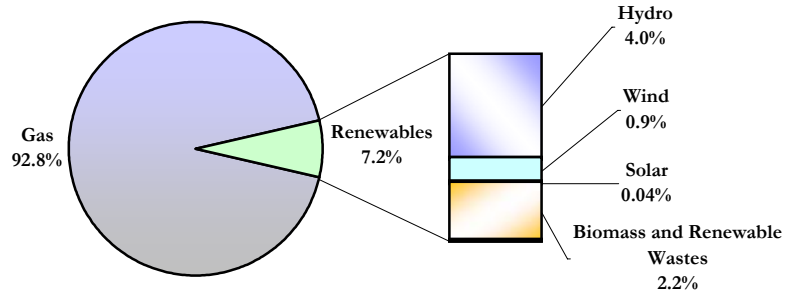
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Electricity Consumption Tax

<i>Country</i>	Luxembourg
<i>Effective from</i>	2001
<i>Description</i>	On 1 January 2001, an electricity consumption tax was instituted.
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
Source: IEA	

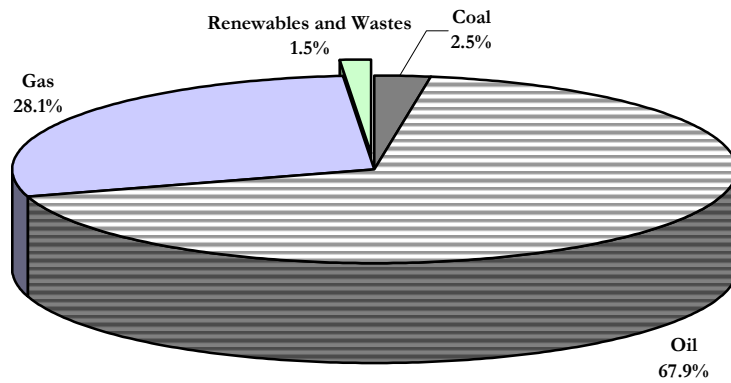
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Luxembourg - Electricity Generation by Fuel 2002



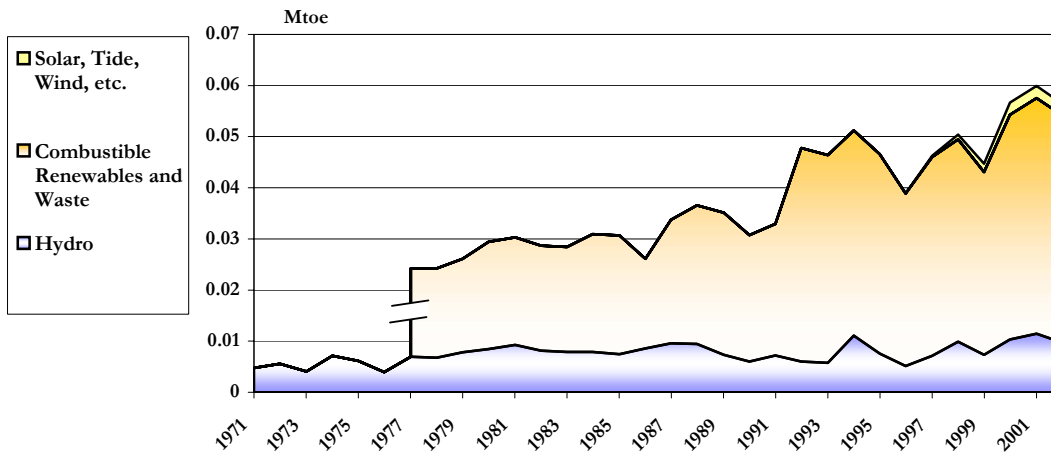
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<http://www.iea.org/Textbase/stats/index.asp>

Luxembourg - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Luxembourg - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>



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Mali

Region Africa
Renewable energy target(s) 15% of TPES by 2020
Source: IEA

Renewable Energy Policies and Measures

1. [Action Plan for Renewable Energy Promotion in Mali](#)

Statistical Information on Renewable Energy

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Action Plan for Renewable Energy Promotion in Mali

<i>Country</i>	Mali
<i>Effective from</i>	2004
<i>Description</i>	<p>The Action Plan for Renewable Energy Promotion in Mali was established to achieve the renewable energy target of increasing the share of renewables in TPES from less than 1% in 2002 to 15% in 2020.</p> <p>Their energy policy is defined by 5 major objectives:</p> <ul style="list-style-type: none">- improving access to energy especially from renewables- the rational use of existing energy sources- the efficient use of existing natural resources to produce energy- sustainable use of biomass resources through the conservation and protection of forests- strengthening government capacity and streamlining administrative procedures within the energy sector
	<p>For a french version of the complete Action Plan, please click here</p>
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables
Source: IEA	

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Malta

Region Europe - EU
Renewable energy target(s) 5% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

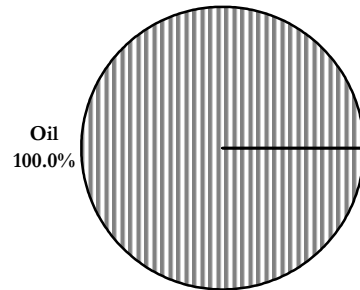
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Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Malta](#)
- [Shares of TPES 2002 - Malta](#)
- [Electricity Generation by Fuel 2002 - Malta](#)

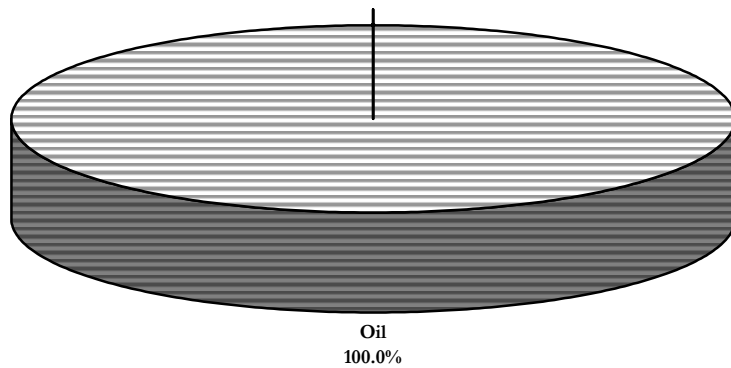
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Malta - Electricity Generation by Fuel 2002



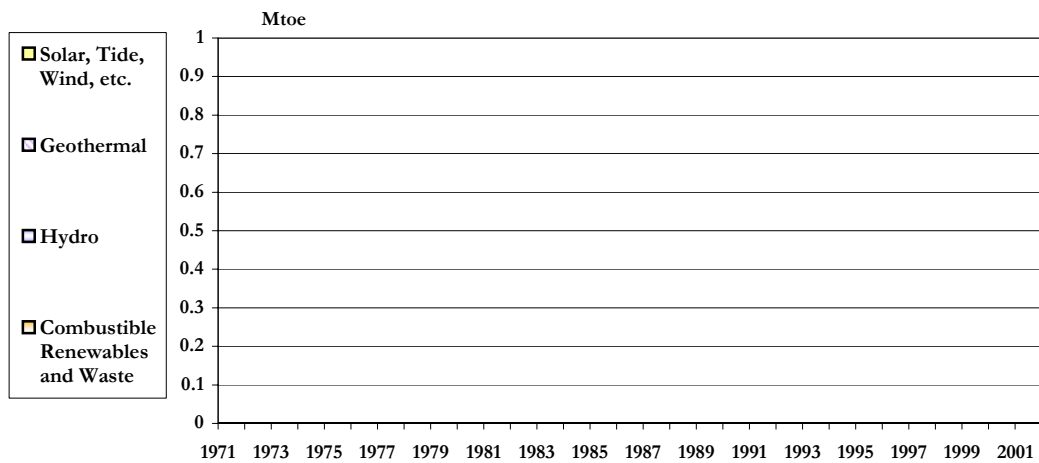
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Malta - Shares of TPES 2002



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Malta - Total Primary Energy Supply from Renewables (Mtoe)



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Morocco

Region Africa

Source: IEA

Renewable Energy Policies and Measures

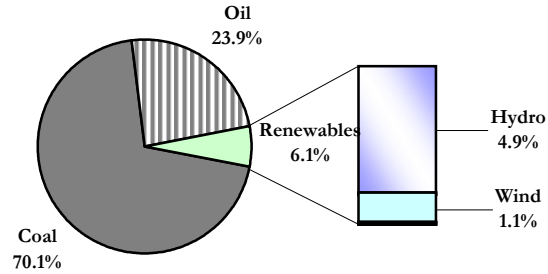
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Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Morocco](#)
- [Shares of TPES 2002 - Morocco](#)
- [Electricity Generation by Fuel 2002 - Morocco](#)

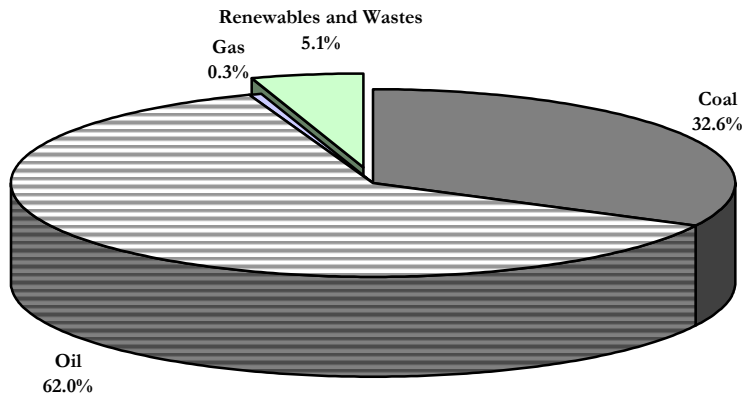
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Morocco - Electricity Generation by Fuel 2002



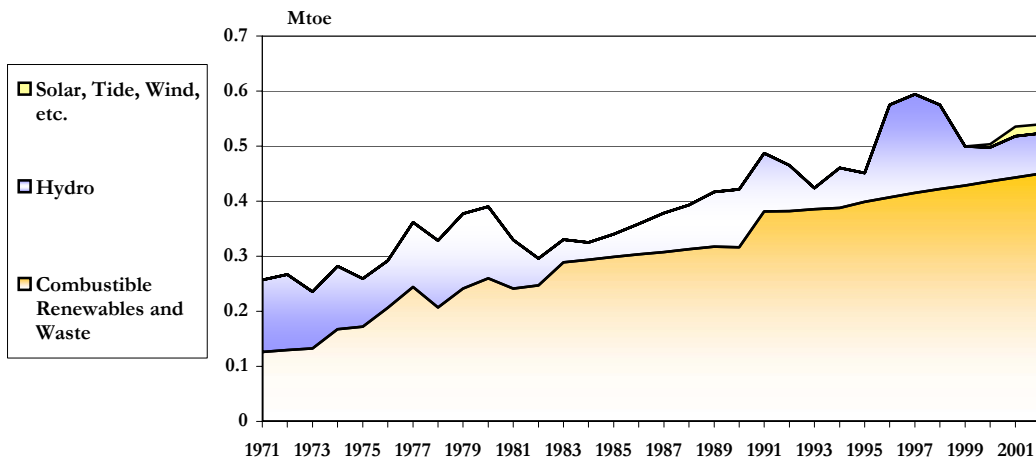
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Morocco - Shares of TPES 2002



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<http://www.iea.org/Textbase/stats/index.asp>

Morocco - Total Primary Energy Supply from Renewables (Mtoe)



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Netherlands

Region Europe - EU
Renewable energy target(s) 12% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. Renewables for Government Buildings
2. REB (Regulating Energy Tax)
3. Energy Investment Deduction (EIA)
4. MEP: Environmental quality of Electricity production (Milieukwaliteit van de Elektriciteitsproductie)
5. Green Funds
6. Energy Research Strategy (EOS)
7. Energy Performance of New Buildings

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Netherlands](#)
- [Shares of TPES 2002 - Netherlands](#)
- [Electricity Generation by Fuel 2002 - Netherlands](#)

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Renewables for Government Buildings

<i>Country</i>	Netherlands
<i>Effective from</i>	2001
<i>Description</i>	By 2004, 50% of electricity consumption in all government buildings is to be derived from renewables sources. An important instrument is central purchasing of green electricity.
<i>Policy type</i>	Government Purchases
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Housing, Spatial Planning and the Environment
<i>URL</i>	www.minvrom.nl
Source: IEA	

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REB (Regulating Energy Tax)

<i>Country</i>	Netherlands
<i>Effective from</i>	1997
<i>Description</i>	<p>The Regulating Energy Tax (REB) is an energy levy on electricity and gas consumption by small and medium-size customers. Since 1999, energy from renewable sources has been exempt from the tax. The proceeds from the tax can be used by suppliers as a premium tariff for renewable energy producers (not mandatory). In 2002, this combination totalled € 0.08/kWh (€ 0.06/kWh tax exemption + € 0.02/kWh production support).</p> <p>Since 2001, a Green Certificate System has been used for the validation and monitoring of the production and sales of green electricity under the REB. In 2003 the energy tax on fossil electricity for small consumers (<10 000 kWh) was further raised to € 0.0639/kWh, with a partial exemption of € 0.029/kWh for renewables. With this tax level, green electricity is on average as expensive as regular electricity. The energy tax exemption applies only to renewable electricity possessing a green certificate. Due to budgetary constraints, the REB facilities for renewables (the exemption) will be partially phased out in 2004 and totally in 2005. The MEP feed-in tariff scheme will replace the REB facilities. The production subsidy for renewables in the REB was phased out on the same date that the MEP scheme was started (1 July 2003).</p> <p>As of 2002, small-scale hydro is no longer eligible.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Fossil Fuel Taxes•Tax Credits•Tradable Certificates
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Finance
<i>URL</i>	www.minfin.nl
<i>Source: IEA</i>	

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Energy investment deduction (EIA)

<i>Country</i>	Netherlands
<i>Effective from</i>	1997
<i>Description</i>	This fiscal measure known as EIA aims to save energy by stimulating investment in energy efficient and renewable energy technologies. It allows investment in certain technologies (including wind) to be deducted from taxable profit up to a percentage of investment costs. Since 2001, this percentage has been 55%. With a taxation level of 35% for Dutch entrepreneurs, the EIA amounts to a discount of 19% of investment costs if the entrepreneur can use the full deduction. The maximum deduction is € 99 million per fiscal entity. The minimum investment (in the year of application) is € 1 900. The EIA can be viewed as a reduction in investment costs.
<i>Policy type</i>	Investment Tax Credits
<i>Renewable energy</i>	All renewables
<i>Funding</i>	2003: € 161 mln
<i>Contact</i>	Senter / Ministry of Finance
<i>URL</i>	www.senter.nl www.minfin.nl

Source: IEA

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MEP: Environmental quality of Electricity production (Milieukwaliteit van de Elektriciteitsproductie)

<i>Country</i>	Netherlands
<i>Effective from</i>	2003
<i>Description</i>	The MEP is a kWh subsidy that is paid to domestic producers for electricity from renewable sources and CHP who feed-in to the national grid. It is guaranteed for a maximum of ten years (not for CHP). The level of producer support is differentiated for technologies. The highest support level (€ 0.068/kWh) is granted for offshore wind, PV, small (< 50 MW) stand-alone biomass installations, hydro, wave and tide energy. For onshore wind, the production support is € 0.049/kWh for a maximum of 18 000 full load hours in ten years. The subsidy is financed by a levy of € 34 (2003) on all connections to the electricity grid in the Netherlands. This levy is for 100%, compensated by means of a reduction of the REB on fossil energy consumption. The MEP producer support exists along with a partial REB exemption for renewable electricity consumption. The MEP support levels in 2004 (1 July) and 2005 (1 January) will be adapted in line with the phasing out (in two steps of € 0.015/kWh) of the REB renewable energy tax exemption.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€ 258 mln, of which RES €141 million
<i>Contact</i>	Ministry of Economic Affairs
<i>URL</i>	www.mep.ez.nl www.enerq.nl/Images/Subsidieverlening%202005_tcm26-7581.pdf

Source: IEA

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Energy Premium (EPR) and Energy Performance Advice (EPA)

<i>Country</i>	Netherlands
<i>Effective from</i>	2001
<i>Description</i>	<p>Energy Premium (EPR) is a subsidy scheme for households and social housing corporations investing in energy efficiency and renewable energy. The subsidy averages between 25% (energy efficiency) and 50% (renewable energy). Energy Performance Advice (EPA) is a consultation that can be requested by an association of owners, landlords and tenants, to improve the energy performance of their dwellings or offices. The consultation is performed by a certified company, and lists the possible measures to be taken. If the advice is neglected, a bill is presented. Should one or more of the measures be carried out, EPA pays the bill, and EPR will subsidise part of the cost. In addition, EPA adds a bonus of 10% (for individuals) to 25% (for housing co-operatives and landlords) to the EPR premium. Both measures are financed by means related to the energy tax (REB). The mechanism thus encourages energy efficiency. One of the requirements for using EPA and EPR is that the consumer pays REB. Due to general government budget cut backs, energy efficient equipment will no longer be subsidised by the EPR from 2004. Renewable energy equipment (heat pumps, solar boilers and PV) and EPA energy consultations remain in the EPR scheme but with a lower budget (approximately € 20 million).</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Consumer Grants / Rebates•Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.minvrom.nl
<i>Source: IEA</i>	

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Green Funds

<i>Country</i>	Netherlands
<i>Effective from</i>	1995
<i>Description</i>	Loans for green projects, which include virtually all renewable energy systems are available at rates 1-2% lower than the prevailing rate. In addition, investment income (such as interest or dividends) derived from green funds are exempt from income tax. To be eligible, a bank has to apply for a ? green declaration? for a project. The ? declaration? has a maximum duration of ten years.
<i>Policy type</i>	<ul style="list-style-type: none">•Investment Tax Credits•3rd Party Finance
<i>Renewable energy</i>	All renewables
<i>Funding</i>	as of mid 1998, public investment = 660 million €. Min Project size = 22,700 €
<i>URL</i>	solstice.crest.org/repp_pubs/articles/issuebr14/05Dutch.htm

Source: IEA

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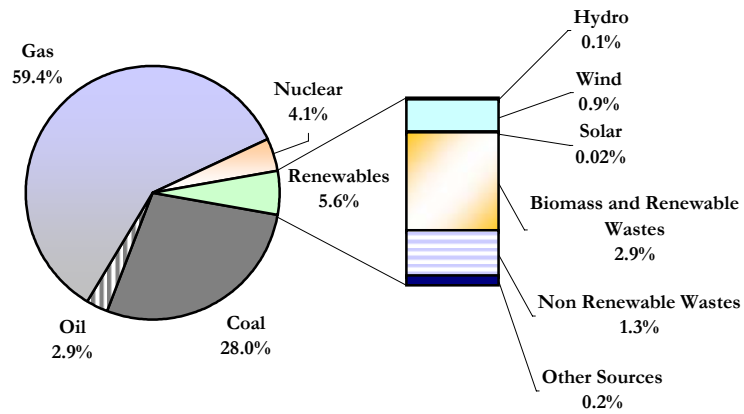
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RD&D Programme DEN (duurzame energie in Nederland)

<i>Country</i>	netherlands
<i>Effective from</i>	2001
<i>Description</i>	DEN is a tender programme for renewable energy projects. It is a follow-on programme from the former NOVEM programmes for specific renewable energy technologies.
<i>Policy type</i>	<ul style="list-style-type: none">•RD&D•Bidding Systems
<i>Renewable energy</i>	All renewables
Source: IEA	

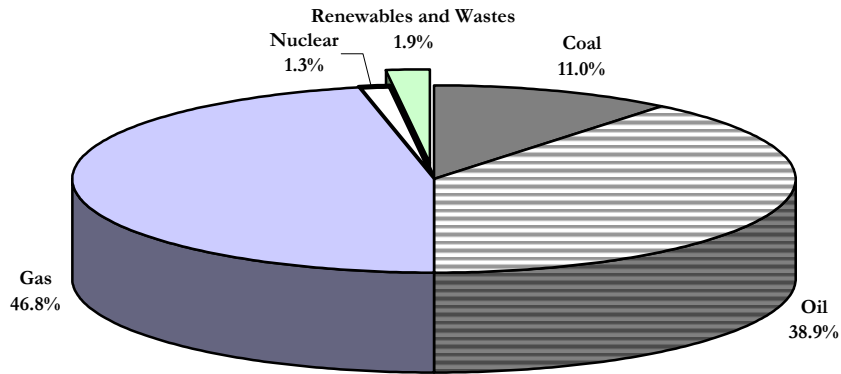
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Netherlands - Electricity Generation by Fuel 2002



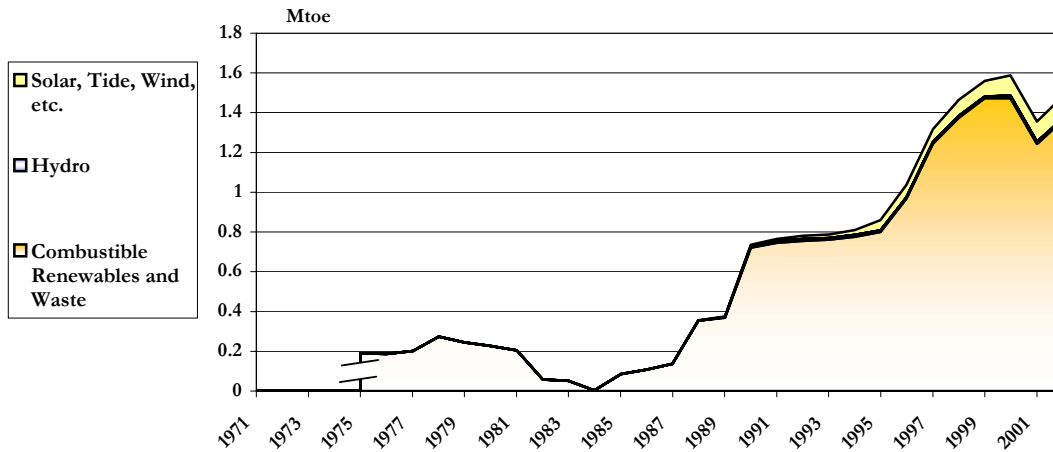
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Netherlands - Shares of TPES 2002



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Netherlands - Total Primary Energy Supply from Renewables (Mtoe)



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New Zealand

Region Other Industrialised Countries
Renewable energy target(s) 30 PJ of new capacity (including heat and transport fuels) by 2012
Source: IEA

Renewable Energy Policies and Measures

1. [Renewable Energy R&D funding](#)
2. [Energy Saving Scheme : Solar Heaters Support](#)
3. [Energy Efficiency and Conservation Act 2000](#)
4. [Energy Efficiency and Conservation Authority - Changes in Status](#)
5. [National Energy Efficiency and Conservation Strategy](#)
6. [The Electricity Act and Energy Companies Act](#)
7. [Carbon Emissions Charge](#)
8. [Renewable Energy Policy Statement](#)
9. [Projects to Reduce Emissions \(Project Mechanism\)](#)
10. [Resource Management Act \(RMA\)](#)
11. [The New Zealand Waste Strategy](#)
12. [Resource Management \(Energy and Climate Change\) Amendment Act](#)

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Renewable Energy R&D funding

<i>Country</i>	New Zealand
<i>Effective from</i>	1995
<i>Description</i>	Publicly funded R&D expenditure on renewable energy: 1999/2000: NZ\$ 2,004,000; 2000/2001: NZ\$ 3,659,000
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Funding</i>	1999/2000: NZ\$ 2,004,000; 2000/2001: NZ\$ 3,659,000
Source: IEA	

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Energy Saving Scheme : Solar Heaters Support

Country	New Zealand
Effective from	2001
Description	<p>The Energy Saver Fund is a government-funded, residential energy efficiency grant programme administered by the Energy Efficiency and Conservation Authority (EECA). Funding is allocated by competitive tender to projects that are designed to achieve cost-effective improvements in residential energy efficiency.</p> <p>The fund has, in part, provided direct assistance grants in the form of reduced interest payments for the installation of solar water heaters for low-income family homes. These grants have had a significant impact on the solar water heating industry.</p>
Policy type	Consumer Grants / Rebates
Renewable energy	Solar thermal
Funding	\$12.4 million
Contact	Energy Efficiency and Conservation Authority (EECA)
URL	www.eeca.govt.nz

Source: IEA

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Energy Efficiency and Conservation Act 2000

<i>Country</i>	New Zealand
<i>Effective from</i>	2000
<i>Description</i>	New Zealand's House of Representatives passed the Energy Efficiency and Conservation Act 2000, which became effective in 2001. It placed emphasis on the importance of renewable energy sources with the development of biomass, wind, solar, small hydro and other technologies. The act also provided for the establishment of mandatory energy performance standards for energy-using products such as appliances, equipment and vehicles. The renewable energy target under the New Zealand Waste Strategy (see below) is 30 PJ of new capacity (including heat and transport fuels) by 2012.
<i>Policy type</i>	<ul style="list-style-type: none">•Obligations•General Energy Policy
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry for the Environment
<i>URL</i>	www.eeca.govt.nz www.mfe.govt.nz/laws/

Source: IEA

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Energy Efficiency and Conservation Authority - Changes in Status

<i>Country</i>	New Zealand
<i>Effective from</i>	2000
<i>Description</i>	The Energy Efficiency and Conservation Act 2000 established the Energy Efficiency and Conservation Authority (EECA) as a separate Crown entity. EECA has been funded to encourage, promote and support energy efficiency, energy conservation and the use of renewable energy.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables

Source: IEA

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National Energy Efficiency and Conservation Strategy

<i>Country</i>	New Zealand
<i>Effective from</i>	2001
<i>Description</i>	<p>New Zealand's first National Energy Efficiency and Conservation Strategy (NEECS) was prepared as a requirement of the Energy Efficiency and Conservation Act 2000. The Strategy's purpose is to promote energy efficiency, conservation and renewable energy, and to move New Zealand towards a sustainable energy future. It promotes practical ways to make energy efficiency, conservation and renewable energy mainstream solutions and is organised around policies, objectives and targets, supported by a set of measures. The Strategy outlines five action plans for government, energy supply, industry, buildings, appliances, and transport to help achieve its targets. The Strategy's overall plan is to improve New Zealand's energy efficiency by at least 20% by 2012 and to increase the supply of renewable energy by 30 PJ by 2012.</p> <p>Policies within the NEECS will take effect through the renewable energy programme. This programme is designed to support renewable energy development by engaging with stakeholders and working to minimise the barriers that inhibit the realisation of the full potential of renewable energy. The expanded Renewable Energy Programme aims to cover the following: Planning and policy processes. Information and communication. Education and training in renewable energy. Identifying and prioritising research needs. Supporting pilot projects/demonstrations. Standards setting where appropriate. Market development, capacity enhancement and business development opportunities. Government leadership.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Public Awareness•RD&D•Regulatory and Administrative Rules•Obligations
<i>Renewable energy</i>	All renewables
<i>Funding</i>	Additional funding required for the Strategy's first five years is estimated at about NZ\$ 80 million. A combination of government and private funding will be sought.
<i>Contact</i>	Energy Efficiency and Conservation Authority (EECA)
<i>URL</i>	www.eeca.govt.nz

Source: IEA

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The Electricity Act and Energy Companies Act

<i>Country</i>	New Zealand
<i>Effective from</i>	1992
<i>Description</i>	This act allows independent power producers to supply directly to a specific local market or customer and requires energy companies to disclose financial information to assist potential suppliers with grid and energy cost information. Electricity market reform has separated the bodies responsible for transmission and generation and has increased competition within generation. These changes play an important part in promoting the development of renewable energy sources for electricity generation, including new renewables, and interest in these sources of energy has been growing. New renewables were exempt from a cap on the construction of additional generating capacity by the dominant generator, ECNZ, but this organisation no longer exists.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>URL</i>	spider.iea.org/pubs/studies/files/renenp2/ren/28-ren.htm
Source: IEA	

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Carbon Emissions Charge

<i>Country</i>	New Zealand
<i>Effective from</i>	2007
<i>Description</i>	From 2007, a carbon emissions charge will be levied on fossil fuels and industrial process emissions, i.e., CO2 and methane excluding agricultural sources. The charge will approximate the international emissions price, but be capped at NZ\$ 25 (US\$ 15) per tonne of CO2 equivalent. It is expected that the levy will make renewable energy sources relatively more attractive.
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Climate Change Group
<i>URL</i>	www.climatechange.govt.nz/policy-initiatives/emissions-charge.html
Source: IEA	

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Negotiated Greenhouse Agreements (NGAs)

<i>Country</i>	New Zealand
<i>Effective from</i>	2003
<i>Description</i>	Negotiated Greenhouse Agreements (NGAs) were established with at-risk businesses beginning in 2003, the first being the NZ Refinery Company Limited. Firms can qualify by being classified as 'competitiveness-at-risk' based on the costs imposed by an emissions charge (during the first Kyoto Protocol commitment period 2008-2012). Such firms will be able to avoid the charge in part or in full, by entering into binding commitments to manage their greenhouse gas emissions. For some firms, adoption of renewable energy sources may be the favoured route to meet their NGA commitments.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables

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Renewable Energy Policy Statement

<i>Country</i>	New Zealand
<i>Effective from</i>	1993
<i>Description</i>	In 1993, the Government released its Renewable Energy Policy Statement. Its key objective is to ensure "the continuing availability of energy services at the lowest cost to the economy as a whole consistent with sustainable development." At the time, there were no specific quantitative targets or plans for future renewable energy use in New Zealand. However, recent government forecasts, based on the target of 30 PJ in the National Energy Efficiency and Conservation Strategy, indicate that renewable energy supply will increase by around a fifth in 2010 compared with 1996, mainly due to increased electricity generation from wind, combustible renewables and wastes, and geothermal.
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables
<i>URL</i>	spider.iea.org/pubs/studies/files/renenp2/ren/28-ren.htm
Source: IEA	

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Projects to Reduce Emissions (Project Mechanism)

<i>Country</i>	New Zealand
<i>Effective from</i>	2003
<i>Description</i>	<p>Projects to reduce carbon emissions are part of New Zealand's confirmed policy package on climate change. Projects are activities undertaken by businesses, other groups or individuals that deliver measurable reductions of greenhouse gas emissions. In return, the government awards them an incentive of emission units, or ? carbon credits.? Projects must result in a measurable reduction in greenhouse gases and not be merely business-as-usual.</p> <p>While the process is open to all forms of renewable energy supply, it is anticipated that process heat and electricity projects will be the most favourably positioned renewable energy sources to benefit from this funding. Nine projects were allocated a total of 4 million tonnes of carbon dioxide credits in the first round in 2003.</p>
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Climate Change Office
<i>URL</i>	www.climatechange.govt.nz/policy-initiatives/projects/index.html www.climatechange.govt.nz/resources/media-releases/8dec04.html

Source: IEA

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Resource Management Act (RMA)

<i>Country</i>	New Zealand
<i>Effective from</i>	1991
<i>Description</i>	The general purpose of the Resource Management Act (RMA) is to promote sustainable management. The act is therefore favourable towards increased deployment of new renewable energy resources to meet community needs. However, areas that require protection can continue to constrain sites for wind power, hydro electric or other developments. Moreover, the RMA requires plans to identify specific resources for protection or preservation, which may be inconsistent with, for example, wind farms in economically attractive wind resource areas. An amendment is being debated to enable greenhouse gas mitigation projects to become more acceptable than under the current legislation.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.mfe.govt.nz/laws/rma/
Source: IEA	

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The New Zealand Waste Strategy

<i>Country</i>	New Zealand
<i>Effective from</i>	2000
<i>Description</i>	<p>The waste strategy sets a new direction for minimising the country's waste and for improving waste recovery and management. It sets out a practical programme of large and small actions for the medium term, as well as some far-reaching, longer-term commitments. This strategy covers liquid, solid, and gaseous waste, and recognises that moving toward zero waste and sustainability is a long term challenge. It has three major goals: Lowering the social costs and risks of waste. Reducing the damage to the environment from waste generation and disposal. Increasing economic benefit by making more efficient use of materials.</p> <p>Five core policies form the basis for action:</p> <ul style="list-style-type: none">- A sound legislative basis for waste minimisation.- Efficient pricing.- High environmental standards.- Adequate and accessible information.- Efficient use of materials.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Waste (organic)
<i>URL</i>	www.mfe.govt.nz/publications/waste/waste-strategy-mar02/index.html

Source: IEA

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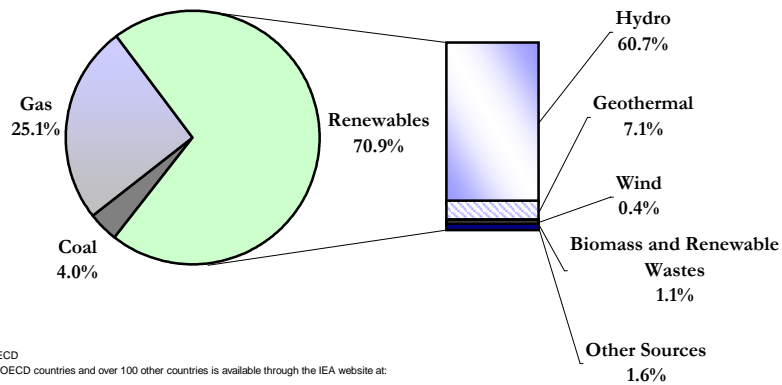
Resource Management (Energy and Climate Change) Amendment Act

<i>Country</i>	New Zealand
<i>Effective from</i>	2003
<i>Description</i>	This legislation changed the original Management Act (1991) to require that all persons exercising powers under the Act have particular regard to the: Efficiency of the end-use of energy. Effects of climate change. Benefits to be derived from the use and development of renewable energy. It also requires regional councils to give appropriate regard to the use and development of renewable energy.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry for the Environment
<i>URL</i>	www.mfe.govt.nz/laws/

Source: IEA

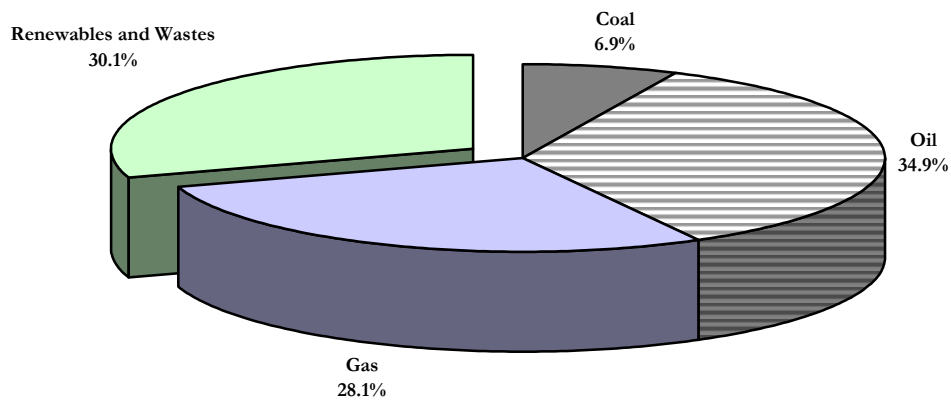
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New Zealand - Electricity Generation by Fuel 2002



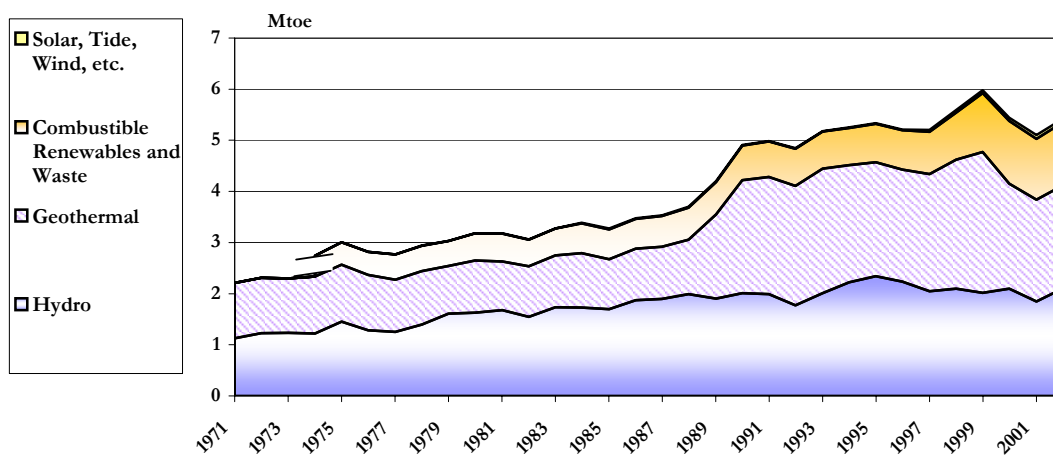
Source: IEA Energy Statistics - Copyright: IEA/OECD
 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

New Zealand - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

New Zealand - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Norway

Region Other Industrialised Countries
Renewable energy target(s) 7 TWh from heat and wind by 2010
Source: IEA

Renewable Energy Policies and Measures

1. CO2 Tax
2. Electricity Consumption Tax
3. White Paper on Energy Policy
4. Tax on Waste Disposal
5. Subsidy Scheme - Energy Use and Production
6. New Central Agency - Energy Efficiency
7. Wind Farm Concessions
8. Enova SF - The Energy Fund
9. Subsidies for Energy Efficiency and Renewables
10. Incentives for Non-Electric Heating Technologies
11. White Paper on Domestic Use of Natural Gas
12. Norway-Sweden Green Certificate Scheme
13. Imposed Connection to District Heating
14. Strategy for Small-scale Hydropower
15. White Paper on Energy Supply

Statistical Information on Renewable Energy

- Total Primary Energy Supply from Renewables (Mtoe) - Norway
- Shares of TPES 2002 - Norway
- Electricity Generation by Fuel 2002 - Norway

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CO2 Tax

<i>Country</i>	Norway
<i>Effective from</i>	1999
<i>Description</i>	A CO2 tax of NOK 104 per tonne of CO2 emissions is applied to mineral oils used in air traffic, domestic shipping and supply ships and offshore petroleum installations. Major industrial sectors and gas used in the transport sector are exempt from the CO2 tax.
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables

Source: IEA

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Electricity Consumption Tax

<i>Country</i>	Norway
<i>Effective from</i>	2002
<i>Description</i>	Electricity consumption is subject to a tax which stands at NOK 0.0967/kWh in 2004. All consumers in Finnmark county and some local authorities in northern Troms county are exempt from this tax. The tax rate was NOK 0.095/kWh in 2003 and NOK 0.093/kWh in 2002. In effect starting 1 January 2004, the grid companies have responsibility for collecting the tax. It had previously been collected by the electricity suppliers through their invoices. All business activities have been exempted from the electricity tax starting in 1 January 2004. A new electricity tax system was introduced on 1 July 2004, which has subsequently rendered part of the electricity consumed by business activities subject to the tax.
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of the Environment
Source: IEA	

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White Paper on Energy Policy

<i>Country</i>	Norway
<i>Effective from</i>	1999
<i>Description</i>	In 1999, the Norwegian Government submitted a White Paper on Energy Policy which included an increase in electricity taxation and provided approximately NOK 5 billion in investment support over ten years for new renewable energy.
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•General Energy Policy
<i>Renewable energy</i>	All renewables
Source: IEA	

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Tax on Waste Disposal

<i>Country</i>	Norway
<i>Effective from</i>	1999
<i>Description</i>	In order to reduce methane emissions, a tax on final disposal of waste, with tax rebates for energy utilisation, was introduced in 1999. In addition, it prohibited the disposal of wet organic waste in landfills and required that it be used for animal feed, composted or incinerated. In 2004, the tax rates are: Fixed part of tax: NOK 82/tonne (€ 9.6/tonne). Part related to energy utilisation: NOK 245/tonne (€ 28.8/tonne).
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	Waste (organic)
Source: IEA	

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Subsidy Scheme - Energy Use and Production

<i>Country</i>	Norway
<i>Effective from</i>	2000
<i>Description</i>	The government provided NOK 340 million in the 2001 budget to promote a shift in the use and production of energy. About NOK 60 million was to be used for work directly related to energy efficiency. The government stated its objective to increase "new renewable capacity" (i.e., other than large-scale hydro) by 7 TWh.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Petroleum and Energy
<i>URL</i>	www.oed.dep.no/
Source: IEA	

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New Central Agency - Energy Efficiency

<i>Country</i>	Norway
<i>Effective from</i>	2000
<i>Description</i>	In 2000, the Ministry of Petroleum and Energy announced the establishment of a new central agency (Enova SF) that is responsible for implementing energy efficiency policy and programmes, and for increased use of new renewables. The new body was established in 2001, taking over from the Norwegian Water Resources and Energy Administration (NVE).
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Petroleum and Energy
<i>URL</i>	www.oed.dep.no/
Source: IEA	

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Wind Farm Concessions

<i>Country</i>	Norway
<i>Effective from</i>	2000
<i>Description</i>	The Norwegian Water Resources and Energy Directorate (NVE) announced in 1997 the first concession for wind farm. By October 2004, NVE has given concessions to 1025 MW of wind power, out of which 270 MW have been installed. In addition more than 40 applications have been received.
<i>Policy type</i>	Bidding Systems
<i>Renewable energy</i>	Onshore wind
<i>Contact</i>	Water Resources and Energy Directorate (NVE)
Source: IEA	

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Enova SF - The Energy Fund

<i>Country</i>	Norway
<i>Effective from</i>	2001
<i>Description</i>	<p>Enova SF was established in 2001 and has been operating since January 2002. Enova is owned by the Government of Norway, represented by the Ministry of Petroleum and Energy (MPE). Enova aims to ensure the more cost-effective use of public funding for energy efficiency and new energy technology by creating a more target-oriented organisation.</p> <p>The Energy Fund was established on 1 January 2002 to finance Enova's activities. The MPE is the legal owner of the Energy Fund. Enova is responsible for the Fund's implementation and administration.</p> <p>The central task for Enova is to reach the energy policy objectives that were approved by the Storting (parliament) in 2000: To limit energy use considerably more than would be the case if developments were allowed to continue unchecked. To increase annual use of central heating based on new renewable energy sources, heat pumps and waste heat by 4 TWh per year by the year 2010. To increase wind power production capacity to 3 TWh per year by 2010.</p> <p>To achieve these objectives, the Storting has indicated grants within a framework of up to € 680 million over a ten-year period. The funding comes from a levy on the electricity distribution tariffs and from ordinary grants from the national budget.</p> <p>Within the framework of the Energy Fund, Enova provides investment support for energy saving systems and new energy technologies, initial investment for market introduction of new energy technologies, and support to energy efficiency information and education measures for the industry, commercial and household sectors.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•Obligations
<i>Renewable energy</i>	All renewables
<i>Funding</i>	NKr 5 billion (approx.€680 million) over a ten-tear period
<i>Contact</i>	Enova
<i>URL</i>	www.enova.no

Source: IEA

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Subsidies for Energy Efficiency and Renewables

<i>Country</i>	Norway
<i>Effective from</i>	2001
<i>Description</i>	The activities of Enova are financed by the Energy Fund, which receives revenues from a levy placed on the electricity distribution tariff (NOK 0.01/kWh) and from state budget grants. In 2004 the Fund will receive a total of about NOK 565 millions which is an increase of 20% from 2003. The budget is expected to increase to NOK 660 millions in 2005. Enova uses this Fund to promote energy savings, to reduce the use of electricity for heating purposes and to promote new environmentally friendly forms of energy production. Enova shall also provide information and educational measures to the public.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Government

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Incentives for Non-Electric Heating Technologies

<i>Country</i>	Norway
<i>Effective from</i>	2002
<i>Description</i>	The Norwegian State Housing Bank offers financial incentives for new homes incorporating non-electric heating technologies. Loans are available for builders to incorporate technologies such as heat pumps, solar systems and biofuel boilers in new construction.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	<ul style="list-style-type: none">•Solar photovoltaics•Solar thermal•Solar concentrating power•Biofuel
<i>Contact</i>	Norwegian State Housing Bank
<i>URL</i>	www.husbanken.no
Source: IEA	

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White Paper on Energy Policy

<i>Country</i>	Norway
<i>Effective from</i>	1999
<i>Description</i>	In 1999, the Norwegian Government submitted a White Paper on Energy Policy which included an increase in electricity taxation and provided approximately NOK 5 billion in investment support over ten years for new renewable energy.
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•General Energy Policy
<i>Renewable energy</i>	All renewables

Source: IEA

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Norway-Sweden Green Certificate Scheme

<i>Country</i>	Norway
<i>Effective from</i>	2003
<i>Description</i>	(White Paper no 9, 2002 ? 03). The government wants to establish a market for green certificates. Preparations for a certificate market are in progress. The green certificate market should preferably be integrated with the Swedish market and co-ordinated with an international market. In November 2004 a law proposal was presented by the Ministry of Petroleum and Energy. The proposed green certificate market shall enter into force from January 1., 2006. To ensure continuous investments in renewable energy projects during the preparation and planning period, it was decided that all projects initiated after 1 January 2004 will be included in the certificate system.
<i>Policy type</i>	<ul style="list-style-type: none">•General Energy Policy•Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Petroleum and Energy
<i>URL</i>	odin.dep.no/oed/engelsk/aktuelt/presse/026021-070111/index-dok000-b-n-a.html
Source: IEA	

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Imposed Connection to District Heating

<i>Country</i>	Norway
<i>Effective from</i>	1999
<i>Description</i>	Under this legislation, district heating plants >10 MW require a concession. A concession is necessary for local authorities to impose mandatory connection for new buildings.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Bioenergy

Source: IEA

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Strategy for Small-scale Hydropower

<i>Country</i>	Norway
<i>Effective from</i>	2003
<i>Description</i>	Hydropower plants < 5 MW are exempt from natural resource and ground rent taxes. Guidelines for building and running small scale hydropower plants have been published.
<i>Policy type</i>	Property Tax Exemptions
<i>Renewable energy</i>	Hydropower

Source: IEA

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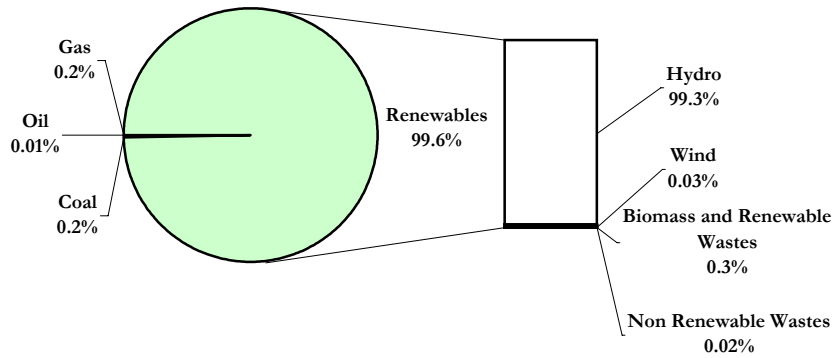
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White Paper on Energy Supply

<i>Country</i>	Norway
<i>Effective from</i>	2003
<i>Description</i>	The policy encourages increased efforts to prepare a more environmentally friendly energy system, e.g., stimulate investments in infrastructure for district heating and increased efforts to modernise and upgrade hydropower plants.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.odin.dep.no/oed/engelsk/aktuelt/pressem/026021-070111/dok-bn.html
Source: IEA	

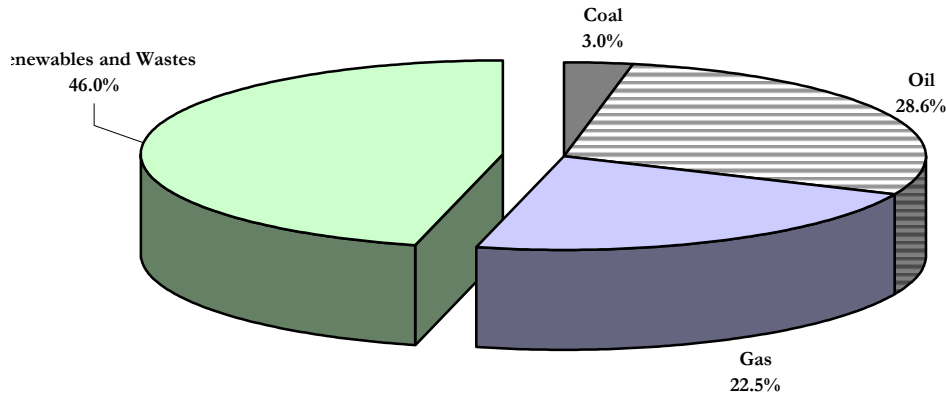
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Norway - Electricity Generation by Fuel 2002



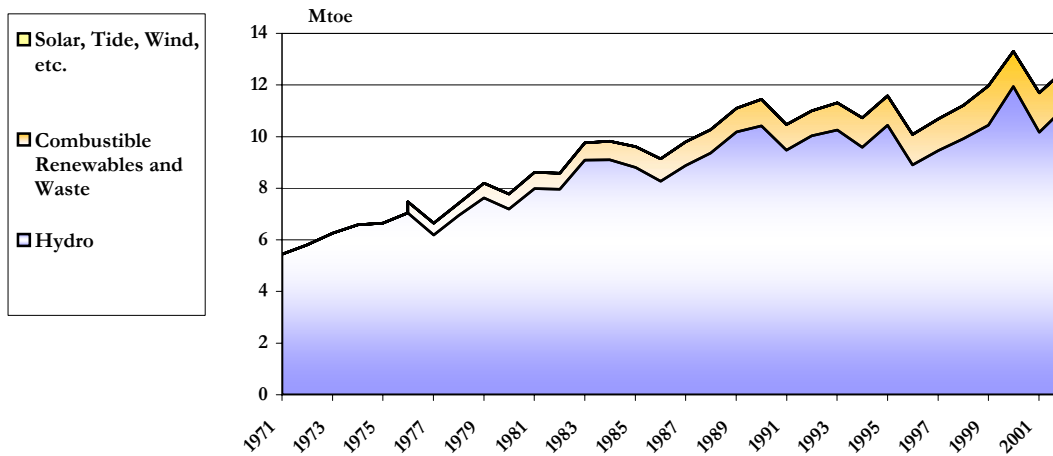
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Norway - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Norway - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Palau

Region Aosis - Pacific Ocean

Source: IEA

Renewable Energy Policies and Measures

1. [Sustainable Development, Reduced dependence on imported fuel](#)
2. [Use of Renewable Energy](#)

Statistical Information on Renewable Energy

Information currently unavailable.

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Sustainable Development, Reduced dependence on imported fuel

<i>Country</i>	Palau
<i>Effective from</i>	2004
<i>Description</i>	<p>The goals of the Policy are the following:</p> <ul style="list-style-type: none">- To develop and diversify the productive capacity of the economy and to make transition from a subsistence to a market based economy.- To accelerate private sector development for employment creation.- To replace a portion of the petroleum imports with the use of renewable energies. <p>It is expected that the use of renewable energy will contribute to the improvement of the standard of living through the enhanced productivity of available resources, the protection of the environment, the reduction in health threatening factors associated with energy production and consumption patterns and strengthen the balance of payments position with reduction of petroleum imports</p>
<i>Policy type</i>	<ul style="list-style-type: none">•General Energy Policy•Obligations
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Palau Energy Office

Source: IEA

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Use of Renewable Energy

<i>Country</i>	Palau
<i>Effective from</i>	2005
<i>Description</i>	Although only a policy by directive (i.e. the policy has not yet been legislated), this policy aims to create wider awareness in the community about the benefits of renewable energy, new ways to use energy with greater efficiency, and support community projects that promote the use of renewable energy and energy efficiency in the context of rural development and human capacity building
<i>Policy type</i>	<ul style="list-style-type: none">•General Energy Policy•Public Awareness
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Steering Committee
Source: IEA	

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Philippines

Region Middle East and Asia
Source: IEA

Renewable Energy Policies and Measures

1. [The Philippine Energy Plan \(PEP\)](#)
2. [Mini-Hydro Law](#)
3. [Investment Priorities Plan \(IPP\)](#)
4. [An Act to Promote the Exploration and Development of Geothermal Resources](#)
5. [Executive Order No. 462 as amended by Executive Order No. 232](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Philippines](#)
- [Shares of TPES 2002 - Philippines](#)
- [Electricity Generation by Fuel 2002 - Philippines](#)

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The Philippine Energy Plan (PEP)

<i>Country</i>	Philippines
<i>Effective from</i>	2003
<i>Description</i>	<p>The Philippines Department of Energy has identified long-term goals for RE development, namely:</p> <ul style="list-style-type: none">(i) to increase RE-based capacity by 100 percent by 2013; and(ii) to increase non-power contribution of RE to the energy mix by 10 million barrels of fuel oil equivalent (MMBFOE) between 2003 and 2012. <p>In support of these general goals, the government shall aim to</p> <ul style="list-style-type: none">(i) to become the leading geothermal energy producer in the world;(ii) to become the leading wind energy producer in Southeast Asia;(iii) to double hydro capacity by 2013; and(iv) to expand contribution from biomass, solar and ocean energy by about 131 MW. <p>These goals will serve as concrete benchmarks for government to advance towards its vision of a sustainable energy system with renewables taking a prominent role in the process.</p>
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.doe.gov.ph
<i>Source: IEA</i>	

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Mini-Hydro Law

<i>Country</i>	Philippines
<i>Effective from</i>	1992
<i>Description</i>	<p>The Mini-Hydro Law (Republic Act No. 7156) provides the following rights and privileges to mini-hydro developers:</p> <ol style="list-style-type: none">1. Special tax rates ? Tax is payable by developers/grantees to develop potential sites for hydroelectric power where generation, transmission and sales of electric power shall amount to 2 percent of their gross receipts.2. Income tax exemption for a seven-year period from start of commercial operations.3. Tax and duty free importation of machinery, equipment and materials. Exemption from payment of tariff duties and value-added tax (VAT) on importation of machinery and equipment (within seven years from the date the contract was awarded).4. Tax credit on domestic capital equipment - For developers who buy machinery, equipment, materials and parts from a local manufacturers, tax credit is given equivalent to 100 percent of the VAT and customs duties that would normally have been paid to import said machinery, equipment, etc.5. Special realty tax rates on equipment and machinery ? Realty and other taxes on civil works, equipment, machinery and other improvements of a registered mini-hydroelectric power developer shall not exceed 2.5 percent of their original cost.6. VAT Exemption - Exemption from payment of 10 percent VAT on gross receipts derived from the sale of electric power whether wheeled via the NPC grid or electric utility lines.
<i>Policy type</i>	<ul style="list-style-type: none">•Excise Tax Exemptions•Investment Tax Credits•Sales Tax Rebates•Property Tax Exemptions
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Office of Energy Affairs
<i>URL</i>	www.doe.gov.ph
<i>Source: IEA</i>	

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Investment Priorities Plan (IPP)

<i>Country</i>	Philippines
<i>Effective from</i>	2002
<i>Description</i>	<p>The exploration and development of indigenous and renewable energy sources and technologies are the major areas which the government is aggressively promoting for investments under the 2002 Investment Priorities Plan (IPP).</p> <p>Qualified investments entitle proponents to both fiscal (e.g., income tax exemption of up to six years) and non-fiscal incentives (e.g., employment of foreign nationals and simplification of customs procedures).</p> <p>Executive Order (E.O.) 232 which amended E.O. 462 embodies several incentives: The government shall waive the signature bonus on the first project to reduce the pre-operating cost burden on solar, wind, and ocean production-sharing contractors, Payment of production bonus shall be applied only after the project has fully recovered its pre-operating expenses, Ocean, wind and solar developers shall be allowed to charge the cost of assessment, field verification and feasibility studies to current commercial projects The government shall assist developers in obtaining all applicable fiscal and non-fiscal incentives, including registration as a pioneer industry under the Board of Investments (BOI) and securing access to lands and offshore areas where ocean, wind and solar resources can be harnessed.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•Production Tax Credits•Regulatory and Administrative Rules
<i>Renewable energy</i>	<ul style="list-style-type: none">•Ocean energy•Offshore wind•Onshore wind•Solar photovoltaics•Solar thermal
<i>Contact</i>	Office of Energy Affairs
<i>URL</i>	www.us-asean.org/Philippines/2004_IPP.pdf
<i>Source:</i>	IEA

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An Act to Promote the Exploration and Development of Geothermal Resources

<i>Country</i>	Philippines
<i>Effective from</i>	1978
<i>Description</i>	<p>Current incentives for geothermal service contractors are enumerated under Presidential Decree No. 1442, otherwise known as ? An Act to Promote the Exploration and Development of Geothermal Resources? . These are:</p> <ol style="list-style-type: none">1. Recovery of operating expenses not exceeding 90 percent of the gross value in any year with carry -forward of unrecovered cost.2. Service fee of up to 40 percent of the net proceeds.3. Exemption from all taxes except income tax.4. Exemption from payment of tariff duties and a compensatory tax on the importation of machinery, equipment, spare parts and all materials for geothermal operations.5. Depreciation of capital equipment over a ten (10) year period.6. Easy repatriation of capital investments and remittance of earnings.7. Entry of alien technical and specialized personnel (including members of immediate family).
<i>Policy type</i>	<ul style="list-style-type: none">•Investment Tax Credits•Production Tax Credits•Property Tax Exemptions•Excise Tax Exemptions•Regulatory and Administrative Rules
<i>Contact</i>	Office of Energy Affairs
<i>URL</i>	www.doe.gov.ph/geothermal-1/legal.html
<i>Source:</i>	IEA

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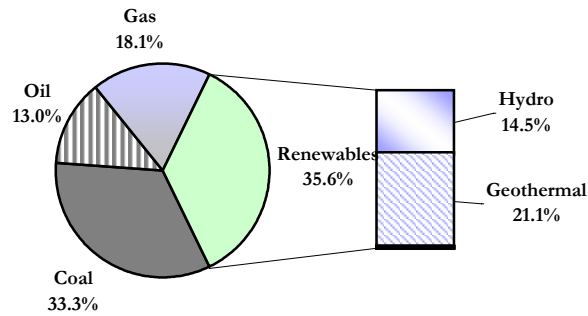
Executive Order No. 462 as amended by Executive Order No. 232

<i>Country</i>	Philippines
<i>Effective from</i>	1998
<i>Description</i>	The objective of this policy is to enable private sector participation in the exploration, development, utilization and commercialization of ocean, solar and wind energy resources for power generation and other energy uses.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	<ul style="list-style-type: none">•Ocean energy•Offshore wind•Onshore wind•Solar concentrating power•Solar photovoltaics•Solar thermal
<i>Contact</i>	Department of Energy
<i>URL</i>	www.doe.gov.ph

Source: IEA

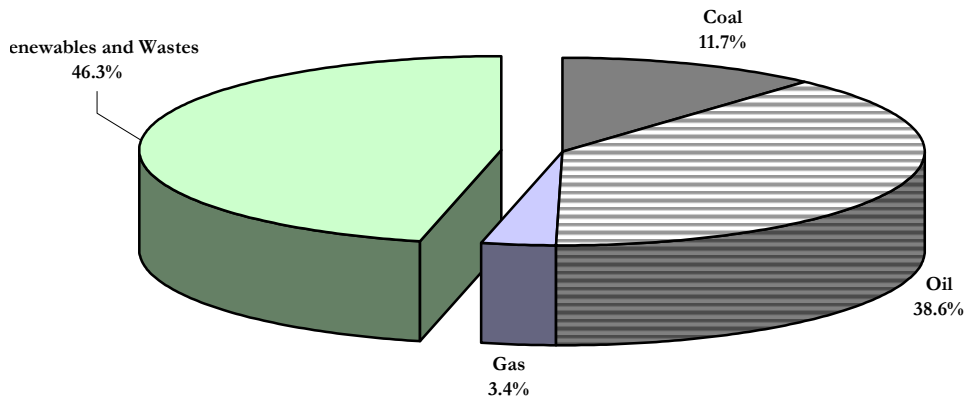
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Philippines - Electricity Generation by Fuel 2002



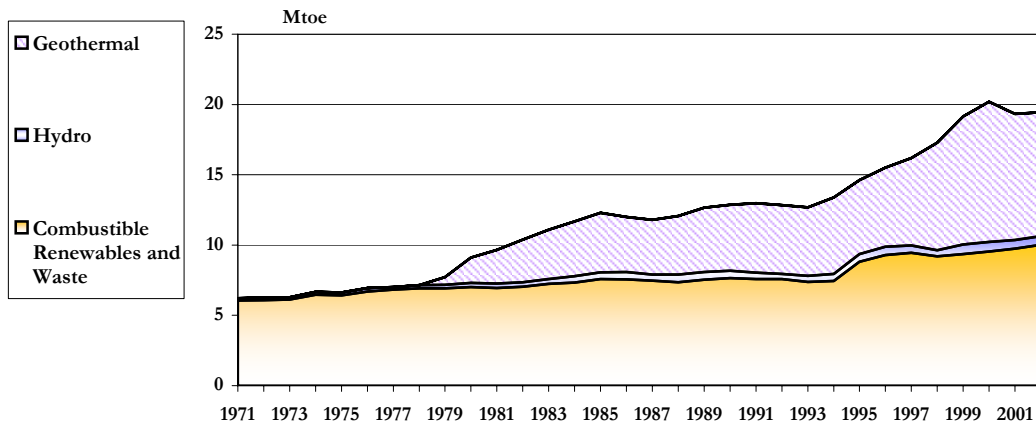
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Philippines - Shares of TPES 2002



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<http://www.iea.org/Textbase/stats/index.asp>

Philippines - Total Primary Energy Supply from Renewables (Mtoe)



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Poland

<i>Region</i>	Europe - EU
<i>Renewable energy target(s)</i>	<ul style="list-style-type: none">• 7.5 % of TPES by 2010 (Development Strategy of Renewable Energy Sector)• 14 % of TPES by 2020 (Development Strategy of Renewable Energy Sector)• 7.5% of electricity output by 2010 (As per Directive 2001/77/EC)

Source: IEA

Renewable Energy Policies and Measures

1. [General RES Voluntary Target](#)
2. [Development Strategy of Renewable Energy Sector](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Poland](#)
- [Shares of TPES 2002 - Poland](#)
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General RES Voluntary Target

<i>Country</i>	Poland
<i>Effective from</i>	2004
<i>Description</i>	<p>Purchase obligations and quota system were introduced by the Energy Law and relevant Decree of Minister of Economy, Labour and Social Policy. The aim is to realise the Polish indicative, agreed with EC, target of RES-E production ? 7.5 % of total electricity production in 2010.</p> <p>The regulation above concerns the obligation to purchase electricity and heat from renewable energy sources. The regulation determines requirements for energy enterprises, as appropriate to their economic activity, concerning the purchase of electric energy and heat generated in renewable energy sources connected to grids. By virtue of provisions of the Decree, energy enterprises dealing with trade in energy have been obliged to cover a proper share of 'green' electricity in electricity sold by them. The penalties for enterprises not fulfilling the obligation are determined by Energy Law.</p> <p>To see the entire document: click here.</p>
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Economy, Labour and Social Policy
<i>URL</i>	www.mos.gov.pl
Source: IEA	

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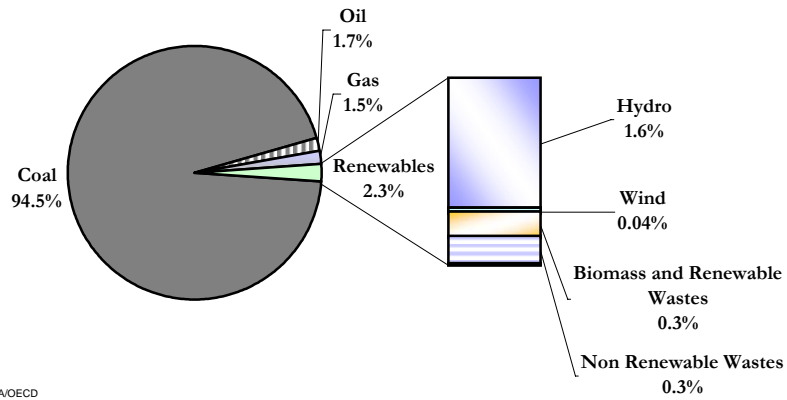
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Development Strategy of Renewable Energy Sector

<i>Country</i>	Poland
<i>Effective from</i>	2001
<i>Description</i>	<p>The Development Strategy of Renewable Energy Sector was adopted by the Parliament of the Republic of Poland in August 2001.</p> <p>The strategic objective is the increase of the share of energy from renewable sources in Poland's primary energy balance to 7.5% in 2010 and to 14% in 2020.</p> <p>The objective set in this document is a political one which calls for further action in the development of the utilisation of renewable energy sources in Poland, a crucial matter in sustainable development. From now to 2010, the solutions proposed in this document should be checked and verified whilst concrete development programmes for individual kinds of renewable energy are formulated. On the basis of information presented in this document on both the utilisation and technical potential of renewable energy sources in Poland one may state that, first of all, the utilisation of biomass will grow in the first phase. However, in order to increase utilisation of biomass as well as other renewable sources of energy, the state will have to allocate certain budget. The expenditures required to achieve objectives of this strategy will be put forward in specific programmes for each source of renewable energy.</p> <p>To see the entire document: click here.</p>
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Geothermal heat•Hydropower•Offshore wind•Onshore wind•Solar concentrating power•Solar photovoltaics•Solar thermal
<i>Contact</i>	Ministry of the Environment
<i>URL</i>	www.mos.gov.pl
Source: IEA	

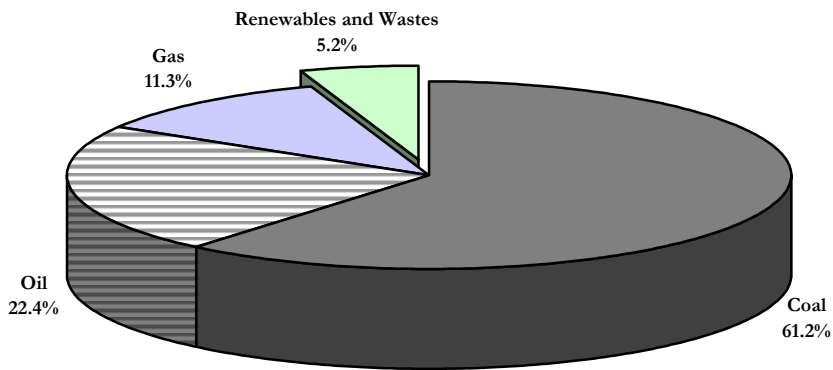
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Poland - Electricity Generation by Fuel 2002



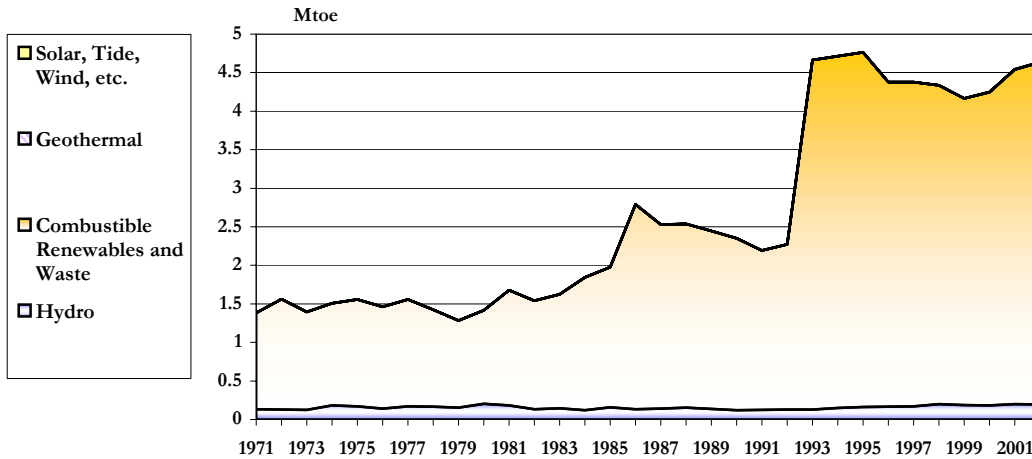
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<http://www.iea.org/Textbase/stats/index.asp>

Poland - Shares of TPES 2002



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<http://www.iea.org/Textbase/stats/index.asp>

Poland - Total Primary Energy Supply from Renewables (Mtoe)



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Portugal

Region Europe - EU
Renewable energy target(s) 45.6% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. Tax Reduction for Renewable Energy Equipment
2. Electricity Generation Efficiency
3. Follow up of the Energy Programme and PEDIP
4. New Tariffs for Renewables
5. Decree-Law no. 189/88 (IPP Law)
6. Decree-Law no. 339-C/2001
7. Decree-Law no.445/88
8. Decree-Law no. 68/2002
9. Decree-Law no.69/2000 (05/05/00); Despacho no.11091/2001 (25/05/01); Despacho no.12006/2001 (06/06/01); Despacho Conjunto no.583/2001 (03/07/01)
10. Decree-Law no.87/90 and Decree-Law no.90/90
11. Decree-Law no.254/99
12. Decree-Law no. 312/2001
13. Portaria no. 383/2002 (PRIME Programme)
14. Tax Incentives
15. Resolution of the Council of Ministries - 63/2003
16. Energy Efficiency and Endogenous Energies (E4) Programme
17. Resolution of the Council of Ministries ? 171/2004

Statistical Information on Renewable Energy

- Total Primary Energy Supply from Renewables (Mtoe) - Portugal
- Shares of TPES 2002 - Portugal
- Electricity Generation by Fuel 2002 - Portugal

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Tax Reduction for Renewable Energy Equipment

<i>Country</i>	Portugal
<i>Effective from</i>	1999
<i>Description</i>	New budget provisions allow purchasers of renewable energy equipment, such as solar panels for residential use, to benefit from a reduced VAT of 5%. Investment costs in renewable end-use technology were deductible from the income tax with a limit to the deduction set at PTE 50 000 in 2000. Beginning in 1999, investors in equipment using solar energy are entitled to claim a depreciation rate of 25% (previously set at 7.14%).
<i>Policy type</i>	<ul style="list-style-type: none">•Sales Tax Rebates•Investment Tax Credits
<i>Renewable energy</i>	All renewables

Source: IEA

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Electricity Generation Efficiency

<i>Country</i>	Portugal
<i>Effective from</i>	1999
<i>Description</i>	The government has implemented measures to encourage the development of more efficient or carbon free electricity production, including co-generation, small hydroelectric production and generation using other renewable energy sources. The formula for payments of capacity and energy supplied to the grid by new co-generators was set in 1999. Monthly payments are a function of performance and availability. An environment premium is added if thermal efficiency of the plant is at least equal to the most efficient combined-cycle. As with efficient electricity generation, the legislation approved for the payments of electricity from renewables is based on a market value associated to the environmental benefits (avoided carbon) obtained from renewable based electricity.
<i>Policy type</i>	<ul style="list-style-type: none">•Regulatory and Administrative Rules•Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
Source: IEA	

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Follow up of the Energy Programme and PEDIP

<i>Country</i>	Portugal
<i>Effective from</i>	2000
<i>Description</i>	In 2000, a new programme in support of economic development activities under the European Union's Community Support Framework (POE) was prepared. It set out new regulations related to incentives for energy efficiency and energy diversification (renewables) projects.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
Source: IEA	

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New Tariffs for Renewables

<i>Country</i>	Portugal
<i>Effective from</i>	2001
<i>Description</i>	In 2001, the buy-back tariffs for renewables were increased (up to 25% for wind energy), in order to develop more electricity generation under the special regime for co-generation and renewables.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables

Source: IEA

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Decree-Law no. 189/88 (IPP Law)

<i>Country</i>	Portugal
<i>Effective from</i>	1988
<i>Description</i>	The Independent Power Production (IPP) Law was introduced in 1988, revised in 1995 and 1999, for consistency with the implementation of a new regulatory framework for the electricity sector. The IPP Law allows for public or private entities or private individuals to generate electricity from renewable energy sources (including small hydro) and sell it to the grid, provided certain technical conditions for interconnection are guaranteed.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.agores.org/Publications/Enerlure/Portugal21.pdf
Source: IEA	

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Decree-Law no. 339-C/2001

<i>Country</i>	Portugal
<i>Effective from</i>	2001
<i>Description</i>	This Decree-Law was adopted by the Council of Ministers within the framework of the E4 Programme package. Although the general principles of the IPP law remain in force, this new law changed the formula for calculating prices paid to special-regime producers. The measure revises DL no.168/99 and led to the establishment of differentiated tariffs as a function of the technology and operating regime.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/PRTtables.pdf
Source: IEA	

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Decree-Law no.445/88

<i>Country</i>	Portugal
<i>Effective from</i>	1988
<i>Description</i>	Following the publication of the Decree-Law no. 189/88 (IPP law), this law established the licensing procedures to use water for electricity generation (small-hydropower).
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Hydropower
<i>Contact</i>	Ministry of Land Planning and Administration, and Ministry of Industry and Energy
<i>URL</i>	www.agores.org/Publications/EnerIure/Portugal21.pdf
Source: IEA	

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Decree-Law no. 68/2002

<i>Country</i>	Portugal
<i>Effective from</i>	2002
<i>Description</i>	This law pertains to micro-power producers and is intended to speed up administrative and technical procedures associated with the interconnection of micro-generators to the low voltage grid.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Economy
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/PRTtables.pdf
Source: IEA	

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Decree-Law no.69/2000 (05/05/00); Despacho no.11091/2001 (25/05/01); Despacho no.12006/2001 (06/06/01); Despacho Conjunto no.583/2001 (03/07/01)

<i>Country</i>	Portugal
<i>Effective from</i>	2000
<i>Description</i>	This set of legislative measures concerns the promotion of investments in renewable energy projects (wind and hydro). They established the procedures to evaluate and obtain environmental permission to develop renewable energy projects.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	<ul style="list-style-type: none">•Hydropower•Offshore wind•Onshore wind
<i>Contact</i>	Ministry of the Environment and Land Planning and the Ministry of Economy (for the Despacho Conjunto only)
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/PRTtables.pdf

Source: IEA

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Decree-Law no.87/90 and Decree-Law no.90/90

<i>Country</i>	Portugal
<i>Effective from</i>	1990
<i>Description</i>	This law, passed in 1990, ? establishes the procedures regulating the awarding and management of the exploration, assessment and exploitation licences related to the geothermal resources (natural resources of public domain)? .
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	Geothermal
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/PRTtables.pdf
Source: IEA	

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Decree-Law no.254/99

<i>Country</i>	Portugal
<i>Effective from</i>	1999
<i>Description</i>	This law established the procedures to obtain licences to develop ocean energy projects, as well as the procedures regulating the awarding and management of the construction and use of equipment and infrastructure located in areas of marine public domain.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Ocean energy
<i>Contact</i>	Ministry of Equipment, Planning and Land Administration
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/PRTtables.pdf
Source: IEA	

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Decree-Law no. 312/2001

<i>Country</i>	Portugal
<i>Effective from</i>	2001
<i>Description</i>	This law concerns the independent producers of electricity from renewable energy sources and co-generation. It establishes the procedures regulating the awarding and management of the interconnection points with the Public- Service Electrical System (SEP) for the delivery of electricity received from new power plants, in the framework of the Independent Electrical System (SEI).
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Economy
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/PRTtables.pdf
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Portaria no. 383/2002 (PRIME Programme)

<i>Country</i>	Portugal
<i>Effective from</i>	2000
<i>Description</i>	<p>This legislative measure created the Measure for Supporting the Use of Energy Potential and Rational Use of Energy Programme (PRIME programme, formerly MAPE/POE), which is considered to be the main tool of the Ministry of Economy to support projects in the energy sector under the III Community Support Framework (QCA III ? 2006).</p> <p>The programme grants subsidies to public and private organisations for investments projects in four categories: Renewables for electricity generation. Energy management measures and co-generation. Green fuels for transport fleets. Fuel switching to natural gas. Subsidies vary according to renewable-type and project economic feasibility, but in general correspond to approximately 40% of the investment.</p>
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	All renewables
<i>Contact</i>	The Portuguese Directorate-General for Energy (DGE) and the Regional Directorates of Economy (DRE)
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/PRTtables.pdf
Source: IEA	

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Tax Incentives

<i>Country</i>	Portugal
<i>Effective from</i>	2002
<i>Description</i>	The Ministry of Finance is directing favourable taxation towards private investors who get tax credits for investing in renewable energy (personal income tax) to stimulate investment in renewable energy technologies. The lower VAT rates of 5% (versus 12%) applied for renewables in Portugal are no longer in force due to the European fiscal harmonisation of 2002.
<i>Policy type</i>	<ul style="list-style-type: none">• Investment Tax Credits• Sales Tax Rebates
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/PRTtables.pdf
Source: IEA	

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Resolution of the Council of Ministries - 63/2003

<i>Country</i>	Portugal
<i>Effective from</i>	2003
<i>Description</i>	<p>The Council of Ministries approved the main orientations of energy policy and defined objectives and measures to achieve them in Resolution RCM 63/2003. (This suspended Resolution 154/2001 that created the E4 programme.)</p> <p>The resolution is based on three main vectors: Security of supply ? new objectives for 2010 for electricity produced from renewable energy sources to reduce import dependency. Sustainable development ? supports the use of renewable energy and promotes the rational use of energy to assure Portugal's commitment in the framework of the Kyoto Protocol. Promotion of national competitiveness ? the main focus is the liberalisation of the electricity market and to decrease energy intensity.</p>
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables
Source: IEA	

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Energy Efficiency and Endogenous Energies (E4) Programme

<i>Country</i>	Portugal
<i>Effective from</i>	2001
<i>Description</i>	<p>New legislation aimed at promoting investment in energy efficiency and renewable energy generation was approved in September 2001. The main changes relate to the simplification of the process involved in obtaining licences and substantially more attractive tariffs for the acquisition of electricity from renewable sources by the national grid.</p> <p>Under the new programme, € 0.082/kWh will be paid for the first 2 000 hours of wind energy production each year and € 0.07/kWh for the following 2 000 hours, with prices decreasing slightly after that. Average payment is expected to be about € 0.08/kWh, compared with € 0.06/kWh under the previous legislation. The new tariffs for mini-hydro production are € 0.07/kWh and € 0.224/kWh for wave energy. Solar will be paid at € 0.284/kWh for plants bigger than 5kW and € 0.499/kWh for smaller plants. These prices compare with an estimated average of € 0.064/kWh paid to Portugal's renewable energy producers in 2001.</p>
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind•Hydropower•Solar photovoltaics
<i>Contact</i>	Ministry of Economic Affairs and Work
<i>URL</i>	www.dge.pt
Source: IEA	

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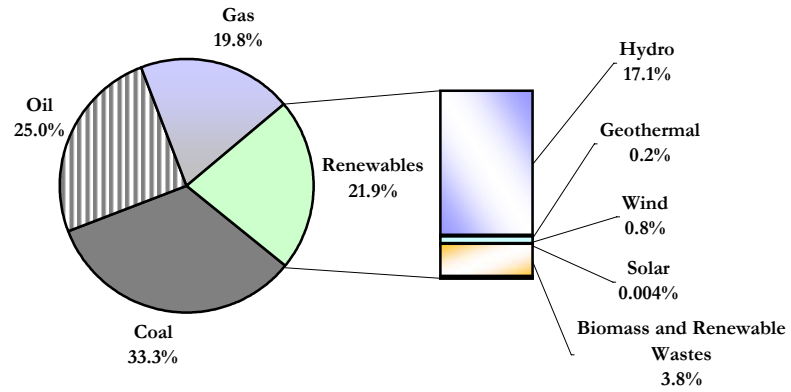
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Resolution of the Council of Ministries ? 171/2004

<i>Country</i>	Portugal
<i>Effective from</i>	2004
<i>Description</i>	<p>The Council of Ministries approved a Programme with actions towards facing the potential impact of the high prices of oil in the international market. This Programme has in mind the particular situation of the high dependence of Portuguese economy in imported energy namely oil and the high energy intensity of Portuguese Economy.</p> <p>The main actions proposed in this Programme are:</p> <ol style="list-style-type: none">1) A significant increase of the production of Energy from Renewable sources and the liberalization of energy markets.2) Incentives to the utilization of Public Transports and the implementation of multimodal Transports infrastructures.3) Incentives to energy efficiency and to the use of Renewables and Cogeneration in the Industrial sector.4) Promoting Energy Efficiency in buildings and in the service sector. <p>The Programme will be coordinated by the Ministry of Economic Activities and will integrate working groups from different Government Departments that will address issues like Tax incentives, Regulation, Research and Development and A.ambient.</p>
<i>Policy type</i>	General Energy Policy
<i>Renewable energy</i>	All renewables
<i>Source: IEA</i>	

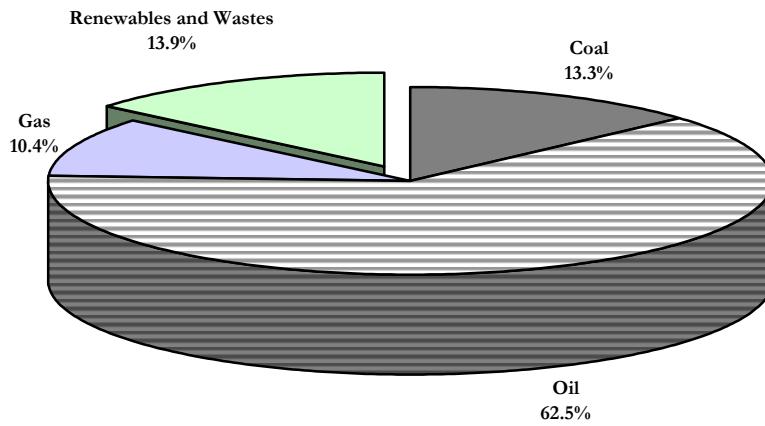
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Portugal - Electricity Generation by Fuel 2002



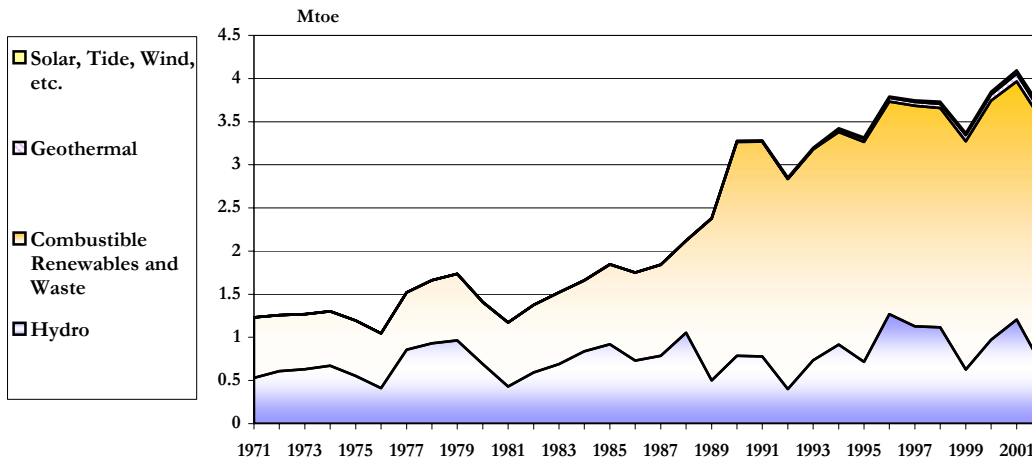
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Portugal - Shares of TPES 2002



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Portugal - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Romania

Region Europe - EITs

Source: IEA

Renewable Energy Policies and Measures

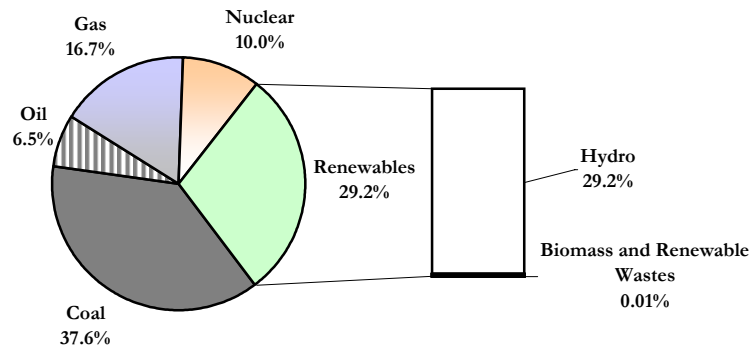
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- [Shares of TPES 2002 - Romania](#)
- [Electricity Generation by Fuel 2002 - Romania](#)

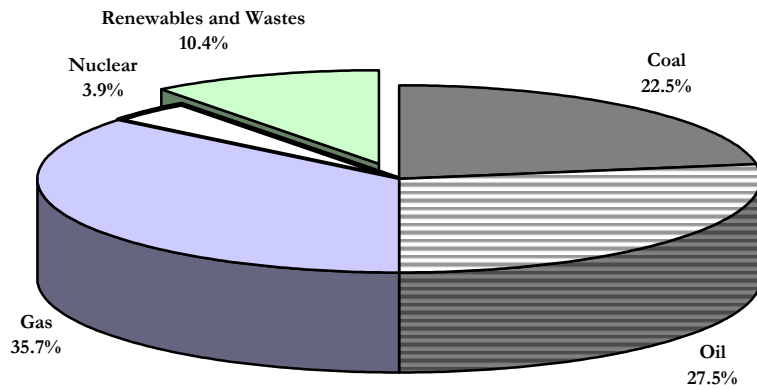
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Romania - Electricity Generation by Fuel 2002



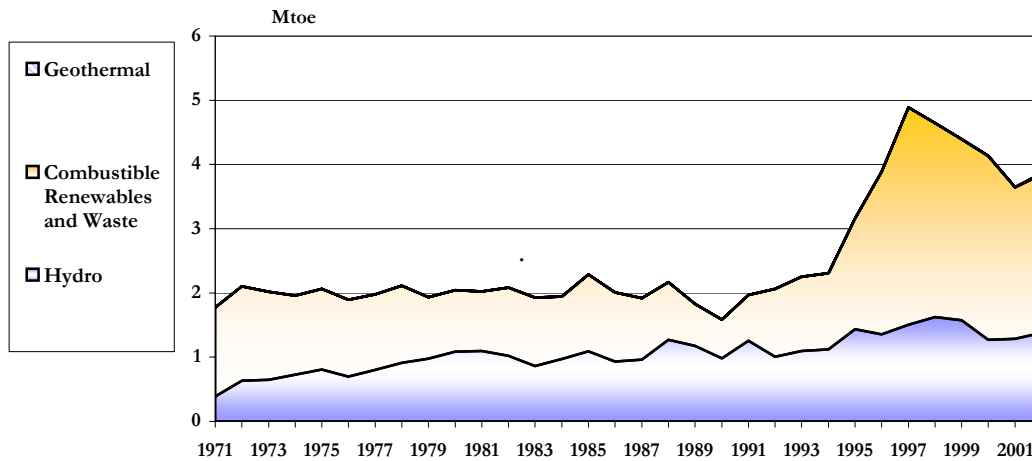
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Romania - Shares of TPES 2002



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Romania - Total Primary Energy Supply from Renewables (Mtoe)



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Singapore

<i>Region</i>	Aosis - South China Sea
<i>Renewable energy target(s)</i>	• Installation of 50,000 m ² of solar thermal systems by 2012 • Complete recovery of energy from municipal waste
<i>Agency responsible for implementation</i>	National Environment Agency
<i>Web site</i>	www.nea.gov.sg
Source: IEA	

Renewable Energy Policies and Measures

1. [Energy Recovery from Biomass in Municipal Waste](#)
2. [Tax Incentive for Energy Efficient Equipment](#)
3. [Innovation for Environmental Sustainability](#)
4. [Environmental Test-bedding Initiative \(Ennovate\)](#)
5. [Joint Research with Tertiary Institutions](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Singapore](#)
- [Shares of TPES 2002 - Singapore](#)
- [Electricity Generation by Fuel 2002 - Singapore](#)

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Energy Recovery from Biomass in Municipal Waste

<i>Country</i>	Singapore
<i>Effective from</i>	1979
<i>Description</i>	All incinerable waste not recovered, reused or recycled is sent for incineration at the waste-to-energy incineration plants operated by the National Environment Agency. The combustion of municipal waste including renewables in the waste produce heat, which is recovered to generate electricity. The electricity generated is fed into the electricity grid.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	Waste (organic)
<i>Contact</i>	National Environment Agency
<i>URL</i>	app.nea.gov.sg/cms/htdocs/category_sub.asp?cid=75
Source: IEA	

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Tax Incentive for Energy Efficient Equipment

<i>Country</i>	singapore
<i>Effective from</i>	1996
<i>Description</i>	<p>This tax incentive scheme is provided under the Income Tax Act. Capital expenditure on qualifying energy efficient or energy-saving equipment can be written off in 1 year instead of 3. Qualifying equipment include: solar heating or cooling system and solar energy collection systems.</p> <p>Capital expenditure pertains to costs incurred by the investment in or purchase of long-term business assets. All costs directly related to the project, including the equipment, supplies and installation costs, are eligible for accelerated tax allowance, except consultancy work. Any person carrying on a trade, profession or business in Singapore is eligible for the tax incentive. The applicant must own the equipment and use it for business purposes only.</p>
<i>Policy type</i>	Investment Tax Credits
<i>Renewable energy</i>	<ul style="list-style-type: none">•Solar concentrating power•Solar photovoltaics•Solar thermal
<i>Funding</i>	One Year Accelerated Depreciation Allowance
<i>Contact</i>	National Environment Agency
<i>URL</i>	www.neec.gov.sg/incentive/catB.shtm
Source: IEA	

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Innovation for Environmental Sustainability

<i>Country</i>	Singapore
<i>Effective from</i>	2001
<i>Description</i>	<p>All Singapore-registered companies are eligible to apply. The proposed project must meet the following criteria:</p> <ol style="list-style-type: none">Strong elements of 'innovation' and 'early adoption'.The outcome of the pilot should assist Singapore to meet the goal of environmental sustainability.Project must not have commenced at the time of application.Project should not exceed 3 years in duration. <p>The projects may be classified in the following categories:</p> <ol style="list-style-type: none">Projects that enhance the Ministry's capabilities.Projects for the development of environmental technologies and products for commercialisation purposesProjects with the primary aim to improve environmental performance of a company. <p>Grants are provided to cover a percentage of the qualifying cost of the project at three levels of funding. Various levels of support for different components of allowable cost are offered, viz :</p> <p>Ø Full Funding if projects result in technologies that could be employed directly by NEA and which the Ministry needs to have intellectual proprietary rights to the final technologies/products.</p> <p>Ø Partial Funding if projects result in technologies and products that have industry-wide benefits. Level of Support :</p> <ul style="list-style-type: none">o Manpower cost - 50%o Equipment & Materials - 50%o Professional Services - 50%o Intellectual Property Rights - 50% <p>Ø Partial Funding if projects result in technologies and products that benefit only the company. Level of Support:</p> <ul style="list-style-type: none">o Manpower cost - 50%o Equipment & Materials - 30%o Professional Services - 30%o Intellectual Property Rights - 30%
<i>Policy type</i>	<ul style="list-style-type: none">•RD&D•Capital Grants
<i>Renewable energy</i>	All renewables
<i>Funding</i>	Maximum S\$2million for each project
<i>Contact</i>	National Environment Agency
<i>URL</i>	app.nea.gov.sg/cms/htdocs/category_sub.asp?cid=42
Source: IEA	

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Environmental Test-bedding Initiative (Ennovate)

<i>Country</i>	Singapore
<i>Effective from</i>	2003
<i>Description</i>	<p>Interested parties are invited to submit proposals to the Economic Development Board (EDB), National Environment Agency (NEA) or Public Utilities Board (PUB) for evaluation. If accepted, NEA or PUB will provide the relevant infrastructure and technical support to implement the project. Approved projects can also be considered for grant support by the EDB or ENV under the Innovation Development Scheme or Innovation for Environmental Sustainability Fund.</p> <p>The programme is open to all Singapore registered firms, companies or organisations. The bulk of the development work should be conducted in Singapore. Work involving customisation or reconfiguration of commercially available systems will generally not qualify.</p> <p>Other conditions include:</p> <ol style="list-style-type: none">Project duration should not exceed 3 years.Project should involve product or process innovation which lead to significant improvements in productivity and value-added per worker; OR lead to tangible outcomes such as additional investments for the new products, introduction of new services or adoption of new technology.Project should lead to significant contribution to the relevant industry or cluster.Project should help promote environmental sustainability in Singapore.Project must not have commenced at the time of application. <p>In general, assistance is provided through grants to cover a percentage of the qualifying cost of the project, based on the different levels of support for each component of allowable cost.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•RD&D
<i>Renewable energy</i>	All renewables
<i>Contact</i>	National Environment Agency, Economics Development Board
<i>URL</i>	www.sedb.com/edbcorp/sg/en_uk/index/industry_opp/engineering_environmental0.html
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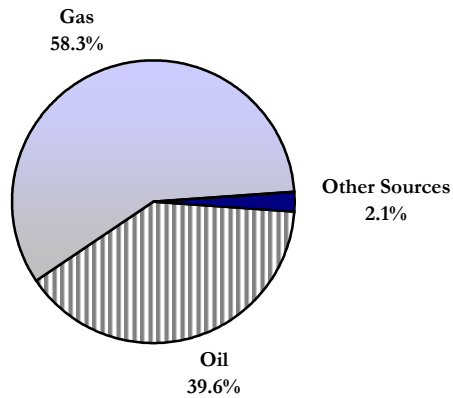
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Joint Research with Tertiary Institutions

<i>Country</i>	Singapore
<i>Effective from</i>	1991
<i>Description</i>	The National Environment Agency (NEA) carries out joint research projects that are of interest and relevance to the NEA with tertiary institutions such as National University of Singapore, Nanyang Technological University (under the Memoranda of Understanding), as well as other tertiary institutions. Costs and incomes accruing from the programme, if any, are shared between the NEA and the universities. If the product/process developed from a project has any commercialisation potential, the product/process may be patented and/or marketed.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
<i>Contact</i>	National Environment Agency
<i>URL</i>	app.nea.gov.sg/cms/htdocs/category_sub.asp?cid=43
Source: IEA	

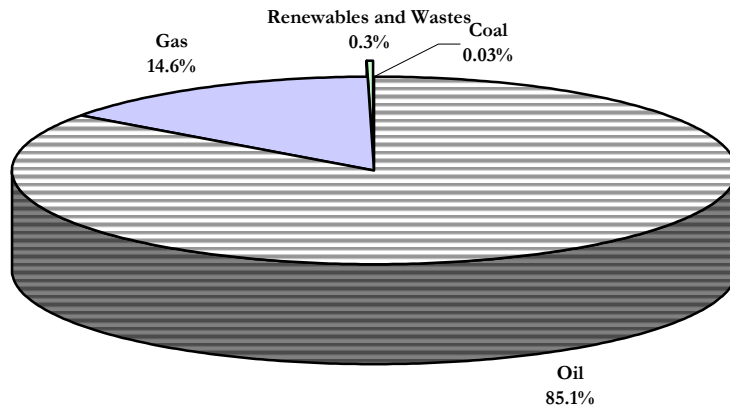
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Singapore - Electricity Generation by Fuel 2002



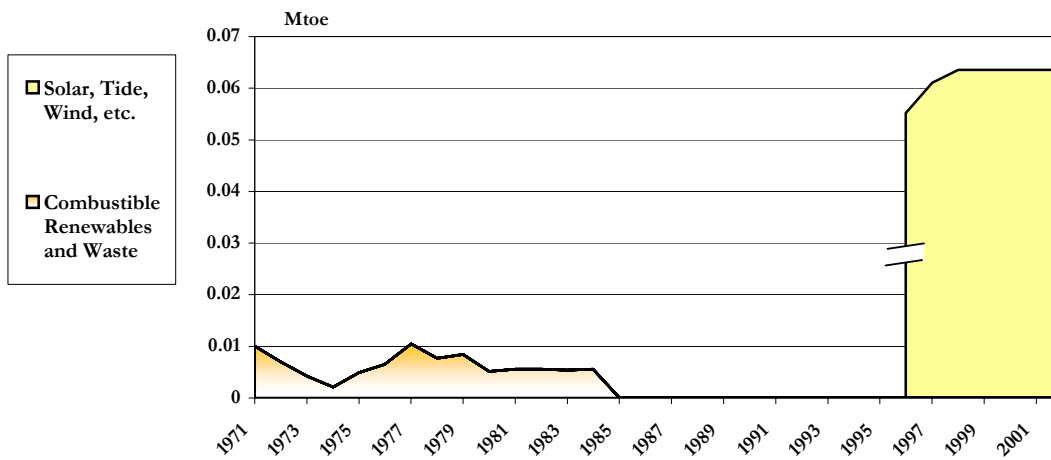
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Singapore - Shares of TPES 2002



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Singapore - Total Primary Energy Supply from Renewables (Mtoe)



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<http://www.iea.org/Textbase/stats/index.asp>



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Slovak Republic

Region Europe - EU
Renewable energy target(s) 31% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

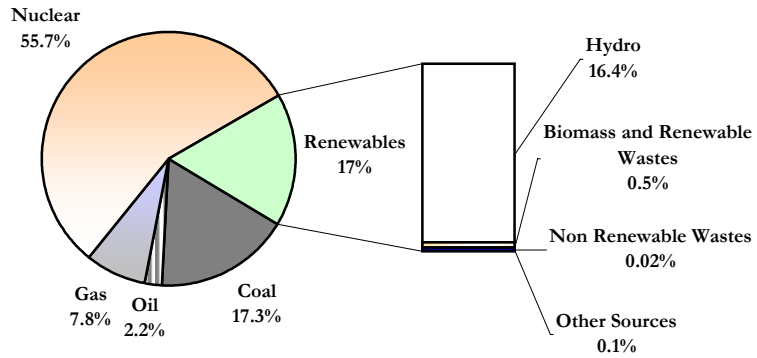
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- [Shares of TPES 2002 - Slovak Republic](#)
- [Electricity Generation by Fuel 2002 - Slovak Republic](#)

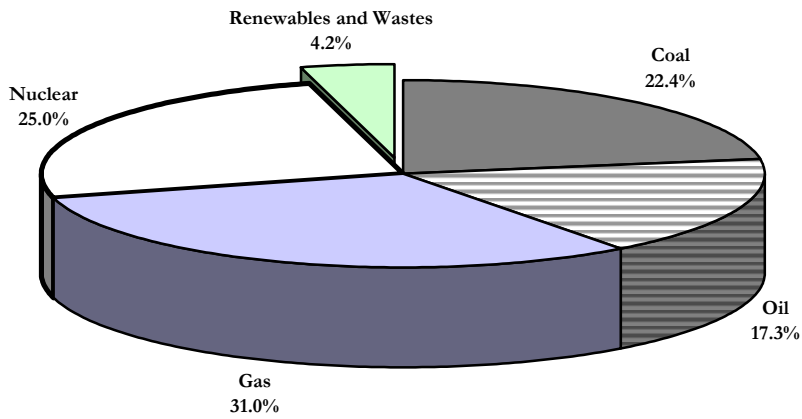
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Slovak Republic - Electricity Generation by Fuel 2002



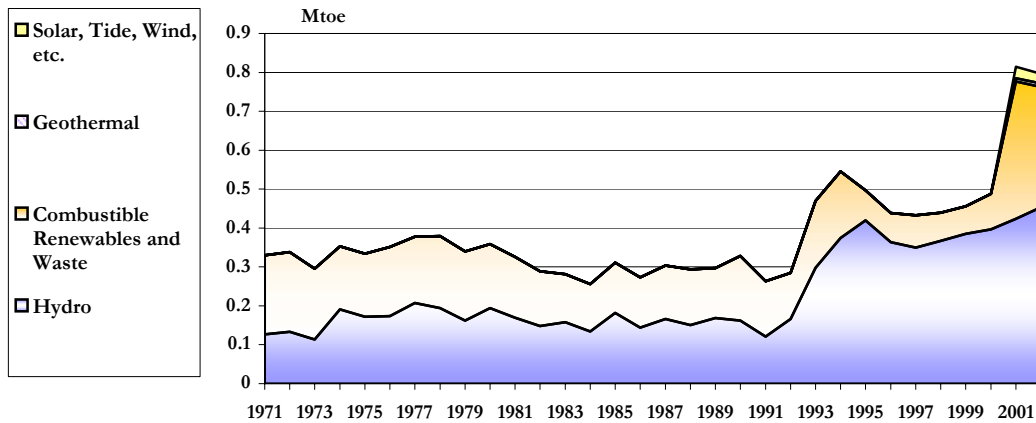
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Slovak Republic - Shares of TPES 2002



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Slovenia

Region Europe - EU
Renewable energy target(s) 33.6% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

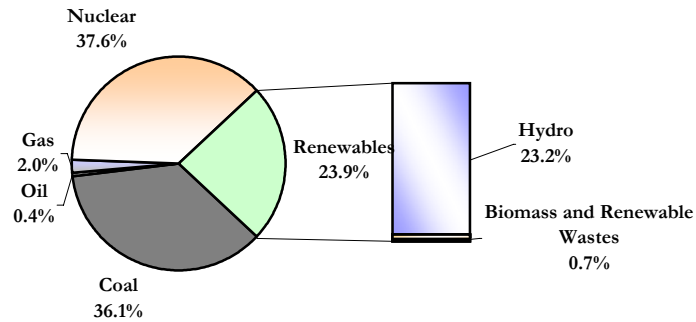
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Statistical Information on Renewable Energy

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- [Shares of TPES 2002 - Slovenia](#)
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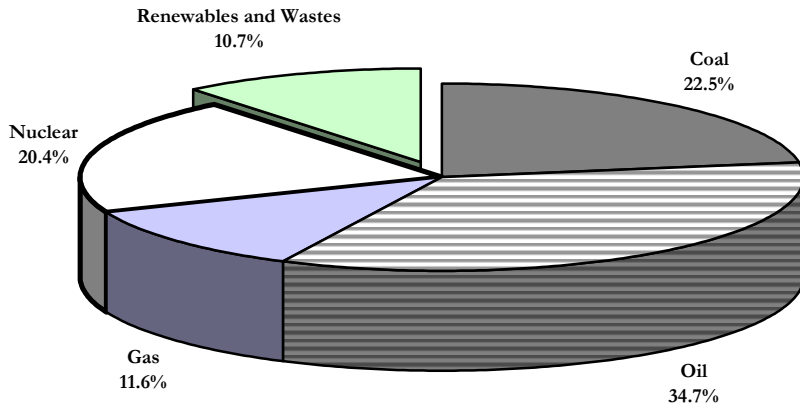
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Slovenia - Electricity Generation by Fuel 2002



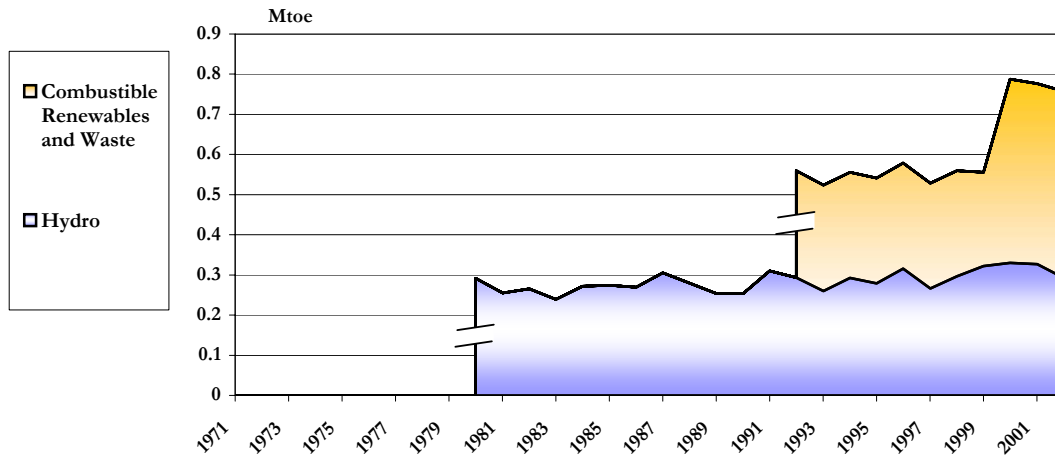
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<http://www.iea.org/Textbase/stats/index.asp>

Slovenia - Total Primary Energy Supply from Renewables (Mtoe)



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<http://www.iea.org/Textbase/stats/index.asp>



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South Africa

Region Africa

Source: IEA

Renewable Energy Policies and Measures

1. [White Paper on Renewable Energy](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - South Africa](#)
- [Shares of TPES 2002 - South Africa](#)
- [Electricity Generation by Fuel 2002 - South Africa](#)

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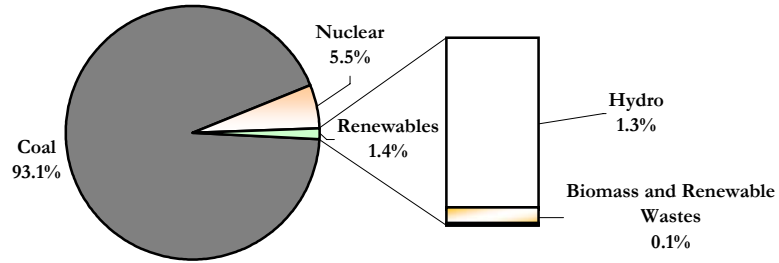
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White Paper on Renewable Energy

<i>Country</i>	South Africa
<i>Effective from</i>	2003
<i>Description</i>	<p>The General Policy Objective is to increase the share of modern renewable energy consumed and provide affordable access to energy throughout South Africa, thus contributing to sustainable development and environmental conservation.</p> <p>South Africa has an estimated existing (in 2000) renewable energy (RE) contribution of 11 278 GWh/annum mainly from fuelwood and waste. The Renewable Policy White Paper sets up the medium-term target (10-year) of 10 000 GWh or 0.8 Mtoe RE contribution to the final energy consumption by 2013 in addition to the existing RE contribution.</p> <p>At the basic level, the RE policy attempts to remove barriers that prevent RE penetration in the South African market. The policy addresses 5 key strategic areas.</p> <ol style="list-style-type: none">1. Promotes appropriate financial and fiscal instruments. This includes redirecting national resources/investment to RETs and provision of fiscal incentives2. Develop effective legislative instruments in order to facilitate RE dissemination. This will be achieved by passing regulations for pricing and the integration of IPP into the electricity system3. Promotion of R&D of RETs through the provision of guidelines/standards and code of practices as well as supporting appropriate R&D and local manufacturing.4. Raising of public awareness about RE through support of training centres, improved information dissemination strategies, improve government communication strategy, etc.5. Establish technology support centres, such as the National Energy Research Institute. <p>The policy is to be reviewed periodically.</p> <p>Funding will be provided through the National Fiscus and International donors</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Obligations•RD&D
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Bioenergy•Geothermal•Hydropower•Ocean energy•Onshore wind•Solar photovoltaics•Waste (organic)
<i>Funding</i>	Through the National Fiscus and International Donors
<i>Contact</i>	The Department of Minerals and Energy
<i>URL</i>	www.dme.gov.za
Source: IEA	

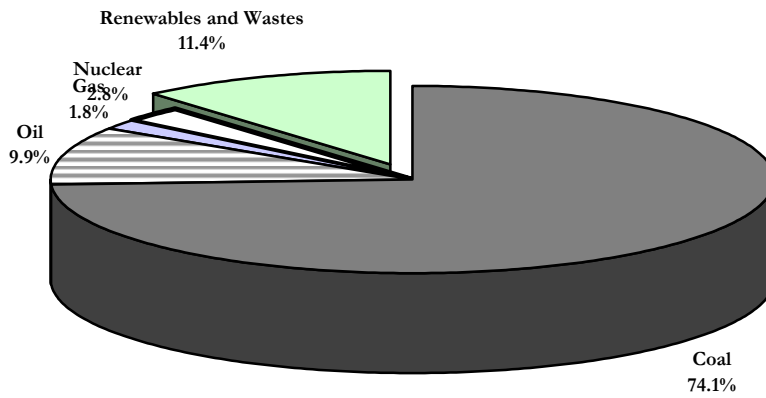
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South Africa - Electricity Generation by Fuel 2002



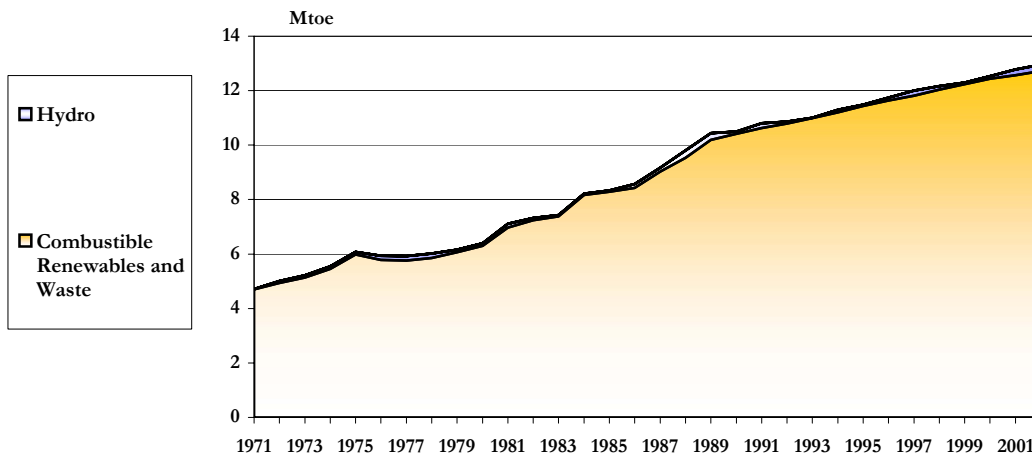
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South Africa - Shares of TPES 2002



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South Africa - Total Primary Energy Supply from Renewables (Mtoe)



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Spain

Region Europe - EU
Renewable energy target(s) 29.4% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Feed-in Tariffs](#)
2. [Low interest loans](#)
3. [Renewable Energy Promotion Plan](#)
4. [Feed-in tariffs for Small Scale Co-generation/Renewable Electricity Production](#)
5. [Plan on Renewables](#)
6. [Inter-ministerial Commission for Biomass](#)
7. [Planning and Development of the Electric and Gas Transport Networks 2002-2011](#)
8. [Modification to the Biomass, Waste and Wind Energy Premiums](#)
9. [Royal Decree 841/2002](#)
10. [Royal Decree 1663/2000](#)
11. [Royal Decree 2819/1998: ? Special Regime?](#)
12. [ICO-IDAE Financing Line](#)
13. [Law on Fiscal, Administrative and Social Measures](#)
14. [General Electricity Law](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Spain](#)
- [Shares of TPES 2002 - Spain](#)
- [Electricity Generation by Fuel 2002 - Spain](#)

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Feed-in Tariffs

<i>Country</i>	Spain
<i>Effective from</i>	1994
<i>Description</i>	<p>A series of Royal Decrees provided support for electricity generation from renewable energy sources, waste and CHP, based on feed-in tariffs. The 1994 decree determined the fixed tariff for solar electricity at ESP 10.42/kWh (€ 0.06/kWh). The Royal Decree (2818/1998) increased the tariff for solar electricity to € 0.22 to € 0.39/kWh. In 2000, it was revised and a new price at which a utility or supplier has to purchase renewable electricity from private generators was fixed. It ranges from € 0.03/kWh (for secondary biomass) to € 0.39/kWh (for PV under 5 kW). From 1999, wind electricity producers could receive either a fixed tariff of € 0.06/kWh or the average hourly market price of electricity plus a bonus of € 0.03/kWh.</p> <p>Rates are specified for both capacity and output credits. Output credits are the highest for wind and solar plants: € 0.07/kWh over a five-year period. Capacity credits are the highest for waste incineration plants; output credits for these plants vary depending on the size of the plant and on the relative importance of any co-fired fossil fuel. They also decrease annually. Buy-back rates for these plants are about € 0.06/kWh in the first year. Buy-back rates also depend on continuity of supply to avoid surges in power sold to the grid. The legislation also provides for guaranteed access to the electricity grid, with agreed rates for connection.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Ministry of Economy
<i>URL</i>	www.mineco.es/
Source: IEA	

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Low interest loans

<i>Country</i>	Spain
<i>Effective from</i>	2001
<i>Description</i>	This programme provides investment assistance to renewables through low interest loans at discounts of 2-5 points. The programme's total budget for 2001 was € 9.62 million.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€ 9.62 million in 2001

Source: IEA

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Renewable Energy Promotion Plan

<i>Country</i>	Spain
<i>Effective from</i>	1999
<i>Description</i>	The Renewable Energy Promotion Plan was approved in 1999 and aims to supply at least 12% of Spain's total energy demand with energy generated from renewable sources by 2010.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables

Source: IEA

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Feed-in tariffs for Small Scale Co-generation/Renewable Electricity Production

<i>Country</i>	Spain
<i>Effective from</i>	1999
<i>Description</i>	Generators with an installed capacity of less than 50 MW using co-generation systems or renewable resource systems (biomass, wind, mini-hydroelectric or photovoltaic solar), or any type of biofuel or non-renewable waste have the right to sell the electricity they generate or their surpluses to the grid at a pre-set price, the value of which is the market price plus a premium according to the type of plant. The premiums are established and decreased on a yearly basis in order to maintain market competition.
<i>Policy type</i>	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Net Metering
<i>Renewable energy</i>	All renewables

Source: IEA

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Plan on Renewables

<i>Country</i>	Spain
<i>Effective from</i>	2000
<i>Description</i>	The Promotion Plan of Renewable Energies ("Plan de Fomento de las Energías Renovables en España"), adopted by the Spanish government in 1999, became effective in 2000. It calls for doubling the renewable energy share in the primary energy supply quota from 6 to 12%. The main areas that are considered by the plan are biomass, wind, hydropower, solar and urban solid waste.
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Offshore wind•Onshore wind•Hydropower•Solar photovoltaics•Solar concentrating power•Solar thermal•Waste (organic)
<i>Funding</i>	1689 billion PTA. (€10 billion) for lifetime
<i>Contact</i>	Ministry of Economy
<i>URL</i>	www.mineco.es/

Source: IEA

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Inter-ministerial Commission for Biomass

<i>Country</i>	Spain
<i>Effective from</i>	2001
<i>Description</i>	An inter-ministerial commission was created to promote a package of measures and to remove barriers to the development of biomass.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Bioenergy
<i>Funding</i>	€3M/year (over the next three years)
<i>Contact</i>	Ministry of Economy

Source: IEA

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Planning and Development of the Electric and Gas Transport Networks 2002-2011

<i>Country</i>	Spain
<i>Effective from</i>	2002
<i>Description</i>	<p>The 'Planning of Electricity and Gas Sectors: Development of the Transport Networks 2002-2011' was approved by the Government and ratified by Parliament in 2002. Under the plan, priority is given to the installation of power lines coming from renewable energy facilities and for combined cycle power plants; and also for the building of natural gas pipelines to serve co-generation and combined cycle plants.</p> <p>The structure of electrical generation is to be modified through fuel substitution and technical change. The plan is to increase the installed capacity of wind power facilities to 13 000 MW in 2011 and of combined cycle plants to at least 14 800 MW by 2011.</p> <p>The forecast for energy demand used in this new plan is higher than that used in the Renewable Energy Plan. In order to reach the target of 12% of energy produced by renewables, the plan updates the objectives for wind energy and biomass electricity production in the 2000 Renewable Energy Plan.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Regulatory and Administrative Rules•Obligations
<i>Renewable energy</i>	All renewables
<i>Funding</i>	€2720M for Electricity - €5235M for Gas
<i>Contact</i>	Ministerio de Economía, Dirección General de política Energética y Minas
<i>URL</i>	www.mineco.es/PlanificacionEnergetica2002_2011/
Source: IEA	

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Modification to the Biomass, Waste and Wind Energy Premiums

<i>Country</i>	Spain
<i>Effective from</i>	2002
<i>Description</i>	Within the Renewable Action Plan 2000-2010, an inter-ministerial commission was created in 2001 to promote a package of measures and remove barriers in the deployment of renewable energy sources. Modification of renewable energy premiums has been introduced in the legislation that set the yearly electric tariffs. The premium for energy from biomass has been increased from €0.0279/kWh in 2002 to €0.0332/kWh in 2003, and also for the livestock manure management from €0.0271/kWh to €0.0294/kWh. Conversely, the premium for wind energy has been reduced from €0.0290/kWh to €0.0266/kWh.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Offshore wind•Onshore wind•Waste (organic)
<i>Contact</i>	Ministerio de Economía, Dirección General de política Energética y Minas
<i>URL</i>	www.mineco.es www.BOE.es
Source:	IEA

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Royal Decree 841/2002

Country	Spain
Effective from	2002
Description	Royal Decree (841/2002) specified changes to the special regime, regulating installations producing electricity from renewables and the incentives for them to participate in the energy market. It included a series of obligations concerning disclosure of their production forecasts and other information, as well as rules for the purchase of the electricity generated by energy traders. Installations with a generating capacity > 50 MW using renewable/nonconsumable energy sources are required to submit offers for the sale of electricity via the market operator. Generators covered by the system are guaranteed a price equal to that offered by the market plus € 0.009015/kWh as a power guarantee, in addition to the premium due under the legislation.
Policy type	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Regulatory and Administrative Rules
Renewable energy	All renewables
URL	www.cne.es/pdf/NE001_04.pdf
Source: IEA	

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Royal Decree 1663/2000

<i>Country</i>	Spain
<i>Effective from</i>	2000
<i>Description</i>	The Directorate General for Energy Policy and Mines drafted a standard contract and invoice for solar PV installations connected to low voltage grids. The Royal Decree (1663/2000) applies to photovoltaic installations of nominal power not more than 100 kVA and whose connection to the distribution grid is carried out in low voltage, i.e., not higher than 1 kV. If the nominal power of a photovoltaic installation to be connected to the distribution grid is more than 5 kW, the connection to the distribution grid will be triphasic, through three-phase inverters. This connection could be made through one or various single-phase inverters at each phase, with power less than 5 kW.
<i>Policy type</i>	Regulatory and Administrative Rules
<i>Renewable energy</i>	Solar photovoltaics
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/ESptables.pdf
Source: IEA	

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Royal Decree 2819/1998: ? Special Regime?

<i>Country</i>	Spain
<i>Effective from</i>	1998
<i>Description</i>	The Royal Decree (2818/1998) increased the tariff for solar electricity from € 0.22 to € 0.39/kWh. In 2000 it was revised and a new price was fixed, at which a utility or supplier has to purchase renewable electricity from private generators. It ranges from € 0.03/kWh (for secondary biomass) to € 0.39/kWh (for PV less than 5 kW). From 1999, wind electricity producers could receive either a fixed tariff of € 0.06/kWh or the average hourly market price of electricity plus a bonus of € 0.03/kWh.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.odyssee-indicators.org/Publication/PDF/Spain-p01.pdf
Source: IEA	

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ICO-IDAE Financing Line

<i>Country</i>	Spain
<i>Effective from</i>	2002
<i>Description</i>	In 2002 - under the Renewable Energy Plan 2000-2010 - a financing line has been provided by the Official Credit Institute (ICO) and the Institute for Diversification and Energy Saving (IDAE) for renewable energies and improving efficiency projects (saving and fuel switching in industry, energy efficiency in buildings, etc.). The maximum that can be financed in a project is 70% of the investment by means of loans at low interest rates.
<i>Policy type</i>	3rd Party Finance
<i>Renewable energy</i>	All renewables
<i>Funding</i>	9.98M€ in 2000 & 13.379M€ in 2001
<i>URL</i>	www.jrc.es/cfapp/eneriure/Tables/ESPTables.pdf

Source: IEA

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Law on Fiscal, Administrative and Social Measures

Country	Spain
Effective from	2001
Description	This Law (24/2001) offers corporate tax deductions for investments in renewable energy sources. Those investments that were originally for Royal Decree 1663/2000 have been incorporated into this Law. Eligible investments entitle firms to a 10% tax deduction in the case of investments in installations or equipment using solar power, biomass from agricultural or forestry waste, solid municipal waste and biofuels. These tax deductions are not applicable to wind power equipment or installations.
Policy type	Investment Tax Credits
Renewable energy	All renewables
URL	www.odyssee-indicators.org/Publication/PDF/Spain-p01.pdf
Source: IEA	

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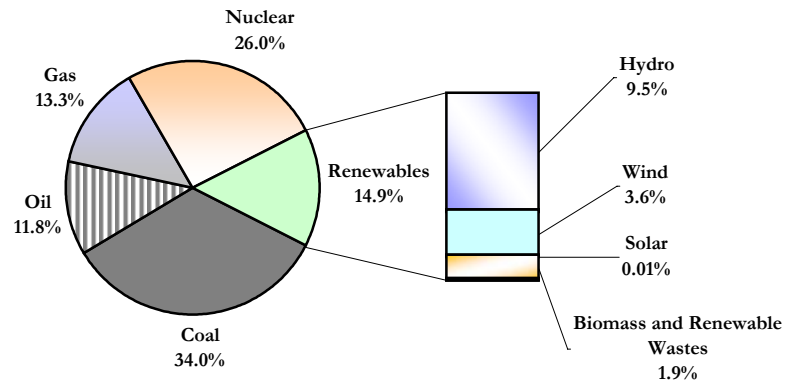
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General Electricity Law

<i>Country</i>	Spain
<i>Effective from</i>	1997
<i>Description</i>	This regulation (Law 54/1997) of the electric sector liberalised the electricity sector and guaranteed electricity supply at lowest possible cost. It elaborated the plan for the promotion of renewable energy and the plan for achieving the goal of 12% of primary energy consumption from renewable sources by 2010. The law also established a special regime for producers, which are not allowed to surpass a maximum of 50 MW power. This law is implemented through royal decrees, most notably Decree 2818/1998, which specified the feed-in tariffs from which the generating plants under the ? special regime? may benefit. The law established the guarantee of access to the grid for producers under the special regime. The law also established a premium, so that the price of electricity sold under the special regime is 80-90% of the mean price of electricity charged to final consumers.
<i>Policy type</i>	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Obligations
<i>Renewable energy</i>	All renewables
<i>URL</i>	www.odyssee-indicators.org/Publication/PDF/Spain-p01.pdf
<i>Source: IEA</i>	

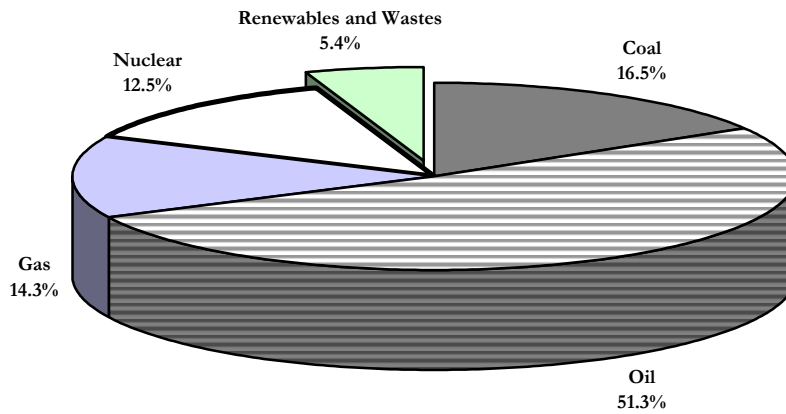
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Spain - Electricity Generation by Fuel 2002



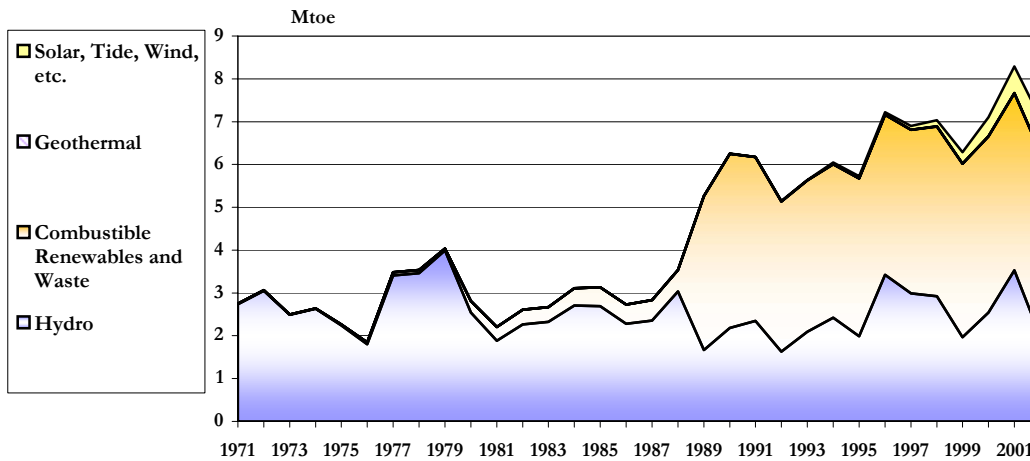
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Spain - Shares of TPES 2002



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Spain - Total Primary Energy Supply from Renewables (Mtoe)



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Sweden

Region Europe - EU
Renewable energy target(s) 60% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Energy Taxation](#)
2. [Investment Grant for Solar Heating](#)
3. [Local Investment Programmes](#)
4. [Feed-in tariffs](#)
5. [Transitional Regulation for Wind Power](#)
6. [Measures to Support Wind Power](#)
7. [Eco-Energy Municipality Programme](#)
8. [Tax Reduction for Wind Power Prolongation](#)
9. [Energy Policy](#)
10. [Green Certificate Scheme](#)
11. [Energy policy programme](#)
12. [Renewables Tax Exemption: Act 1776](#)
13. [Investment Subsidy for Plants in Difficult Locations](#)
14. [Guaranteed Power Purchase Contracts](#)
15. [Tax Reduction for Installation Costs of Biomass Heating Systems and Energy Efficient Windows](#)
16. [Energy Research and Development](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Sweden](#)
- [Shares of TPES 2002 - Sweden](#)
- [Electricity Generation by Fuel 2002 - Sweden](#)

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Energy Taxation

<i>Country</i>	Sweden
<i>Effective from</i>	2000
<i>Description</i>	Sweden levies three different taxes on energy products: an energy tax, a CO2 tax and a sulphur tax (introduced in 1991). In 2000, a budget proposal was approved to increase energy taxation by SKr 3 billion in 2001; in the form of green tax exchange (the bulk of the money was to replace lost tax revenue). The carbon dioxide tax rate was raised from SKr 370 to SKr 530 per tonne. The tax on diesel increased by SKr 0.117/litre and taxes on electricity by SKr 0.019/kWh. Biomass is exempt from the three levies.
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	Bioenergy
Source: IEA	

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Investment Grant for Solar Heating

<i>Country</i>	Sweden
<i>Effective from</i>	2000
<i>Description</i>	In 2000, the Swedish government introduced an investment support scheme for solar heating. Home owners can apply for an investment grant corresponding to SKr 2.50/kWh of calculated yearly supply for investments in solar heating installations.
<i>Policy type</i>	Consumer Grants / Rebates
<i>Renewable energy</i>	Solar thermal
<i>Funding</i>	2000: 10 MSEK, 2001: 20 MSEK
<i>Contact</i>	Swedish National Board of Housing, Building and Planning
Source: IEA	

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Local Investment Programmes

<i>Country</i>	Sweden
<i>Effective from</i>	1997 (Update in 2002)
<i>Description</i>	<p>A support initiative for Local Investment Programmes (LIP) was established in 1997 with a budget of SEK5 400 million (later increased to SEK 7 200 million) for the period 1998-2003. The programme was designed to support local governments' investments in technology to achieve lower environmental impacts, more efficient use of energy and resources and to promote the use of renewable resources. The Swedish government granted support amounting to SEK 1 200 million to local governments for 56 local investment programmes in 2000. Up to 1 July 2001, the government granted a total of SEK 5 600 million to 136 local governments. The supported programmes are expected to lead to decreases in energy use of 2.2 TWh per year. Conversions to renewable energy sources will contribute 2.6 TWh per year. Carbon dioxide emissions are expected to decrease by 1.7 million tonnes per year.</p> <p>The 2002 Budget bill set out a support programme for Local Climate Investment Programmes as a replacement for the Local Investment Programmes and allocated a budget of SEK 900 million for a three-year period beginning 2002. The measure is designed to support local governments' investments to reduce greenhouse gas emissions in Sweden.</p>
<i>Policy type</i>	Government Purchases
<i>Renewable energy</i>	All renewables
<i>Funding</i>	SKr 7 200 million
<i>Contact</i>	Ministry of the Environment
Source: IEA	

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Feed-in tariffs

<i>Country</i>	Sweden
<i>Effective from</i>	1998
<i>Description</i>	The liberalisation of the Swedish electricity market provides straightforward access for small independent generators to be connected to the grid. Swedish utilities were obliged to purchase electricity from small generators at agreed prices. Since the end of 1998, biomass and wind power has been sold at the market price plus a temporary support of SKr 0.09/kWh (€ 0.009/kWh) provided by the state.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Offshore wind•Onshore wind

Source: IEA

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Transitional Regulation for Wind Power

<i>Country</i>	Sweden
<i>Effective from</i>	2003
<i>Description</i>	As part of the green certificates plan, a transitional regulation was introduced in 2003 for wind power plants that had been in operation before 1 January 2003. These plants, until they achieve 25 000 equivalent full-load hours, are granted support for each MWh produced during the initial five-year period: SEK 150/MWh in 2003, SEK 120/MWh in 2004, SEK 90/MWh in 2005, SEK 60/MWh in 2006 and SEK 30/MWh in 2007.
<i>Policy type</i>	Guaranteed Prices / Feed in
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind

Source: IEA

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Measures to Support Wind Power

<i>Country</i>	Sweden
<i>Effective from</i>	2000
<i>Description</i>	The 2001 budget bill included additional funding of SEK 40 million per year to support wind power installations under the Swedish Energy Policy Programme initiated in 1998.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind
<i>Funding</i>	SEK 40 million per year
<i>Contact</i>	Swedish Energy Agency Administration
Source: IEA	

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Eco-Energy Municipality Programme

<i>Country</i>	Sweden
<i>Effective from</i>	2001
<i>Description</i>	The Eco-energy municipality programme was started in March 2001. Seventy municipalities applied for participation and ten were selected for the first year of the programme. The responsibility of the municipalities is to decide an energy policy, engage in a continuous improvement process and carry out measures to improve energy efficiency and introduce renewable energy sources. The municipalities are also offered seven educational packages.
<i>Policy type</i>	Public Awareness
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Swedish Energy Agency
Source: IEA	

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Tax Reduction for Wind Power Prolongation

<i>Country</i>	Sweden
<i>Effective from</i>	2002
<i>Description</i>	Tax exemptions for electricity generated from wind power were prolonged to 2009. This "environmental bonus," introduced in 1994, provided the opportunity for deduction of the energy tax due on electricity produced from wind power. In 2004 the incentive is SEK 0.181/kWh.
<i>Policy type</i>	Production Tax Credits
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind

Source: IEA

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Energy Policy

Country	Sweden
Effective from	2002
Description	In 2002, the Swedish government presented its Energy Policy Bill ? Co-operation for a Secure, Efficient and Environmentally-Friendly Energy Supply? (2001/02:143). This report, approved by Parliament, re-affirmed the country's established energy policy objectives. The energy policy decision contained measures designed to encourage more efficient energy consumption through the rationalisation of existing policy measures and the dissemination of knowledge at the national and regional levels. The decision also announced a new method to promote environmentally-friendly and renewable electricity production through a quota-based trading programme for green electricity certificates.
Policy type	<ul style="list-style-type: none">•General Energy Policy•Public Awareness•Regulatory and Administrative Rules
Renewable energy	All renewables

Source: IEA

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Green Certificate Scheme

<i>Country</i>	Sweden
<i>Effective from</i>	2003
<i>Description</i>	A law instituting a green certificate system in Sweden came into force on 1 May 2003. Under the scheme, generators using solar, wind, biomass geothermal, wave or small hydro (< 1.5MW) are awarded one certificate for each 1 MWh produced, and all consumers are obliged to buy these certificates to cover a set proportion of their use. This requirement started at 7.4% in 2003, and will rise to 16.9% in 2010. Energy-intensive industry is exempt from the requirement. There is a floor and a ceiling set on certificate prices. Should generators find no buyers for their certificates; the government is obliged to buy them. The price was SKr 60/MWh (€ 6.6/MWh) in 2003, with the price falling in future years. For consumers who fail to buy enough certificates, there is a penalty of SKr 175/MWh (€ 19.3/MWh) in 2003 and SKr 240/MWh (€ 26.5/MWh) in 2004.
<i>Policy type</i>	Tradable Certificates
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Swedish Energy Agency
<i>URL</i>	www.stem.se

Source: IEA

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Energy policy programme

<i>Country</i>	Sweden
<i>Effective from</i>	1997
<i>Description</i>	This programme was established in 1997 to compensate for the closure of nuclear power stations by promoting the production of electricity from renewable energy sources. It includes measures aimed at reducing the consumption of electricity for heating purposes, to make more efficient use of the existing power system and to increase the supply of electricity and heating from renewable energy sources. It consists of a short-term programme, which focuses on ways to increase the supply of renewable electricity and to reduce electricity consumption, and a programme of a more research-directed and long-term nature.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	All renewables
Source: IEA	

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Renewables Tax Exemption: Act 1776

<i>Country</i>	Sweden
<i>Effective from</i>	1994
<i>Description</i>	Small-scaled renewable energy based electricity production is partially or totally exempt from the energy tax levied on households and the service sector; this gives a tax benefit of € 0.1-2/kWh. Furthermore, producers and consumers of biomass-based electricity are exempt from various environmental taxes, such as the CO2 tax, sulphur tax and NOx levy.
<i>Policy type</i>	<ul style="list-style-type: none">•Production Tax Credits•Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables

Source: IEA

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Investment Subsidy for Plants in Difficult Locations

<i>Country</i>	Sweden
<i>Effective from</i>	2003
<i>Description</i>	The Swedish government intends to work together with industry to gaining experience building wind farms in ? difficult areas? such as offshore or mountain locations. An amount of SKr 350 million (about € 38.6 million) is planned for this measure.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	<ul style="list-style-type: none">•Offshore wind•Onshore wind
<i>Funding</i>	SEK 350 million
Source: IEA	

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Guaranteed Power Purchase Contracts

<i>Country</i>	Sweden
<i>Effective from</i>	1997
<i>Description</i>	The guaranteed power purchase contract with local utilities supports small renewable energy projects within the liberalised Swedish electricity market. Local distribution companies must purchase all electricity generated by projects of less than 1 500 kW within their service territories.
<i>Policy type</i>	<ul style="list-style-type: none">•Guaranteed Prices / Feed in•Regulatory and Administrative Rules
<i>Renewable energy</i>	All renewables
Source: IEA	

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Tax Reduction for Installation Costs of Biomass Heating Systems and Energy Efficient Windows

<i>Country</i>	Sweden
<i>Effective from</i>	2004
<i>Description</i>	Through this legislation, home owners may get tax reductions of 30% of the costs of the installation of heating system based on biomass (i.e., pellet or wood burners/furnaces) in new houses or energy-efficient windows in existing houses. The upper limit is set at SEK 15 000 for heating systems and SEK 10 000 for windows. The reduction may be first applied for in the 2005 income tax return (2004 income).
<i>Policy type</i>	Tax Credits
<i>Renewable energy</i>	Bioenergy

Source: IEA

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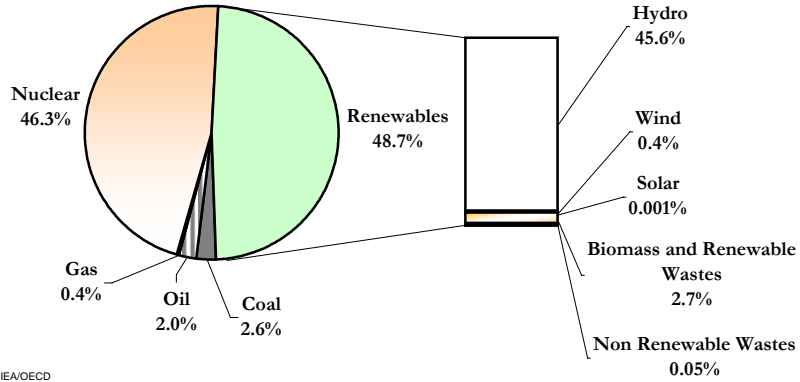
Energy Research and Development

<i>Country</i>	Sweden
<i>Effective from</i>	1975
<i>Description</i>	<p>There have been long-term energy RD&D programmes in Sweden since 1975. This section covers the relevant portions of the 1997 Long-term Energy Policy Programme. The RD&D programme was divided into a five-year short-term programme (with a new programme from 2003 and a seven-year programme to be put into action in 2005).</p> <p>The Energy Policy Programme adopted in 1997 included a seven-year RD&D programme of SKr 5.6 billion (€ 93 million per year) for renewable energy sources and new energy technology. The main target of the programme was to reduce the cost of renewables to make them more viable alternatives to nuclear power and fossil fuels.</p> <p>Biomass RD&D received total funding of about SKr 400 million (€ 36 million) per year from the government. Electricity companies and other industries also provided funds. The main areas of support were combustion and conversion technologies, demonstration of pre-competitive technologies, fuel production, harvesting supply programmes and ashes recycling.</p>
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	Bioenergy
<i>Funding</i>	SKr 5.6 billion (€ 93 million per year) for renewable energy sources and new energy technology from the Energy Policy Programme. Biomass RD&D received total funding of about SKr 400 million (€ 36 million) per year from the government.

Source: IEA

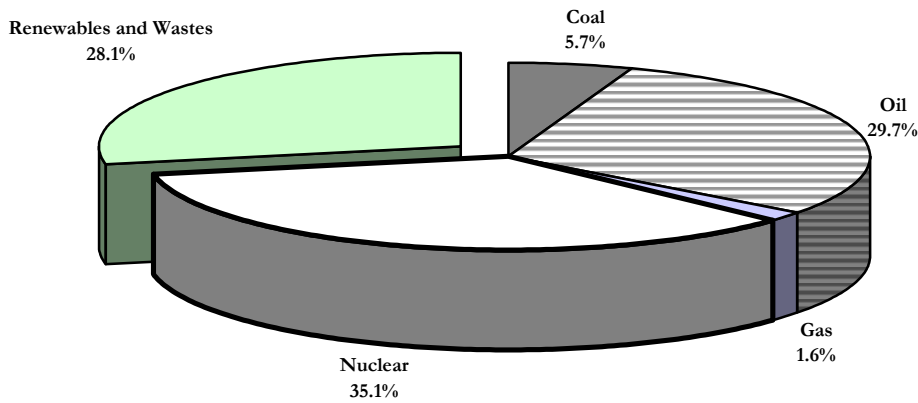
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Sweden - Electricity Generation by Fuel 2002



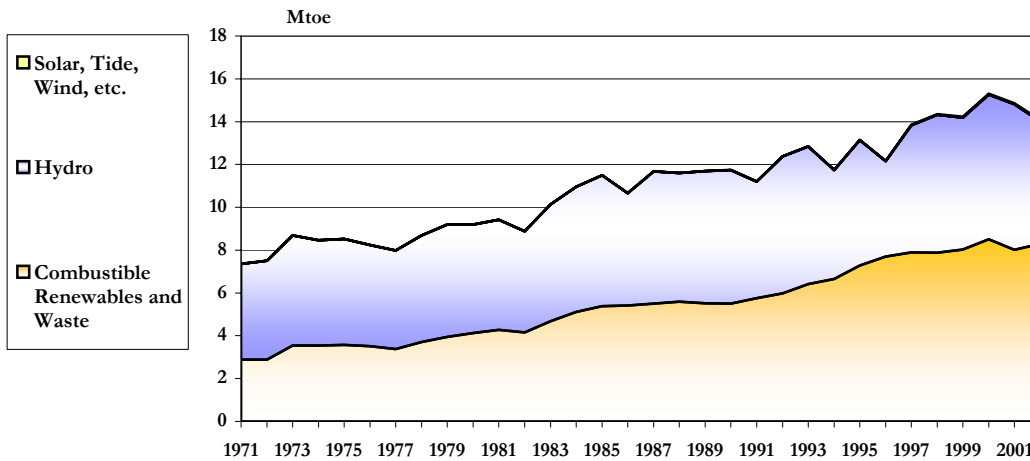
Source: IEA Energy Statistics - Copyright: IEA/OECD
 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

Sweden - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

Sweden - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Switzerland

Region Other Industrialised Countries
Renewable energy target(s) 3.5 TWh from electricity and heat by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Federal Law on the Reduction of CO₂ \(CO₂ Law\)](#)
2. [Energy Law](#)
3. [SwissEnergy Action Plan](#)
4. [Feed-in Tariff \(SwissEnergy Action\)](#)
5. [Naturemade Labelling Scheme](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Switzerland](#)
- [Shares of TPES 2002 - Switzerland](#)
- [Electricity Generation by Fuel 2002 - Switzerland](#)

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Federal Law on the Reduction of CO2 (CO2 Law)

<i>Country</i>	Switzerland
<i>Effective from</i>	1999
<i>Description</i>	<p>The CO2 Law entered into force on 1 May 2000. The Law stipulates that by 2010, the emissions of CO2 must be reduced by 10% below the 1990 level. For motor fuels, the objective is a reduction of 8%, while for heating fuels, 15% is envisaged. Measures to reduce CO2 emissions include consumption-dependent heavy vehicle tax, the Energy Law and the SwissEnergy Programme. If Switzerland is not on course to meet its Kyoto targets via the voluntary measures within the SwissEnergy Programme, then a CO2 tax may be instituted in 2004 at the earliest. The maximum rate of tax on CO2 is set at 210 CHF per tonne CO2, which will need to be approved by Parliament. The revenue from the tax is to be refunded in full to the public and industry. To avoid incurring a disadvantage over their foreign competitors, companies may be exempt from the CO2 tax if they undertake measures to reasonably reduce their CO2 emissions.</p>
<i>Policy type</i>	Fossil Fuel Taxes
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Swiss Agency for the Environment, Forests and Landscape
<i>URL</i>	www.umwelt-schweiz.ch/buwal/eng/fachgebiete/fg_klima/index.html
<i>Source: IEA</i>	

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Energy Law

<i>Country</i>	Switzerland
<i>Effective from</i>	1999
<i>Description</i>	1991-1998 Energy Decree 1999 Energy Law The goals of the Energy Law, which replaced the Energy Decree, are, among others, to ensure safe energy supply that is environmentally compatible and economically feasible, to contribute to the rational and efficient use of energy, and to encourage the use of domestic and renewable energy sources. The law calls for co-operation with the cantons and the private sector and gives priority to voluntary measures over regulations.
<i>Policy type</i>	<ul style="list-style-type: none">•Voluntary Programmes•General Energy Policy
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Federal Council
<i>URL</i>	www.admin.ch

Source: IEA

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SwissEnergy Action Plan

<i>Country</i>	Switzerland
<i>Effective from</i>	2001
<i>Description</i>	<p>The Swiss Energy Action Plan started in 2001, following the Energy2000 programme. The objectives of SwissEnergy are to reduce the consumption of fossil fuels, to slow the growing electricity demand and to increase the contribution of renewables to energy supply. Specifically the targets of the SwissEnergy Action Plan are: +3000 GWh of heat (+3 percentage points). +500 GWh of electricity (+1 percentage point).</p> <p>The targets are to be reached in extensive co-operation with the cantons and the private sector. Voluntary agreements; funding measures favouring energy savings; promotion of renewables; dissemination of research information; and energy consumption standards for buildings, equipment and vehicles are the main elements of SwissEnergy. Their aim is to achieve a 10% reduction in the consumption of fossil fuels, to cap electricity demand growth at 5% and increase the share of renewable energy.</p> <p>Additional promotion of renewable energy is being undertaken by RD&D activities as well as with the programmes Energy2000 and SwissEnergy: Energy from biomass other than wood, deep geothermal energy, ambient heat for heat pumps. The promotion activities are similar to those described below.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Voluntary Programmes•RD&D•Obligations
<i>Renewable energy</i>	All renewables
<i>Funding</i>	CHF 55 Million for 2003 CHF 45 Million for 2004
<i>Contact</i>	Swiss government
<i>URL</i>	www.energieschweiz.ch
Source: IEA	

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Feed-in Tariff (SwissEnergy Action)

Country	Switzerland
Effective from	1991
Description	Set up by the Swiss Federal Office for Energy based on the Energy Law, the feed-in tariff obliges electricity companies to purchase electricity from renewable energy sources at a fixed rate according to the following principles: The feed-in tariff is on average CHF 0.15/kWh for renewables. The tariff is adjusted to be higher during daily peak periods and lower in summer but the annual average must be met. The feed-in tariff is applied to all renewables except hydropower with capacity < 1 MW and (renewable) waste. Cantonal authorities can reduce the tariff where production costs by small hydropower plants (< 1 MW) are much lower than the fixed feed-in tariff. The cantons can also establish higher feed-in tariffs. For example, in Geneva the feed-in tariff for photovoltaics is CHF 0.60 to CHF 0.90/kWh. The cantons can establish, individually or in co-operation with other cantons, a compensatory fund in favour of electricity companies which are obliged to buy electricity from renewables generators when the purchase share is ? over-proportional? to their turnover (determined on a case-by-case basis by the cantons' authorities). These funds would be financed by all electricity suppliers inside the canton, but no such funds have yet been established. The obligation for utilities to purchase electricity from companies producing electricity from renewables only applies to electricity that exceeds the generator's consumption (the generators cannot sell their electricity at a higher price and at the same time purchase electricity at a lower price).
Policy type	Guaranteed Prices / Feed in
Renewable energy	<ul style="list-style-type: none">•Bioenergy•Geothermal•Solar concentrating power•Solar photovoltaics•Solar thermal•Offshore wind•Onshore wind•Hydropower

Source: IEA

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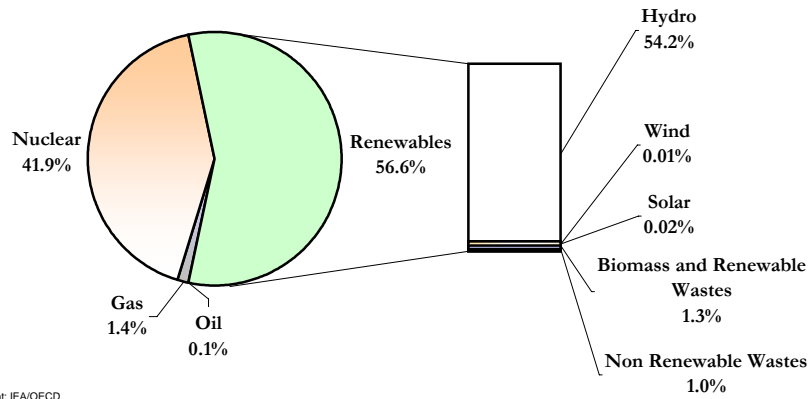
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Naturemade Labelling Scheme

<i>Country</i>	Switzerland
<i>Effective from</i>	2000
<i>Description</i>	<p>Naturemade is a green electricity labelling scheme. The certificate system has two levels and includes special measures to promote non-hydro renewables: The first level, Naturemade Basic, is a declaration of the source (plants using renewables) and origin (own plants or purchased energy) of renewable electricity. Large hydropower plants (>10 MW) have to establish an environmental management system within five years of receiving the Naturemade Basic certificate. The second level, Naturemade Star, was defined for environmentally preferable electricity. Power plants can be granted the Naturemade Star label if they fulfil Naturemade Basic criteria as well as additional criteria for lifecycle characteristics. For example, the generator must establish an ecoassessment (? eco-indicator 99?); the minimum efficiency for wood-fired plants is set at 60% and environmental protection requirements are set for hydropower, photovoltaics and wind power generation. Hydropower plants can also achieve this level if they comply with certain criteria. Principally, they must have a lower environmental impact than traditional hydropower plants. For example, they have to leave sufficient water in streams and rivers (i.e. respect residual flow limits) or allow fish to pass through weirs. Hydropower units with more than 0.1 MW capacity must establish a fund to improve the ecological situation in the power plant site. The funds are financed from a levy on certified electricity; Naturemade Star producers pay CHF 0.009/kWh whereas Naturemade Basic producers pay only CHF 0.001/kWh. Specific provisions were developed to protect other renewables from competition with large hydropower plants and to create an incentive to develop non-hydro renewables. The marketers of all Naturemade certified electricity must guarantee that at least 5% of their certified electricity sales have the Naturemade Star certificate.</p>
<i>Policy type</i>	Voluntary Programmes
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Geothermal•Hydrogen (from Renewables)•Offshore wind•Onshore wind•Solar photovoltaics•Solar concentrating power•Solar thermal•Hydropower
<i>URL</i>	www.naturemade.org/
Source: IEA	

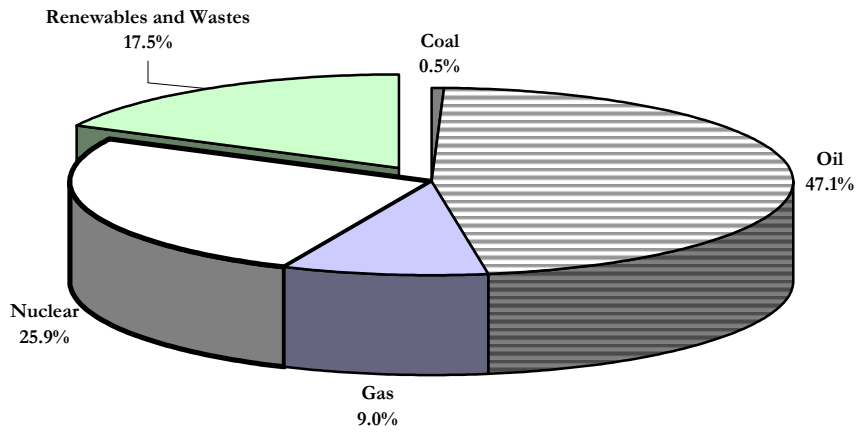
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Switzerland - Electricity Generation by Fuel 2002



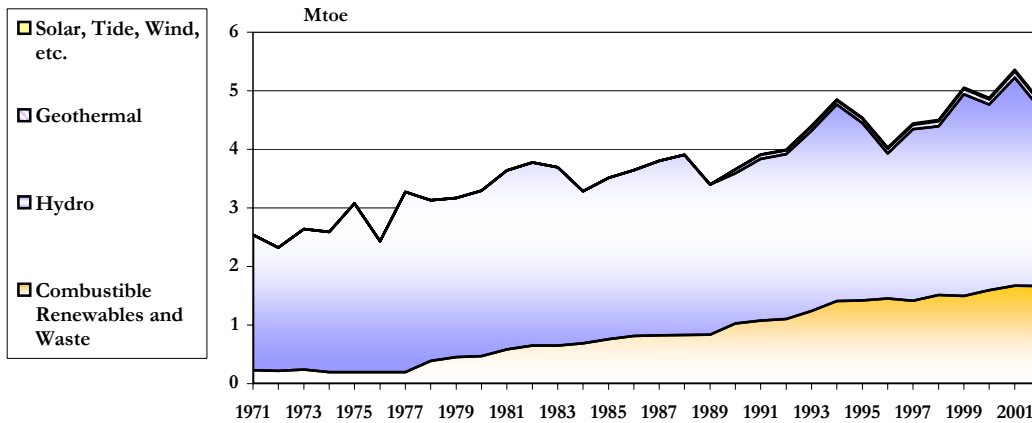
Source: IEA Energy Statistics - Copyright: IEA/OECD
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Switzerland - Shares of TPES 2002



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Switzerland - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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Trinidad and Tobago

Region Aosis - Caribbean
Source: IEA

Renewable Energy Policies and Measures

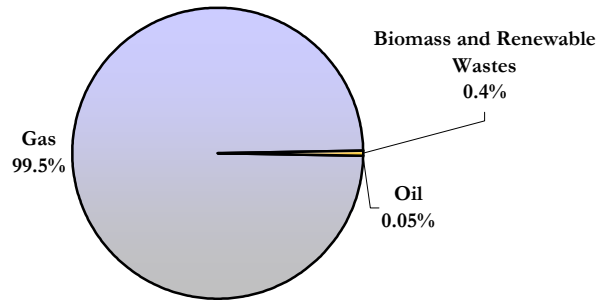
Information currently unavailable.

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Trinidad and Tobago](#)
- [Shares of TPES 2002 - Trinidad and Tobago](#)
- [Electricity Generation by Fuel 2002 - Trinidad and Tobago](#)

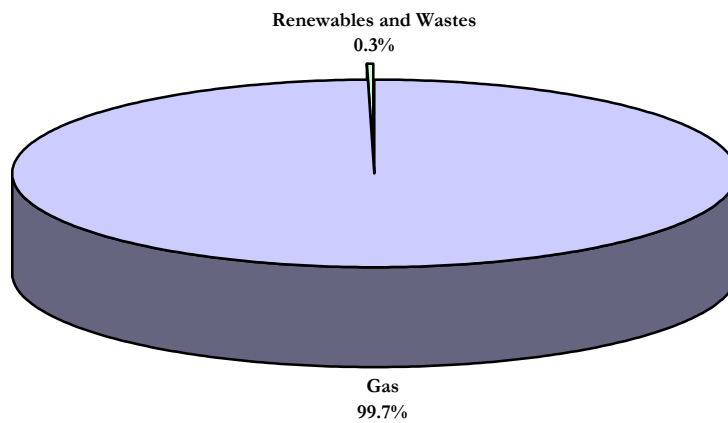
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Trinidad and Tobago - Electricity Generation by Fuel 2002



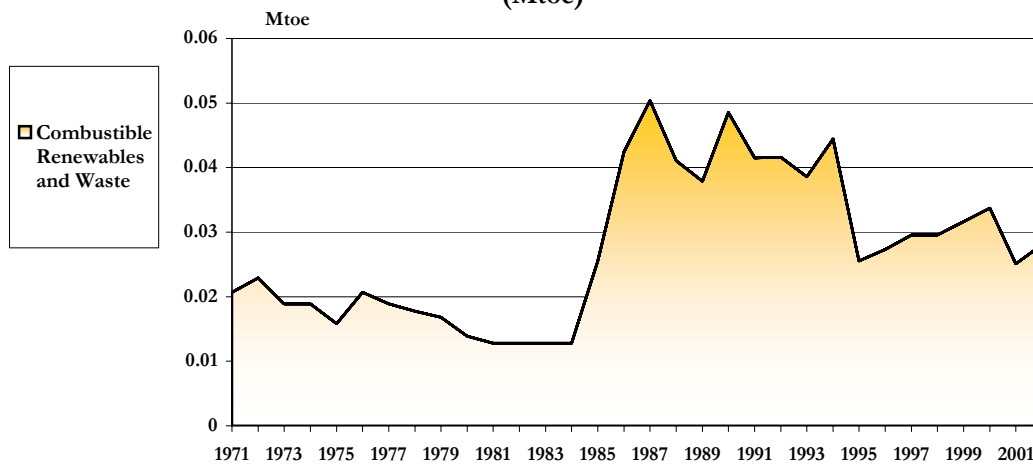
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Trinidad and Tobago - Total Primary Energy Supply from Renewables (Mtoe)



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Turkey

Region Europe - EITs
Renewable energy target(s) 2% of electricity from wind by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Electricity Market Licensing Regulation](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Turkey](#)
- [Shares of TPES 2002 - Turkey](#)
- [Electricity Generation by Fuel 2002 - Turkey](#)

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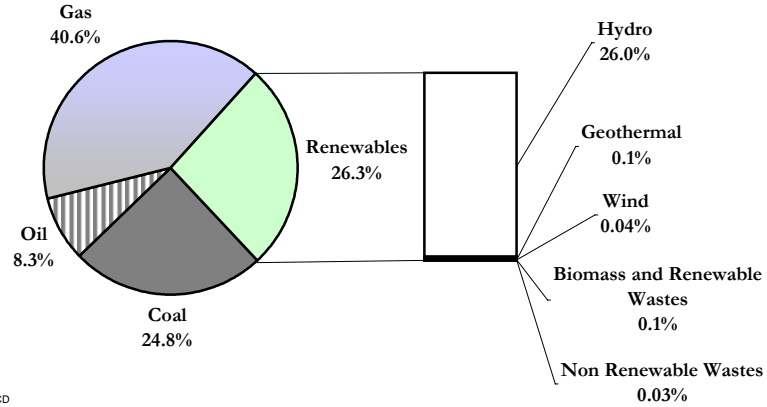
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Electricity Market Licensing Regulation

<i>Country</i>	Turkey
<i>Effective from</i>	2001
<i>Description</i>	The Electricity Market Licensing Regulation of the Electricity Market Law (Law Number 4628) contains two regulations pertaining to the promotion of the use of renewable energy: The legal entities applying for licences for construction of renewable energy facilities are required to pay only 1% of the total licence fee. Also renewables based generation facilities are exempt from paying the annual licence fees for the first eight years following the facility completion date as specified in the licence. The Turkish Electricity Transmission Company (TEIAS) and/or distribution companies are required to give priority status for systems connection of generating facilities based on renewables.
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	All renewables
Source: IEA	

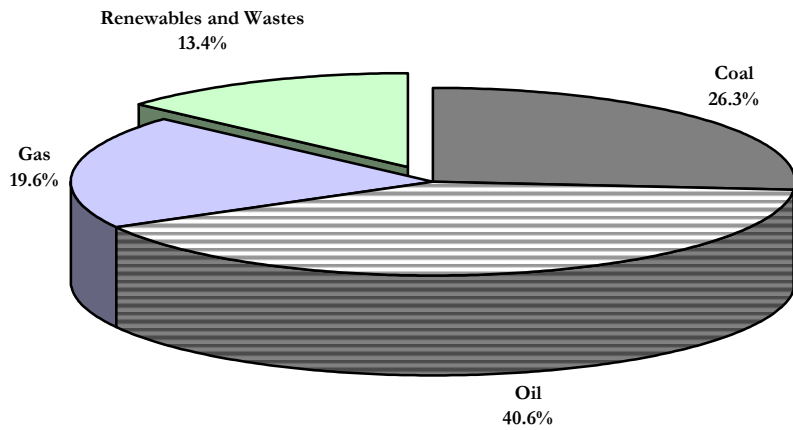
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Turkey - Electricity Generation by Fuel 2002



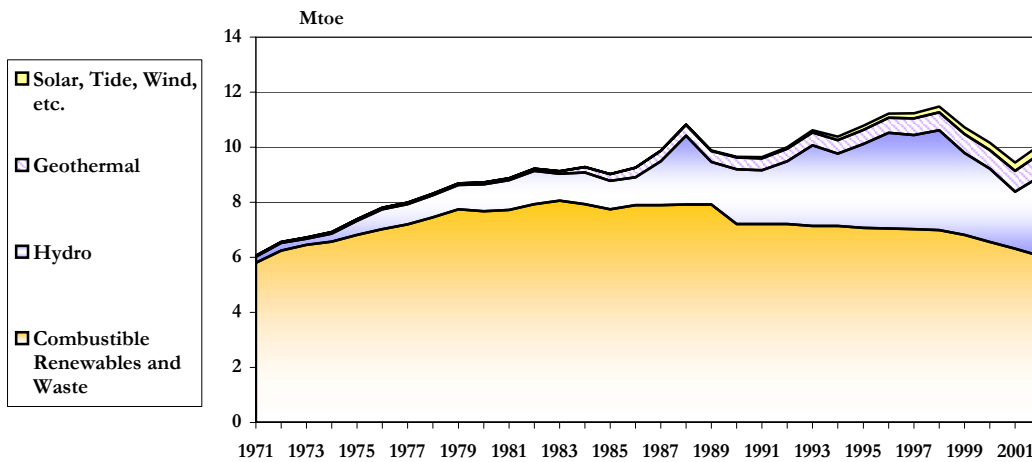
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Turkey - Shares of TPES 2002



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Turkey - Total Primary Energy Supply from Renewables (Mtoe)



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United Kingdom

Region Europe - EU
Renewable energy target(s) 10% of electricity output by 2010
Source: IEA

Renewable Energy Policies and Measures

1. [Climate Change Levy](#)
2. [The Green Fuels Challenge](#)
3. [Reduced Value-Added Tax](#)
4. [UK Climate Change Programme](#)
5. [New Opportunities Fund - Financing Renewable Energy in the UK](#)
6. [Renewables Obligation Order](#)
7. [Demonstration and Testing of Wave and Tidal Technologies](#)
8. [New and Renewable Research and Development Energy Programme](#)
9. [Bio-energy Capital Grants Scheme](#)
10. [Offshore Wind Capital Grants Scheme](#)
11. [Large-scale Field Trial: Building Integrated PV for Public Buildings](#)
12. [Major PV Demonstration Programme](#)
13. [Renewable Energy Guarantee of Origin](#)
14. [Industry Promotion and Information Development](#)

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - United Kingdom](#)
- [Shares of TPES 2002 - United Kingdom](#)
- [Electricity Generation by Fuel 2002 - United Kingdom](#)

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Climate Change Levy

<i>Country</i>	United Kingdom
<i>Effective from</i>	2001
<i>Description</i>	<p>The Climate Change Levy is designed to promote energy efficiency and stimulate investment in new energy technologies. The levy is a tax on energy use in industry, commerce, agriculture and the public sector. It applies to gas, electricity, LPG and coal.</p> <p>The levy is based on the primary energy content of the various fuels, not the carbon content. Levy rates are: £0.43/kWh for electricity; £0.15/kWh for gas; £1.17/kg for coal; and £0.96/kg for LPG.</p> <p>Electricity generated from ? new? forms of renewable energy, such as solar and wind power, and ? good quality? combined heat and power plants are exempt. In addition to these, several other categories are exempt or have discounts related to the levy: Up to 80% discounts for businesses and energy-intensive industries that have Climate Change Agreements (negotiated agreements with the government to deliver specified energy savings). 50% discount for horticultural producers.</p> <p>The levy package as a whole is designed to be broadly neutral for the manufacturing and service sectors. Revenues from the levy are recycled back to businesses via a 0.3 percentage point cut in the main rate of employers' National Insurance Contribution and additional support for energy efficiency measures. In 2001-2002, £50 million was available from the levy to support energy efficiency advice, promote the take-up of low-carbon technologies and to promote renewable energy projects. Some £200 million was expected to be available from the scheme in the 2001-2003 period.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Fossil Fuel Taxes•Tax Credits
<i>Renewable energy</i>	<ul style="list-style-type: none">•Hydropower•Offshore wind•Onshore wind•Biofuel
<i>Contact</i>	Her Majesty's Customs and Excise
<i>URL</i>	www.hmce.gov.uk/business/othertaxes/ccl.htm www.dti.gov.uk/energy
<i>Source:</i>	IEA

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The Green Fuels Challenge

<i>Country</i>	United Kingdom
<i>Effective from</i>	2001
<i>Description</i>	The Green Fuels Challenge aims to stimulate industry to develop practical proposals for alternative fuels. The budget in 2001 announced reductions on the duty on biodiesel and further reductions on the duty on road fuel gases. It also included duty reductions or exemptions for pilot studies for vehicles running on alternative fuels, in particular fuels for use in fuel cells, such as hydrogen and methanol.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	<ul style="list-style-type: none">•Hydrogen (from Renewables)•Biofuel
<i>Contact</i>	Her Majesty's Customs and Excise
<i>URL</i>	www.hmce.gov.uk
Source: IEA	

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Reduced Value-Added Tax

<i>Country</i>	United Kingdom
<i>Effective from</i>	2002
<i>Description</i>	Through this legislation, passed in 2002, VAT rates on the installation of solar panels have been reduced from 17.5% to 5% to correspond to the rate for domestic fuels. A similar reduced VAT rate is available for biofuels.
<i>Policy type</i>	Sales Tax Rebates
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Solar photovoltaics
<i>Contact</i>	Her Majesty's Customs and Excise
<i>URL</i>	www.hmce.gov.uk/
<i>Source: IEA</i>	

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UK Climate Change Programme

<i>Country</i>	United Kingdom
<i>Effective from</i>	2000
<i>Description</i>	<p>The Climate Change Programme is the United Kingdom's central policy document setting out how the country intends to address the challenge of climate change and meet its twofold target. Under the Kyoto Protocol and EU's burden-sharing agreement, the United Kingdom is committed to reducing greenhouse gas emissions by 12.5% below 1990 levels by 2008-2010. But the government believes that the United Kingdom can and should go further and that there will be benefits from taking early action to cut emissions. Therefore, it has set a domestic target to cut the UK's emissions of carbon dioxide by 20% below 1990 levels by 2010.</p> <p>The Climate Change Programme sets out a package of policies and measures in which all sectors of the UK economy play their part. Measures that impact renewable energy include: Climate change levy (described below). Establishment of the Carbon Trust to recycle approximately £100 million of climate change levy receipts to accelerate the take-up of cost-effective, low carbon technologies and other measures by businesses and other levy payers. Exemption of ? good quality? combined heat and power production and of renewables from the climate change levy. The Renewables Obligation (described below) requiring electricity suppliers to increase the proportion of electricity provided by renewables to 10% by 2010.</p>
<i>Policy type</i>	Obligations
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Department of the Environment, Food and Rural Affairs (DEFRA)
<i>URL</i>	www.defra.gov.uk/environment/climatechange/cm4913/

Source: IEA

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New Opportunities Fund - Financing Renewable Energy in the UK

<i>Country</i>	United Kingdom
<i>Effective from</i>	2000
<i>Description</i>	In 2000, the UK government announced a £260 million package for measures over 2001-2004 to stimulate renewable energy, comprising: £89 million towards capital grants to help develop offshore wind, energy crop power generation projects and small-scale biomass heating projects, through the New Opportunities Fund; grants for energy crops (short rotation coppice and miscanthus) of £ 2 million; an initial funding of £10 million to kick-start a major solar PV demonstration scheme; a further £100 million for new generation renewable energy technologies; and an expanded renewable energy research and development programme of £55.5 million. These measures are additional to the substantial boost for renewable energy coming from the renewables Obligation and exemption from the Climate Change Levy.
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•RD&D
<i>Renewable energy</i>	All renewables
<i>Funding</i>	Most of the funding has been put into action. Funding for capital grants is expected to be available from summer of 2001. £260 million package over 2001 to 2004
<i>URL</i>	www.dti.gov.uk/energy/renewables/index.shtml
Source: IEA	

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Renewables Obligation Order

<i>Country</i>	United Kingdom
<i>Effective from</i>	2002
<i>Description</i>	<p>The Renewables Obligation Order came into force in 2002 and will remain in place until 2027.</p> <p>The Renewables Obligation on electricity supply is the primary policy in support of the UK government's commitment to achieving the 10% target for electricity to be supplied from renewable sources by 2010. It is an obligation on all licenced electricity suppliers in England and Wales to supply a specified and growing proportion of their electricity sales from a choice of eligible renewable sources ? with the ultimate aim of achieving 10.4% by 2010. (The Renewables Obligation Scotland is the equivalent instrument in Scotland.) It has been announced that the RO would be extended from 2010 rising to 15.4% by 2015 ? it would then remain at this level until 2027. This is intended to help long-term investment decisions in renewables</p> <p>The Office of Gas and Electricity Markets (Ofgem) is responsible for monitoring and enforcing compliance with the Obligation. Their functions include accrediting renewable generators and issuing Renewables Obligation Certificates (ROCs).</p> <p>As an alternative to supplying renewable energy, electricity suppliers may fulfil all or part of their obligation by paying the buyout price to Ofgem, which was set at £ 30/MWh to 31 March 2003 and is thereafter adjusted in line with the retail price index. Proceeds from the buyout fund are recycled and returned to the suppliers by Ofgem in proportion to the number of ROCs that each supplier presents to discharge its obligation.</p> <p>A statutory consultation paper was issued in 2003 announcing a number of proposed changes to the Renewables Obligation that will be put before Parliament in 2004. The majority of the changes are technical adjustments to ensure the Obligation works as originally intended. Two of the more substantial changes include a relaxation of the rules on small generators and adjustments to the rules on the co-firing of biomass with fossil fuels.</p> <p>A full review of the Renewables Obligation Order 2002 is planned for 2005/6.</p> <p>The Renewables Obligations refers to the following technologies:</p> <ul style="list-style-type: none"> Landfill gas Sewage gas Energy from waste Only non-fossil derived energy is eligible. Energy from incinerating mixed waste is not eligible. Energy from the non-fossil derived element of mixed waste using advanced technologies is eligible. Hydro <20MW Onshore wind Offshore wind Co-firing of biomass with fossil fuels (revised proposals as detailed in The Renewables Obligation Amendment Order 2003) Any biomass can be co-fired until 31 March 2009 with no minimum percentage of energy crops. 25% of co-fired biomass must be energy crops from 1 April 2009 until 31 March 2010. 50% of co-fired biomass must be energy crops from 1 April 2010 until 31 March 2011. 75% of co-fired biomass must be energy crops from 1 April 2011 until 31 March 2016. Co-firing ceases to eligible for ROCs after this date. Other biomass Geothermal power Wave and tidal power Solar photovoltaics Energy crops
<i>Policy type</i>	<ul style="list-style-type: none"> •Obligations •Tradable Certificates
<i>Renewable energy</i>	All renewables
<i>Funding</i>	Government
<i>Contact</i>	<ul style="list-style-type: none"> •Her Majesty's Treasury •Department of Trade and Industry (DTI)
<i>URL</i>	www.dti.gov.uk/energy/renewables/policy/renewables_obligation.shtml
<i>Source: IEA</i>	



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Demonstration and Testing of Wave and Tidal Technologies

<i>Country</i>	United Kingdom
<i>Effective from</i>	2002
<i>Description</i>	The demonstration and testing programme for wave and tidal technologies makes £5 million available for grid-connected pre-commercial wave and tidal stream projects. The aim of this programme is to create a small niche market for marine renewables. This money is administered as part of the Department of Trade and Industry's New and Renewable Programme.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	Ocean energy
<i>Funding</i>	GBP 5 Million for the Whole Programme
<i>Contact</i>	Department of Trade and Industry (DTI)
<i>URL</i>	www.dti.gov.uk/renewable/index.html
Source: IEA	

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New and Renewable Research and Development Energy Programme

<i>Country</i>	United Kingdom
<i>Effective from</i>	2002
<i>Description</i>	The New and Renewable Energy Programme supports pre-competitive research and development to help improve the understanding of the prospects for renewable energies and to improve their economic attractiveness. The current budget is about £18 million per year, awarded through a call and evaluation process. The programme presently supports industry-led R&D projects in the areas of: biofuels, fuel cells, photovoltaics, wind energy (primarily offshore) distributed generation (including energy storage), wave and tidal energy, and small-scale hydro.
<i>Policy type</i>	RD&D
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Hydrogen (from Renewables)•Solar photovoltaics•Offshore wind•Onshore wind•Hydropower•Ocean energy
<i>Funding</i>	GBP 18 million per year
<i>Contact</i>	Department of Trade and Industry (DTI)
<i>URL</i>	www.dti.gov.uk/energy/renewables/support/research_development.shtml

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Bio-energy Capital Grants Scheme

<i>Country</i>	United Kingdom
<i>Effective from</i>	2002
<i>Description</i>	<p>The Bio-energy Capital Grants Scheme promotes the efficient use of biomass for energy, and in particular the use of energy crops by stimulating the early deployment of biomass-fuelled heat and electricity generation projects. It awards capital grants towards the cost of equipment and has a budget of £66 million.</p> <p>Of this amount, £10 million will go to electricity generation and production from energy crops/wood fuel (focus on CHP): £18 million to demonstrate advanced energy crop technologies and £2 million for industrial heat produced by energy crops and forestry wood fuel. These funds are co-ordinated by the Department of Trade and Industry.</p> <p>By 2006, £36 million is to be committed from the National Lottery New Opportunities Fund. Of this, £33 million will be allocated to energy crop power generation projects and £3 million will be allocated for heat and CHP projects using energy crops/biomass.</p>
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	<ul style="list-style-type: none">•Biofuel•Bioenergy
<i>Funding</i>	£66 million in capital grants
<i>Contact</i>	Department of Trade and Industry (DTI)
<i>URL</i>	www.dti.gov.uk/renew/eoi.htm www.dti.gov.uk/energy/renewables/support/capital_grants.shtml

Source: IEA

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Offshore Wind Capital Grants Scheme

<i>Country</i>	United Kingdom
<i>Effective from</i>	2002
<i>Description</i>	<p>The key objective of this capital grants programme is to stimulate early deployment of a significant capacity of offshore wind. Support for these projects is targeted so as to help reduce both the costs and risks involved in offshore wind developments, and hence to maximise the contribution to the government's targets for renewable electricity supply. As such, the government will seek to ensure swift completion, making output from these projects available for electricity suppliers to respect their renewable obligation.</p> <p>The first round of the competition in 2002 granted two awards for a total of £20 million. The second round, later in 2002, awarded four grants for £38 million. The third round awards were announced in December 2003 and a further £59million was awarded. The grants cover up to 40% of eligible costs. Individual companies and consortia are eligible. Proposed projects must have an installed capacity of not less than 20 MW.</p>
<i>Policy type</i>	Capital Grants
<i>Renewable energy</i>	Offshore wind
<i>Funding</i>	£117 million in capital grants
<i>Contact</i>	Department of Trade and Industry (DTI)
<i>URL</i>	www.dti.gov.uk/energy/renewables/support/capital_grants.shtml

Source: IEA

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Large-scale Field Trial: Building Integrated PV for Public Buildings

<i>Country</i>	United Kingdom
<i>Effective from</i>	2002
<i>Description</i>	<p>This field trial was initiated to raise awareness and build confidence in PV applications, increase UK capacity to apply the technology, provide opportunities for local industry and assess the near-term potential for building-integrated PV. Projects were chosen through a tendering process to represent a wide range of technologies and applications. Projects providing the highest value through publicity, visits, information dissemination and marketing by the suppliers and installers were selected. The qualification criteria stipulated that: both project proposers and buildings must be public, the purpose must primarily be non-residential, arrays must be truly integrated and large scale (minimum 20 kWp).</p> <p>The maximum grant for capital costs is £300 000, plus up to £20 000 for design and £40 000 for monitoring. The 18 successful projects with an increased budget of £4.2 million were announced on 18 March 2002.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Public Awareness•RD&D•Capital Grants
<i>Renewable energy</i>	Solar photovoltaics
<i>Funding</i>	£4.2 million
<i>Contact</i>	Department of Trade and Industry (DTI)
<i>URL</i>	www.dti.gov.uk/energy/renewables/technologies/photovoltaics.shtml
Source: IEA	

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Major PV Demonstration Programme

<i>Country</i>	United Kingdom
<i>Effective from</i>	2002
<i>Description</i>	<p>A £20 million budget was allocated in 2002 to provide grants for the Major PV Demonstration Programme with the objective of preparing a secure platform for long-term and sustained growth of PV. In February 2004 the funding level was increased by £5 million to a total of £25 million. A further £6million was allocated in September to the programme, making a total budget of £31million. Average capital grants of 50% were made available, though the level is expected to be reduced over the three years of the first phase. The extra funding given will allow the programme to run for a further year until March 2006.</p> <p>Two types of grants are available:</p> <p>Stream 1 Grants ? Small-scale individual applications (between 0.5 kWp and 5 kWp) that target households, small and medium-sized businesses and public and community groups such as schools.</p> <p>Different grant amounts apply to bolt-on PV systems and integrated PV systems: bolt-on caps equals the lesser of £3 000/kWp or 50% of total eligible costs; integrated systems cap equals the lesser of £4 250/kWp or 50% of total eligible costs. The programme operates on a rolling basis with funds being allocated almost automatically provided the proposed installation meets certain basic criteria.</p> <p>Stream 2 Grants attract applications from housing groups, private developers, local authorities, large companies, etc. and are operated through a quarterly competitive call where criteria such as cost, level of integration, innovation and geographical location are taken into account.</p> <p>The grants are for medium to large scale applications (between 5 kWp and 100 kWp). Grants cover:</p> <p>up to 55% of eligible costs for public bodies.</p> <p>up to 50% of eligible costs for small to medium sized enterprises.</p> <p>up to 40% of eligible costs for large companies.</p>
<i>Policy type</i>	<ul style="list-style-type: none">•Capital Grants•Consumer Grants / Rebates•RD&D
<i>Renewable energy</i>	Solar photovoltaics
<i>Funding</i>	£31 million
<i>Contact</i>	<ul style="list-style-type: none">•The Energy Saving Trust•Department of Trade and Industry (DTI)
<i>URL</i>	www.est.co.uk/solar/ www.dti.gov.uk/energy/renewables/support/capital_grants.shtml

Source: IEA



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Renewable Energy Guarantee of Origin

<i>Country</i>	United Kingdom
<i>Effective from</i>	2003
<i>Description</i>	Implemented in 2003, the Renewable Energy Guarantee of Origin (REGO) electronic certificate system enables producers of renewable-sourced electricity that is eligible under the EU Renewables Directive to be issued with evidence (guarantees) that their electricity is indeed renewable. Generators will be able to prove their green credentials at home and abroad as the scheme is based around mutual recognition between EU Member States. Although the certificates have no actual monetary value in and of themselves, they will prove useful for smaller generators and those who wish to conduct trade across national boundaries.
<i>Policy type</i>	Tradable Certificates
<i>Renewable energy</i>	<ul style="list-style-type: none">•Bioenergy•Hydropower•Geothermal•Offshore wind•Onshore wind•Ocean energy•Solar photovoltaics•Waste (organic)
<i>Contact</i>	Department of Trade and Industry (DTI)
<i>URL</i>	www.dti.gov.uk/energy/renewables/policy/regosdoc.shtml
Source: IEA	

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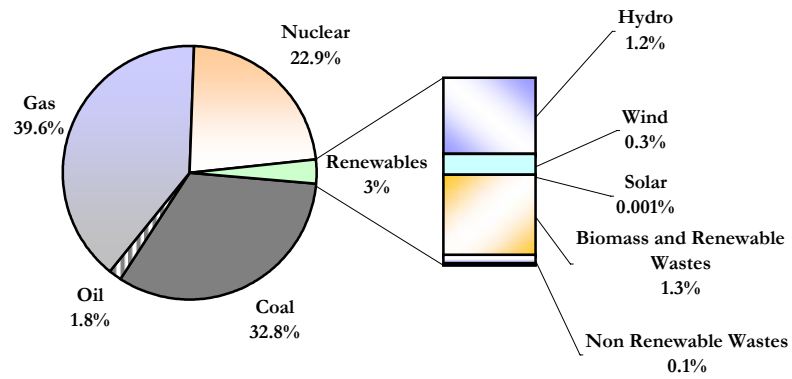
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Committed to cooperating on the promotion of **renewable energy**

Industry Promotion and Information Development

<i>Country</i>	United Kingdom
<i>Effective from</i>	2003
<i>Description</i>	This programme aims to strengthen the renewables industry and the use of renewable energy sources in the United Kingdom. It is currently seeking shared cost proposals for effective industry promotion and information development projects that will support UK renewable industry development in domestic and international markets. Proposals are due in May 2004.
<i>Policy type</i>	Public Awareness
<i>Renewable energy</i>	All renewables
<i>Contact</i>	Department of Trade and Industry (DTI)
<i>URL</i>	www.dti.gov.uk/energy/renewables
Source: IEA	

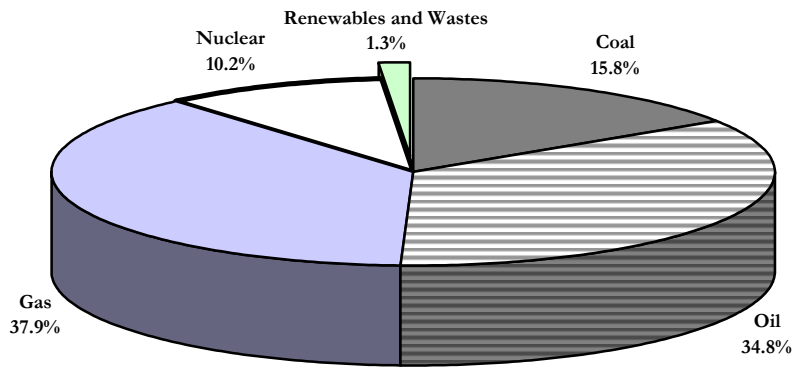
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United Kingdom - Electricity Generation by Fuel 2002



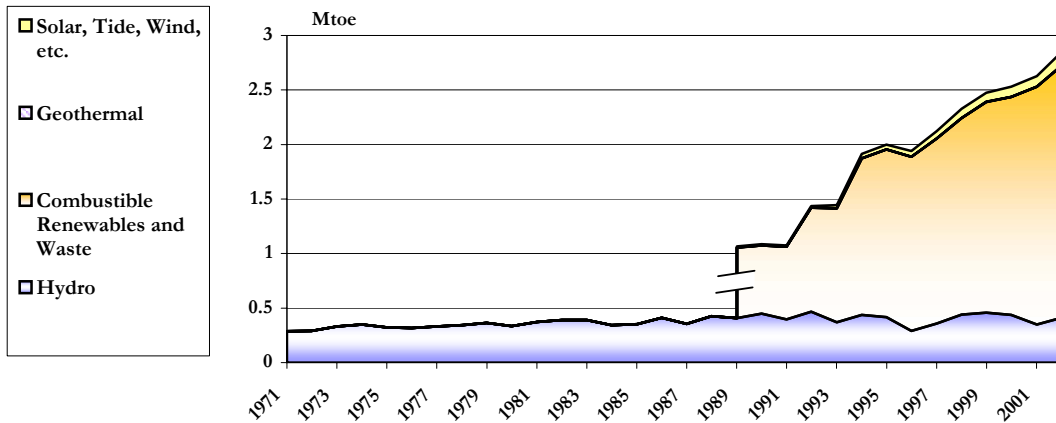
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 Access to detailed data for almost all fuels for both OECD countries and over 100 other countries is available through the IEA website at:
<http://www.iea.org/Textbase/stats/index.asp>

United Kingdom - Shares of TPES 2002



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>

United Kingdom - Total Primary Energy Supply from Renewables (Mtoe)



Source: IEA Energy Statistics - Copyright: IEA/OECD
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<http://www.iea.org/Textbase/stats/index.asp>



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Yemen

Region Middle East and Asia

Source: IEA

Renewable Energy Policies and Measures

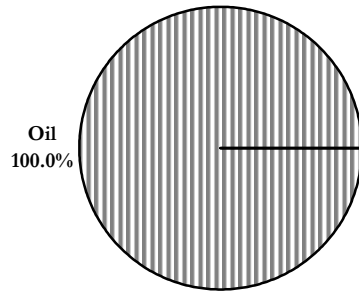
Information currently unavailable.

Statistical Information on Renewable Energy

- [Total Primary Energy Supply from Renewables \(Mtoe\) - Yemen](#)
- [Shares of TPES 2002 - Yemen](#)
- [Electricity Generation by Fuel 2002 - Yemen](#)

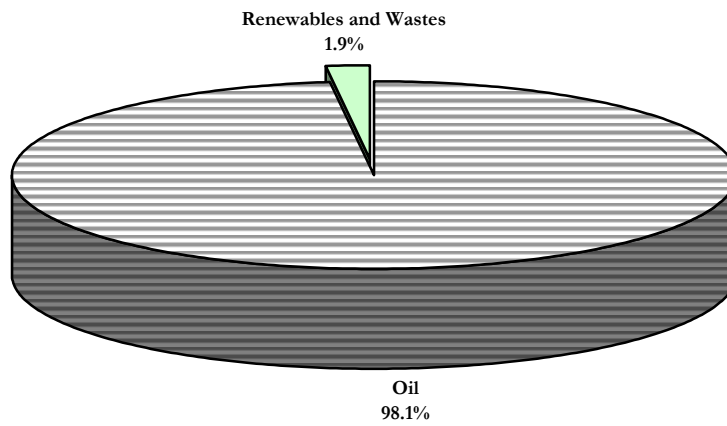
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Yemen - Electricity Generation by Fuel 2002



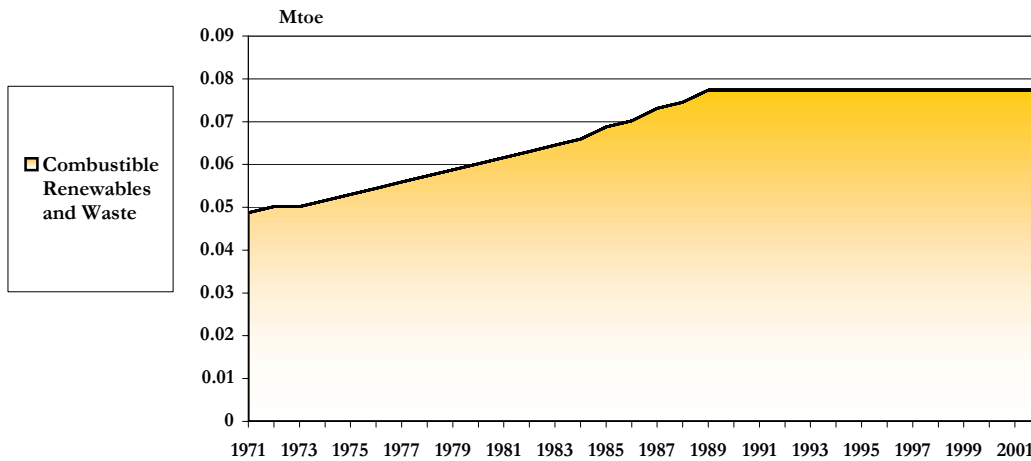
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Yemen - Shares of TPES 2002



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Yemen - Total Primary Energy Supply from Renewables (Mtoe)



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