CLIFFORD
CHANCE

Incentivising Renewables: A European Analysis

contents

CLIFFORD
CHANCE

Incentivising Renewables: A European Analysis

New renewable generation capacity is set to increase dramatically across the EU due to commitments to produce 20% of our energy requirements from renewable sources by 2020. Whilst many Member States are taking different approaches to incentivising the deployment of renewables, common themes and barriers can be seen. This guide, drawing on expertise from across our European offices, analyses those themes and barriers and provides a brief overview of the specific mechanisms employed in Belgium, the Czech Republic, France, Germany, Italy, the Netherlands, Poland, Romania, Spain and the UK.

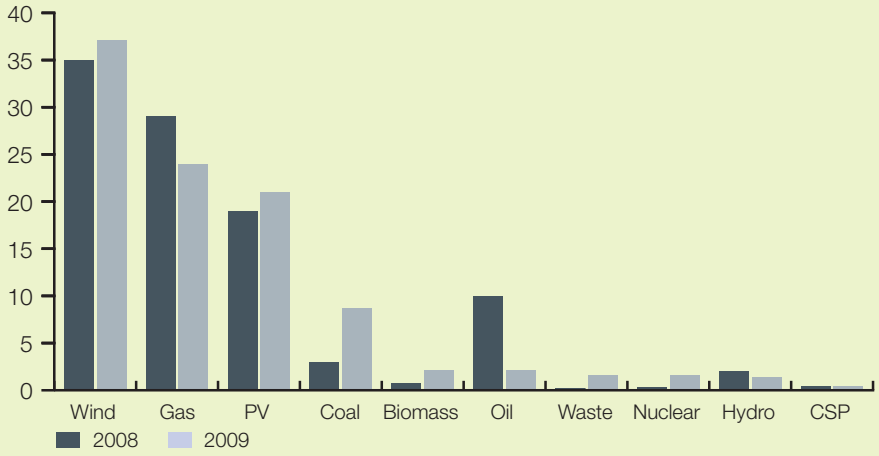
Although increases in renewable energy generation capacity are already being seen (see inset box "**2009 Renewable Generation Capacity**"), it is clear that for many European countries, creating significant additional renewable generating capacity will be a major challenge requiring a step-change in policy, commercial and industrial capability and financing ingenuity. Each Member State is different with varying levels of renewable resources, different approaches to incentivising renewable projects and different barriers to the development of projects. However, looking across Europe, there are many commonalities faced by Member States and lessons can be learned by new entrants to this growing market. This guide identifies some of the common themes in the financial incentives available to encourage the deployment of renewables and also highlights some of the associated obstacles (resource / physical constraints, environmental, permitting and land issues, and commercial and financing issues). We use examples from different Member States throughout this guide based upon our experience advising on renewable in these countries.

2009 Renewable Generation Capacity

In 2009, renewable energy sources accounted for 62% of new electricity generation capacity installed in the EU, comprising 17GW out of a total 27.5GW. This is up from 57% in 2008, suggesting that the 2009 Renewables Directive[1] and the financial incentives offered for renewables deployment are beginning to have an effect.

Wind power represented the largest of all energy sources at 37.1% in 2009, ahead of natural gas (24%), photovoltaics (21%), coal (8.7%), biomass (2.1%), oil (2.1%), waste incineration (1.6%), nuclear (1.6%), hydro (1.4%) and concentrated solar power (0.4%).

Percentage (by energy source) of new electricity generation capacity installed in the EU in 2008 and 2009



Source: Renewable Energy Snapshots 2009 and Renewable Energy Snapshots 2010 published by the European Commission Joint Research Centre Institute for Energy (March 2009 and July 2010).

[1] Directive 2009/28/EC of the European parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

A Targeted Approach to Renewables

Under the 2009 Renewables Directive, EU Member States agreed collectively to generate 20% of EU energy through renewable resources by 2020. This target is shared among the Member States on a differentiated basis to reflect the fact that some states already have a higher baseline of renewables capacity; for example, in 2005 39% of Sweden's energy came from renewable sources, whereas Malta had none. As well as implementing the Renewables Directive by 5 December 2010, each Member State needed to submit a National Renewable Energy Plan to the European Commission by 30 June 2010 demonstrating how these targets would be met (see inset box "**The Path to 2020**").

Financial Incentives

It is well known that renewable energy capacity is significantly more expensive (cost/MWh) to develop than conventional (thermal) forms of electricity generation due to the high upfront capital costs and the ongoing operation / maintenance costs of renewables, this is particularly true for offshore development (wind, wave and tidal).

"Creating significant additional renewable generating capacity will be a major challenge requiring a step-change in policy, commercial and industrial capability and financing ingenuity"

To encourage the commercial-scale deployment of renewables, a variety of financial incentive schemes have been developed in the EU and the two principal forms of support consist of "green certificates" and feed-in-tariffs. Often only one system is used but some Member States (for example Italy and now the UK for small scale micro-generation) operate both systems with the limited possibility of swapping between the two. Whilst a variety of support mechanisms are employed, we have observed that similar qualities and key themes are shared by many of the various financial incentives across the EU (please see insert box on page 3).

Green Certificates

Green certificate mechanisms are operated in, for example, Belgium, Italy, Poland, Romania and the United Kingdom. The basic structure of a green certificate mechanism works as follows:

- Qualifying renewable electricity generation is issued with green certificates;

The Path to 2020

Country	2005 Share*	2020 Target	On Course?
Belgium	2.2	13	✗
Czech Republic	6.1	13	✓
Germany	5.8	18	✓
Spain	8.7	20	✓
France	10.3	23	✓
Italy	5.2	17	✗
The Netherlands	2.4	14	✓
Poland	7.2	15	✓
Romania	17.8	24	✓
UK	1.3	15	✓

* Percentage share of energy from renewable sources in gross final consumption of energy.

Although the 2009 Renewables Directive requires Member States to each submit a National Renewable Energy Action Plan by 30 June 2010, early forecasting figures were submitted to the European Commission by Member States and these have been subjected to analysis by the Commission's Joint Research Centre.

Based on the early forecasts, there is reason to be optimistic - overall, Member States expect to exceed (but only by 0.3%) the 20% renewable energy consumption target, with the main proportion sourced from wind, biomass, and hydro. The table on the left shows the progress of Member States in which Clifford Chance has an office.

Whilst respectable progress is being made by most, some countries are enjoying more success than others – Spain, Germany and Poland all predict a surplus by the end of 2020 (along with Bulgaria, Greece, Sweden, Slovakia, Lithuania and Estonia); whereas Belgium and Italy (along with Malta, Luxembourg and Denmark) forecast a deficit. It should be noted however, that Spain and Germany's forecasts both pre-dated their respective governments' announcements on the potential reduction in feed-in tariffs for solar power and, as a result, their forecasts may be over-optimistic.

Successful financial incentives (i.e. those in which developers and funders have confidence):

- **Cover all renewable technologies** – allowing for the fullest possible range of generation capacity to be developed, thereby increasing security of supply.
- **Provide long-term (but finite) support** – providing developers and their funders with the certainty that their project will qualify for fixed support for the bulk of its operational life, irrespective of changes made to the incentive scheme in the future.
- **Provide adequate levels of support** – so that the high cost of deploying renewables is sufficiently, but not overly, compensated.
- **Differentiate renewable technologies** – on the basis that some technologies are likely to cost less to deploy than others, particularly once they have become well-established, whereas emerging technologies (for example wave and tidal) are likely to need additional support to compensate for the high research and development costs.
- **Adapt to national circumstances** – not all renewable technologies are suitable for deployment in every country.

- Electricity suppliers have an obligation to source a certain (often increasing year on year) amount of electricity from renewable sources, the evidence for which must be obtained by the presentation of green certificates; and
- A penalty is payable in the event the obligation is not satisfied.

Those generating qualifying renewable electricity can sell their green certificates to suppliers, thereby creating a significant additional income stream.

Banding

In some EU Member States the obligation is structured (or "banded") so as to provide more support for less developed technologies over and above well-established technologies – for example, in the UK, tidal power generation attracts eight times the level of support than power generation from landfill gas. Some states which have a uniform support, like Poland, are looking at changing this to direct support where it is most needed to encourage innovation in newer technologies.

The table below shows the weighting applied to each renewable energy technology in Italy and the UK, where banded systems for green certificates operate. Banding generally favours marine-based technologies and biomass, which attracts additional support in the UK when the crops are dedicated energy crops or the relevant plant is CHP, whereas in Italy, biomass attracts additional support when the fuel is sourced from within 70km of the relevant plant, thereby increasing its sustainability. Belgium, Poland and Romania currently award green certificates on a uniform basis, irrespective of the technology employed.

The incentive offered through green certificates is an uncertain one since the price is agreed between the parties or is

Green Certificate Banding in the UK and Italy

	Wave	Tidal	Offshore wind	Biomass	PV	Geothermal	Onshore wind	Sewage gas	Landfill gas
Italy	x1.8	x1.8	x1.5	x1.3-1.8	—	x0.9	x1	x0.8	x0.8
UK	x2	x2	x2	x1 to x2	x2	x2	x1	x0.5	x0.25

"the sole risk associated with feed-in tariffs is climatic, unlike the green certificate system where additional risks arise from a potential for over-supply and price unpredictability"

based on the price of a trading market – in addition the level of the obligation is set by the regulator. As a result green certificate systems tend to be complex and the artificial market created can lack stability causing concern to investors and funders as to the actual level of financial support achievable (although mechanisms are in place to reduce this possibility, such as the introduction of headroom which ensures that the level of the obligation is always above the actual volume of renewable generation). The need for stability is of particular relevance to long-term transactions, for example, Poland's targets only being set until 2017 leaves considerable uncertainty for investors as to the post-2017 position. Added to this is the lack of stability created by the tendency for certain Member States to change their regulatory regimes. In the UK, for example, regular amendments to the "Renewables Obligation" regime have resulted in investment in the UK renewable market being less competitive than in other EU member states or indeed, the US.

Feed-in Tariffs

Feed-in tariffs have overtaken green certificates in terms of the number of schemes operated in the EU – they are employed for example in the Czech Republic, France, Germany and Spain and are becoming increasingly popular throughout the world. They generally work by:

- Imposing a requirement on electricity suppliers to purchase electricity from renewable generators, and
- Requiring suppliers to pay a guaranteed amount or tariff for energy generated or "fed into" the grid. Tariffs tend to be indexed and available for the life of the scheme.

Different technologies and sizes of project may be subject to different levels of tariff and tariffs often decline at a set rate over time. Like the green certificates system, this encourages growth of particular technologies – in particular, photovoltaics currently attract considerably larger tariffs than other technologies in the UK, Germany, Spain and France for example.

Some regimes have placed a cap on the amount of production qualifying for a feed-in tariff, most notably in France for solar energy generation, and a similar situation is in place in Spain.

In the Member States in which they are available, feed-in tariffs have been very successful in encouraging renewables development, particularly on a domestic and small commercial scale. The schemes are generally regarded as being simpler than green certificate regimes as they do not rely on an artificial market structure – they provide certainty to investors and funders as the sole risk associated with feed-in tariffs is climatic, unlike the green certificate system where additional risks arise from a potential for over-supply and price unpredictability.

However, the success of some feed-in tariff schemes has resulted in some EU member states cutting back their schemes: for example, in Spain, solar and wind power targets were met early and it is increasingly likely that the Spanish Government will limit the right to receive feed-in tariffs as a result. The Czech Government is also considering reducing their tariffs for solar photovoltaic installations for similar reasons. In Germany, the Government has recently

decided to decrease feed-in tariffs regarding photovoltaic installations, and in France, a decrease has recently been implemented.

Other incentives

A range of other incentives are available across Europe to encourage the growth in renewables including:

- Tax exemptions or deductions in relation to capital investments (employed, for example, in Belgium), reduced VAT rates for the construction of renewable energy plants (e.g in Italy), and income tax exemptions (for example, in the Czech Republic for the first years of a renewable energy plant's operation);
- Financial "top-up" compensation (for example, the top-up scheme in the Netherlands where subsidies are paid by the government based on electricity generated);
- Priority access to the grid for electricity generated from renewable sources (employed in Poland); and
- Carbon prices "disincentivising" non-renewable energy sources (for example, through the EU Emissions trading scheme).

Challenges to renewables development

Once the economic issues have been resolved there are still a number of challenges to overcome. Lack, or instability, of the natural resource is clearly a barrier to renewables development in certain countries. So, for example, lack or intermittency of sun will act as a limit on solar energy development in northern countries such as the UK. Lack of space for significant renewable development can also be an issue, for example, in Belgium a short coastline and high population density mean that both onshore and offshore renewables deployment are hindered. Other considerations include:

Grid Capacity

One common theme among EU Member States is the grid challenge. The EU's grids are under considerable pressure to cope with new capacity provided by renewables. This is not only due to the amount of increased capacity expected, but also where that capacity will come from. In many cases, existing grids will need to connect to environments or geographical locations where energy has never been generated before, for example, many kilometres offshore. At a time when traditional grid structures are often ageing, this gives rise to the need for huge investment in replacement and extended grid infrastructure, including the possibility of a European Supergrid – the proposal for an integrated international grid.

"One common theme among EU Member States is the grid challenge. The EU's grids are under considerable pressure to cope with new capacity provided by renewables"

Renewables policy in some countries has already shown itself to affect grid operations. The Czech Republic, for example, is currently passing a law to significantly reduce feed-in tariffs for new solar plants. The high level of tariffs, combined with falling technology prices, have led to such a boom in PV production that Czech grid authorities are concerned that the grid has reached its limit and new grid connections are being limited as a result. A similar story can be seen in Italy.

In the current economic conditions, prioritising necessary investment in national grids to accommodate renewables growth will take considerable political resolve.

Permitting / Environmental issues

One significant obstacle to a rapid renewables revolution is the often bureaucratic and long-winded system of planning / zoning control. For example, in Spain, offshore wind farms are currently subject to a 2 year delay as strategic studies are carried out to identify suitable areas. Delays are frequently caused by the complexity of the applicable regimes, particularly in offshore areas. In the UK, the government has recently acted to consolidate the licensing process for offshore energy development in order to speed up the construction of new capacity.

Public opposition to renewables can often delay or halt the process, for example in France litigation has frequently been encountered to prevent the development of wind farms on aesthetic or noise grounds. In addition, environmental protection designations will often be in opposition to proposals to install renewable facilities. Thus, in Scotland, the UK's largest proposed onshore wind farm (181 turbines) was rejected due to its location in a habitat protected under the Birds Directive.

Complex transaction structures and project constraints

As projects become larger to benefit from economies of scale and situated in more difficult locations, the transactions necessary to bring together all aspects of the development, including financing, are becoming more complex. This is most evident in the offshore wind sector where typically several parties will come together as a joint venture (JV) to develop a project. Increasingly popular is the adoption of an unincorporated vehicle to invest in the project, with a limited company "SPV" to hold land and permits. The unincorporated structure then allows each JV party to seek its own funding and negotiate its own off-take arrangements and (where relevant) trade its own green certificates.

Construction packages tend to be particularly complicated as a wide range of contractual packages need to be integrated together (sometimes 40 or more) and the complex inter-relationship of these packages increases risk, causing concern to investors and funders.

Supply Chain Pressures

The significant lead-in times for supply of components such as wind turbines have been widely reported. Less well-known but equally important is the limited availability of specialist ships to install offshore wind turbine equipment. For example, there are only two such ships available for construction in Germany. The availability of suitable port facilities to support offshore construction, as well as ongoing maintenance, is also becoming a problem, for example in the UK. Unless substantial investment is made in these types of facility, the problem will be exacerbated as demand for offshore generating equipment grows.

Investment and funding constraints

Many of the uncertainties and barriers mentioned in this guide will affect the way in which financiers view the risk of lending to renewables projects. Another issue is the level of financing and investment that will be necessary in the years to come. In addition to the difficulty of securing finance, meaning that developers may need to look to alternative sources of funds, renewables will be competing for financing with other types of energy project, including nuclear, coal / gas (with or without carbon capture and storage facilities).

Final Comments

Governments across the EU are working hard to encourage the development of significant renewables capacity to meet or exceed 2020 targets. Financial incentives need to be maintained to continue to make investment in renewables attractive. But action on all fronts is needed to ensure that other barriers do not choke the chain of new supply.

Clifford Chance's Global Renewables Group offers depth in resource, local expertise and a long-term presence in, and commitment to, the key markets across the globe. Our market-leading team is comprised of acknowledged industry experts across all legal disciplines, providing top-tier renewables capability. If you would like to know more about the subjects covered in this guide, or about our Global Renewables Group, please contact any of the lawyers below or your usual Clifford Chance contact.

Thomas Burmeister
Partner
T: +49 2114355 5107
E: thomas.burmeister@cliffordchance.com

Jeremy Connick
Partner
T: +44 207006 4237
E: jeremy.connick@cliffordchance.com

Carlos Hernández-Canut
Partner
T: +34 91590 7539
E: carlos.hernandez-canut
@cliffordchance.com

Nigel Howorth
Partner
T: +44 207006 4076
E: nigel.howorth@cliffordchance.com

Jaap Koster
Partner
T: +31 20711 9282
E: jaap.koster@cliffordchance.com

Ben Stansfield
Senior Associate
T: +44 207006 4507
E: ben.stansfield@cliffordchance.com

A form of this guide will appear in PLC's Cross-Border Environment Handbook 2010/11.

Belgium

2005 Baseline	2.20%
2020 Target	13%
Main Renewable Sources	Wind, PV and hydro (run of water)
Green Certificates?	Yes. Each of the three regions: Flanders, Wallonia and Brussels (in respect of their own territories) and the Belgian Federal State (in respect of offshore wind power in the North Sea) have put in place a green certificate system. The four systems are comparable, but procedures for obtaining the certificates and for complying with the obligations vary. The green certificates systems broadly work as described in the main section of this guide, although the obligations rest on suppliers and transmission or distribution system operators. In common with other systems, the required number of green certificates required to be surrendered is equal to a percentage of the energy supplied to end customers. In 2010 the obligation levels were Wallonia: 11.75%; Flanders: 6% and Brussels: 2.75%. Apart from the market system for green certificates, the three Regions and the Federal government have put in place a system that guarantees a minimum price. Although the green certificates are freely transferable within the regional system in which they are issued, an area of uncertainty remains as to how far the certificates are recognised by other regions*. It has been proposed that this issue will be resolved by means of a cooperation agreement to be concluded among the federal and regional authorities. * The only exception is that green certificates issued in Wallonia are recognised in Brussels (although only for ten years following the relevant facility commencing operations).
Feed-In Tariff?	No
Other Incentives	Increased investment tax deductions are applied to certain qualifying energy saving investments. The increased investment deduction is *a non-recurring* tax deduction applied on the investment value of the asset. For example, for the financial year ending 31 December 2010, the increased deduction amounted to 13.5%. Alternatively, and provided certain conditions are complied with, Belgian companies can apply the *recurrent* investment deduction, which implies that the investment deduction is calculated each year as a percentage of the annual depreciations (and not on the investment value) performed on the assets concerned. This increased recurrent investment deduction is determined on the basis of the basic investment deduction and is increased by 17%. As such, for the financial year ending 31 December 2010, the increased recurrent investment deduction amounts to 20.5%. The recurrent investment deduction is only applicable with regard to assets which are used to promote the research and development of new products and future-oriented technologies and may be subject to aggregation by the competent authorities.
Additional Comments	Particular issues hindering the development of renewable energy in Belgium are the lack of natural resources and space, for example, Belgium only has 66 km of coastline, which reduces its ability to develop marine-based renewables on a significant scale (unlike the UK and Germany).

Contacts

Xavier Remy
Partner, Brussels
T: +32 2533 5902
E: xavier.remy@cliffordchance.com

Pieter De Bock
Counsel, Brussels
T: +32 2533 5919
E: pieter.debock@cliffordchance.com

Czech Republic

2005 Baseline	6.1%
2020 Target	13%
Main Renewable Sources	Hydro, photovoltaic, wind and biomass
Green Certificates?	No, although a green bonus is available (discussed below) which is similar, although does not place an obligation on any party to acquire a specific number of certificates.
Feed-In Tariff?	The right to a fixed feed-in tariff payable by distribution system operators is available to renewable electricity generators. The duration of the right (20-30 years) and the amount of financial assistance provided depends on the source of renewable energy used. Particularly generous support is given to photovoltaic. Every year, the Czech Energy Regulatory Office (ERO) sets the amount of the feed-in tariffs applicable to newly commissioned plants. Until recently, the ERO was entitled to reduce the feed-in tariff for newly commissioned plants by only 5% year-on-year. However, the Czech Parliament has recently passed a substantial amendment to the Renewable Sources Act and, as of the next calendar year, the ERO will become entitled to reduce the feed-in tariff by more than 5% if the return on investment for the investor into generation is achieved in less than 11 years.
Other Incentives	Green bonus - generators of renewable electricity can opt for a 'green bonus' (instead of the feed-in tariff) if they sell electricity on the market for market price. In fact, only the green bonuses are used in practice because this instrument is more profitable for the generators than feed-in tariff under the current conditions. Generators of electricity from renewable sources have the priority right to connect their facilities to the electricity distribution or transmission grid and the priority right to supply electricity to the grid. An income tax exemption applies to income from the operation of renewable energy plants for the first 5 years following commissioning. The current level of government subsidies (which are generally perceived as very generous) will be available only for those photovoltaic projects which will be put into operation before December 2010. The Government is currently preparing new legislation which should substantially change various aspects of the system of subsidies (although the principle of the return on investment, guaranteed to be achieved within 15 years as maximum, should remain in place). It is contemplated that the government subsidies should not be provided to photovoltaic plants located on agricultural land. The bill is at a very early stage and remains subject to comments of various public authorities and the members of the Czech Parliament.
Additional Comments	The current FIT scheme has been particularly successful in relation to photovoltaic plants. The relatively high tariffs available, together with falling photovoltaic technology prices, caused a boom in the photovoltaic sector between 2008 and the beginning of 2010 (in particular the total installed capacity of photovoltaic in the Czech Republic has risen to 535,8 MW as of 1 June 2010 as compared with 65,74 MW as of 1 January 2009). This boom only slowed down after February 2010 because the Czech Transmission System Operator (ČEPS, a.s.) and the Czech Distribution System Operators has stopped granting grid capacity reservations to any new photovoltaic or wind power plants, arguing that the ability of the Czech electricity grid to safely balance the output of existing photovoltaic and wind power has reached its limit.

Contacts

Vlad Petrus
Partner, Prague
T: +420 222555 207
E: vlad.petrus@cliffordchance.com

Tomáš Rychlý
Lawyer, Prague
T: +420 222555 224
E: tomas.rychly@cliffordchance.com

France

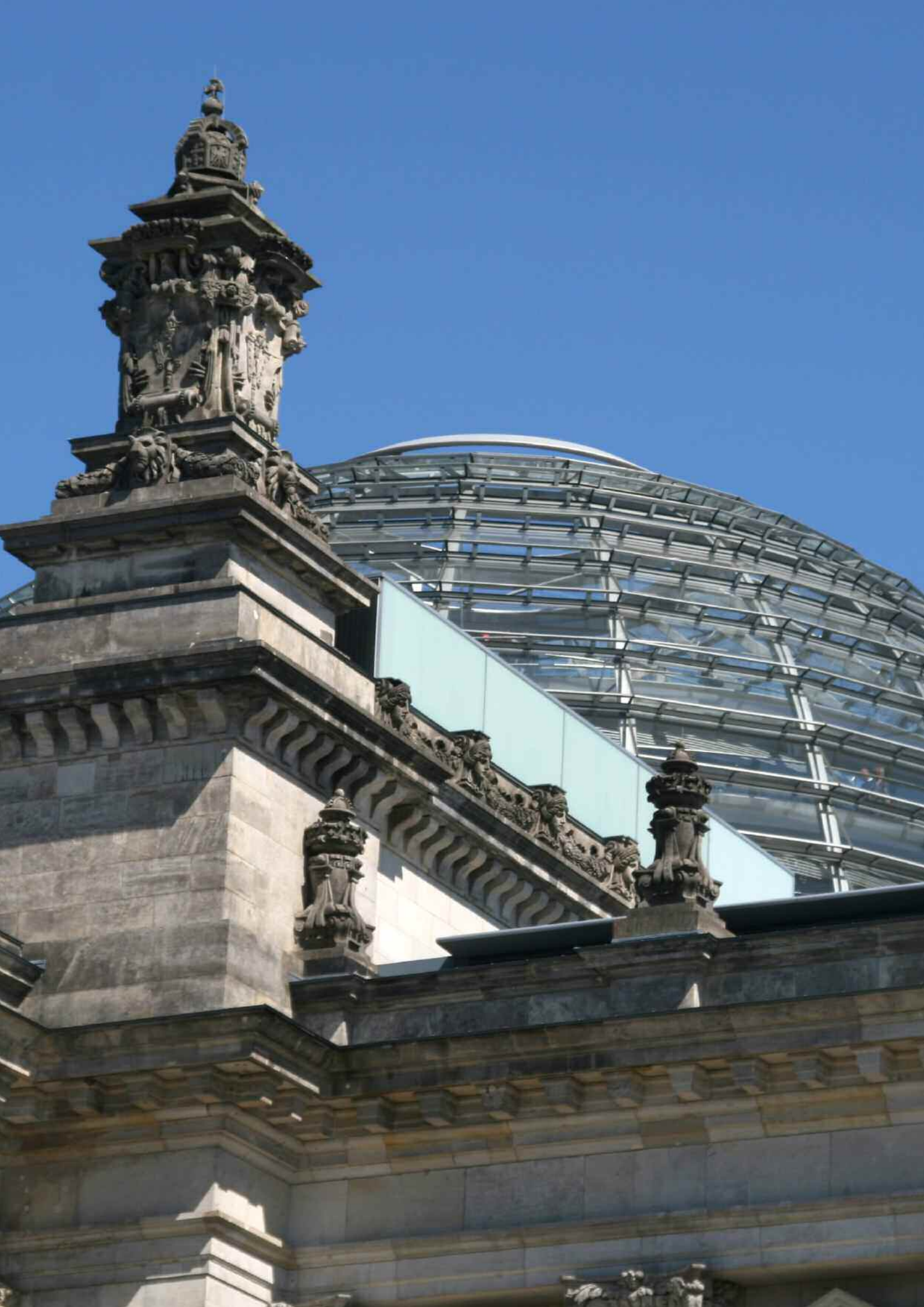
2005 Baseline	10.3%
2020 Target	23%
Main Renewable Sources	Hydroelectricity, wind and solar
Green Certificates?	No
Feed-In Tariff?	A feed-in tariff scheme implemented in 2000 obliges Electricité De France (EDF) and other 'non-nationalised operators' to purchase electricity produced by hydroelectricity, wind and solar panels. In order to benefit from the feed-in tariff, producers must obtain an authorisation to operate an electricity production facility. They must also obtain a power purchase certificate which then allows them to enter into a purchase agreement with EDF or non-nationalised operators. The level of remuneration available depends on the type of renewable technology used: ■ Hydroelectricity: 6.07 c€/kWh (with a premiums for small installations and regular production) ■ Maritime hydraulic: 15 c€/kWh ■ Onshore wind (mainland France and Corsica) 8.2 c€/kWh (reducing over time) ■ Offshore wind 13 c€/kWh (reducing over time) ■ Solar 27.6 c€/kWh to 58 c€/kWh depending on factors such as region and, for example, situation of photovoltaic panels
Other Incentives	None
Comments	As with other members states, regulatory uncertainty is a concern in France and it is possible that feed-in-tariffs could be reduced in future. The Grenelle II Act (12 July 2010) provides that windfarms are "classified facilities" and are therefore subject to a prior authorisation procedure, as such there is a 6-month period during which they can be challenged.

Contacts

Mustapha Mourahib
Partner, Paris
T: +33 14405 5152
E: mustapha.mourahib@cliffordchance.com

Laurent Schoenstein
Partner, Paris
T: +33 14405 5467
E: laurent.schoenstein@cliffordchance.com

Amandine Delsaux
Lawyer, Paris
T: +33 14405 5103
E: amandine.delsaux@cliffordchance.com



Germany

2005 Baseline	5.8%
2020 Target	18%
Main Renewable Sources	Onshore wind, offshore wind, photovoltaic, biomass and hydro
Green Certificates?	No
Feed-In Tariff?	Yes – a feed-in tariff has been in operation since 1990. Grid operators are obliged to connect facilities producing electricity from renewable energies to their grid; to purchase the electricity produced by those facilities as a priority; and to pay compensation rates guaranteed by law for a period of 20 years. The level of remuneration available depends on the type of renewable technology used and, within this band, remuneration varies according to factors such as location and size of the facility and the point in time the installation is initially commissioned: ■ Hydro: 3.5 c€/kWh – 12.67 c€/kWh ■ Offshore wind: at least 13 c€/kWh for 12 years increasing to 15 c€/kWh depending on the location of the turbines ■ Onshore wind: 9.2 c€/kWh for the first 5 years reducing to 5.02 c€/kWh ■ Photovoltaic: 31.94 c€/kWh to 43.01 c€/kWh ■ Biomass: 7.79 c€/kWh to 11.67 c€/kWh depending on the size of the relevant facility ■ Geothermal 10.5 c€/kWh to 20 c€/kWh depending on the size of the relevant facility and the start of operations.
Other Incentives	None
Comments	The already highly developed onshore wind infrastructure means there is a lack of natural resources for more onshore wind in the future. The first offshore windfarms are operational after initial delays and the environmental impact of these first farms is monitored very closely by the respective public authorities to decide on further offshore projects. In addition, the German Parliament has decided to lower the feed-in tariff for photovoltaic energy due to the considerable increase in this sector recently – the amendment is effective from 1 July 2010.

Contacts

Thomas Burmeister
Partner, Düsseldorf
T: +49 2114355 5107
E: thomas.burmeister@cliffordchance.com

Georg Linde
Partner, Frankfurt
T: +49 697199 1243
E: georg.linde@cliffordchance.com

Peter Rosin
Partner, Düsseldorf
T: +49 2114355 5336
E: peter.rosin@cliffordchance.com

Mathias Elspass
Lawyer, Düsseldorf
T: +49 2114355 5260
E: mathias.elspass@cliffordchance.com

Italy

2005 Baseline	5.2%
2020 Target	17%
Main Renewable Sources	Wind, hydro and solar
Green Certificates?	Yes. Renewable Energy Certificates (RECs) provide evidence of the use of renewable energy sources and are given in equal proportion to the renewable electricity generated (each worth 1 MWh) by qualifying plants, multiplied by a variable factor which depends on the technology used: ■ Wave x1.8 ■ Tidal: x1.8 ■ Offshore wind: x1.5 ■ Biomass: x1.3-1.8 (depending on distance of the "fuel" to the relevant plant) ■ Geothermal: x0.9 ■ Onshore wind: x1 ■ Hydro: x1 ■ Sewage gas: x0.8 ■ Biogas: x0.8-1.8 (depending on distance of the "fuel" to the relevant plant Subject to various conditions, relevant plants are eligible for RES' for 8-15 years
Feed-In Tariff?	Yes. To be eligible, plants must have begun operating after December 2007, have a yearly normal capacity not exceeding 1 MW and, for wind farms, an electrical capacity not exceeding 0.2MW. The tariff may be revised every three years by government in order to ensure that investment in renewable energy is adequately remunerated.
Other Incentives	The current photovoltaic incentive scheme is provided under the second Conto Energia (Ministerial Decree No. 25336 of 19 February 2007), setting out the criteria for the incentives for the production of electricity by photovoltaic plants that will start operations by 31 December 2010. Incentives are in the form of payments, the level of which depends upon the installed capacity of the plant and whether the plant is fully-integrated, partially-integrated or not integrated into the building. A higher level of incentive is awarded to those plants which are architecturally integrated. On 8 July 2010, the third Conto Energia, setting out the criteria for the incentives for the production of electricity by photovoltaic plants that will start operations from 1 January 2011 to 31 December 2013, was approved by the State-Regions Conference. The third Conto Energia, in order to become effective, must be given the favourable opinion of the Council of State, approved by the National Audit Office and finally published in the Official Gazette. The third Conto Energia distinguishes among three types of photovoltaic plants: (i) solar photovoltaic plants; (ii) integrated photovoltaic plants with innovative features; and (iii) solar concentration plants. As for solar photovoltaic plant, the distinction between (i) not integrated plants, (ii) partially-integrated plants, and (iii) architecturally integrated plants provided under the second Conto Energia has been abandoned and has been replaced by a distinction between (i) integrated plants and (ii) not integrated plants. The general levels of the incentive tariffs have been decreased; however, they should be sufficiently profitable for developers. A higher level of incentive is awarded to the integrated plants. A special category of plants is where the photovoltaic panels are integrated on pergolas, greenhouses, or other roof-like coverings. These special category plants are eligible from an incentive tariff equal to the arithmetic mean between the incentive tariffs available for integrated plants and the incentive tariffs available for the other plants. Qualifying thermodynamic plants benefit from an incentive scheme under which operators receive a payment dependent upon the amount generated by sources other than solar thermodynamic. Under the net metering service, producers / users of plants of certain capacities may feed into the grid electricity generated but not immediately consumed and take in electricity as needed at a different time. Reduced tax rates and subsidies are available to generators / developers for the purchase and construction of renewable plants, e.g. VAT is applied at a reduced 10% rate, and for the sale / purchase of land on which they are installed.
Comments	Complex regulation subject to rapid development is likely to produce uncertainty in the market. In addition, there may be unforeseeable fluctuations in RES prices, especially in long-term transactions.

Contacts

Cristina Martorana
Partner, Milan
T: +39 0280634 261
E: cristina.martorana@cliffordchance.com

Chiara Commis
Lawyer, Milan
T: +39 0280634 388
E: chiara.commis@cliffordchance.com

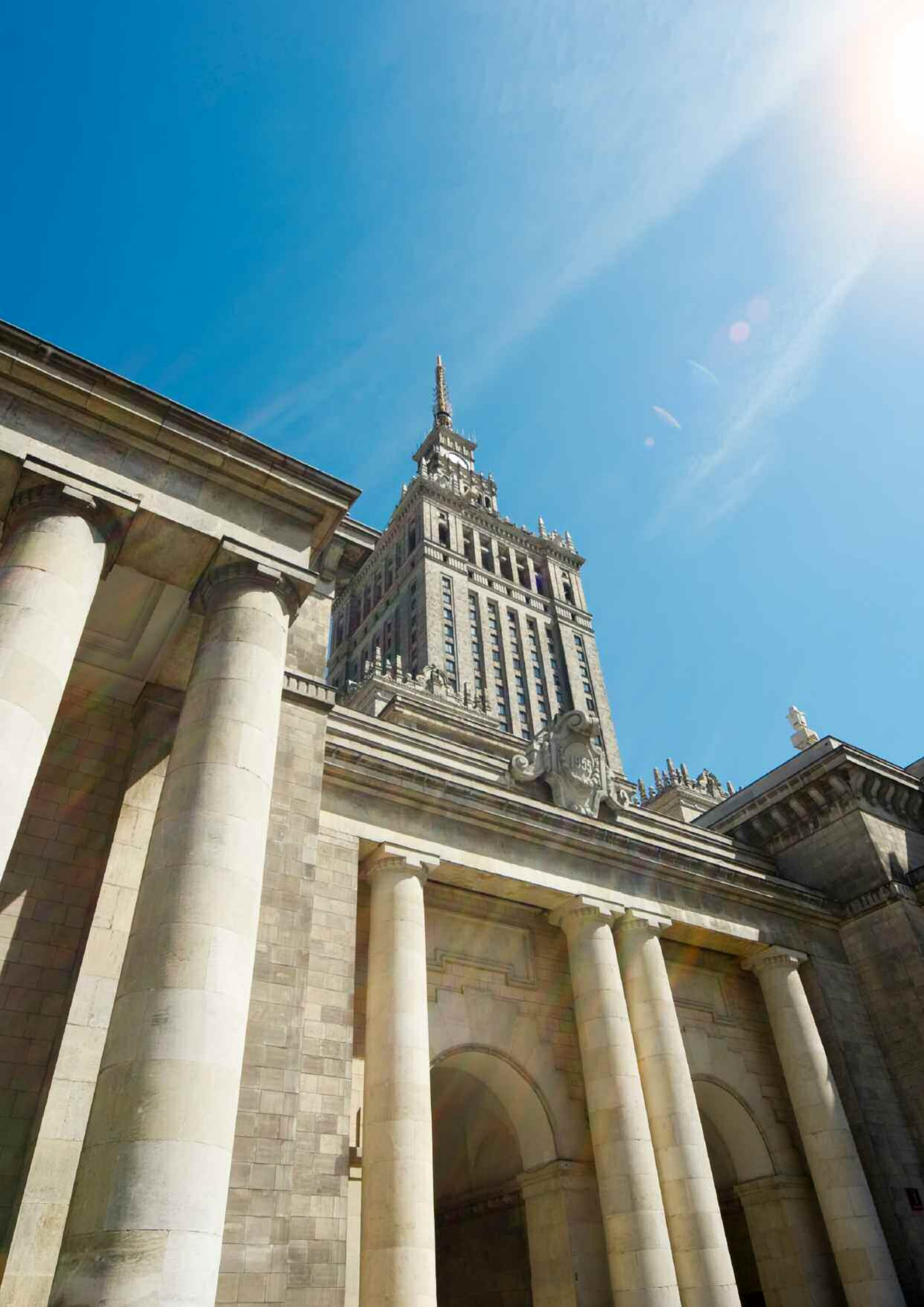
The Netherlands

2005 Baseline	2.4%
2020 Target	14%
Main Renewable Sources	Onshore wind, offshore wind and biomass
Green Certificates?	No
Feed-In Tariff?	No
Other Incentives	Instead of green certificates or feed-in tariffs, financial incentives to renewable energy production are provided by a system of subsidies and grants for a number of renewable technologies. The first such system was established in 2003 and has since been modified after it became too expensive as applications exceeded calculated costs. The current 'SDE-scheme' stimulates renewable energy production by providing financial compensation for the non-profitable part of production of renewable energy for a period of 12 to 15 years. The total budget for 2010 is €7.426 billion, which includes EUR 2.126 billion for offshore wind. The funds available vary according to the technology employed as follows: ■ Onshore wind energy: budget of €937m, with basic compensation of €0.12 per kWh ■ Offshore wind energy: budget of €5,312m, with compensation for near shore wind farms at €0.121 per kWh and for offshore wind farms at €0.181 per kWh ■ Biomass electricity: budget of €400 m, with compensation ranging from €0.114 per kWh to €0.193 per kWh, dependant on the heat efficiency ratio ■ Solar electricity: budget of €93 m, with basic compensation for small photovoltaic panels of up to 15 kWp at €0.474 per kWh and basic compensation for large photovoltaic panels of up to 100 kWp is €0.430 per kWh Subsidies are issued on a first-come-first-served basis. However, subsidies for offshore wind farms are granted as a result of a tendering process. A recent tender has led to the creation of a 600MW offshore wind farm and, in the future, the Dutch government intends to establish a scheme to subsidize over 5 GW of offshore wind energy. An alternative method of financing renewable energy production, through additional taxation for the consumption of electricity and gas, is under consideration by the Dutch government. This taxation will be structured in a similar way to the 'energy tax', under which with natural gas, other gases and electricity used for production of electricity are exempt for taxation.
Comments	The Dutch government is firmly committed to achieving its renewable energy targets. In addition to ongoing investments in onshore wind, in summer 2010 subsidies were granted for two large offshore wind projects. This reflects significant improvements in the investment climate for the renewable energy sector. However, the sector would benefit even further from improved legislation providing greater security about grid access and more long term certainty about subsidy levels. Initiatives to achieve such improvements are developed, but have not yet been implemented.

Contacts

Jaap Koster
Partner, Amsterdam
T: +31 20711 9282
E: jaap.koster@cliffordchance.com

Wieke Hoge
Counsel, Amsterdam
T: +31 20711 9642
E: wieke.hoge@cliffordchance.com



Poland

2005 Baseline	7.2%
2020 Target	15%
Main Renewable Sources	Hydroelectricity, onshore wind, biomass
Green Certificates?	Yes. Enterprises which generate or trade in electricity and sell to a final offtaker as well as, to a certain extent, final offtakers trading with energy at the commodity exchange and brokerage houses trading with energy at the commodity exchange, are required to acquire certificates and to present a number of them in a proportion that corresponds to the amount of renewable energy generated calculated by reference to sales to end users to the energy regulatory authority. The green certificates are issued by the Polish energy regulatory authority to renewable energy generators, confirming, among other things, that a renewable energy generator produced a certain amount of renewable energy over a certain period of time. They are issued on the application of a given energy generator and on the basis of data provided by the operators of the grid transmission or distribution system to which the given renewable energy generator is physically connected. The support scheme applies to all technologies, regardless of their efficiency and costs. Obliged entities which do not present certificates are required to pay compensation. Failure to present certificates or pay compensation leads to the imposition of a financial penalty by the energy regulatory authority.
Feed-In Tariff?	No
Other Incentives	The operator of the electricity system is obliged to ensure that electricity generated from renewable energy sources has priority of transmission. By law suppliers of last resort are obliged to purchase electricity generated from renewable energy sources. The obligatory purchases are made at the average price on the competitive market for the preceding calendar year determined yearly by the energy regulatory authority. The energy regulatory authority is obliged to announce the average price by 31 March of the following year. Any entity not meeting its obligation to purchase electricity from renewable energy sources is subject to a financial penalty. Electricity generated from renewable technologies is exempt from excise duty.
Comments	The grid needs substantial reinforcement. As there have been no investment in the grid infrastructure in the last three decades, it is too weak and underdeveloped to cater for new capacities from renewable sources. Investors have indicated that unclear rules for connection to the grid and complicated spatial management regulations are a hindrance to development.

Contacts

Tomasz Janas
Legal Adviser, Warsaw
T: +48 22429 9467
E: tomasz.janas@cliffordchance.com

Pawel Puacz
Lawyer, Warsaw
T: +48 22429 9532
E: pawel.puacz@cliffordchance.com

Romania

2005 Baseline	17.8%
2020 Target	24%
Main Renewable Sources	Hydroelectricity, wind
Green Certificates?	Yes. Suppliers of electricity to end consumers are obliged to acquire a minimum number of green certificates based on the quantity of electricity they supply each year to end consumers. The regulatory authority establishes the quota of green certificates to be acquired by electricity suppliers. In 2009, this is 0.589%. Suppliers that do not meet this mandatory quota are bound to pay a fine of EUR 110 for each green certificate that is not delivered. Starting with 2011 such value will be updated every year. For 2008-2025, the value of a green certificate is between EUR 27 and EUR 55. Starting with 2011 such values will be indexed every year. Currently, all producers of electricity from renewable sources receive 1 green certificate per MWh of electricity generated, regardless of the type of renewable source. However, according to the legislation in force, different number of green certificates should be issued depending on the type of renewable energy source deployed. Such differentiated scheme is not, however, fully applicable, as it should be approved by the European Commission. Producers and suppliers of electricity from renewable sources can trade green certificates on an internal centralized market and on a bilateral contracts market for green certificates. Until the achievement of the national targets, the green certificates can be traded only on the internal market. In order to ensure the achievement of the national objective, the Romanian state can cooperate with other European Union member states with respect to transfer of renewable energy, common projects for the production of renewable energy, harmonisation of support schemes.
Feed-In Tariff?	No
Other Incentives	The default suppliers are obliged to purchase electricity produced from renewable sources in plants with an installed capacity of maximum 1MW at regulated prices. Producers of electricity from renewable sources have priority access to the transport/distribution network, subject to the safety of the National Energy System.
Comments	Only limited wind energy capacity can currently be connected to the grid due to imbalance risks and poor grid infrastructure. The permitting procedure overseen by local authorities can be lengthy and bureaucratic.

Contacts

Perry Zizzi
Partner, Bucharest
T: +40 216666 145
E: perry.zizzi@cliffordchance.com

Ioana Talnaru
Counsel, Bucharest
T: +40 216666 125
E: ioana.talnaru@cliffordchance.com

Spain

2005 Baseline	8.7%
2020 Target	20%
Main Renewable Sources	Solar (photovoltaic and thermo), wind, hydroelectricity, biomass and biogas
Green Certificates?	No
Feed-In Tariff?	Spanish legislation creates two regimes applicable to the production of electric energy: the ordinary regime, which is applicable to conventional power plants; and the special regime, which is applicable to power plants using renewable energy sources. Feed-in tariffs, regulated premiums and applicable supplements are paid to installations operating under the special regime by the Spanish National Energy Commission. Special regime electricity producers may choose the type of remuneration they wish to receive, based on either the sale of the energy produced at the rate of a feed-in tariff or the sale of the energy produced at the pool price supplemented by a premium. All renewable technologies are equally eligible for assistance but the amount of financial assistance available varies because the feed-in tariff and the applicable premium are specific to each type of technology used. For example, the highest feed-in tariff is currently that of solar photovoltaic installations, but this tariff is slowly decreasing. Solar photovoltaic installations, however, are only eligible for the feed-in tariff.
Other Incentives	Supplements are available for installations meeting, for example, requirements of efficiency
Comments	The Spanish government is currently considering approving new regulations which will substantially change the economic regime applicable to renewable energy. So far, although no draft legislation has yet been made public, it seems fairly certain that this regulatory review will affect solar photovoltaic technology, thermo solar technology and wind technology mainly by limiting the number of hours during which the electricity generated by such technologies is remunerated with a feed-in tariff. Regulatory uncertainty caused by frequent, unpredictable changes in recent years is the principal issue affecting renewable energy development in Spain. So far, there have been changes in 2004, 2007, 2008, 2009 and, most likely, in 2010.

Contacts

Carlos Hernández-Canut
Partner, Madrid
T: +34 91590 7539
E: carlos.hernandez-canut@cliffordchance.com

Ignacio Borrego
Counsel, Madrid
T: +34 91590 7567
E: ignacio.borrego@cliffordchance.com

The United Kingdom

2005 Baseline	1.3%
2020 Target	15%
Main Renewable Sources	Offshore wind, onshore wind, biomass, hydro and landfill gas
Green Certificates?	Yes – the Renewables Obligation was introduced in 2002. Suppliers satisfy their obligation by either purchasing green certificates (known in the UK as ROCs) from generators of qualifying renewable electricity or paying a "buy-out" price, currently £36.99. The ROCs are currently awarded to generators on a banded basis as below to be reviewed by 2013: ■ Landfill gas: 0.25 ROCs/MWh ■ Sewage gas: 0.5 ROCs/MWh ■ Onshore wind; hydro; and energy from waste with CHP: 1 ROC/MWh ■ Biomass: 1 ROC/MWh / 1.5 ROCs/MWh / 2 ROCs/MWh depending on specific technology ■ Offshore wind, tidal, wave, photovoltaic, geothermal: 2 ROCs/MWh Money paid into the "buy-out" fund is distributed to suppliers who satisfied their renewables obligation by purchasing (and surrendering) ROCs. The current obligation for the period ending on 31 March 2011 is 0.111 ROCs per MWh.
Feed-In Tariff?	Yes – introduced by the last Government in April 2010. The Feed-in tariff only applies to microgeneration (5MW and below) and to proven renewable energy technologies. FITs must be offered by licensed suppliers with 50,000 or more domestic customers. Tariffs will be payable for export to the grid at 3p/kWh irrespective of the generation technology; and for the generation itself, tariffs will be payable according to the size of the scheme and the renewable technology deployed: ■ Anaerobic digestion: 9p/kWh to 11.5p/kWh for 20 years ■ Hydro: 4.5p/kWh to 19.9p/kWh for 20 years ■ Photovoltaic: 29.3p/kWh to 41.3p/kWh for 25 years (projects commenced in later years will face reduced tariffs) depending on the size of the project and whether the building is new-build or the panels are retro-fitted ■ Wind: 4.5p/kWh to 34.5p/kWh for 20 years (projects commenced in later years will face reduced tariffs).
Other Incentives	The Climate Change Levy (currently £4.70/MWh) is payable by industry, commerce, agriculture and the public sector for electricity consumed. Renewably generated electricity is awarded with one Levy Exemption Certificate (LEC) for each MWh.
Comments	The new Government is likely to extend the new feed-in tariff to include large-scale renewable power projects and existing projects benefitting from ROCs are likely to be given the opportunity to move to the feed-in tariff scheme - the Renewables Obligation may be closed for new projects, although industry may resist this.

Contacts

Nigel Howorth
Partner, London
T: +44 207006 4076
E: nigel.howorth@cliffordchance.com

Ben Stansfield
Senior Associate, London
T: +44 207006 4507
E: ben.stansfield@cliffordchance.com

Global Renewables Group

We provide top-tier renewables capability for clients around the world through our European, US, Middle East and Asian offices - a network that few firms can match. Our acknowledged industry experts have a reputation for successfully advising on all aspects of renewable energy projects, including:

- corporate/M&A
- equity and debt capital markets
- construction and project development
- planning, consenting and real estate
- regulatory issues
- project, acquisition, structured, Islamic and corporate financing
- dispute resolution
- fund formation and investment
- derivatives and carbon trading
- anti-trust, market regulation, compliance and sanctions
- health, safety and environment
- tax, pensions and employment
- insurance

The Global Renewables Group is consistently recognised by leading industry bodies as a key player in the market:

No 1 of the Global Top 10 Legal Advisors (1998 - 2009)
No 1 Global Legal Advisor 2009
Project Finance International Legal Survey 2009

Project Finance Team of the Year
IFLR Middle East Awards 2008, 2007

Renewable Deal of the Year
Infrastructure Journal Awards 2009

No 1 Global Legal Adviser
No 1 Oil & Gas Legal Adviser
No 1 Power Legal Adviser
No 1 Social Infrastructure/PPP Legal Adviser
Infrastructure Journal League Tables 2008

Global Legal Advisor of the Year
Infrastructure Journal Awards 2008

International Law Firm of the Year
IFLR European Awards 2009

Kyoto Credits Runner-up
Environmental Finance 2007, 2006

EU Emissions Trading Scheme Best Law Firm
Environmental Finance 2008, 2007, 2006

North American markets Best Law Firm
Environmental Finance 2007, 2006

Weather Derivatives Best Law Firm
Environmental Finance 2010, 2009, 2008, 2007, 2006

CLIFFORD

CHANCE

J201007140036688