



COGENERATION OBSERVATORY
AND DISSEMINATION EUROPE



CHP support mechanisms in the EU

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Overview of support schemes

Country	Tax support	Feed in tariff	Certificate scheme	Capital grant	Other
Austria		√			√
BE - Flanders	√		√		√
Bulgaria		√			√
Cyprus					√
Czech Republic		√			√
Denmark					
Estonia					√
Finland				√	√
France		√			√
Germany		√			√
Greece	√	√			√
Hungary		√			√
Ireland				-	√
Italy	√	√		√	
Latvia		√			√
Lithuania		√			√
Luxembourg	√				√
Malta	√				√
Netherlands	√	√		√	√
Poland			√		
Portugal				√	√
Romania		√		√	
Slovakia		√			
Slovenia		√			√
Spain	√	√			√
Sweden				√	√
United Kingdom	√	√		√	



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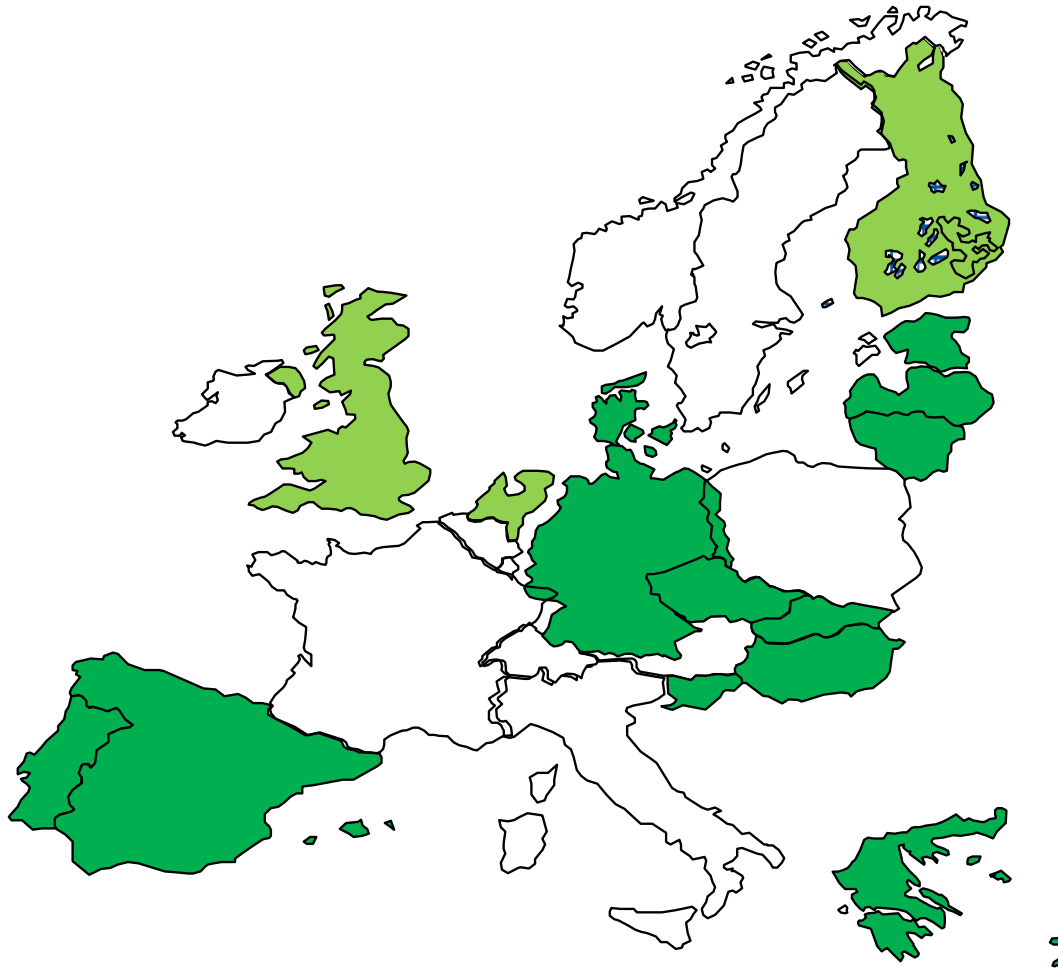


Types of support mechanisms



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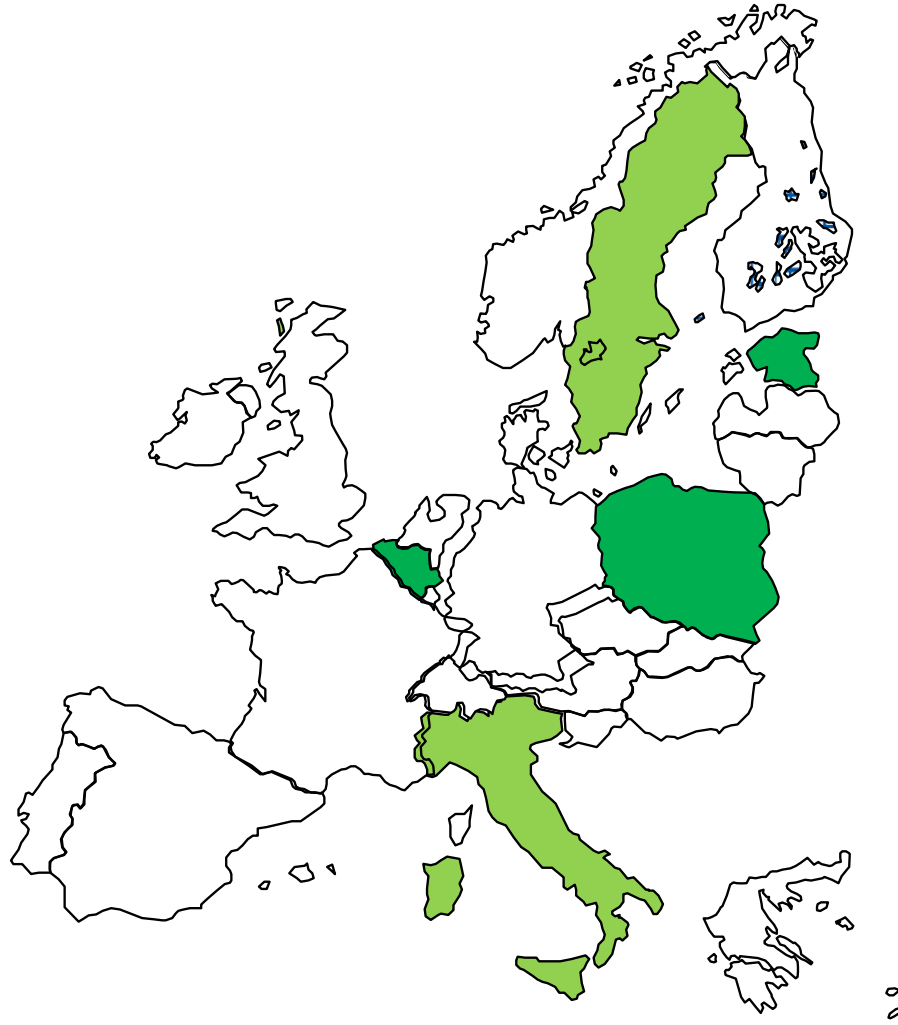
Feed-in tariffs & Feed-in premiums





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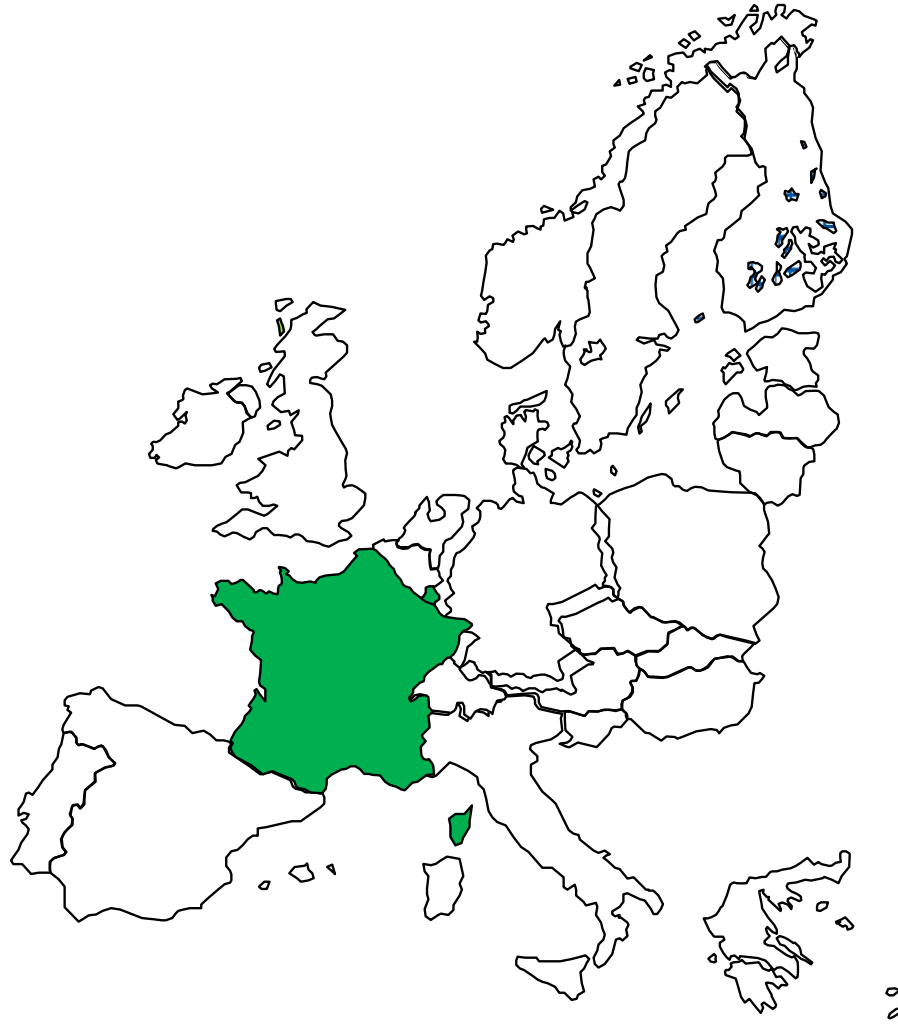
Certificate-based systems





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Contracts



Austria, Belgium, Bulgaria

Austria:

- Legal framework: Austrian Federal Law on the Promotion of CHP (KWK-Gesetz), issued by National Council on the 8th August 2008, entered into force on the 9th August 2008 and 23rd February 2009 respectively.
- Policy approach: Fossil fuel CHP is supported in Austria through a generation based FiT, the 'übersicht-einspeisetarife'. The FiT applies to CHP of 2 MW and below. There is no support for fossil CHP of over 2 MW.

Belgium:

- Legal framework: There is a law on the promotion of CHP issued by the Flemish government (7th July 2006), a law on the promotion of CHP issued by the Walloon Region (30th November 2006) and a law on the promotion of CHP issued by the Brussels Region (6th May 2004).
- Policy approach: Support for CHP in Flanders is accrued through a number of different mechanisms. The capital costs of CHP are supported through an Ecological premium and tax reduction which significantly reduces the investment cost. The CHP certificate can be traded for the duration of the plant life and is calculated based on the emissions saved. These two support mechanisms account for the majority of the support in Flanders. For smaller scale CHP, there are payments made to reflect the reduction in grid losses from decentralised generation. At the federal level, there is also tax reduction for CHP.

Bulgaria:

- Legal framework: Energy Act of Bulgaria created in 2003 and amended in 2006.
- Policy approach: Financial support is in the form of a FiT paid on all generated electricity. Ahead of a proposed legislation to provide a system for Green Certificates, the support schemes available for CHP in Bulgaria is based on a mechanism of mandatory purchase of electricity for preferential prices. There are two funds supporting cogeneration projects: one set up by the Bulgarian state and a second one is called the Energy Efficiency Fund and the main donor is the World Bank. FiT paid on all generated electricity has a marked effect on all plants. where the support is available.

Cyprus, Czech Republic, Denmark

Cyprus:

- Legal framework: Law on the Promotion of Cogeneration and Heat (2006)
- Policy approach: A new grant scheme for investment subsidies for CHP is expected to be adopted in Cyprus. The previous scheme (2006) offered subsidies for cogeneration up to 30% of eligible investment costs for enterprises and biomass-fired CHP. The Energy Authority of Cyprus defines the purchase tariffs for cogenerated electricity which are linked to the fuel price.

Czech Republic:

- Legal framework:
- Energy Act No, 458/2000 Coll.
- Public notice No, 439/2005 Coll.
- Decree on electricity market rules and other conditions No,541/2005 Coll.
- Policy approach: Since 1st January 2006 a new support scheme has been introduced for CHP units, based on a feed-in premium on top of the market price of electricity for cogenerated electricity paid by network operators (distribution or transmission). The premiums are divided into three categories according to the installed electric capacity: up to 1 MWe, 1 MWe to 5 MWe and above 5 MWe. The premium is higher if producers sell electricity only in peak time. Producers can sell electricity to the market or use it themselves. The system of price regulation is controlled by the Energy Regulatory Office (not as state aid).

Denmark:

- Legal framework: Electricity Supply Act and Heat Supply Act.
- Policy approach: There is no governmental support for fossil fuel CHP in Denmark

Estonia, Finland, France

Estonia:

- Legal framework: Amendments to the Electricity Market Act (1 May 2007).
- Policy approach: New support scheme implemented in 2007 with FiT for CHP using renewable energy sources and other units of efficient cogeneration replacing boiler houses with capacity up to 10MWe. Two options are available:
 1. Purchase obligation with feed-in tariff; or
 2. Subsidised tariff (premium)
- The support will be provided for CHP facilities with capacity less than 100 MW, CHP units using peat, waste or shale gas and CHP units replacing old boiler houses with capacity up to 10 MWe. There is support for fossil CHP units up to 10MWe. Relatively low feed-in tariffs make new renewable investments very difficult. A voluntary mechanism involving green energy certificates was also created by the grid operator in 2001.

Finland:

- Legal framework: Law on the excise taxation of specific fuels 30.12.1996/1260.
- Policy approach: Investment support for biomass based CHP plants. No fossil fuel support.

France:

- Legal framework: Consolidated Cogeneration law: Arrêté du 31 juillet 2001 consolidé au 23 août 2005.
- Policy approach: A two part feed in tariff one part paid on total electricity generation and a second tranche paid on electricity exported to the grid only. No capital grant or tax based supports available.

Germany, Greece

Germany:

- Legal framework:
- CHP Law (unofficial consolidated version on the basis of the Federal Law Gazette published on 25.10.2008)
- CHP Law – changes from 21.08.2009. The changes mainly concern the clarification that belong to the eligible consumers leaving the heat network Law to accelerate the development of high voltage electricity network
- Erneuerbare-Energien-Gesetz (EEG)
- Erneuerbare-Energien-Wärmegesetz (EEWärmeG)
- Energiesteuergesetz
- Stromsteuergesetz
- Policy approach: The main support for CHP in Germany is a stepped FiT in which the first kWh generated in a given year are rewarded at a higher level than subsequent generation. The result of such a mechanism is that fixed costs can be accounted for during the initial run time and therefore the investment presents less of a risk for developers. The model used here is unable to reflect the value of this feed in tariff design as it smoothes value over total annual generation.

Greece:

- Legal framework:
- Law on Generation of Electricity using RES and High-Efficiency CHP and Miscellaneous Provisions (2006)
- Law on Promotion of CHP and other Provisions (2009)
- Ministerial Decree on Methodology for calculating the co-generated electricity from high efficiency CHP (2009)
- Law on Acceleration of the development of RES for handling climate change and other provisions (2010)
- Policy Approach:
- The FiTs are differentiated according to the location of the CHP unit. They also apply for biomass power plants. A CHP plant running on biomass cannot combine these tariffs, i.e. they remain the same. There is support for small scale CHP. Investment subsidies are available within the framework of the Development Act. They vary, but they can reach 55 % (especially in case of SMEs).

Hungary, Ireland, Italy

Hungary:

- Legal framework: Act No. CX of 2001 on Electricity came into effect on 1 January 2003, amended in 2005. Much of the current legal framework applicable to cogenerators is derived from this Act, together with Act XVIII/1998 on district heat supply.
- Policy approach: There is a CHP Support (Feed-in obligation). Fixed purchase prices for sold electricity to the network. Prices vary by unit size and hours of selling electricity (peak, valley, deep valley). The future of support scheme is uncertain after 2010. A green certificate scheme was introduced with the Electricity Act (2001, as amended in 2005). This act gives the Government the right to define the start date of implementation. At that time,
- the feed-in tariffs will cease to exist. Investment subsidies are potentially provided by KIOP (mainly for renewable projects).

Ireland:

- Legal framework:
- Energy (Miscellaneous Provisions) Act 2006
- Electricity Regulation Act 1999 (Appointment of Person to Calculate Power to Heat Ratios of Combined Heat and Power Units) Order 2009
- Policy Approach: There are no supports mechanisms for new CHP plant modelled. There is a grant support system to assist the deployment of small scale (less than 1 MWe) fossil-fired CHP and biomass (anaerobic digestion and wood residue) CHP systems. Financial tax incentives are available through the Accelerated Capital Allowance (ACA) scheme to encourage the purchase of plants that are highly efficient.

Italy:

- Legal framework: Decreto Legislativo 8 febbraio 2007, n.20
- Policy Approach: CHP plants are granted a FiT as well as a reduction in the tax paid in gas input fuels and, at the smallest scale (50 kW) a payment to account for the benefit of decentralised generation to the grid.

Latvia, Lithuania, Luxembourg

Latvia:

- Legal framework:
- Law on Electricity Market (2005), adopted on 5 May 2005
- Regulation No. 221 of Cabinet of Ministers on Electricity Production and the Price Regulation in Cogeneration, adopted on 10 March 2009
- Policy approach: The Latvian FiT is paid on all electricity generation and applies to all fossil CHP. Purchase price differs depending on the installed electric capacity and fuel used (for natural gas calculated according to a fixed price formula as natural gas price multiplied by factor, individually calculated). Investment support for renewable CHP units is available from the EU Structural Funds.

Lithuania:

- Legal framework: Rules on Issue of Guarantees of Origin of Electricity produced from High-efficiency Cogeneration (2008). Official Gazette 2008, No 59-2254. The Regulations for Public Service Obligations approved by the Minister of Economy
- Policy approach: Lithuania has a FiT with purchase obligation on all generation is controlled by National Control Commission for Prices and Energy (level of support sets annually and differs between plants).

Luxembourg:

- Legal framework:
- Law on the rational use of energy (5th August 1993)
- Regulation on CHP and electricity generation from RES for units with a maximum capacity of 1.5MWe (30 May 1994)
- Policy approach: There was no support modelled for fossil fuel fired CHP.

Malta, Netherlands, Poland

Malta:

- Legal framework: Subsidiary Legislation 423.27
- Policy approach: Malta lacks a FiT for CHP and there is also a lack of incentives and local expertise. These tariffs are directly linked to avoided costs in terms of new generation equipment, avoided fuel, O&M and network costs, avoided CO₂ costs and finally a factor accounting for network losses.

Netherlands:

- Legal framework:
- Electricity Act 1998, EIA Energy list 2010, Arrangement for Guarantees of Origin electricity production
- The Act 'Wet belastingen op milieugrondslag' (environmental taxes)
- Policy approach: There is a tax credit: extra depreciation of 44% of the investment; applicable tax rate 25.5%; subsidy $0.44 * 25.5\% = 11.2\%$ of the investment temporarily subsidy for the exploitation of co-generation, only applicable to the CO₂-free kWh (approximately 30% of the production first two cases, 20% for the last).

Poland:

- Legal framework:
- Amended Energy Law and Environmental Act 2007 (Green Certificates from 1. July 2007)
- Issuing GoO (Energy Regulatory Office): Ordinance on issuing CHP GoO, 2007
- Policy approach:
- Certificates of origin ("Green Certificates") are issued separately for two groups of cogeneration units:
- 1. Gaseous fuels or with total installed electrical capacity below 1MW
- 2. All remaining sources (4,8 €/MWh).
- Certificates carry a range of purchase obligations and a different level of substitute fee. The level of the substitute fee is determined each year by the President of the Energy Regulatory Office. The support system will remain in force until 31 March 2013.

Portugal, Romania, Slovakia

Portugal:

- Legal framework:
- Decree-Law n.º. 23/2010
- Law n.º. 19/2010
- Policy approach: Cogenerated electricity exported to the grid benefits from feed-in tariffs. These feed-in tariffs are applied for a period of ten years and it is indexed to the price of oil, to reduce fuel-price risks. As the price of oil rises, so will the feed-in tariff for cogenerated electricity. Micro-CHP in Portugal benefits from a higher level of support than larger cogeneration.

Romania:

- Legal framework:
- Electricity Law (2007)
- Government Decision on the promotion of co-generation based on the effective thermal energy demand (2007)
- Government Decision on the approval procedure for issuing guarantees of origin for electricity produced by high efficiency cogeneration (2008)
- Policy approach: The support mechanism operating in Romania is in the form of a two stage FiT; one part paid on all generation and worth 1.5 cents per kWh across all fuel types and plant sizes. There is also a support paid on exported generation and this varies from between 0.5 and 0.43 cents per kWh exported power. For CHP installations running on renewable fuels, cogenerated electricity receives Green Certificates. Systematic CHP support in Romania is not developed yet and it is only subject to special (EU) funds and programmes. Two funds are available for energy efficiency improvements: the Romanian Energy Efficiency Fund (FREE) and the Environmental Fund.

Slovakia:

- Legal framework: Act on promotion RES and High Efficiency Cogeneration (309/2009)
- Policy approach: Support for CHP in Slovakia comes in the form of an operation support as fixed purchase price composed of electricity price for losses and surcharge (varies by size and type of technology). Fixed purchase price is paid for all sold electricity to the network operator, whereas surcharge is paid on all other generated electricity. Investment subsidies from EU structural fund are available in the period 2007 – 2013 (if plant is granted from 30 – 50% of total acquisition costs, the fixed electricity price is reduced from 4% to 16%).

Slovenia, Spain, Sweden

Slovenia:

- Legal framework:
- Energy Law
- Decree on Support for Electricity Produced in High-Efficiency Cogeneration (Off. Gaz.of RS No. 37/09)
- Policy approach: Support scheme was approved in 2009 with higher and more stable support for cogeneration as fixed purchased price for units up to 1 MW or premium on all generated electricity for all plants for a 10 year period. Separate support for fossil fuel and wood biomass plants and different support levels for different size classes. Higher level of support for units with up to 4,000 operation hours per year (heating). Predictable methodology for yearly adjustment of supports based on forecast of natural gas and wood biomass market price and electricity market price minimise market risks for the investors.

Spain:

- Legal framework:
- Royal Decree 616/2007, entered into force on 11 May, on the Promotion of CHP
- Royal Decree 616/2007, entered into force on the 25th of May, on the regulation of electricity produced on special regime
- Policy approach: The support for CHP is in the form of a reduction on the tax applied to the input fuel and a generation based FiT which is smaller per kWh generated the larger the size of the plant.

Sweden:

- Legal framework: Lag (2003:113) om elcertifikat (Law on Green Electricity Certificate (2003:113) revised 2010).
- Policy approach: There is no support for new fossil fired CHP in Sweden. New CHP plants are bio-energy.

United Kingdom

United Kingdom:

- Legal framework: Energy Act 2008
- Policy approach: Enhanced Capital Allowances (ECAs) enable a business to write off capital cost of investment, against their taxable profit FiTs offer financial support for gas-fired CHP up to 2 kW (and renewable electricity up to 5MW). Climate Change Levy Exemption Certificates (CHP LECs) operate for high efficiency CHP sources. Electricity suppliers are required to source a proportion of their electricity from renewable sources. Suppliers acquire Renewable Obligation Certificates (ROCs) from eligible generators when purchasing electricity, in order to demonstrate the proportion of renewable supply delivered to customers. CHP operators receive Embedded Benefits payments to refund the costs incurred in the charging system which assumes use of the transmission network.

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