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Taxes and incentives for renewable energy

KPMG INTERNATIONAL

September 2013

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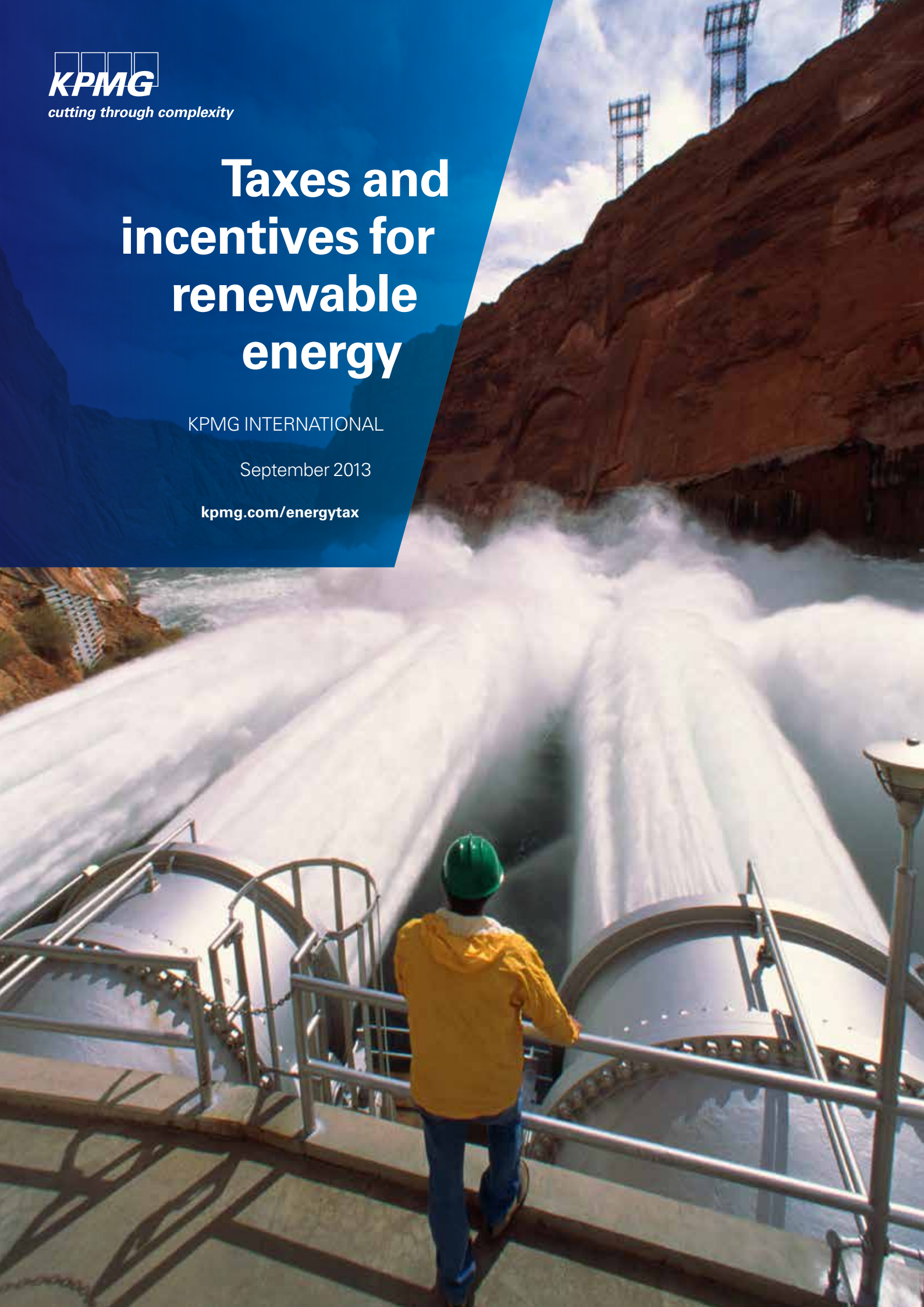

This report describes the 2013 taxes and incentives provided by 28 countries around the world to promote renewable energy from wind, solar, biomass, geothermal and hydropower. These policies also support other areas such as increased energy efficiency, smart-grid management, biofuels, carbon capture systems and storage technologies. Content includes an introduction about global trends in renewables, a summary of investments in renewable energy, and a brief outline of renewable energy promotion policies in all 28 countries.

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Introduction

Renewable energy continues to be one of the world's strongest growth industries. Consider these facts:

- Approximately 20 percent of global electricity generation now comes from renewable energy sources.[1]
- Renewables accounted for over half of total net additions to electric generating capacity worldwide in 2012.[2]
- Almost 70 percent of new electric generating capacity in the European Union (EU) for 2012 came from renewables.[3]
- Solar photovoltaic (PV) electricity generation soared from 10 gigawatts (GW) in 2007 to over 100 GW in 2012.[4]

This rapid increase in renewables is driven by a number of factors, including falling technology costs, rising fossil-fuel prices and carbon pricing. However, the main support for growth is through government incentives, which totaled United States dollar (USD)88 billion globally in 2011.[5]

This report describes current incentives provided by 28 countries around the world to promote renewable energy from wind, solar, biomass, geothermal and hydropower. These incentives also support related areas such as increased energy efficiency, smart-grid management, biofuels, carbon capture systems and storage technologies.

Governments now offer a wide variety of tax incentives and related programs to support renewable energy investment, including:

- credits
- grants
- tax holidays
- accelerated depreciation
- non-tax incentives.

Governments also play a role in discouraging carbon emissions by enforcing taxes and penalties such as:

- carbon tax and pricing
- cap and trade schemes
- indirect taxes, such as energy taxes, excise taxes or value added taxes (VATs).

The 12 most common policies can be divided into three categories:

- **Regulatory policies:**
  - renewable energy targets
  - feed-in tariff/premium payment
  - electric utility quota obligation/ renewable portfolio standard (RPS)
  - net metering
  - biofuels obligation/mandate
  - heat obligation/mandate
  - tradable renewable energy credit (REC).
- **Fiscal incentives:**
  - capital subsidy, grant and rebate
  - investment and production tax credits
  - reductions in sales taxes, energy taxes, CO_2 taxes, VAT and other taxes
  - energy production payment.
- **Public financing:**
  - public investment, loans and grants
  - public competitive bidding/ tendering.

These policies and incentives have proven their effectiveness over the past decade. By the end of 2012, at least 138 countries had renewable energy targets, an increase of 66 percent from 2007.[6] Some 120 countries have various types of policy targets for long-term shares of renewable energy. The EU is maintaining its target of 20 percent by 2020.[7] Several European countries in particular have even stronger national long-term targets that will place them in the high renewables range by 2030 or 2050, including Denmark (100 percent) and Germany (60 percent).[8]

Outside of Europe, at least 20 other countries have targets in the 2020–2030 time frame ranging from 10 to 50 percent. These include Algeria, China, Indonesia, Jamaica, Jordan, Madagascar, Mali, Mauritius, Samoa, Senegal, South Africa, Thailand, Turkey, Ukraine, and Vietnam.[9]

(For additional information about these policies, see appendix A/page 57).

1 World Energy Outlook 2012 – Executive Summary
2 Ibid.
3 REN 21 Renewables 2013 Global Status Report
4 Ibid.
5 Op. cit., World Energy Outlook 2012
6 Op. cit., REN 21 Renewables 2013 Global Status Report
7 REN 21 Renewables 2013 Global Futures Report
8 Ibid.
9 Ibid.

2013 Industry trends

The global energy system based on hydrocarbons is undergoing a foundational shift. No one disputes the need for increased energy supplies. Global demand for electricity is expected to rise by more than 80 percent from 2010 to 2040, driven by an increase in total population and gross domestic product (GDP) output.

To address world energy demand, the energy industry has seen a recent resurgence in oil and gas production, led by the "shale gale" of natural gas made available with hydraulic fracturing (fracking) and horizontal drilling in the US In addition, global fossil fuel subsidies rose almost 30 percent to USD523 billion in 2011, primarily for oil development in the Middle East and North Africa.[10]

Nevertheless, the feasibility of a carbon-based energy system is being questioned. Economic development across Europe is hampered by continued high oil prices, and signs of an unsustainable energy system persist, with CO_2 emissions at a record high. Accordingly, economies around the world are increasing their dependence on sustainable energy sources to help reduce greenhouse gas (GHG) emissions and pollutants. Renewables have also been recognized as a way to stimulate economies, enhance energy security and diversify energy supply.

In terms of renewables policy, the EU continues to lead the world in its support for less carbon-intensive electricity generation, with 65 percent of electricity now being generated from nuclear and renewable fuels. Europe increased its wind energy capacity by 12.3 percent in 2012,[11] and 20 percent of Europe's power is targeted to come from wind generation by 2040. A European Commission report indicated that renewable energy could meet 55 to 75 percent of final energy consumption by 2050, compared to less than 10 percent in 2010.[12]

The United States is expected to see a significant growth in domestic natural gas production, which might impact policies that support renewables. Continued low gas prices, for example, would likely reduce the value of purchase price agreements available to generators, including wind developers. However, the federal Production Tax Credit for wind was extended for a further year by Congress at the start of 2013. The Clean Energy Standard Act of 2012 is currently under consideration by the US Congress, and this law would set the first nationwide targets for clean electricity, defined as energy produced from renewables, nuclear power and gas-fired generation. The Renewable Fuel Standard, adopted in 2005 and extended in 2007, mandates 36 billion gallons of biofuels to be blended into transportation fuel by 2022.

In China, electric energy demand is expected to more than double by 2040.[13] Despite the continued use of large amounts of coal and gas, China is also adopting the European and the US approach to shift electricity generation away from coal. China's renewables policy is based on the 2005 Renewable Energy Law. In 2009, China set a target to increase the share of non-fossil energy (nuclear and renewables) in the power sector to 15 percent by 2020. The 12th Five-Year Plan (2011-2015) calls for 70 GW of additional wind capacity, 120 GW of additional hydropower and 5 GW of additional solar capacity by 2015. Targets have also been set for the first time for geothermal and marine power.

Japan's renewables energy policy was reviewed and extended through legislation passed in 2009 and a revised Basic Energy Plan in 2010. After the events at Fukushima, the government announced the Innovative Strategy for Energy and the Environment in September 2012, which includes the goal of reducing the role of nuclear power. This will be supported in part by increasing the deployment of renewable energy. By 2030, the strategy calls for power generation from renewables to triple compared to 2010, reaching about 30 percent of total generation. In July 2012, Japan launched a new feed-in tariffs system for wind and solar power and other renewables, providing a generous amount of incentives.

Overall, the global adoption rate of renewables policies has slowed considerably, especially as compared to the early-to-mid 2000s. Revisions to existing policies are becoming increasingly more common, as well as new types of policies that combine energy-efficiency measures with the implementation of renewable energy technologies.[14]

Looking ahead, recent analysis has suggested that the following global milestones will be reached by 2035:[15]

- Demand for electricity will grow by over 70 percent.
- Overall energy demand will rise by over 30 percent.
- Generation from renewables will increase to almost three times its 2010 level.
- The share of renewables in the generation mix will increase to 31 percent.

Greater energy efficiency in building, heating, transportation and manufacturing will help offset the rise in energy demand. However, renewables will play a vital role in addressing this demand in an environmentally supportive and sustainable manner.

10 Op. cit., World Energy Outlook 2012
11 EurObserv'ER, Wind Power Barometer
12 Rethinking 2050, European Renewable Energy Council, 2010
13 Op. cit., World Energy Outlook 2012
14 Op. cit., REN 21 Renewables 2013 Global Status Report
15 OECD, International Energy Association (IEA), World Energy Outlook 2012, REN 21 Renewables 2013 Global Futures Report

Global investment in renewable energy production

In 2012, global investments in renewables reached USD244 billion. This figure represents a decrease of 12 percent.[16] Investment levels in 2013 have followed this trend. As of Q1 2013, global investment in renewables reached only USD40 billion, the lowest in any quarter since Q1 2009 and a decrease of 36 percent from the final quarter of last year and 24 percent below the first quarter of 2012.[17]

This decline can be explained by several factors, starting with uncertainty about renewables policy in developed economies. Investments declined 34 percent in the US because of policy uncertainty, and former champions for renewables in Europe such as Italy and Spain saw significant contractions based on policy changes and cuts in tariff supports. The decline in investments was also driven by overcapacity in the manufacturing supply chain in North America and Europe.

In addition, dramatically lower prices for renewable energy have discouraged investors. Solar prices dropped 30 to 40 percent between 2011 and 2012, driven mainly by low-cost manufacturing in China.[18] Wind turbine prices dropped by 20 to 25 percent in western markets and by 40 percent in China.[19]

Another key trend in renewables investment for 2012 was the continued north to south shift toward emerging markets. In 2007, developed economies invested 2.5 times more in renewables than the south. Now the gap has shrunk to 18 percent, and emerging markets are on track to surpass the north in the next few years. Total renewables investment in developing economies rose 19 percent in 2012 to USD112 billion, while investment in developed countries dropped 29 percent to USD132 billion.[20] China, South Africa, Morocco, Mexico, Chile and Kenya all showed sharp increases in investment.[21]

Significantly, incentives have been maintained or increased in many Asian countries even as they were being reduced in many developed countries.

According to the REN21 Renewables 2013 Global Status Report, the top five countries for new capacity investments in renewable energy in 2012 were China, the United States, Germany, Japan and Italy. In KPMG's Green Tax Index focusing on fiscal incentives, China ranked sixth, the United States ranked first, Germany fifteenth and Japan second. Italy was not included in this report.

(For additional information, see appendix A/page 57)

16 Global Trends in Renewable Energy Investments 2013, Bloomberg New Energy Finance
17 Ibid.
18 Ibid.
19 Bloomberg New Energy Finance, IHS Research
20 Ibid.
21 Op. cit., Global Trends in Renewable Energy Investment 2013

China:

China was the dominant country in 2012 for investments in renewable energy, with commitments rising 22 percent to USD67 billion, representing 27 percent of global renewables investment.[22] This surge was due mainly to a spike in solar investment.[23] Since 2005, China has increased its renewables investment by over 300 percent.

The government's support for renewables in China includes reduced corporate income taxes, significant reductions in value added taxes, feed-in tariffs, R&D incentives, subsidies for energy conservation technologies improvement, and other tax incentives.

In a related note, Chinese companies have provided nearly USD40 billion to solar and wind industries in other countries over the past decade.[24] Most investments have gone to the US, followed by Germany, Italy and Australia. China's wind industry supports the domestic market, but the solar industry relies on the international market for 95 percent of its sales.[25]

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United States:

The US ranked second in 2012 for renewables investments, with a total of USD36 billion. This represents a drop of 34 percent over the previous year. Most investment dollars went to asset finance, while the remaining portion went to public markets, venture capital/private equity, corporate and government R&D and small distributed capacity.

Suggested strategies to increase the US investments in renewables involve a greater alignment of state, federal and private efforts. At the state-level, renewable energy portfolio standards (RPS) and policies like electricity market design have been proven successful. These can complement federal production and investment tax credits. From the private sector, policies such as Master Limited Partnerships (MLPs) and Real Estate Investment Trusts (REITs) can help provide lower-cost capital.

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Germany:

Although Germany led the world in renewable power per capita for 2012,[26] investments fell 35 percent from previous year to USD20 billion.[27] Feed-in tariffs are available in Germany for wind, solar, geothermal, methane gas and hydro generation. The government-owned bank KfW also provides various subsidies and support programs for renewables. However, a major shift away from nuclear plants and the upcoming elections in September 2013 have introduced a high level of uncertainty for investors. Feed-in tariffs are expected to be cut, and other reductions in incentives are expected.

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Japan:

After the Fukushima earthquake, Japan introduced several significant incentives to support the move from nuclear to renewable energy sources. These include a special depreciation of 30 percent or 100 percent for the purchase and installation of qualified renewable energy equipment. In addition, the government introduced an incentive for fixed assets tax on certain renewable energy generation facilities.

Not surprisingly, 2012 investments in renewables increased 73 percent over 2011 to USD16 billion.[28] Most investments were for small-scale solar PV facilities that promise a faster return on investment. Goldman Sachs Group Inc. (GS) has announced plans to invest as much as USD487 million in renewable energy projects in Japan in the next five years.[29] Japanese banks and financial institutions such as Softbank Corp. and Orix Corp. have also shown considerable interest in renewables investment.[30]

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Italy:

The renewable energy sector in Italy is considered by some to have the highest potential in the EU.[31] The country has a well-developed system of incentives (mainly feed-in tariffs) for renewable energy generated from solar, wind and biomass. In particular, the government's Renewable Energy Decree, which entered into force on 29 March 2011, revises the system of incentives for the production of electricity from renewable sources and simplifies the authorization process for building new plants.

Nevertheless, the prolonged European financial crisis, lower PV costs and other factors have made their impact on the sector. In 2011, Italy attracted USD29 billion in renewable energy investment, but asset financing of renewable energy in 2012 dropped 31 percent as compared to 2010.[32] Investment from asset finance, public markets and private equity was down 26 percent.[33]

More on page 28

22 Ibid.
23 Ibid.
24 China invests billions in international renewable energy projects, WRI Insights, wri.org
25 Ibid.
26 not including hydro
27 Op. cit., Global Trends in Renewable Energy Investment 2013
28 Renewable energy investments shift to developing nations, Bloomberg, 12 June 2013
29 Goldman Sachs Eyes Japan Renewable Energy Investments, Bloomberg, 20 May 2013
30 Ibid.
31 Italy's Renewable Energy Sector Continues to Attract Investors, According to Mergermarket, Mergermarket, 9 May 2013
32 Can Italy Keep Its Renewables Investors?, RenewableEnergyWorld.com, 23 July 2013
33 Ibid.

Renewable energy promotion policies by country

The following chart is a summary of the support schemes available in the 28 countries that are highlighted in this publication. Additional details regarding the investment and operating support schemes for each country can be found in the following pages.

▲ Some states/provinces within these countries have state/provincial-level policies but there is no national-level policy.	REGULATORY POLICIES AND TARGETS							FISCAL INCENTIVES				PUBLIC FINANCING	
	Renewable energy targets	Feed-in tariff/ premium payment	Electric utility quota obligation/ RPS	Net metering	Biofuels obligation/ mandate	Heat obligation/ mandate	Tradable REC	Capital subsidy, grant, or rebate	Investment or production tax credits	Reductions in sales, energy, CO_2, VAT or other taxes	Energy production payment	Public investment, loans, or grants	Public competitive bidding/tendering
Argentina	●	●			●			●	●	●	●	●	●
Australia	●	▲			▲		●	●				●	
Austria	●	●			●		●	●	●			●	
Brazil	●			●	●	▲			●	●		●	●
Canada	▲	▲	▲	▲	●			●	●	●		●	●
China	●	●	●		●	●		●		●	●	●	●
Denmark	●	●		●	●		●	●		●		●	●
France	●	●			●		●	●	●	●		●	●
Germany	●	●			●	●		●	●	●	●	●	
India	●	●	●	●	●	▲	●	●	●	●	●	●	●
Ireland	●	●			●	▲	●						●
Italy	●	●	●	●	●	●	●	●	●	●		●	●
Japan	●	●	●	●			●	●	●			●	
Mexico	●			●		●			●			●	●
Netherlands	●	●		●	●		●	●	●	●	●	●	
New Zealand	●												
Norway	●				●		●	●		●		●	
Peru		●			●					●			●
Poland	●		●		●		●	●		●		●	●
Romania	●		●		●		●			●		●	
South Africa	●							●		●	●	●	●
South Korea	●		●	●	●		●	●	●	●		●	
Spain[34]	●	●		●	●	●		●	●	●		●	
Sweden	●		●		●		●	●	●	●		●	
Turkey	●	●			●			●				●	
United Kingdom	●	●	●		●	●	●	●		●	●	●	
United States		▲	▲	▲	●	▲	▲	●	●	●	●	●	●
Uruguay	●	●		●	●	●		●		●		●	●

Source: This section is intended only to be indicative of the overall landscape of policy activity and is not a definitive reference. Policies listed are generally those that have been enacted by legislative bodies. Some of the policies listed may not yet be implemented, or are awaiting detailed implementing regulations. It is obviously difficult to capture every policy, so some policies may be unintentionally omitted or incorrectly listed. Some policies may also be discontinued or very recently enacted. This report does not cover policies and activities related to technology transfer, capacity building, carbon finance, and Clean Development Mechanism projects, nor does it highlight broader framework and strategic policies – all of which are still important to renewable energy progress. For the most part, this report also does not cover policies that are still under discussion or formulation, except to highlight overall trends. Information on policies comes from a wide variety of sources, including the International Energy Agency (IEA) Renewable Energy Policies and Measures Database, the U.S. DSIRE database, RenewableEnergy-World.com, press reports, submissions from country-specific contributors to this report, and a wide range of unpublished data. Much of the information presented here and further details on specific countries appear on the "Renewables Interactive Map" at www.ren21.net. It is unrealistic to be able to provide detailed references to all sources here. REN 21 Renewables 2013 Global Status Report.

[34] In Spain, the feed-in tariff (FIT) and net metering programmes have been temporarily suspended by Royal Decree for new renewable energy projects; this does not affect projects that have already secured FIT funding. The Value Added Tax (VAT) reduction is for the period 2010–12 as part of a stimulus package.

Market issues

To help clients address key challenges in today's rapidly evolving renewable energy sector, KPMG member firms provide services backed by a global network of resources, information and experience. The KPMG Energy & Natural Resources practice has specialists in the field of renewable energy, based in key business locations around the world, acting as a single network. In each location, KPMG professionals can offer practical, in-depth, renewable energy experience. They can also draw on the KPMG global network of Energy & Natural Resources practitioners to provide clients with immediate access to the latest industry knowledge, skills, resources and technical developments.

With regular calls and effective communications tools, we can share observations and insights, debate new emerging issues and discuss issues that are critical to clients' management agendas. This global network also produces publications and commentary on key issues affecting the sector, business trends, changes in regulations and the commercial, risk and financial challenges of doing business.

KPMG's ENR Tax Services & Solutions – engaging the green agenda

KPMG firms can help you to review your regulatory and sustainability business strategies and your energy and emissions trading objectives. We can provide tax characteristics of carbon credits, resolve Clean Development Mechanism issues, and define implications of Certified Emission Reduction forward contracts from both trading and transfer pricing standpoints.

We can also help you navigate the wide array of available global and local government and municipal grant programs or tax incentives related to the production and sale and purchase of alternative energy and green products. These include feed-in tariffs, tax holidays, accelerated depreciation, carbon tax/pricing, trading schemes, energy taxes, excise taxes or VAT in relation to wind, solar, biomass, biofuels, geothermal and hydropower sources, as well as increased energy efficiencies, smart-grid technologies, and carbon capture and storage technologies.

Due to the impact of these incentives and taxes on your investment decisions, KPMG firms can factor them into tailored due diligence and tax modeling services. These services apply not only to production or sale/purchase of green goods but also to green investments and financing arrangements.

KPMG's Global ENR Tax network includes professionals who specialize in these tax practice areas:

- Financial Services Tax
- Global Indirect Tax
- Global Transfer Pricing Services
- International Corporate Tax
- Mergers & Acquisitions.

Investing in the sector

KPMG member firms invest significant time and resources in deepening our understanding and knowledge of the sector. This enables us to provide clients with strategic and insightful services that are tailored to their specific needs and based on an understanding of their challenges.

Argentina

Support schemes

Investments and other subsidies
Support is available for renewable energy sources including biofuels, solar, wind, hydro and geothermal, among others.

At the local tax level:

- Anticipated value added tax (VAT) refunds for the new depreciable property (except for automobiles) included in the project.
- Accelerated income tax depreciation. (filing two claims for the same project are not allowed).

The property used for the project will not be part of the minimum presumed income tax taxable base. In addition, biofuel producers will not be subject to the hydric infrastructure tax, the tax on liquid fuels and the gas oil tax for the amount of fuel that is marketed in the national territory.

At the provincial level:

- real estate tax exemption
- stamp tax exemption
- turnover tax exemption/deferral
- tax stability.

The type of benefit depends on the geographic area in which the renewable energy plant operates, so the plant's specific location must be supplied for a proper tax classification.

Operating subsidies

Subsidies at the national level:

- Wind: 0.015 Argentine peso (ARS)/ kWh
- Solar: 0.9 ARS/kWh
- Hydro for less than 30 MW installed capacity: 0.015 ARS/kWh
- Other: 0.015 ARS/kWh. Several provinces have different incentive feed-in tariffs according to the kind of energy they want to promote.

Quota obligation

The aim is to reach a contribution of sources of renewable energy equal to eight percent of the total national consumption of electric energy within a term of 10 years, starting in 2006, the effective date of the regime.

Quota obligations also include the use of fossil fuel mixed with at least five percent of biofuels, including biodiesel and bioethanol.

Additional information

The following authorizations are required for the construction of renewable energy plants:

- authorization to use the land
- environmental impact study
- approval by the Energy Secretariat
- bidding offer submitted through the Program of Electric Generation through Renewable Energies (Programa Generación Renovable or GENREN).

Australia

Support schemes

Investments and other subsidies

Australia's clean energy sector is currently experiencing significant change in the wake of the Australian government's introduction of the Securing a Clean Energy Future Climate Change Plan (the Plan). The Plan has initiatives in four key areas – carbon pricing, renewable energy, energy efficiency and land management. The government has released numerous federal funding initiatives within the Plan, many of which are applicable to renewable energy. There are also a number of policies, programs and incentives outside of the Plan, with key initiatives specifically related to renewable energy that are described below.

Carbon Price Mechanism (CPM)

Central to the Plan is the introduction of a CPM. Revenue generated from the CPM will be invested to alleviate the impact of price increases, support more jobs and encourage innovations addressing climate change. Enhanced support for renewable energy is expected to drive innovation and investment into clean technologies and clean energy R&D, demonstration, deployment and uptake.

The carbon price is being introduced in a two-step process, starting with a fixed price period that runs from 1 July 2012 to 30 June 2015 before transitioning to an emissions trading scheme. In the fixed price stage the carbon price will start at Australian dollar (AUD) 23 per tonne and rise by 2.5 percent a year in real terms. From 1 July 2015 onwards, the price will be set by the market, with the number of permits issued by the government each year to be capped. The carbon price was passed by parliament on 8 November 2011 and commenced on 1 July 2012.

Australian Renewable Energy Agency (ARENA)

ARENA is tasked with managing AUD3.2 billion of financial assistance for renewable energy projects and initiatives promoting the R&D, demonstration, commercialization and deployment of renewable energy projects. The availability of this funding is expected to improve the sector's long-term competitiveness and drive down its costs in an Australian context. Approximately AUD2.2 billion of ARENA's funding is currently uncommitted and will be available to support future projects in the renewable energy sector.

ARENA incorporates and has responsibility for overseeing renewable energy initiatives previously administered separately through a range of bodies including the Australian Centre for Renewable Energy (ACRE), Solar Flagships Program, Australian Solar Institute (ASI), Low Emissions Technology Demonstration Fund, Renewable Energy Demonstration Program, Renewable Energy Venture Capital Fund, Australian Biofuels Research Institute, Geothermal Drilling Program and the Second Generation Biofuels Research and Development Program. ARENA also has accountability for administering unallocated funding.

Listed below are initiatives which are currently open or in planning phases where additional funding is expected to be announced.

Emerging Renewables Program (ERP)

The ERP is focused on supporting renewable energy technology at the development, demonstration and supported commercial stages of the innovation chain. Ultimately the aim is to lower the cost of energy produced by renewable energy technologies to a point where they are better able to compete with traditional fossil-fuel technologies. Funding totalling AUD126 million is available under two categories:

- **Projects** – Offers funding for renewable energy and enabling technologies and products as they move through the technology innovation chain. The application process is undertaken in two phases, with funding allocations expected to fall within the range of AUD2 million to 30 million.
- **Measures** – Offers funding for initiatives that involve a renewable energy industry capacity building activity, skills development activity or a preparatory activity for an ACRE Project. The application process is undertaken in one phase and is expected to fund up to AUD2 million, with a maximum funding pool of AUD10 million.

Of the total funding pool of AUD126 million:

- At least AUD40 million will be allocated to assist the development of renewable energy and enabling technologies with the potential to contribute to the generation of large-scale base load power such as wave, geothermal and enabling technologies.
- A further AUD26.6 million will be allocated specifically to assist the geothermal energy sector.

Regional Australia's Renewables (RAR)

ARENA has also launched a new strategic initiative, the RAR program, which aims to demonstrate the viability of renewable energy in regional and remote locations. It will support the deployment of commercially prospective renewable energy technologies, both generation and enabling, in off-grid and edge-of-grid situations. The RAR program has sought community consultation and is expected to be formally launched in the first half of 2013, with funding running for two to three years.

Renewable Energy Venture Capital Fund

The Southern Cross Renewable Energy Fund is a 13-year, AUD200 million venture capital fund, operated by Southern Cross Venture Partners. The fund was established under the Australian government's AUD100 million Renewable Energy Venture Capital Fund (REVC). The government's contribution has been matched by an additional AUD100 million contributed by Softbank China Venture Capital.

With offices and staff located in Sydney, Palo Alto and Shanghai, the fund makes selected investments in Australian renewable energy companies, providing capital and assisting with the management skills they need to commercialize their technologies and succeed in domestic and overseas markets.

Opportunities previously funded by the ASI

ARENA has committed support for programs previously administered by the ASI, including the United States-Australia Solar Energy Collaboration Strategic Research Initiative as well as solar Ph.D. scholars and postdoctoral fellows following the success of ASI's Skills Development Program.

Clean Energy Finance Corporation (CEFC)

The government has established the CEFC through a financial commitment of AUD10 billion to overcome capital market barriers that hinder the financing, commercialization and deployment of renewable energy, energy efficiency and low emissions technologies. The CEFC will be responsible for investing in firms and projects that utilize these technologies as well as manufacturing businesses that focus on producing the inputs required.

The CEFC began operations on 1 July 2013 and offers complementary financing alongside private sector financing for renewable energy and clean energy enabling technologies. Funding will be allocated over a period of five years, with AUD5 billion for renewable energy and technology including geothermal, wave energy and large scale solar power generation. The remaining AUD5 billion will be allocated to the general clean energy stream which may also include renewable energy.

The CEFC is intended to be commercially oriented and make a positive return on its investment. In its early stages the CEFC will be offer loans on concessional commercial terms, with each agreement being considered individually. As the fund matures, the CEFC may choose to offer alternate funding arrangements, including mezzanine finance and other equity-based funding arrangements.

Ethanol Production Grants (EPG)

The EPG program will support the production and deployment of ethanol as a sustainable alternative transport fuel in Australia. The program provides support via a full excise reimbursement, at a rate of 38.143 cents per litre, to ethanol producers for ethanol produced and supplied for transport use in Australia from locally derived feedstocks. The program and grants are administered by the Department of Resources, Energy and Tourism.

R&D Tax Incentive

The major mechanism and program for fostering innovation is a tax-based scheme rewarding expenditure on R&D activities. The R&D Tax Incentive scheme is a broad-based program accessible to all industry sectors. The R&D scheme has recently undergone a significant change, transitioning from the R&D Tax concession to the R&D Tax Incentive. In many instances, activities conducted as a part of renewable energy development may be eligible for the R&D tax incentive. The program offers two tiers of incentive based on the turnover of the company in question:

- A 45 percent refundable tax offset (equivalent to a 150 percent deduction) for eligible entities with a grouped turnover of less than AUD20 million per annum.
- A non-refundable 40 percent tax offset (equivalent to 133 percent deduction) for all other eligible entities. Unused non-refundable offset amounts may be able to be carried forward to future income years.

The R&D Tax Incentive is an entitlement-based, self-assessment program. Registration of activities, via the R&D application, is required within 10 months of the relevant financial year end.

Operating subsidies

Feed-in tariff

There are no national based feed-in tariffs. However, a number of state-based initiatives exist for small-scale generation. The Australian Capital Territory (ACT) has a Large Scale Feed-in Tariff Scheme (the Scheme) which provides the ACT government with power to grant feed-in tariff entitlements up to 210 MW of generation capacity. The first tranche of capacity released under the ACT provided industry with an opportunity to compete for the establishment of up to 40 MW of solar generation (minimum 2 MW generating system capacity). Applications for the 40 MW tranche are closed, but further tranches are expected.

Quota obligation

20 percent by 2020.

Additional information

In addition to the funding initiatives described above, the government also has a number of policy levers and numerous other programs.

Austria

Support schemes

Investments and other subsidies

Small solar plants

Less than 5 kWp investment subsidies are granted for the plants, sufficient for them to achieve a six percent capital yield.

Waste liquor plants

Maximum 30 percent of the investment (not including real estate costs)

- up to 100 MW: EUR300/kW
- 100 MW to 400 MW: EUR180/kW
- more than 400 MW: EUR120/kW

Small hydro plants

- maximum 30 percent of the investment for 500 kW capacity: up to EUR1500/kW
- maximum 20 percent of the investment for 2 MW capacity: up to EUR1000/kW
- maximum 10 percent of the investment for 10 MW capacity: up to EUR400/kW
- in between these set percentages, the maximum is calculated via linear interpolation.

Medium hydro plants (<10 MW)

- maximum 10 percent of the investment
- maximum EUR400/kW and maximum EUR6 million per plant

Operating subsidies

Feed-in tariff[35]

Wind energy:

- cents (ct)9.45/kWh

Solar:

In buildings:

- 5 kWp to 500 kWp: ct18.12/kWh

In open space:

- 5 kWp to 500 kWp: ct16.59/kWh

Geothermal:

- ct7.43/kWh

Sewage gas

- ct5.94/kWh

Landfill gas

- ct4.95/kWh

Compact biomass (such as forest woodchips or straw)

- ct8.9/kWh to ct14.00/kWh, depending on the production capacity (declining tariff)

Waste with high biogenic contingent

- Same as for compact biomass, minus 25 percent

Liquid biomass

- ct5.74/kWh; surplus of ct2/kWh for production in an efficient power-heat cogeneration

Biogas from agrarian production

- ct 12.93/kWh to ct19.5/kWh, depending on the production capacity (declining tariff)

Additional information

Legal

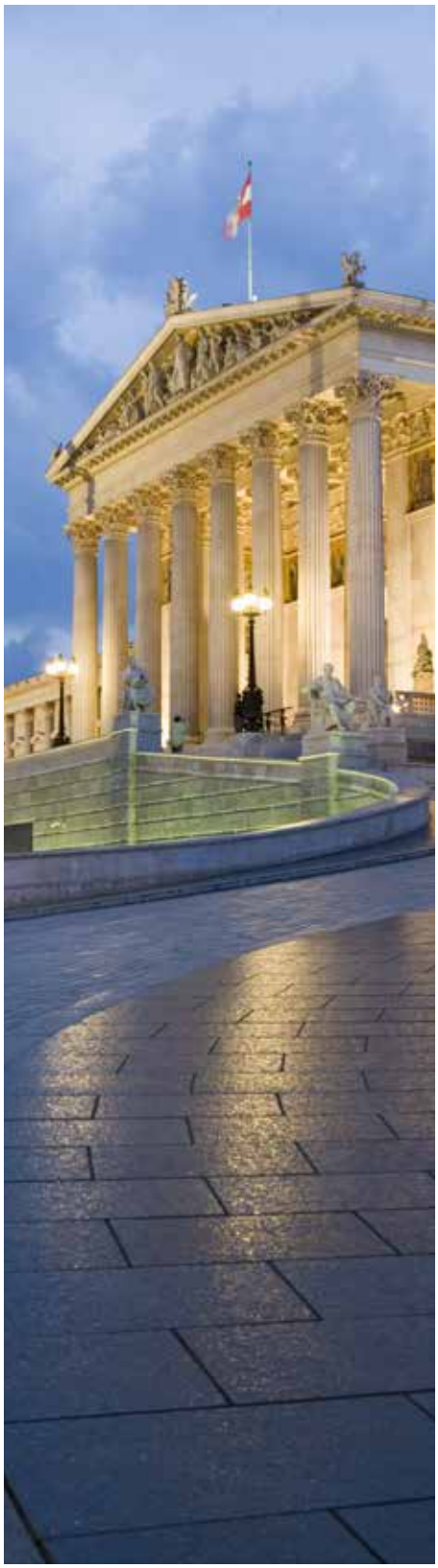
The feed-in tariffs are regulated by the law for the promotion of electricity production from renewable energy resources ("Ökostromgesetz 2012"). The concrete feed-in tariffs have to be determined each year by a decree from the Ministry of Economics.

Duration of the feed-in-tariffs

15 years for liquid and concrete biomass or biogas; 13 years for all other renewable technologies.

Administrative procedures

Applications have to be filed with the Renewable Energy handling Center ("Ökostromabwickklungstelle," http://www.oem-ag.at/).



[35] For applications filed in 2012

Brazil

Support schemes

Investments and other subsidies

Taxes over revenue and imports (PIS and COFINS)

- a special tax regime is applicable in Brazil for producers and importers of biodiesel,[36] which includes two programs: the Social Integration Program (Programa de Integração Social or PIS) and the Contribution to the Social Security Fund (Contribuição para o Financiamento da Seguridade Social or COFINS). The PIS and COFINS taxes due are definitive, meaning that the resale of biodiesel by wholesalers, distributors and retailers is not subject to PIS and COFINS. Under this tax regime, the producers and importers can opt for:
  - a 6.15 percent PIS rate and a 28.32 percent COFINS rate levied on gross revenues derived from biodiesel sales; or
  - a fixed value of PIS and COFINS by cubic meter of commercialized biodiesel Brazilian real (BRL) 26.41 and BRL121.59, respectively.

  Producers opting for the fixed value can obtain certain reductions and exemptions of the amounts due, depending on the supplier of raw material or input applicable to the production (for example, acquisition from castor bean producers or from family farmers).

  Moreover, producers of biodiesel under a non-cumulative regime of PIS and COFINS are able to offset 4.625 percent of presumed credit on acquisition of inputs from individuals or legal entities that supply agribusinesses or agribusiness cooperatives.
- The sugarcane sales for ethanol production are exempt from PIS and COFINS, provided that the tax payer is under the non-cumulative regime.
- There is a special tax regime for producers, importers and distributors of ethanol. The producers and importers may opt for:
  - a 1.5 percent PIS rate and a 6.9 percent COFINS rate levied on gross revenue of ethanol sales;
  - a fixed value of PIS and COFINS by cubic meter of commercialized ethanol – BRL8.57 and BRL39.43, respectively, up to 31 August 2013.

  Recently, the Brazilian government edited Decree 7.997/13, which sets forth that, from 1 September 2013, the fixed value of PIS and COFINS by cubic meter of commercialized ethanol shall be increased to BRL21.43 and BRL98.57, respectively.

  Despite this, the Brazilian government enacted Provisional Measure 613 that grants to the producers and importers a presumed credit in the same values, which leads to a practical effect of zero rate of PIS and COFINS. Also, the taxpayers may opt for this new fixed value and the presumed credit in advance (from 8 May 2013).

  When it comes to distributors of ethanol, the options are (depending on the option of the producer or importer).
  - a 3.75 percent PIS rate and a 17.25 percent COFINS rate levied on gross revenue of ethanol sales;
  - a zero rate for the fixed PIS and COFINS.
- Ethanol sales carried out by retailers and sales negotiated through the Future & Commodities Exchange (Bolsa de Mercadorias e Futuros or BM&F) are not subject to PIS and COFINS.

Federal and state VAT (IPI and ICMS)

- Biodiesel and ethanol sales are not subject to the Industrialized Products tax (Imposto Sobre Produtos Industrializados or IPI).
- Equipment used in the renewable energy generation process is generally exempted from the IPI.
- The State Value-Added Tax on Sales and Services (Imposto Sobre a Circulação de Mercadorias e Serviços or ICMS) can possibly be exempted for some products used for biodiesel or ethanol production. In addition, the ICMS calculation basis may be reduced for interstate operations related to ethanol and biodiesel production and distribution. This reduction depends on individual state law.
- In the same way, operations involving equipment used in the generation of wind and solar energy can possibly be ICMS tax-exempt until 31 December 2015.

Contribution for Intervention in the Economic Domain (CIDE)

- Ethanol sales are not subject to Contribution for Intervention in the Economic Domain (Contribuição de Intervenção no Domínio Econômico or CIDE).

Operating subsidies

Feed-in tariff

Wind: N/A

Biomass: N/A

Hydro: N/A

Brazil currently has no feed-in tariff policy.

[36] Producers and importers are legal entities that are beneficiaries of concessions or authorizations from the National Petroleum Agency (ANP). They are registered as producers or importers of biodiesel in the Special Register held by the Brazilian Internal Revenue Service.

Additional information

Brazil is considered the world's sixth largest investor in renewable energy.[37] Nationwide, 44.1 percent of the Internal Energy Supply (Oferta Interna de Energia or OIE) is renewable,[38] whereas the world's average is 20.3 percent.[39]

Furthermore, the National Bank for Economic and Social Development (Banco Nacional do Desenvolvimento Econômico Social or BNDES) provides a variety of financial programs to stimulate the production of renewable energy. The development of the renewable energies in Brazil is increasing, and almost half of the energy consumed in Brazil is now generated by renewable sources.

The actual scenario is very advantageous for renewable energy. The government expectations are that renewable energy may be responsible for 18 GW out of a total increase of 63 GW in the total installed capacity of the segment over the next 10 years.[40]

According to the Ministry of Mines and Energy, Brazil is especially well situated for becoming a major producer of biodiesel. The country contains a vast amount of arable land, much of which has the right soil and climate for growing a variety of oilseeds.

The growth of biodiesel as an alternative energy source in Brazil is supported by Federal Law 11.097/05, which mandates a minimum of five percent of biodiesel to be mixed with diesel and the monitoring of this mixture in the marketplace. This law also supports the funding of R&D for biodiesel and other energy sources, as well as all phases of production, including the acquisition of equipment and technology.

In a related matter, Brazil is one of the most promising countries for wind energy.[41] The first wind energy auction was held at the end of 2009, in which the government bought 1805 MW of wind energy at a price of BRL148.39/MWh. Encouraged by the success of this auction, the government continues to hold auctions on an annual basis.

Additional benefits not yet in force

Several other incentives being discussed in the Brazilian scenario are also worth mentioning:

The Brazilian Commission of Infrastructure Services (CI) approved PLS 311/09, a federal project law that establishes the Special Regime of Taxation to encourage the development and generation of electric power from alternative sources (Regime Especial de Tributação para o Incentivo ao Desenvolvimento e à Produção de Fontes Alternativas de Energia or REINFA). This project foresees several tax benefits such as exemptions of PIS and COFINS, import taxes and IPI for companies operating under the regime. It is important to emphasize that this is not a law in force, yet. At the present time, it is still awaiting internal procedures in the Federal Senate.

After COP-15, Brazil formalized its commitment to reduce carbon emissions and increased its goal by 2.8 percent. Under the National Policy on Climate Change (law 12.187/09), Brazil has pledged to reduce carbon emissions 38.9 percent by 2020. According to this law, Brazil could grant several tax benefits to encourage the use of renewable energy. At this point in time, these benefits have not yet been implemented.

Recently, the government announced the creation of a program of incentives to the ethanol sector. This program involves several benefits to this market that will be implemented soon:

- Creation of a line of credit of BRL6 billion for the production and storage of sugarcane and ethanol with reduced interests.
- Increasing of the percentage of ethanol to be mixed with gasoline from 20 percent to 25 percent.
- Reduction of chemical input costs, by diminishing the chemical industry costs with the increasing of its PIS and COFINS credits.

Finally, other general benefits that are not specific to renewables may apply, such as the Special Incentives Program for Infrastructure Development (Regime Especial de Incentivos para o Desenvolvimento da Infra-Estrutura or REIDI), SUDAM/SUDENE incentives, and technology innovation. Each one has its requirements for application and, in some cases, depends on government approval.

[37] Global Trends in Renewable Energy Investment 2012 – UNEP
[38] Energetic National Balance (Balanço Energético Nacional) 2012
[39] United Nations Environment Programme – 2012
[40] Brazilian government website, 2013
[41] GLOBAL Wind Energy Outlook of 2012

Canada

Support schemes

Federal investments and other subsidies

The Government of Canada has committed that Canada's total greenhouse gas (GHG) emissions be reduced by 17 percent from 2005 levels by 2020 and that 90 percent of Canada's electricity be generated from sources that do not produce GHG pollution by 2020. Here is a summary of incentives and grants that the federal government has invested in support of these goals.

Income tax incentives

Accelerated Capital Cost Allowance (ACCA)

Advantageous ACCA rates are available for certain types of assets used for clean energy generation and energy conservation:

- Class 43.1 (30 percent declining balance basis) for certain clean energy generation and energy conservation equipment.
- Class 43.2 (50 percent declining balance basis) for certain equipment described in Class 43.1 that is acquired on or after 23 February 2005 and before 2020 that is used for clean energy generation and energy conservation and meeting higher efficiency standards.
- Recent federal budgets continue to expand the list of equipment that qualifies for an ACCA. The current eligible equipment includes:
  - electricity
    - high-efficiency cogeneration equipment
    - small hydroelectric facilities
    - wind turbines
    - fuel cells
    - wave and tidal power equipment
    - photovoltaic (PV) equipment
    - equipment generating electricity from geothermal energy
    - equipment generating electricity from eligible waste fuel.
  - thermal energy
    - active solar equipment
    - district energy equipment that distributes thermal energy from cogeneration
    - heat recovery equipment used in electricity generation and industrial processes
    - ground source heat pump equipment
    - equipment generating heat for industrial processes or greenhouses, using an eligible waste fuel.
  - fuels from waste
    - equipment that recovers landfill gas or digester gas
    - equipment used to produce biogas through anaerobic digestion
    - equipment used to convert biomass into bio-oil.
- The 2013 budget proposes to broaden the eligible equipment in Class 43.2 to include
  - Equipment used to produce biogas using pulp and paper waste and waste water, beverage industry waste and wastewater, and separated organics from municipal waste.
  - A broader range of cleaning and upgrading equipment used to convert eligible gases (biogas, landfill, digester) into biomethane.

Canadian Renewable and Conservation Expense (CRCE)

To promote development and conservation of sources of renewable energy, many start-up expenditures on renewable projects can be grouped in a CRCE pool. CRCE can include intangible expenses such as feasibility studies, negotiation, regulatory, site approval costs, site prep and testing, etc. CRCE can also include test wind turbines that are part of a wind farm, on projects where 50 percent or more tangible costs are reasonably expected to be included in Class 43.1 or 43.2 ACCA. CRCE is fully deductible in any year, can be carried-forward indefinitely or can be transferred to investors through the flow-through share rules.

Scientific Research & Experimental Development (SR&ED) Program

The SR&ED Program is a federal tax incentive program administered by the Canada Revenue Agency that encourages Canadian businesses of all sizes, and in all sectors, to conduct R&D in Canada. Companies, including those carrying on business in clean energy generation, may be entitled to claim an Investment Tax Credit (ITC) if they incur eligible R&D expenditure. The tax credit is based on money already committed and spent by the company. The program is the single largest source of federal government support for industrial R&D, returning as much as a 35 percent federal cash refund.

Sustainable Development Technology Canada (SDTC)

SDTC plays a significant role in bridging the gap between research and commercialization of clean technologies. It does this by fast-tracking clean technologies through their development and demonstration phases, in preparation for commercialization. SDTC is an arm's-length foundation that was created by the Federal government to invest Canadian dollar (CAD)1.09 billion in innovative technologies and projects that deliver economic, environmental, and health benefits to Canadians.

Backed by CAD590 million in funds, SDTC supports projects that address climate change, air quality, clean water and clean soil. The CAD500 million NextGen Biofuels Fund supports the establishment of first-of-kind, large demonstration-scale facilities for the production of next-generation renewable fuels.

SDTC acts as the primary catalyst in building a sustainable development technology infrastructure in Canada. The SDTC portfolio is currently comprised of 245 clean technology projects, for a total value of CAD2.1 billion, of which over CAD1.5 billion is leveraged primarily from the private-sector. In February 2013, SDTC announced its 22nd call for applications, which was open until 17 April 2013

ecoENERGY

The ecoENERGY program targets several areas including biofuels, energy efficiency and renewable energy.

- ecoENERGY for biofuels: The ecoENERGY for Biofuels initiative has a budget of CAD1.5 billion over nine years to boost Canada's production of biofuels. The program runs from 1 April 2008 to 31 March 2017, and recipients will be entitled to receive incentives for up to seven consecutive years.
- ecoENERGY for Renewable Power: The ecoENERGY for Renewable Power initiative has a budget of approximately CAD1.4 billion over 14 years to encourage using renewable energy sources to create electricity. The program runs from 1 April 2007 to 31 March 2021. There are no new agreements signed after 31 March 2011; however, many projects with existing contribution agreements will still receive payments up until 31 March 2021.

Provincial investments and other subsidies

Bioenergy Producer Credit Program – Alberta

To expand Alberta's bioenergy sector, the Bioenergy Producer Credit Program was established to provide production subsidies for a variety of bioenergy products, including renewable fuels, electricity, and heat using waste such as manure and wood chips. In the 2013 budget, the Government of Alberta cancelled future rounds of the Bioenergy Producer Credit Program. However, the government will still be honouring payments to existing grant agreements. The program is valid for bioenergy production from 1 April 2011 to 31 March 2016.

Carbon Capture and Storage (CCS) fund – Alberta

The Alberta government has committed CAD2 billion to advance CCS technology. Approved projects can receive a maximum of 75 percent of the total incremental cost to capture, transport and store CO_2. A maximum of up to 40 percent of the approved funding will be distributed during the design and construction stage based on achieved milestones and up to an additional 20 percent of the approved funding will be granted upon commercial operation. The remaining 40 percent of the funding will be provided as CO_2 is captured and stored over a maximum period of 10 years.

The government of Alberta has awarded funding for two projects from its CAD2 billion CCS fund.

- Alberta Carbon Trunk Line (CAD495 million)
- Shell Quest (CAD745 million)

Innovative Energy Technologies Programs (IETP) – Alberta

The Innovative Energy Technologies Program (IETP) supports the Provincial Energy Strategy (PES), which identifies the need for innovation, research and technology development. Announced in 2004, the IETP supports innovative technology development in the production of Alberta's oil, oil sands, and gas resources. It also supports finding commercial technical solutions to the gas-over-bitumen issue to allow the efficient and orderly production of both resources. Over time, program costs will be recovered through additional recoverable reserves and increased royalties. Successful applicants in the program are provided with royalty adjustments up to a maximum of 30 percent of approved project costs. The industry must provide the remaining 70 percent or more of total project costs. The total industry/government commitment to important new technologies, assuming full subscription of the program, will be more than CAD800 million.

Innovative Clean Energy Fund (ICE) – British Columbia

The Innovative Clean Energy Fund encourages the development of new sources of clean energy and technologies and supports pre-commercial energy technology or commercial technologies not currently used in British Columbia. Since 2008, there are 62 projects with a total amount of CAD77 million that have been approved throughout British Columbia.

SR&ED tax credit – All provinces

Various provinces provide refundable and/or non-refundable investment tax credits (ITC) worth between 10 percent and 15 percent of annual eligible expenditures (depending on the particular province) for all corporations that do business through a permanent establishment situated in that province. Eligible expenditures are generally those that qualify for federal ITC purposes and are generally capped at a maximum annual credit.

Operating subsidies

There are no feed-in tariffs and quota obligations at the federal level but they are implemented in some provinces.

Quota obligation – Alberta

The province of Alberta requires facilities that emit more than 100,000 tonnes of GHG emissions a year to reduce their emissions intensity by 12 percent as of 1 July 2007. Emitters have four choices for compliance with this emissions reduction target:

- make improvements to their operations
- purchase offset credits from other sectors that have voluntarily reduced their emissions
- pay CAD15 a tonne into the Climate Change and Emissions Management Fund, an arm's length organization independent from the government that invests the funds into initiatives and projects that support emission reduction technologies
- purchase Emissions Performance Credits from facilities that have reduced their emissions intensity below the mandatory 12 percent threshold.

Feed-in tariff (FIT) – Ontario

The Ontario FIT program is North America's first comprehensive guaranteed pricing structure for renewable electricity production, and it provides a way to contract for renewable energy generation. It includes standardized program rules, prices and contracts for anyone interested in developing a qualifying renewable energy project. Prices are designed to cover project costs and allow for a reasonable return on investment over the contract term, and they are subject to review periodically. Qualifying renewable technologies include biogas, renewable biomass, landfill gas, solar photovoltaic (PV), waterpower and wind power. As of 31 January 2013, there were 1,728 contracts executed to generate 4,546 MW of electricity.

With the help of the FIT program, Ontario is on the track to be the first jurisdiction in North America to replace coal-fired generation with cleaner sources of power by the end of 2014.

China

Support schemes

Investments and other subsidies

Corporate Income Tax (CIT)

- A reduced CIT rate of 15 percent is granted to qualified advanced and new technology enterprises. Applicable fields include solar energy, wind energy, biomaterial energy, and geothermal energy.
- The Clean Development Mechanism (CDM) Fund is exempted from CIT on the following income:
  - the portion of Carbon Emissions Reductions (CERs) proceeds that are shared by the government
    - donations from international financial organizations
    - interest income derived from capital deposit or national bonds
  - donations from domestic and foreign entities or individuals.
- Enterprises operating CDM projects are allowed to deduct before CIT the CER proceeds that are shared by the government.
- Three years CIT exemption is followed by a 50 percent reduction for another three years of the standard CIT rate for income derived from specified CDM projects. These projects include hydrofluorocarbons (HFC), perfluorocarbons (PFC), and nitrous oxide (N2O) projects, starting from the year in which the revenue from the transfer of greenhouse gas (GHG) emission reductions is first received. According to the new Administrative Measures Governing the Operation of CDM Projects in 2011, any project companies, except for the 41 state-owned enterprises listed, shall apply for approval with the National Development and Reform Commission (NDRC) at the provincial level first. Then the commission would submit preliminary review opinions to the central NDRC for further review. (According to the Old Measures, all CDM project companies applied directly to the central NDRC for approval.) The New Measure also changes the sharing percentage in the proceeds from the transfer of emission reductions units between the government and companies involved in N2O and PFC projects.
- Three years CIT exemption is followed by a 50 percent reduction for another three years of the standard CIT rate for income derived from qualified environmental protection and energy or water conservation projects. This reduction starts from the year in which the first revenue is generated. Applicable fields include biomaterial energy, synergistic development and utilization of methane, and technological innovation in energy conservation and emission.
- Ten percent of the amount invested in the qualified equipment is credited against CIT payable for the current year, with any unutilized investment credit eligible to be carried forward for five tax years. This applies only if such equipment is qualified as special equipment related to environmental protection, energy, or water conservation and production safety.
- Only 90 percent of the revenue derived from the transaction is taken into account for CIT computation purposes. This applies only if such revenue is derived from the use of specific resources associated with the synergistic utilization of resources as raw materials in the production of goods.
- A 150 percent deduction is given for qualified R&D expenses incurred for CIT computation purposes.

Value Added Tax (VAT)

- 50 percent refund of VAT is paid on the sale of wind power.
- 100 percent refund of VAT is paid on the sale of biodiesel oil generated by the utilization of abandoned-animal fat and vegetable oil.
- VAT paid on the sale of goods produced from recycled materials or waste residuals is refundable.
- VAT is exempt on the sale of self-produced goods including recycled water, qualified powdered rubber made out of obsolete tires, retrodden tires and certain construction materials made from 30 percent or more of waste residuals.
- VAT is exempt for sewage treatment, garbage disposal and sludge treatment services.

In November 2011, the government authority expanded the scope of sales of self-produced goods/products by using the prescribed recycled materials, waste residuals and agricultural residuals that are eligible for VAT refund at rates ranging from 50 to 100 percent of the VAT payable. The rates may vary depending on the nature of recycled materials or residuals utilized.

As of 1 April 2013, the taxpayer is further required to meet the local/national pollutant emission requirements in order to receive the VAT incentive for self-produced goods/products from recycled materials.

Vehicle and Vessel Tax

As of 1 January 2012, qualified energy efficient vehicles and vessels enjoy a 50 percent Vehicle and Vessel Tax deduction. Qualified new energy (mainly electric) vehicles and vessels may be exempted from Vehicle and Vessel Taxes.

Financial subsidies and tax incentives available to energy performance contracting (EPC) projects

- Financial subsidies are granted by the central and provincial government agencies respectively. The standard rate of subsidies at the central level is Chinese yuan (CNY) 240 per ton of standard coal saved. The standard rate at the provincial level is no less than CNY60 per ton of standard coal saved. The NDRC and Ministry of Finance jointly announce the qualified energy service companies (ESCO). These companies can apply for financial subsidies on energy preservation management contracts. The list of qualified ESCOs is updated on a regular basis. These financial subsidies are rolled out under the jurisdiction of Energy Performance Contracting (EPC), and they should be taxable for CIT purposes.

- A qualified ESCO taking part in an EPC project will be eligible for a tax exemption in the first three years and a tax reduction by half (an effective rate of 12.5 percent) over the following three years, starting from the tax year in which the revenue from the project first arises.
- An enterprise that invests in special equipment for energy conservation will obtain a credit against its tax payable that equals 10 percent of the investment amount in the year in which the investment is made. Where there is not sufficient tax payable to absorb the credit in the year, the excess credit may be carried forward up to five tax years.
- A qualified ESCO taking part in an EPC project will be provisionally exempt from the Business Tax/VAT on revenues received from the project.
- A qualified ESCO taking part in an EPC project will be provisionally exempt from the VAT on the transfer to the energy user of goods related to the project.
- When, at the end of the term of the energy management contract (EMC), the ESCO transfers to the energy user the assets that have materialized in the course of executing the EPC project, the ESCO can do so as if these assets had been fully depreciated or amortized for CIT purposes. In the same way, when the energy user receives the project assets from the ESCO, the energy user can do so as if these assets had been so depreciated or amortized.
- When the ESCO transfers the project assets to the energy user at the end of the term of the EMC, the ESCO will not have to recognize any revenue to take into account the contributions the energy user has made to the price of the assets.
- An energy user in an EPC project can deduct reasonable expenses actually incurred in accordance with the EMC as, and when, they are incurred for CIT purposes. There is no need to differentiate between service fees and asset prices in claiming such a deduction.

Operating subsidies

Feed-in tariff

With the revised Renewable Energy Law that came into effect in April 2010, the State Bureau of Energy and other departments of the State Council will promulgate guidelines on the full purchase of electricity generated by new energies. According to the revised law, the price of on-grid electricity generated by renewable energies shall be determined by the competent price department of the State Council. The council will consider the difference in areas and the electricity generated by different types of renewable energy companies.

Financial funds/allowance

Special funds are made available to facilitate the development of renewable energy relating to the following activities:

- scientific and technical research, standardization processes and model engineering projects
- renewable energy projects in rural and pastoral areas
- construction of stand-alone electricity generation system in remote areas and islands
- renewable energy resource surveys, evaluation and construction of information systems
- localization of manufacturing facilities used in the renewable energy sector.

The special funds may also be deployed as compensation for the higher costs charged by renewable energy plants and indirectly borne by the grid for the purchase of electricity from these plants. Applicants may apply for such funds with the local finance bureaus and the government agencies in charge of renewable energy projects.

Financial subsidies for energy conservation technologies improvement

During the State's 12th Five-Year Plan period, the central government will continue to arrange special subsidies to support the projects to improve the energy conservation technologies.

In order to achieve optimum energy conservation goals, the financial subsidies are closely linked to the quantity of energy conserved on a project basis. The project companies shall be granted financial subsidies if they fully complete the expected goals of energy conservation.

For projects in the eastern regions of China, companies may be granted a one-time reward subsidy of CNY240 per ton of standard coal based on the annual energy consumption after the completion of the projects. For projects in the central and western regions of China, a one-time reward subsidy of CNY300 per ton of standard coal may be granted.

Financial subsidies for the development of "Model County for Green Energy" program

To promote the "Model County for Green Energy" program, financial subsidies are granted to the following qualified projects in rural areas:

- concentrated provision of methane gas projects
- biomass gasification projects
- biomass briquette projects
- other projects that develop and utilize renewable energies
- rural energy service system.

The amount of subsidies granted is subject to a comprehensive evaluation with reference to the completed investment by the applicant, the level of green energy productivity and the number of users.

Additional information

Quota obligation

The guidelines for quotas in the renewable energy sector have been included in the work plan of the State Bureau of Energy and are expected to be issued by 2013.

Denmark

Focus on renewable energy in Denmark

The long-term target for Danish energy policy is that the entire energy supply, including transport, is to be covered by renewable energy by 2050. This is an ambitious target, and to pursue the target, a number of sub-targets must be achieved initially by 2020.

The targets for 2020 are the following:

- By 2020, the CO_2 emissions must be 34 percent lower than in 1990.
- The energy supply must have decreased by 12 percent compared to 2006.
- Approximately 35 percent of the energy supply must come from renewable energy.
- 50 percent of the electricity consumption must be supplied by wind power.

In addition, the general target is that, as a whole, the terms and conditions of the Danish business community – and the energy sector in particular – must remain stable.

The high ambitions mean that, in Denmark, a strong focus is on energy optimization and renewable energy. Below, we describe some of the political measures taken to achieve the above targets.

Support schemes

Investments and other subsidies

Shift from fossil energy to renewable energy

In Denmark, the primary fuels for production processes include fossil fuels such as natural gas and oil. Danish politicians are committed to shifting from fossil energy to renewable energy by phasing out the use of fossil fuels and replacing them with renewable energy. However, this will not happen overnight, and different incentives are often needed to speed up the process of change.

Therefore, it has been decided that energy optimization projects supporting the energy targets set should be subsidized. The decision includes the establishment of a pool of Danish krone (DKK)500 million per year until 2020, effective as of 1 July 2013. The pool for 2013 is DKK250 million. Depending on company size, the possible subsidy is 45–65 percent of investment costs. Projects that aim to replace fossil fuels with renewable energy for production processes are eligible for investment support from this pool. In addition, projects that aim to replace fossil fuels with district heating for production processes are also eligible for investment support from the pool.

The support received per project may not exceed EUR7.5 million as the support is comprised by the EU's General Block Exemption Regulation.

However, the above support is received on the condition that no other operating support is received for the project.

We believe that many Danish enterprises will use this opportunity to receive support for projects aimed at replacing fossil fuels with renewable energy — in particular, those enterprises that already have or wish to have a green profile. We also believe that the support scheme will make it possible to complete projects where the profitability is uncertain.

Solar cells

With easy access to the sea, Denmark's renewables focus is still on wind energy and offshore wind farms. However, other types of renewable energy such as solar energy are becoming more popular.

In order to support the use of solar cells in private homes as well as in business enterprises, support schemes have been introduced that are now being discussed by the Danish parliament. Basically, these support schemes offer a guaranteed price for the electricity generated that is sold to the public power grid, typically over a 10 year period. After this period, the electricity generated can be sold to the public power grid at market price.

The following support schemes are expected:

- Shared solar panels installed on rooftops in, for example, housing associations
  - DKK1.45/kWh for 10 years if the solar panel system is connected to the public power grid in 2013
  - the subsidy decreases by DKK0.17/kWh per year between 2014 and 2018, depending on the date of grid connection. This means that if the solar panel system is not connected until 2014, the subsidy will amount to DKK1.28/kWh for 10 years.
- Shared solar panels, such as those in housing associations, which are not installed on rooftops but in other areas such as the ground
  - DKK0.90/kWh for 10 years.
- Roof systems
  - DKK1.30/kWh for 10 years if the solar panel system is connected to the public power grid in 2013
  - the subsidy decreases by DKK0.14/kWh per year between 2014 and 2018 depending on the date of grid connection. This means that if the solar panel system is not connected until 2014, the subsidy will amount to DKK1.16/kWh for 10 years, etc.
- Solar panel systems not installed on rooftops, such as those on the ground
  - DKK0.60/kWh for 10 years and, subsequently, DKK0.40/kWh for the next 10 years

The phasing out of the subsidy means that solar panel systems that are connected to the public power grid after 2018 will be eligible for a subsidy of DKK0.60/kWh for 10 years and, subsequently, DKK 0.40/kWh for the next 10 years.

The subsidy or the guaranteed price only applies to the electricity generated that is sold to the public power grid. If the electricity generated is used for the generating entity's own consumption — in the business enterprise, for example — this energy supply will not be eligible for subsidies. However, it will be possible to save money because no electricity charges and no power grid tariffs will be payable. In addition, savings can be achieved on Public Service Obligation (PSO) contributions and the price for power.

The increased subsidies only apply to solar panel systems installed on rooftops that have been established for the purpose of covering the user's own consumption of power. Following the introduction of differentiating subsidies and the above condition regarding the entity's own consumption, the previous limit of 400 kWh has been abolished.

The purpose of differentiating subsidies is to equate the comparatively inexpensive installation of solar cell panels on the ground with solar cell panels installed on rooftops, which is a more expensive investment. Abolishing the maximum limit of 400 kWh also means that it will no longer be profitable to divide solar cell systems in order to receive subsidies.

Biogas

Denmark is an agricultural country, which allows us to produce biogas based on animal fertilizers (liquid manure). As a consequence, it would be natural to launch incentives to produce energy based on biogas.

In the spring of 2012, a new political agreement on energy was reached. Under this agreement, users of biogas receive a subsidy of DKK26/gigajoule (GJ) and a subsidy of DKK10/GJ. However, these subsidies will not become available until they are approved by the EU.

According to Act to Amend the Danish Promotion of Renewable Energy Act, certain rates have been changed. This means that when power is produced based on biogas, a fixed subsidy of either DKK0.793/kWh or a variable additional charge of DKK0.431/kWh is granted.

Moreover, the above energy agreement introduces an additional subsidy of DKK0.26/kWh (converted from DKK26/GJ) and DKK0.10/kWh (converted from DKK10/GJ). The fixed subsidy and the variable additional charge are adjusted on the basis of 60 percent of the increase of the net price index.

The additional charges of DKK0.26/kWh and DKK0.10/kWh are reduced annually by an amount corresponding to the amount by which the price of natural gas for the previous year exceeds any given basic price of DKK53.2/GJ.

The additional total support of DKK0.36/kWh is almost a doubling of the variable support of DKK0.431/kWh. In our opinion, this will definitely increase the incentive for producing power based on biogas.

It has not previously been possible to receive subsidies for using biogas for process purposes in business enterprises. However, in order to increase the incentive, a general subsidy of DKK0.39/GJ will now be introduced, which may be received together with the subsidies of DKK0.26/GJ and DKK0.10/GJ granted for any use of biogas. This also applies to biogas used for transport, which was previously also not eligible for subsidies. In this area, the same support applies to the use of biogas for process purposes in enterprises.

Additional information

The above support and subsidy schemes aim at increasing the incentive for using renewable energy for the production of energy for resale. These schemes can support our national energy consumption and help Denmark achieve its ambitious climate and energy targets, first by 2020 and later by 2050.

France

Support schemes

Investments and other subsidies

The accelerated tax depreciation has not been renewed as of 1 January 2011. However, companies can still apply a declining-balance method to certain equipment used to produce renewable energy. This method, which is optional, consists of multiplying the depreciation rate for the straight-line method by a coefficient determined by law, based on the asset's expected useful life. In practice, when a company applies the declining depreciation method at the beginning of the depreciation period, it can obtain tax depreciation higher than the accounting depreciation.

Biofuels

Biofuels benefit from a partial exemption of the internal tax on petroleum products and of the general tax on polluting activities to compensate for the additional costs arising from biofuel production. Biofuels in gasoline include bioethanol and ethyl tertiary butyl ether (ETBE). This partial exemption is applicable for the period between 2013 and 2015.

Research tax credit

Companies may be granted a research tax credit on their environmental investments if the expenses they incur while carrying on such projects correspond to research activities eligible for this tax credit. The tax credit will be equal to 30 percent of the eligible research expenses that do not exceed EUR100 million and to 5 percent for the eligible R&D expenses exceeding EUR100 million.

The research tax credit will be offset against the corporate income tax due during the year the expenses are incurred. Any surplus tax credit will constitute a receivable for the company that can be used to pay the corporate income tax for the three following years and may be reimbursed afterwards.

Operating subsidies

Feed-in tariff

Remuneration is available for electricity produced from the following sources.

Wind

Onshore wind power plants: EUR0.082/kWh for 10 years and between EUR0.028/kWh and EUR0.082/kWh for the next five years depending on the location of the wind farms and the hours of electricity production. The Court of Justice European Union (CJEU) is currently reviewing this tariff under the EU State aid rules (a decision is expected in July 2013).

- Offshore wind power plants: EUR0.13/kWh for 10 years and between EUR0.03 and EUR0.13/kWh for the next 10 years, depending on the location of the wind farms and the hours of electricity production.

Solar

Due to several recent changes in the law, different tariffs apply to photovoltaic (PV) power plants, depending on the stage of development of the projects (tariffs for the first quarter 2013):

- ground-based PV power plants: EUR 0.8.18/kWh
- simplified building-integrated generating facilities: EUR 0.1817/kWh or EUR0.1727/kWh
- building-integrated generating facilities: EUR0.3159/kWh, EUR0.2764/kWh, EUR0.31.59/kWh depending on the use and the power of the plant

As of 1 July 2011, the above-mentioned tariffs have been adjusted quarterly by the Ministry in charge of energy, depending on the number of grid connection applications received by the distribution system operators over the previous quarter.

A bonus of five percent or 10 percent applicable on the above-mentioned tariffs can be granted for the components of the PV system made in Europe.

Geothermal

- France: EUR0.20/kWh, in addition to an energy efficiency bonus of up to EUR0.08/kWh
- French overseas departments: EUR0.13/kWh, in addition to an energy efficiency bonus of up to EUR0.03/kWh.

Biomaterial (Biogaz)

- Between EUR0.0.8121 and EUR0.1337 /kWh, depending on the power of the plant, in addition to an energy efficiency bonus of up to EUR0.04/kWh.

Hydro

- EUR0.0607/kWh in addition to a bonus between EUR0.005/kWh and EUR0.025/kWh for small power plants, as well as a bonus of up to EUR0.0168/kWh for electricity produced during the winter
- EUR0.015/kWh for ocean hydraulic energy (wave energy, tidal energy and other hydrokinetic energy sources).

Biomass

- EUR0.043/kWh in addition to a bonus between EUR0.0771/kWh and EUR0.1253/kWh depending on the energy efficiency, the nature of the resources used and the power of the plant.

Électricité de France (EDF) and other electricity distributors must purchase the electricity produced by a renewable energies producer at fixed tariffs and for a minimum duration. For example, there is a purchase obligation for EDF during a 15 year period for onshore wind power, geothermal power, and biomaterial power and a 20 year period for offshore wind power, solar power (subject to the date of the operational start up of the facilities) and for hydro power. The tariffs mentioned above correspond to the tariff applied to the power plants located in metropolitan France. Increased tariffs apply with respect to Corsica and overseas departments.

Additional information

Building and Construction Authorization and Permission (BCAP):

The construction of a power plant is subject to the issuance of a building permit. However, solar power plants (subject to certain conditions) and wind turbines smaller than 12 meters are not subject to the issuance of a building permit. Specific authorizations exist for hydro and biomaterial power stations. In addition to the building permit, an exploitation authorization issued by the Minister of Energy is required for power plants with an installed load/installed power higher than 4.5 MW. For power plants with an installed power lower or equal to 4.5 MW, only a declaration is required.

The French government launched "invitations to tender" for PV projects with a capacity exceeding 400 kW in 2013. Bids can be submitted until 16 September 2013. The 400 MW should be divided equally between "innovative" ground-mounted solar plants and traditional roof-mounted PV systems. The purpose of this tender is to encourage development at degraded sites rather than farmland, to take into account the carbon footprint of the project, and to encourage innovation and research and development (R&D).

For the installation of PV, the invitations to tender launched beginning in 2011 are maintained.

Renewal of hydroelectric concessions:

Pursuant to the liberalization of the electricity sector decided by the European Union (EU), the French government launched bidding rounds to renew before the end of 2015 the concessions for 10 lots that represent 49 power structures/stations and two power-increase systems with a total power capacity of 5,300 MW.

The concessions due for renewal are located in the Alps, the Pyrenees and in the center of France. The hydropower stations are currently run by EDF and by a GDF-Suez subsidiary, the Société Hydroélectrique du Midi.

According to a statement issued by the French Ministry in charge of energy, the selection will be made pursuant to the following three criteria:

- The energetic efficiency of the bidders to modernize the existing structures or to create additional equipment.
- The financial remuneration to be paid to the State by the concessionaire, since a capped royalty proportional to the turnover made with the hydropower stations will be paid to the French State and to the local authorities.
- The protection of the ecosystems. (The bidders shall especially respect the commitments convention for the development of a sustainable hydroelectricity, signed on 23 June 2010).

Offshore wind energy:

France has set a target plan for installing 6,000 MW of offshore wind energy by 2020 through a tender process.

In April 2012, the French government announced an award of four offshore wind farm development zones (2 GW of offshore wind energy capacity). On 16 March 2013, the French Energy Regulatory Commission issued a second tender for offshore wind farms with 1 GW of new capacity. The new tender is split into two wind farms: one built off the city of Le Treport in Normandy and the other near the Noirmoutier islands and the Ile d'Yeu islands of the Vendee department of the Pays de Loire along France's Atlantic coast.

The deadline for submission of bids is on 29 November 2013. The result of the new tender should be announced in January 2014 with the construction and commissioning phase of the project is scheduled for 2021 to 2023.

The selection of the bidders will be based on the following criteria:

- price of the electricity produced
- overall characteristics of the projects in terms of industrial and social aspects
- respect for the environment
- consideration for existing fishing activities.

The maximum price of the electricity to be generated by the by new farms was set at EUR220/MWh to avoid producing "sticker shock" for consumers.

Grid access:

The producer/owner of a new power plant has to apply for a grid connection to the public distribution system such as Réseau de Transport d'Electricité (RTE), Electricité Réseau Distribution France (ERDF) or a local distributing company. Some agreements have to be made by the owner of the power plant for the distribution of the electricity that it produces:

- public grid contract (Contrat d'accès au réseau public)
- grid connection contract (Contrat de raccordement)
- contract regarding the use of the equipment necessary for the grid connection (Contract d'exploitation des ouvrages de raccordement).

Germany

Support schemes

KfW Programs

KfW Renewable energies program

- Investments are available in two programs:
  - Standard: in plants for electricity generation from renewable energies photovoltaic (PV), biogas, hydro, onshore wind or geothermal energy) and heat generation in combined heat and power (CHP) systems.
  - Premium: in large plants for heat generation from renewable energies (solar panels, biomass, biogas, deep geothermal energy) as well as CHP installations and heat networks/pumps not promoted under the Standard program.
- Premium funding was initiated to strengthen the establishment of the renewable technologies in the heat market (in the context of the Market Incentive Program by the Federal Ministry for the Environment). These technologies include:
  - solar panel systems with more than 40 square meters gross collector area for the purpose of water heating and/or space heating of properties with three or more residential units or non-residential properties with minimum 500 square meters of usable area
  - biomass plants for the combustion of solid biomass with a rated heat capacity of more than 100 kW
  - beat-controlled biomass CHP with a maximum of 2 MW
  - heat networks with a minimum of 50 percent of heat generated by renewable energies or with a minimum of 20 percent of heat generated by solar energy and with heat sales of a minimum of 500 kWh per year and meter of route
  - heat storages with more than 10 cubic meters
  - biogas pipes with a minimum length of 300 meters (for biogas used for CHP purposes or as biofuel)
  - heat pumps with a rated heat capacity of more than 100 kW
  - facilities for the development and use of deep geothermal energy with a drilling depth of more than 400 meters and a minimum thermal fluid temperature of 20°C.
- The funding shall be granted as a long-term, interest-reduced loan up to 100 percent of the investment costs (excluding VAT), maximum total lending of EUR25 million per project (Standard) and EUR10 million per project (Premium).
- Additional reduced interest rates are available for small to medium-sized enterprises (Premium).
- Eligibly for funding depends on the program part.
- In 2012, KfW provided a total credit volume of around EUR365 million for Premium. Since initiating the program, over 10 years ago, credit volume over EUR2 billion for both programs has been granted.
- Loan-term: 5, 10 or 20 years with a repayment-free, start-up period of up to three years.

KfW offshore wind energy program

- Special promotion of offshore wind energy projects within the 12 nautical mile zone or the German Exclusive Economic Zone (EEZ) of the German North and Baltic Sea. Project financing for up to 10 offshore wind parks is available in the form of:
  - direct loans granted by bank syndicates (a maximum of EUR400 million/project)
  - finance packages comprising loans from KfW on-lent through a bank
  - direct loans limited to 70 percent of the total debt capital required per project and EUR700 million per project
  - direct loans to finance unforeseen additional costs (a maximum of EUR100 million per project).
- Eligible to apply: all project companies investing in the German EEZ or in the 12 nautical mile zone of the North Sea and the Baltic Sea.
- Maximum funding: EUR5 billion.
- Loan-term: up to 20 years with a repayment-free start-up period of up to three years.

Incentives for energy efficiency and corporate environmental protection, housing, home modernization and the reduction of carbon emissions

- Low interest rates on loans and grants used for the efficient production of energy, usually accessed by SMEs.
- Subsidies for new privately owned buildings or buildings which are brought to a new standard in renewable energy or energy savings.
- Reduced interest rates, abatement of instalment payments on loans, direct subsidies for modernizing buildings and reducing carbon emissions.
- Budget: around EUR900 million for energy-efficient house modernization in 2011.

Sources: KfW Bankengruppe, Berliner Morgenpost (9 April 2011), BMWi Förderdatenbank

Operating subsidies

Feed-in tariff

Remuneration is available for electricity produced. All tariffs and ranges apply to plants commissioned in 2012. Plants commissioned prior to 1 January 2012 are subject to the feed-in tariffs that were in force in the year of first commissioning.

Hydro

- Depending on nominal generation capacity of the individual plant:
  - up to 5 MW: cent (ct)6.3/kWh to ct12.7/ kWh
  - more than 5 MW: ct3.4/kWh to ct5.5/kWh.
- Degression: 1 percent per annum (p.a.).

Biomethane

- Basic premiums depending on nominal generation capacity of the individual plant: ct6.0/kWh to ct14.3/ kWh.
- Additional premiums depending on the feed-stock boiled up to ct8/kWh.
- Using the fermentation of organic waste, depending on nominal generation capacity of the individual plant: ct14.0/kWh to ct16.0/kWh.
- Additional gas preconditioning bonus (up to ct3/kWh) for all above available if nominal generation capacity of plant does not exceed 5 MW.
- Using fermentation of manure: ct25.0/kWh.
- Degression: two percent p.a.

Other methane gas (mine, landfill, sewage sludge gas, etc.)

- Depending on nominal generation capacity of the individual plant: ct3.98/ kWh to ct8.60/kWh.
- Degression 1.5 percent p.a.
- Additional gas preconditioning bonus for all the above (up to ct3/kWh).

Geothermal

- ct25.0/kWh.
- Degression: five percent p.a. from 2018 onward.
- Additional premium for using petrothermal technologies: ct5/kWh.

Wind

Onshore

- Basic feed-in tariff for a wind turbine (WT) commissioned in 2012: ct4.87/ kWh.
- First five years: basic increased feed-in tariff of ct8.93/kWh.
- Increased feed-in tariff for a WT fulfilling technical requirements for system intervention of the TSO ("Systemdienstleistungsbonus"):
  - ct0.48/kWh for the time the basic increased feed-in tariff is received and, if the newly installed WT is commissioned before 31 January 2015.
- Degression: 1.5 percent p.a., when commissioned after 1 April 2012.
- Repowering bonus of ct0.5/kWh for the time the basic increased feed-in tariff is received and granted for sites where a WT with higher nominal capacities are commissioned (pre-degression). It is required that the replaced WT was commissioned before 1 January 2002.
- Direct distribution is possible at higher market rates, pursuant to Sec 33a-33f EEG.

Offshore

- Basic: ct3.50/kWh.
- First 12 years: ct15/kWh (extended depending on water depth and distance from shore).
- Degression: zero percent p.a. until 2017; 7 percent p.a. from 2018 onward.
- Grid connection from the offshore switch station to the shore borne by the TSO (Sec 17 par 2a EnWG).

If a WT has been commissioned before 1 January 2018, the plant operator can claim a feed-in tariff of ct19/kWh for the first eight years. This is not in contrast to the regular feed-in tariff of ct15/kWh for the first 12 years.

Solar

In and on buildings

- Depending on the amount of nominal generation capacity: ct11.02/kWh to ct15.92/kWh as of April 2013.
- Degression: 1 percent per month plus a maximum of 1.8 percent points per month if a pre-defined threshold of nominal generation capacity added based on the annual extension corridor ("Zubaukorridor") is exceeded, according to Sec 20a EEG. The annual extension corridor amounts to 2.5GW to 3.5GW. The degression is adjusted on a quarterly basis based on extrapolated annual amounts of nominal generation capacity added.

In open spaces

According to the Renewable Energy Act, plants in open spaces are only subsidized if they were erected in areas being subject to an approved land-use plan that has been:

- approved prior to 1 September 2003 or
- approved after 1 September 2003 where plants were erected either on land to be devoted to different usage (Konversionsfläche) or alongside freeways (Autobahnen) or railroad lines.

Up to a nominal generation capacity of 10 MW: ct11.02/kWh as of April 2013, degression is equivalent to plants erected on buildings.

Additional information

Legal: The feed-in tariffs are regulated in the Renewable Energy Act (Gesetz für den Vorrang Erneuerbarer Energien or Erneuerbare-Energien-Gesetz).

Duration of feed-in tariffs: Usually 15 to 20 years.

Administrative procedures: Applications must be filed with the Ministry of Environment or the governmental-owned bank KfW.

India

Support schemes

Investment and other subsidies

Foreign Direct Investment ('FDI')

The growth of the clean energy sector in India has been impressive. India permits FDI up to 100 percent in the sector under the automatic route in Renewable Energy Generation and Distribution projects that are subject to the provisions of the Electricity Act of 2003. Under the Act, no prior approval of regulatory authorities is required.

Tax holiday under the domestic income tax law

Undertakings engaged in the generation and/or distribution of power has been offered a 10-year tax holiday for renewable energy plants if power generation begins before 31 March 2014. However, the plants have to pay a minimum alternative tax at the rate of approximately 20 to 21 percent (based on the income), which can be offset in future years (10 years).

It is likely that a new Direct Taxes Code will be made effective as of 1 April 2014. The draft provisions of the Direct Taxes Code provide for alternative mechanisms for providing tax incentives to power companies. As regards this incentive, almost all revenue and capital expenditures will be allowed as a tax deduction upfront instead of claiming amortization/depreciation on the capital expenditure. In addition, there would be no tax holiday.

Financing

The Indian Renewable Energy Development Agency has been established under the Ministry for Non-Conventional Energy Sources as a specialized financing agency to promote and finance renewable energy projects.

Operating subsidies

Feed-in tariff

Generation Based Incentives (GBI)

To attract foreign investors, the government has taken several initiatives such as introducing GBI schemes to promote projects under Independent Power Producers (IPP) mode for wind and solar power.

Accelerated depreciation

Under the domestic income-tax law, companies involved in renewable energy such as solar and wind was provided with accelerated depreciation at 80 percent. However, the government has restricted the accelerated depreciation of 80 percent to windmills installed on or before 31 March 2012. Windmills installed after 31 March 2012 will be eligible for depreciation of 15 percent instead of 80 percent on the written-down value method.

It may be noted that 80 percent depreciation is still available for solar power projects.

Further, power companies have been provided with an option to claim depreciation under straight line method. However, a company can claim either accelerated depreciation or GBI (but not both).

Quota obligations

Renewable Purchase Obligation (RPO)

The current contribution of renewable energy is 12.5 percent of India's total generation installed capacity. The Ministry of New and Renewable Energy estimates that this contribution will increase to around 16 percent or 17 percent by the end of the 12th Five Year Plan in 2017.

RPO is one of the tools for implementing this ambitious goal. Under RPO rules, distribution companies, open access consumers and captive consumers are obligated to buy a certain percentage of their power from renewable sources of energy. We believe that going forward; the enforcement of RPO will create the volumes needed for the Renewable Energy Certificate market.

Additional information

Jawaharlal Nehru National Solar Mission (JNNSM)

The JNNSM is a transformational initiative for solar energy development in India. Its primary focus is to establish an enabling environment for solar technology, both at a centralized and decentralized level, with 20,000 MW of grid-connected solar power capacity by 2022.

Related to this initiative, the government has launched the Payment Security Mechanism for Grid Connected Solar Power Projects and a Renewable Energy Certificate Mechanism. The government has also created the Amendment in National Tariff Policy for enabling a solar-specific Renewable Portfolio Obligation.

The JNNSM program has been designed as a three-stage process with targets set under each phase. Phase 1 (up to 2013) will focus on capturing available options in solar thermal; promoting off-grid systems to serve populations without access to commercial energy, and making a modest increase in capacity to grid-based systems. Under Phase 2 (2013-2017), 10,000 MW grid-connected solar plants will be implemented, including rooftop and other small-scale applications. For off-grid solar applications, the cumulative target for Phase 2 is 1,000 MW. Besides the national program, solar programs at the state level also exist.

The policy framework has generated tremendous interest in this space, and the response JNNSM program has received from the market is overwhelming.

Carbon Credits and Clean Development Mechanisms (CDMs)

The Clean Development Mechanism (CDM) is an arrangement under the Kyoto Protocol. The mechanism allows developed (Annex 1) countries with a green house gas (GHG) reduction commitment to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions in their own countries. The developed country gets carbon credits, while the developing country gets capital and clean technology.

India is the second largest seller of carbon credits. The country is also a leading destination among non-Annex 1 countries

with regards to CDM implementation. It has the highest rating of any CDM host country, with 32 percent of the world total of 1,081 projects registered with CDM EB.[42]

Tax and fiscal incentives

Tax cost forms a substantial part of Engineering Procurement and Construction (EPC) project costs, which can range from 10 percent to 20 percent of the total renewable energy project cost. Considering the special focus on renewable energy, the Central Government has given various incentives on setting up the renewable energy power project which includes exemption from customs and excise duties on specific goods required for setting up the renewable energy projects.

However, these exemptions are subject to the fulfilment of prescribed conditions and compliances to be undertaken by the EPC contractor or IPP.

Furthermore, some of the state governments have provided the incentives in the form of a VAT at a reduced rate (5 percent) whereas the other states levy a VAT of 15 percent. Given the vast variety of tax and fiscal incentives available, one needs to quantify the tax cost and explore the structuring options before investing in the solar sector.

Tax planning

For investors based overseas, an entry strategy for India is highly important. To achieve tax efficiency with regard to taxability of gains on sale of shares, many companies opt to route the investments through an intermediate entity in a tax-friendly jurisdiction.

Typically, renewable energy companies in India procure equipment and services from overseas. In this scenario, contract structuring from a tax perspective helps renewable energy companies to achieve major tax efficiency upfront. In the case of multiple parties coming together and bidding as a consortium, contract structuring is critical to avoid the risk of the consortium being taxed as an Association of Persons.

In India, based on the nature of operation, different forms of entity can be established. Operating through a limited liability company by forming a joint venture/wholly owned subsidiary could be one of the possible options where the foreign company is looking at a long-term presence in India. However, one needs to rule out other relationships and entities before proceeding with these options.

In addition, the renewable energy sector is capital intensive, so investing companies need to carefully explore the options available for funding their projects and repatriating profits in a tax-efficient manner.

EPC contracts

The taxation of EPC contracts offers various challenges and opportunities. The EPC contract can be structured as a single contract or as divisible contracts. The selection of either option can cause a huge impact on the tax costs and working capital of the project.

The selection of schemes for the payment of indirect tax liabilities on renewable energy power plant construction offers various tax planning avenues for renewable energy power projects. Furthermore, any scheme can involve difficulties in compliance, such as a restriction on procurement of goods outside the state.

The procurement of goods and supply chain structuring play a vital role in the solar power project costs, since the tax rates are different for procurement of goods from outside India, from other states or from the same state.

Generally, the EPC contractor also undertakes the operation and maintenance of the power plant. The taxability of an Operation and Management (O&M) contract has been the subject of disputes in various decisions.

The exemption provided under the Customs and Excise Act is subject to various conditions and compliances. Hence, it is very important to ensure the compliance of the respective conditions as otherwise the benefits envisaged may not be available.

The proposed introduction of the Goods and Services Tax will also play a major role in the costing of a renewable energy power project.

Given the vast variety of tax and fiscal incentives available, one needs to quantify the tax cost and explore the structuring options, before planning the capex, at the tender/bid stage and also at the time of awarding contracts, so that tax costs are optimized.

[42] Point Carbon and UNFCCC

Ireland

Support schemes

Investments and other subsidies

Corporate tax relief

Irish tax law provides tax relief for corporate equity investments in certain renewable energy projects. Commonly known as Section 486B relief, the law allows a deduction from a company's profits for its direct investment in new ordinary shares in a qualifying renewable energy project. There are a number of conditions that must be satisfied for the investment to qualify for the relief, and the relief is capped at certain levels. Examples of renewable energy projects that would qualify for the relief include those in the solar, wind, hydro and biomass categories.

EII scheme

In 2011, the Irish government introduced the Employment and Incentive Investment (EII) scheme, designed to promote the creation of jobs and encouraging R&D activities. The EII scheme provides tax relief for eligible individuals who investment in certain qualifying small and medium sized trading companies. The relief takes the form of a deduction from an individual's taxable income in the year of investment (subject to certain restrictions), taken after a three-year investment term has passed (subject to certain conditions being met). A number of conditions must be satisfied for an investment to qualify under the scheme. However, the legislation includes some helpful provisions designed to ensure that renewable energy projects meet the qualifying criteria.

R&D tax credit

A company can claim an additional tax credit of 25 percent on incremental qualifying expenditure incurred on R&D activities. Qualifying expenditure includes expenses such as salaries, overhead, materials consumed, etc. A tax deduction is also available against the company's profits at 12.5 percent. This can result in a 37.5 percent net subsidy for a trading entity (12.5 percent corporation tax deduction and a 25 percent R&D tax credit). The tax credit can be used to shelter a group's corporation tax liability or carried forward indefinitely to reduce a company's future tax liability. Where there is limited or no current or preceding corporation tax liabilities, a company may claim to have any remaining credit offset against current year payroll taxes.

Accelerated capital allowances

Companies are entitled to claim accelerated capital allowances (tax depreciation) of 100 percent for capital expenditures incurred on the purchase of certain energy-efficient equipment or vehicles.

Operating subsidies

Quota obligation

Under an EU Directive, the Irish government has an obligation to ensure that, by 2020, 16 percent of all energy consumed in Ireland across the electricity, heat and transport sectors is from renewable sources. The Irish government has planned that the 16 percent overall target will be achieved by 40 percent of electricity consumed being from renewable sources, 12 percent of consumption in the heat sector being from renewable sources, and 10 percent of consumption in the transport sector being from renewable sources.

Feed-in Tariff

Ireland currently has two Renewable Energy Feed in Tariff (REFIT) schemes open for applications. The REFIT 2 scheme applies to onshore wind, small hydro and landfill gas. The REFIT 3 scheme applies to biomass technologies. The schemes operate by guaranteeing a minimum floor price for supplies of energy generated from renewable sources. The 2013 reference prices for the REFIT 2 and REFIT 3 schemes are as follows:

REFIT 2	
Category	**Price**
Onshore wind (above 5 MW)	EUR69.235/MWh
Onshore wind (equal to or less than 5 MW)	EUR71.664/MWh
Hydro (equal to or less than 5 MW)	EUR87.455/MWh
Biomass Landfill Gas	EUR85.026/MWh

REFIT 3	
Category	**Price**
AD CHP (units less than or equal to 500 kWe)	ct15.7/kWh
AD CHP (units of greater than 500 kWe)	ct13.6/kWh
AD (non CHP) (units less than or equal to 500 kWe)	ct11.5/kWh
AD (non CHP) (units of greater than 500 kWe)	ct10.4/kWh
Biomass CHP (units less than or equal to 1500 kWe)	ct14.6/kWh
Biomass CHP (units of greater than 1500 kWe)	ct12.5/kWh
Biomass combustion (non-CHP)	ct9.9/kWh for using energy crops ct8.9/kWh for all other biomass

The energy supplier is also entitled to a balancing payment for every kWh purchased from the generator. The balancing payment under REFIT 2 and REFIT 3 is fixed at EUR9.90/MWh. The full EUR9.90/MWh is payable to the supplier where the market payment is equal to or less than the reference price. If the market price exceeds the reference price but is less than the combination of the reference price plus balancing payment, the balancing payment shall be EUR9.90 less the amount by which the market payment exceeds the reference price. However, where the market payment is equal to or greater than the combination of the reference price plus balancing payment, no balancing payment is payable.

Additional information

Ireland as a hub for green asset management

Global investment is booming in green and clean-tech industries that produce renewable energy, increase energy efficiency or provide sustainability solutions. Major investors include pension funds, life funds, large corporations and high net worth individuals. These investors are attracted to a variety of fund structures to diversify the risk between different green investments and different geographies.

With almost 25 years expertise and experience, Ireland has one of the most sophisticated investment management industries globally. This includes expertise in fund servicing, administration and asset management. Fund promoters are attracted to Ireland due to its open, transparent and well-regulated investment environment, its strong emphasis on investor protection, its efficient tax structure (with a 12.5 percent corporate tax rate) and its dynamic, innovative business culture.

In addition to Ireland's credentials as a leading investment funds location, the case for Ireland as a global center for green asset management is even more compelling. For many years a large number of Irish companies have successfully developed renewable and sustainable projects and related technologies on a global scale. As a result, Ireland has been able to create an unparalleled talent pool with the requisite expertise to support green investments. The combination of these two factors sets Ireland apart.

A number of green investment funds have established operations in Ireland and all indications would suggest that the scale of this activity will increase considerably in the short to medium term. A public private partnership body known as the Green IFSC (GIFSC) has been established to promote Ireland as a center of excellence for green asset management.

Italy

Support schemes

Investment and other subsidies

Italy has a well-developed system of incentives for renewable energy generated from solar, wind and biomass. In particular, the Ministerial Decree of 5 July 2012 – which introduced the so-called Fifth Energy Incentives Plan – revises the system of incentives for the production of electricity from photovoltaic (PV) plants. At the same time, the Ministerial Decree of 6 July 2012 establishes new procedures aimed at supporting the production of electricity from Renewable Energy Source-Electricity (RES-E) plants (other than the PV ones) with a capacity of at least 1 kW. Under this Decree, such plants must be "new, totally rebuilt, reactivated, repowered/upgraded or renovated plants which will be commissioned on or after 1 January 2013" (More information at the Gestore dei Servizi Elettrici website: gse.it).

To safeguard investments on projects under completion, the Ministerial Decree of 6 July 2012 provides that the following plants may apply for support on the terms and conditions specified in the Ministerial Decree of 18 December 2008:

- Plants authorized before 11 July 2012 (the Decree's enforcement date) and commissioned by 30 April 2013
- Plants authorized before 11 July 2012, fuelled by waste (as per article 8, paragraph 4C of the Decree) and commissioned by 30 June 2013. The feed-in tariffs granted or the multiplicative factors for the green certificates issued to these plants will be decreased as indicated in article 30, paragraph 1 of the Decree.

The Decree of 6 July 2012 also covers the procedures under which plants already in service and supported under the Ministerial Decree of 18 December 2008 must pass in 2016 from the Green Certificates scheme of incentives to new support schemes as defined in the Decree.

Operating subsidies

Feed-in tariff premiums

Solar

Solar plants that began operations before 31 May 2011

- According to the Ministerial Decree of 6 August 2010 (the Third Energy Incentive) there is a fixed premium (a bonus on top of the market price of electricity).
- The size of the premium depends on:
  - type of plant
  - nominal output
  - when the plant started to operate.
- The premium ranges from EUR0.251/kWh to EUR0.402/kWh.
- The premium will be paid for 20 years after the plant starts operating. For thermodynamic plants, the premium will be paid for 25 years.

Solar plants that began operations between 31 May 2011 and 31 December 2012

- According to the Ministerial Decree of 5 May 2011 (the Fourth Energy Incentive) a fixed premium computed on the basis of the type and the nominal power of the plant is available up to 31 December 2012.
- In the first six months of 2012 the premium ranges from EUR0.148/kWh to EUR0.274/kWh and in the second six months of 2012 the premium will range from EUR0.133/kWh to EUR0.252/kWh.
- This type of subsidy will expire on 31 December 2012.
- The premium will be paid for 20 years after the plant starts operating, as long as it does so by 31 December 2016. For thermodynamic plants, the premium will be paid for 25 years.

Solar plants that began operations after 27 August 2012

- The Ministerial Decree of 5 July 2012 became effective on 27 August 2012 and introduced the Fifth Energy Incentive Plan, thus redefining the Italian incentive system for the production of PV energy.
- Based on the new scheme, some plants can still have access to incentives granted under the Fourth Energy Incentive Plan. In particular, the Fourth Energy Incentive Plan shall continue to apply to:
  - Plants installed in public buildings and areas owned by the Public Administrations, commissioned before 31 December 2012.
  - Small PV plants integrated into buildings with innovative features (BIPV) and concentrating PV plants commissioned before 27 August 2012.
  - Large PV plants that are positioned in the relevant Public Registers as plants that do not exceed a given applicable cost limit and whose certificates of completion are submitted for the registration within seven months – or nine months in the case of plants with a capacity of above 1 MW – after the publication of the related ranking list.
- In accordance to the Ministerial Decree of 5 July 2012, the incentives for new PV plants will cease and therefore no longer apply once the relevant total expenditure reaches EUR6.7 billion.
- In accordance with the new tariff system, the most important change is that plants with a capacity not exceeding 12 kW (including upgraded, renovated, repowered plants with an

increase in capacity not exceeding an overall capacity of 12 kW) now have direct access to the feed-in tariff in compliance with the procedures set by the Manager of Electricity Services (Gestore dei Servizi Energetici or GSE). In the case of plants with a capacity up to 20 kW, they may have access to the same incentives upon condition that a 20 percent tariff reduction is accepted.

- In the case of the Fifth Incentive Plan, the tariff scheme applies as follows:
  - For plants with capacity up to 1 MW, a feed-in tariff applies based on the electricity sold to the GSE.
  - For plants with capacity exceeding 1 MW, a premium tariff is paid based on the electricity generated which is not sold to the GSE.
  - For self-consumption, a special tariff applies.

Ministerial Decree of 6 July 2012 - Incentives awarded to RES-E plants other than PV plants

Types of incentives

- The Ministerial Decree of 6 July 2012 establishes that the support shall be granted for the net electricity generated by the plant and injected into the grid. Therefore, self-consumed electricity is not eligible for incentives.
- The net electricity generated and injected into the grid is the lower value between the net electricity generated and the electricity actually injected into the grid by the plant.
- The Decree provides for two separate support schemes, based on plant capacity, renewable source used and type of plant:
  - An inclusive feed-in tariff for plants with a capacity of up to 1 MW. This capacity is the sum of a base feed-in tariff (whose value is defined for each source, type of plant and capacity class) and of any premiums, such as high-efficiency, emission reductions, etc.
  - An incentive for plants with a capacity of above 1 MW and for those with a capacity of up to 1 MW not opting for the all-inclusive feed-in tariff. This incentive is the difference between the base feed-in tariff – increased by the premiums, if any, for which the plant is eligible – and the hourly zonal electricity price. The electricity generated by plants benefiting from the incentive remains the property of the producer.
- Access to the incentives according to the Ministerial Decree of 6 July 2012 is an alternative to net metering ("scambio sul posto") and to simplified purchase/resale arrangements ("ritiro dedicato").

Feed-in tariffs

- The Ministerial Decree of 6 July 2012 identifies the value of the base feed-in tariffs for each source, type of plant and capacity class in the case of plants commissioned starting from 2013. The tariffs will decrease by 2 percent in each of the subsequent years until 2015, except in case of failure to reach 80 percent of the yearly capacity quota required for the registries and the auctions.
- The value of the base feed-in tariff is the one applicable upon the date of the plant's commissioning. The GSE will award the all-inclusive feed-in tariff or the incentive, calculated from the value of the base feed-in tariff, as of the date of entry into commercial operation of the plant.
- For plants commissioned prior to the closing of the period of submission of applications for participating in the Registries or Auctions and whose ranking position in the relevant Registries does not exceed the applicable cost limit, the GSE will grant the base feed-in tariff applicable upon the date of closing of the same period.
- The Decree also provides for a number of premiums on top of the base tariff for plants that meet specific operating requirements.

Additional information

Limit on public expenditure to support renewable energy:

The overall public expenditure should not exceed EUR5.8 billion per year.

Authorization procedures:

To accelerate the overall authorization process the Renewable Energy Decree simplified the procedures for building and operating renewable energy plants.

The new Single Authorization procedure (Autorizzazione Unica or AU) now takes only 90 days rather than 180 days. However, this period does not include the time required for the environmental impact assessment (Valutazione di Impatto Ambientale). The regulations that implemented the Renewable Energy Decree identified which "substantial modifications" to a project require a new AU and which modifications can be authorized by following a simplified procedure.

The new provisions of the AU apply to all authorization procedures that started after the Renewable Energy Decree came into force. Authorization procedures that started before then will continue to be subject to the previous authorization procedure. The Renewable Energy Decree also introduces a new simplified authorization procedure for small plants (the "PAS"). However, where specific environmental or landscape authorizations are required, the AU procedure remains mandatory.

Taxation:

Corporations are subject to IRES (a corporate income tax) which is levied at 27.5 percent and to IRAP (a regional business income tax) with a rate that varies from 3.9 percent to 4.82 percent.

Robin Hood Tax

Law Decree no. 138/2011 (the Mid-August measure) sets out certain significant changes to the corporate income tax surcharge for the energy industry (the so-called "Robin Hood Tax").

The Robin Hood Tax applies to the solar and wind farm business if the following thresholds are both exceeded in the previous fiscal year:

- EUR10 million of gross revenues
- EUR1 million of corporate income tax base.

Such surcharge applies to companies involved in the following business activities:

- transmission and distribution of electricity
- transportation and distribution of gas
- production of renewable energy (biomass, photovoltaic, wind).

The rate of the surcharge has been increased by 4 percent (i.e. from 6.5 percent to 10.5 percent) for fiscal years 2011, 2012 and 2013. As a result, the aggregate Corporate Income Tax rate which was applicable to companies involved in the energy business and was originally at 34 percent (27.5 percent plus 6.5 percent) starting from fiscal year 2009, is now fixed at 38 percent (27.5 percent plus 10.5 percent) for years 2011, 2012 and 2013.

Non-operating or dormant companies

The Mid-August Measure also introduced the following changes to the rules governing "dormant" companies, to take effect as of 2012:

- an increase of IRES to 38 percent for companies that are considered as dormant
- an extension of this rule to companies that have incurred in fiscal losses (included in their tax returns) for three consecutive years.

A company is considered dormant if following applies:

- It is subject to a minimum tax charge as far as IRES and IRAP are concerned.
- Limits are in effect to the off-setting or a refund request for any VAT credit accrued.

The minimum income level is calculated by applying specific percentages to certain balance sheet items. In addition, a specific test is conducted to determine whether a company is dormant, comparing the actual values reported in the statement of income with presumed values. If the actual values are below the presumed ones, the company is deemed to be dormant.

Depreciation

Wind and solar plants are subject to ordinary amortization/depreciation tax rules.

Japan

Feed-in tariffs (FIT) for renewable energy became available in Japan in July 2012. The feed-in tariff rate for solar energy for the period up to March 2013 was Japanese yen (JPY)42/1kW for the operation period of 20 years. In order to get the feed-in tariff, the applicant is required to have the following conditions:

1. The power plant development plan is approved by the government.
2. The development plan applied for interconnection to transmission line with the electric power company.

Applicants who fulfilled these two conditions by February 2013 were awarded JPY42 feed-in tariff, which is applicable without time limit. While the approved development plan with the feed-in tariff of JPY42/1kW was accumulated to be 11,010 KW in the period from July 2012 to February 2013, only 420 KW, i.e. less than four percent of the approved plan, became operational in the same period. The feed-in tariff for the period from April 2013 was reduced by 10%, i.e. from JPY42 to JPY37.8.

It is reported that some plans might have been delayed due to the limited supply of equipment. In addition, it also is reported that some plans might have received approval to secure JPY42 feed-in tariff without a concrete investment schedule. A plan with a concrete investment schedule might have been crowded out by the latter plans from the interconnection discussions with the electric power companies. A plan with a concrete investment schedule is a sound one, whereas the plans which are merely for securing JPY42 FIT is not. As the interconnection is physically limited, such a crowding-out may have taken place. As a result, the government may want to review the approved plans for their concrete development schedules.

Mexico

Support schemes

Mexico's Income Tax Law (ITL) provides a 100 percent deduction incentive for taxpayers who carry out investments in renewable energy equipment. Qualifying sources like sun, wind, water and geothermal energies, as well as biomass fuel equipment, are eligible for this incentive.

Additional information

FIDE (Trust for energy saving) energy efficiency

Projects are funded for the installation of new high efficiency technologies by micro, small and medium enterprises, municipalities, industries and service sector companies. These technologies are also tax deductible as investments. The following equipment is included in this program: air conditioners, water pumps, air compressors, high-pressure sodium vapour (HPSV) lamps, light-emitting diode (LED) lighting, fluorescent compact lamps, electric motors, renewable energy systems for refrigeration, ventilation, speed control, and other energy efficiency equipment. Applicants must file a request for the fund and be approved.

FIDE business eco-credit

Projects up to USD30,000 are funded for replacing obsolete equipment with high efficiency equipment. The program applies to companies of any size in the private sector. Besides the funding, the companies are awarded a 10 percent scrapping bond. Technologies financed under this program include air conditioning, commercial refrigeration systems, electric motors, LED lighting, high efficiency lighting and electrical substations. Applicants must file a request for the fund and be approved.

Fund for hydrocarbon projects

In 2012, the Ministry of Energy (SE) and the National Council of Science and Technology (CONACYT) released a fund oriented to R&D and the adoption of new technology related to hydrocarbon sources of energy. The fund aims to increase efficiency in the use of hydrocarbon sources of energy, prevent pollution, and repair environmental damages derived from the oil industry activities. The official bid for 2012 called for universities, research centers and private entities to propose projects related to exploration, production, refinery and oil chemistry studies. No bid has yet been published for 2013.

Fund for hydrocarbon projects

The Renewable Energies Exploit and Energy Transition Financing Law (LAERFTE in Spanish) allows industrial, commercial and residential installation of renewable technologies for the generation of electricity for private consumption only. According to Mexican legislation, only the Electricity Federal Commission (CFE) is allowed to sell electricity. If the energy production exceeds the amount used by an entity during a given month, the excess can be fed into the CFE's grid and becomes a credit that can be applied against the entity's electricity bills in the future. The CFE will not reimburse the money equivalent to the energy fed into the grid.

Fund for energy transition and sustainable exploit of energy

In 2008, LAERFTE was released. It establishes Mexico's strategy to support policies, programs, actions and projects oriented to increase the usage of renewable energy sources and clean technologies, promote energy efficiency and sustainability, and decrease oil dependency as the main source of energy.

To finance sustainability projects, the Fund for Energy Transition and Sustainable Exploit of Energy was created in 2009. The Federal Expenditure Budget for this fiscal year assigned Mexican peso (MXN)3 billion (USD250 million) to the fund. For fiscal year 2011, this amount has been increased to USD260, based on the Consumer Price Index (INPC).

Companies or individuals compete for cash incentives from the fund by submitting proposals for projects that involve renewable energies and energy transition. The announcement for 2010, "Bioeconomy," called for projects that promote the production and use of alternative fuels in primary sectors. No bid was published for years 2011 and 2012, nor has a bid for 2013 been published yet.

Fund for energy sustainability

Every fiscal year, the Ministry of Energy (SE) and the CONACYT establish a special fund for energy sustainability projects in which universities and research centers are the potential participants and beneficiaries. The resources for the fund are provided by the Mexican Oil Company (PEMEX) and are calculated every three months as a percentage of their total income. The projected balance for fiscal year 2011 is approximately MXN1 billion (USD84 million). After the official announcement, participants will compete for cash incentives by submitting their proposals to the Committee, which will then evaluate the proposals and decide on the cash distributions. No official bid was published during 2012, nor has a public bid been published during 2013.

The fund for energy sustainability supports four kinds of projects:

- **Applied research:** research regarding energetic sustainability technology.
- **Technology development:** universities and/or research centers working together with enterprises in technology development projects such as pilot tests or prototyping. In such cases, the enterprises must provide at least 30 percent of the resources for the project development.
- **Technology packages:** documentation, business planning, feasibility studies and other activities designed to link universities and/or research center projects with an enterprise partner.
- **Technology assimilation:** universities and/or research centers working together with enterprises in order to introduce a current developed technology into Mexico. In such cases, the enterprises must provide at least 30 percent of the resources for the project development.

Fund for R&D in energy

The CFE and the CONACYT created a fund to provide resources for R&D projects in the electric sector. The distribution of resources was carried out by a competition among participants, and the CONACYT released one program in 2010, which ended in February 2011. This program involved seven types of projects related to specific categories such as ocean waves, ocean currents, hydraulic equipment, nuclear energy and the measurement of gas emissions. No official bids were published during 2012, nor has a public bid been released for 2013.

Government projects funded for 2011 include the following:

- **Municipal Street Lighting National Program:** For 2011, the Fund has authorized MXN120 million (USD10 million) for the execution of projects for energy-efficient street lighting.
- **Sustainable Light Program:** This program aims to decrease the energy consumption in homes by substituting 45.8 million lights during 2011 and 2012. The first stage of the program is to be concluded within the first months of 2012. The second stage aims to double the number of lights by the end of this year.
- **Integral Energy Services Program:** This program is designed to provide a greater percentage of rural populations in Mexico with electricity through renewable energy and small-scale energy generation. The program will be supported by the Global Fund for the Environment (GFE), the Bank of Reconstruction and Promotion (BIRF) and the National Committee for Indigenous Towns Development (CDI).
- **National Sustainable Energy Exploit Program:** A review carried out by the National Sustainable Energy Exploit Program (PRONASE) identified several areas in which energy efficiency might be increased over a medium to long-term period. These areas include transportation, lighting, industrial motors and home equipment. PRONASE will continue to define new strategies to encourage the use of renewable energy in these areas for Mexico.

The Netherlands

Support schemes

Investment and other subsidies

The following schemes are applicable for solar, wind, geothermal, hydro, biomaterial and offshore technologies.

- An additional deduction of 41.5 percent of the amount invested in qualifying assets is available under the Energy Investment Allowance (Energie-investeringsaftrek or EIA):
  - Investments must be included on the Energy List (Energielijst) to be qualifying assets.
  - The maximum amount of investment for which EIA can be claimed per calendar year per taxpayer is EUR118 million. Pro rata calculation applies in the case of transparent entities.
  - The total amount of qualifying investments must be more than EUR2,300 per calendar year.
  - A granted EIA will be revoked partially or in full (added back to the fiscal profit) on alienation of the assets within a five-year period.
  - No prior use of the asset that is the object of investment is permitted.
  - The EIA and the Environmental Investment Allowance (see below) cannot be applied simultaneously.
  - Certain formal conditions apply to requests for the EIA.
  - The EIA is subject to a maximum annual budget, to be determined annually (EUR151 million in 2013).

Applicability: Not directly applicable to renewable energy, although assets for which this tax incentive is applicable can be used as part of the production of energy from renewables.

- An additional deduction is granted of up to 36 percent of the amount invested in qualifying environmentally friendly assets under the Environmental Investment Allowance (Milieu-investeringsaftrek or MIA):
  - Depending on the asset, the amount that can be deducted from the fiscal profit is 13.5, 27, or 36 percent of the investment costs. The maximum qualifying investment costs that are taken into account are EUR25 million per taxpayer per calendar year.
  - Investments must be included on the Environmental List (Milieulijst) to be qualifying assets.
  - The total amount of qualifying investments must be more than EUR2,300 per calendar year.
  - A granted MIA will be revoked partially or in full (added back to the fiscal profit) on alienation of the assets within a five-year period.
  - No prior use of asset that is the object of investment is permitted.
  - The EIA and the MIA cannot be applied simultaneously.
  - Certain formal conditions apply to requests for the MIA.
  - The MIA is subject to a maximum annual budget, to be determined annually (EUR101 million in 2013).

Applicability: Not directly applicable to renewable energy, although assets for which this tax incentive is applicable can be used as part of the production of energy from renewables.

- **Free depreciation/depreciation at will** is granted on qualifying environmentally friendly assets (Willekeurige afschrijving milieu-investeringen or VAMIL):
  - Investments must be included on the Environmental List (Milieulijst) to be qualifying assets.
  - Free depreciation of up to 75 percent of the investment costs of the qualifying asset is granted. The maximum qualifying investment costs that are taken into account amount to EUR25 million per taxpayer per calendar year.
  - The total amount of qualifying investments must be more than EUR450 per calendar year.
  - No prior use of asset that is the object of investment is permitted.
  - Certain formal conditions apply to requests for the accelerated depreciation.
  - Free depreciation/depreciation at will is subject to a maximum annual budget, to be determined annually (EUR24 million in 2013).

Applicability: Not directly applicable to renewable energy, although assets for which this tax incentive is applicable can be used as part of the production of energy from renewables.

- Capital invested in **green funds** (appropriated funds invested in environmentally friendly projects or groene fondsen) is exempt from personal income tax:
  - A private investor will not be taxed for capital invested in green funds.
  - The maximum amount of invested capital exempted on an individual basis is EUR56,420.
  - A tax credit will be granted of 0.7 percent of the invested capital, with a maximum amount of invested capital of EUR 56,420 on an individual basis.

Applicability: Investments in green funds.

Operating subsidies

Feed-in tariff

As of 4 April 2013, the regulation for the feed-in tariff (Stimulering Duurzame Energieproductie or SDE+) for 2013 has opened. This regulation includes the following features:

- a maximum amount of EUR0.15/kWh (or EUR1.035/Nm3 or EUR41.67/GJ) for all types of renewable energy such as wind, geothermal, solar photovoltaic, biomass and hydro
- phased opening
- a "free category" to enhance investments in certain technologies
- feed-in tariff granted for a certain period (5, 12 or 15 years)
- a maximum subsidy amount for the Netherlands, to be determined annually (EUR3 billion in 2013).

New Zealand

Support schemes

Investment and other subsidies

Schemes are applicable for solar, wind, hydro and biomaterial energy sources.

Historically, renewable generation projects may have qualified for free allocation of carbon credits. Current policy is that generation which results in greenhouse gas (GHG) emissions will incur a carbon cost under the NZ Emissions Trading Scheme. This includes geothermal generation.

Operating subsidies

Feed-in tariff

Remuneration is available for electricity produced.

Additional information

Operating incentives

Wind generation is required to be bid into the market. However, it is automatically dispatched, and the generator receives the same pool price as other dispatched generation. Generation from all other renewable sources is treated the same as generation from carbon. The lowest bid price is dispatched first.

Norway

Support schemes

Investment and other subsidies

Energy Fund

The state-owned corporation Enova is the driving force for an environmentally friendly energy conversion by private and public enterprises. Enova's main commission is through the Energy Fund that supports environmental change in the use and production of energy. The management of the Energy Fund is governed by an agreement between the Ministry of Oil and Energy and Enova. In addition, Enova manages the EU program (Intelligent Energy Europe) and the International Energy Association (IEA) program known as Energy Technology Data Exchange (ETDE) in Norway.

Enova offers financial support based on defined programs for various renewable energy and environmentally friendly projects based on an application principle. In 2012 the Energy Fund supported 750 different projects within energy effectiveness, conversion and increased utilization of renewable energy amounting to approximately Norwegian krone (NOK)1.7 billion.

Other allowances

The General Tax Act includes regulations regarding tax allowances known as SkatteFUNN to support R&D project costs. Under the SkatteFUNN scheme, any type of business enterprise engaged in R&D activities may apply to the research council for tax allowances. R&D projects under the SkatteFUNN scheme are aimed at obtaining new knowledge or technical skills that can benefit the company in connection with the development of new or improved goods, services or means of production. The total tax allowance may not exceed NOK11 million per company per year.

Operating subsidies

Feed-in tariff

There are no national-based feed-in tariffs in Norway. However, there is a green certificate scheme.

Premium

Green certificates

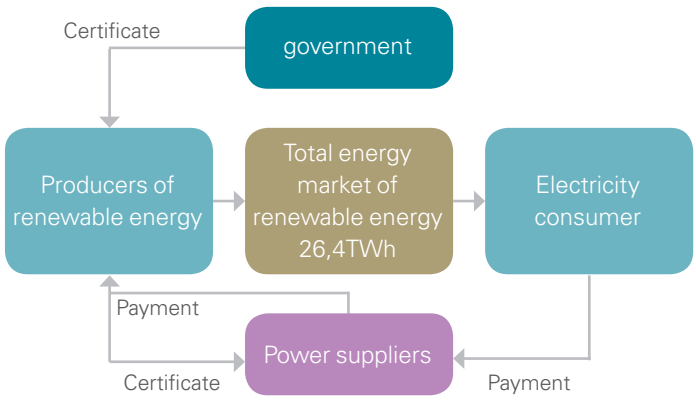
The issuance of green certificates is an economic subsidy scheme that will make it more remunerative to invest in power production based on renewable energy sources such as hydro, wind, solar and bio energy. The scheme is regulated by the Green Certificates Act.

The Norwegian government has entered into an agreement with the Swedish government establishing a common green certificate market for electricity that will contribute to increased production of renewable energy. Moving toward 2020, Sweden and Norway will increase their power production from renewable energy sources with 26.4 TWh. Power plants that are included in the scheme receive green certificates that can be sold in the Norwegian-Swedish green certificates market. Power suppliers and certain power users are required to purchase green certificates for a share of the electricity they sell or use.

The following power producers may apply, subject to certain requirements, for green certificate approval for whole or parts of its production based on its total production:

- power plants based on renewable energy sources and built after 7 September 2009
- hydro plants generating 1 MW and built after 1 January 2004
- existing renewable power plants that permanently increase their electricity production with new construction beginning on or after 7 September 2009.

Any entity that delivers power to end consumers is obliged to purchase green certificates, and it is the end consumer who finances the scheme through increased costs when invoiced for usage. The green certificate scheme is managed by the Norwegian Water Resources and Energy Directorate.



Quota obligation

Starting in 2008, the Norwegian emissions trading system for greenhouse gas (GHG) emissions expanded to include nearly 40 percent of the emissions related to Norway. It is also affiliated with the European system for quotas. The Norwegian system for quota obligation applies to GHG emissions in Norway and to emissions from activities on the Norwegian part of the continental shelf.

The quota system applies to emissions in connection with:

- energy production
- refining of mineral oil
- coke production
- production and processing of iron and steel including roasting and sintering of iron ore
- production of cement, lime, glass, glass fiber and ceramic products, as well as the production of paper, board and pulp from timber or other fibrous materials
- aviation activities.

Any person engaged in any of the activities mentioned above is required to surrender allowances corresponding to any emissions to which the duty to surrender allowances applies. The Norwegian Emissions Trading Registry shall contain information on the allocation, issue, holding, transfer, surrender and cancellation of allowances. An operator will by 30 April each year transfer a number of allowances corresponding to the volume of emissions for which reporting is mandatory, generated by the installation in the previous calendar year to a specified settlement account in the registry.

Additional information

Indirect taxes: Indirect taxes are used as a policy instrument to reduce the consumption of products that are detrimental to the environment.

CO_2 tax: Gasoline, mineral oil, gas for inland usage and petroleum activities are subject to a CO_2 tax. A CO_2 tax related to petroleum activities shall be paid per liter of oil and natural gas liquids and per standard cubic meter of gas burnt off or emitted directly to air on platforms, installations or facilities used in connection with the extraction or transportation of petroleum on the Norwegian continental shelf. The tax is classified as a deductible operating cost associated with petroleum activities, which contributes to reducing the ordinary tax and special tax actually paid by the oil companies.

The CO_2 tax was reduced according to the estimated emissions trading price when the Norwegian emissions trading system was introduced.

Nitrous Oxide (NOx) tax: The NOx tax is calculated per kg for NOx emissions generated during the production of energy from the following energy sources:

- propulsion machinery with a total installed capacity of over 750 kW
- motors, boilers and turbines with a total installed capacity of more than 10 MW
- flares on offshore installations and on facilities on land.

Enterprises that join the Environmental Agreement on NOx are entitled to a tax exemption from the date when they joined. From the same date, the enterprise will have a payment obligation vis-a-vis the business sector's NOx Fund. According to the Participant Agreement, affiliated enterprises will develop a measure plan identifying possible NOx reducing measures within two years after affiliation.

The purpose of the plan is to identify profitable measures the enterprise can implement on its own accord, and to identify cost-effective NOx reducing measures whose implementation are dependent on support from the NOx Fund. As of 13 March 2012, a total of 995 enterprises, ships and rigs had joined the Environmental Agreement on NOx 2011- 2017.

Peru

Support schemes

Investments and other subsidies

Peru has not implemented subsidies, but it has implemented certain tax incentives for energy producers producing energy on renewable resources.

However, Peru has not implemented ***feed-in tariff*** schemes, ***premiums*** to renewable energy producers or ***renewable energy quota obligation*** to energy producers.

Additional information

Peru is a country with abundant natural resources. However, which resources are considered renewable is determined only by a general consensus rather than legal definitions. This consensus appears to be changing, and some resources like water, which was once considered renewable, are no longer considered as such.

Apart from issues related to water, no clear tax policy exists that might promote investment into renewable energy. However, a number of benefits can be identified in the Peruvian taxation system.

Geothermic resources law: The Peruvian government grants 30-year concessions to explore and/or exploit aboveground and underground geothermic resources that are not hydrocarbon-based.

Income tax stability: Geothermic concessionaires will be subject to the 30 percent income tax regime in force at the time of signing the concession agreement during the term of the concession.

Income tax assessment: Geothermic concessionaires having more than one geothermic resource concession agreement that may also perform activities related to geothermic resources and connected activities shall individually and annually assess their income tax liability by each contract and activity.

If one of the contracts generates tax losses that carry forward, such losses could be offset against the profits derived from another contract or geothermic related activities.

Investments applied to a geothermic resource concession agreement that may not have reached the exploitation stage can be accumulated with the same kind of investment made with another contract that may have reached the exploitation stage. These accumulated investments can be amortized either on a production basis or proportionally over a five-year period on a straight line method.

Import of goods: Import of goods and inputs required to exploit geothermic resources under concession are exempt from all existing or to be existed taxes provided such goods or inputs were included in the specific list approved by the Energy and Mining Ministry.

Investment in generating electricity through hydro-power and other Renewable Energetic Resources (RER): Electricity generation through hydro, wind, solar, geothermic, biomass, wave or tidal powers or other RERs is subject to an annual maximum 20 percent accelerated depreciation regime for Income Tax purposes.

Accelerated depreciation is applicable to electricity plants entering into operation as of 29 June 2008. Accelerated depreciation is applicable to machinery, equipment and building infrastructures required for the installation and operation of electricity plants generating power through renewable resources.

Electricity generated with RERs is considered when it is first delivered into the electricity distribution network.

Early recovery of the Input VAT derived by electricity generating corporations: Concessionaires of electricity-generating activities through RERs are entitled to the early recovery of the Input VAT paid for capital expenditures, services and building contracts directly related to the electricity generating activities, provided they do not enter into the productive stage.

Selective Consumption Tax (Impuesto Selectivo al Consumo or ISC): The ISC excise tax is applicable to the consumption of fuels. Beginning 1 January 2008 and extending until 1 January 2016, the Peruvian government has established a schedule for applying a specific amount of Peruvian nuevo sols (PEN) as an ISC on certain fuels such as diesel 2, kerosene and others that contain harmful contaminants like sulfur.

Poland

Support schemes

Investment and other subsidies

- Support schemes are applicable for solar, wind, geothermal, hydro, biomaterial and offshore technologies.
- Renewable energy is exempt from excise tax.
- In some cases solar photovoltaic modules cannot be subject to real estate tax as other constructions. (The planned act on renewable energy sources might provide otherwise.)
- Agriculture tax payers may claim a refund of investment costs if the investment relates to renewable energy (up to 25 percent).
- Subsidies and grants from the EU Structural Fund in Poland or other domestic institutions (for example, the National Fund of Environmental Protection and Water Management).

Currently the following sources of financing for renewable energy projects are available:

- The National Fund of Environmental Protection and Water Management (NFEPWM) has announced a schedule of application rounds for investments related to environmental protection.
- Green Investment Scheme (GIS) Part 4 – Construction and reconstruction of electricity networks for connecting renewable wind energy sources):
  - An application round under GIS Part 4 is planned for November. The total budget of the program amounts to Polish Zloty (PLN) 400 million.
  - Eligible projects are those with investment expenditures above PLN8 million, involving the construction or reconstruction of electricity networks in order to enable the connection of entities producing renewable wind energy to the National Electric Power System (NEPS).
  - Priority will be given to projects implemented in areas with a low 110 kV network density and with documented readiness for implementation of the undertaking.
  - Grants include PLN200 for each kW of connected power from renewable wind energy sources but not more than 40 percent of eligible investment costs. ‘

As of 2013, companies in certain provinces will have the opportunity to apply for co-financing to support the construction of installations designed to produce energy from renewable sources. The above incentives will be applicable to smaller renewable energy projects under the Regional Operational Programs.

Operating subsidies

Green certificate system

Remuneration for renewable energy produced: the average market price of PLN201.36/MWh for the last year (2012) plus the market value of green certificate (certificate of origin) granted by the Energy Regulatory Office.

Quota obligation

Rates (2013): 12 percent of all energy produced (floors relate to all types of renewable energy). The quota is increasing in stages and will reach 13 percent in 2014 to 20 percent in 2021.

Additional information

Legal basis: The Act of Energy Law enacted on 10 April 1997 and the respective decrees from the Ministry of Economy.

The Ministry of Economy announced recently an act regarding renewable energy sources which establishes under Polish law the provisions of Directive 2009/28/WE. According to this act, the level of support for renewable energy will differ depending on the source of renewable energy. The highest support will be provided for photovoltaic installations with the power productivity exceeding 100 kW.

Administrative procedures: Business activity in the area of production of renewable energy is a licensed activity and requires a permit granted by the president of Energy Regulatory Office. Such a permit can be sought by an entity that meets requirements specified in the Energy Law, especially the ability to provide the financial, organizational and technical resources required to perform the licensed activity. As a rule, permission is given for the fixed term but not longer than 50 years.

Grid access: Priority access is granted over nonrenewable electricity producers. The costs of connecting to the electricity grid are determined by the actual costs incurred to construct the line. Those costs may be partially refunded to the investor, depending on the year and production capacity.

Green certificates scheme: Electricity producers may apply to the president of Energy Regulatory Office for green certificates (also known as certificates of origin), if they have produced renewable energy or if they are required to pay substitute fees calculated in line with the energy law. The green certificates are similar to securities; they are transferable and tradable on the regulated market (for example, the Polish Power Exchange) or within the over-the-counter market.

Sale: Electricity distributors have a legal obligation to acquire a certain amount of renewable energy generated in Poland. For the year of 2013, the above percentage limit of renewable energy will amount to 12 percent. Otherwise, the electricity distributor is obliged to buy the missing amount of renewable energy (by means of green certificates) on the market. The prices of renewable energy have been determined based on average prices of energy in the previous year. (The amount for 2012 was PLN201.36 /MWh). The renewable electricity producers have priority over other producers with regards to the distribution of produced energy.

Romania

Support schemes

Investment and other subsidies

Tax incentives

In Romania, the following tax incentives may be applicable to energy produced from the following renewable sources: wind, solar, geothermal, hydro, biomass and residues fermentation gas.

- Electricity from renewable sources is excise duties exempt.
- Accelerated depreciation for tax purposes can be used for technological equipment, computers and related peripheral equipment.
- Buildings and land used within hydroelectric, thermoelectric and nuclear power plants, as well as buildings and land relating to transformation and connection posts, are not subject to local taxes.
- Reinvested dividends can be dividend tax exempt, provided the dividends are used for the purpose of creating new work places or developing the activities of Romanian entities.
- Incentives (for example, exemption from payments to unemployment funds or monthly grants) can also be available to companies which provide places of work for students, recent graduates or disabled persons.

Operating subsidies

Green certificate system

The price of a green certificate has been set between the Romanian new leu (RON) equivalent of EUR29/ General Collateral (GC) and EUR59/GC. Currently, the price of a green certificate is equivalent with the maximum value of EUR59/GC, since the demand of GC is higher than the offer.

Quota obligation

In December 2012, the Romanian Regulatory Authority in the Field of Energy (ANRE) calculated the estimated quota of GCs acquisition for 2013 for the electricity suppliers as 0.21 GC/MWh supplied to final consumers.

Additional information

Legal basis: Electricity Law 13/2007 and Law 220/2008 for approval of the support scheme for electricity from renewable sources (Law 220/2008) and the secondary relating legislation issued by ANRE.

Administrative procedures: The activity of production of electricity from renewable sources requires a license granted by ANRE. Such a license can be obtained by an entity that meets certain requirements (relating to its financial position, technical resources, etc.) and provides a specific set of documentation.

The license is granted for a fixed term, but no longer than 25 years. In case of production of electricity from renewable sources, the maximum period during which ANRE should issue the relating license is reduced to 30 days (from 60 days).

Green certificate scheme: In order to promote investments in renewable electricity production capacities, a Tradable Green Certificates (TGC or GC) system has been in place in Romania since 2004, coupled with a supplier quota obligation system. Under this framework, energy producers are entitled to receive a set amount of GCs according to the amount of electricity generated by them from renewable sources. The revenue from GC sales represents additional revenue for eligible renewable producers on top of electricity sales on the market.

According to Law 220/2008, the producers of electricity from renewable sources benefit from a different number of green certificates depending on the fuel used. For example:

- between 0.5 and 3GC/Mw for hydroelectric power, varying on the capacity of the plant
- 2 GC/MWh for wind power, until 31 December 2017
- 1 GC/MWh for wind power, starting with 1 January 2018
- 6 GC/MWh for solar power.

According to a report issued by ANRE, the green certificates scheme should be reduced in order to avoid overcompensation. Therefore, the authorities intend to grant 1.5 GC/MWh for new wind plants, 1.3 GC/MWh for re-used wind plants, 2.3 GC/MWh for new hydroelectric power and 3 GC/MWh for solar power.

The support scheme is granted for a period of 3 to 15 years, depending on the age of the plants and the installed capacity. Eligible electricity producers will be able to enter the scheme only if the commissioning/refurbishment of the power plant are performed before 31 December 2016.

Sale: The annual mandatory GCs acquisition quota is established based on the quantity of renewable electricity produced and on the final electricity consumption of the previous year, without exceeding the level corresponding to the mandatory quota for the electricity produced from renewable sources.

The quantity of electricity for which the annual mandatory GCs acquisition quota is established includes the electricity purchased by electricity suppliers for their own consumption or for the sale to final consumer, the electricity used by the electricity producers for their own consumption (other than CPT), and for the supply of end consumers directly connected to the power plant.

Electricity suppliers and electricity producers previously mentioned have the obligation to acquire annually a number of GCs which is equivalent to the product between the annual mandatory GCs acquisition quota and the quantity of electricity detailed in the paragraph above, supplied annually to final consumers.

For 2013, the estimated quota of acquisition of GCs for the electricity suppliers is 0.21 GC/MWh delivered to final consumers. Any supplier that fails to fulfil this obligation must pay the equivalent value of the GC at a premium of EUR117.6 per each non-purchased certificate.

The GCs are issued by the transmission system operator and are valid for 16 months. The trading value of a GC has been established by ANRE as between the RON equivalent of EUR 29/GC and EUR59/GC. Currently, the price of a green certificate is equivalent with the maximum value of EUR59/GC, because the demand of GC is higher than the offer.

South Africa

Support schemes

Investment and other subsidies

Carbon emissions incentives

Certified emissions reduction exemption

Section 12K of the Income Tax Act provides for a tax exemption on any amount accrued in respect of the disposal of any certified emission reduction (CER) credit derived in the furtherance of a qualifying clean development mechanism.

To stimulate the uptake of Clean Development Mechanism (CDM) projects in South Africa, income from primary certified emission reductions, which was exempted from income tax from 2009 to 2012, will be extended to 31 December 2020, in line with the adoption of the second commitment period of the Kyoto Protocol.

The VAT Act does not provide for exemption from VAT on the disposal of a CER credit. It is arguable that the disposal of CER credits should be viewed as a supply of services for VAT purposes and that, on exportation of CER credits, this service is zero-rated for VAT purposes.

Energy efficiency incentives

Industrial policy projects additional allowance

This is an incentive in relation to industrial policy projects, including greenfield and brownfield manufacturing projects. One of the qualifications for eligible projects is the use of improved energy efficiency and cleaner production technology. Measurement and verification (M&V) of savings will be required to verify that savings are sustained over the incentive benefit period of four years.

Under Section 12I of the Income Tax Act (Industrial Policy Projects), projects that have already received incentives or grants under other types of schemes will be excluded. Such projects need to be ring-fenced and taken out of the equation when calculating and reporting savings for the tax claim.

Section 12I provides for an additional allowance on assets (new or used), applied to a project that qualifies as an Industrial Policy Project (IPP) defined in relation to assets used in the manufacturing sector. The project must be approved by the Minister of Trade and Industry. Only projects larger than South African rand (ZAR)200 million qualify for this allowance.

The incentive in relation to a qualifying project comprises:

- 75 percent of the cost of a new and unused manufacturing asset used in an IPP within an Industrial Development Zone (IDZ); or
- 35 percent of the cost of a new and unused manufacturing asset that is used in an IPP
- If the qualifying project constitutes a Preferred Project (as defined), the incentive comprises:
  - 100 percent of the cost of a new and unused manufacturing asset used in an IPP within an IDZ; or
  - 55 percent of the cost of a new and unused manufacturing asset used in an IPP.

The incentive (i.e. tax deduction) is limited to:

- ZAR900 million for greenfield projects with preferred status
- ZAR550 million for greenfield projects with qualifying status
- ZAR550 million for brownfield projects with preferred status
- ZAR350 million for brownfield projects with qualifying status.

Energy efficiency savings allowance (legislation not yet in force)

Section 12L proposes as a deduction, in determining the taxable income of a taxpayer, an amount in respect of energy efficiency savings by the taxpayer with regard to that year of assessment. The deduction will be calculated at 45 cents per kilowatt hour (or equivalent) of energy efficiency savings. The energy efficiency savings have to be measured and confirmed by an institution, board or body as prescribed by regulation. No deduction is allowed if the taxpayer receives a concurrent government benefit in respect of energy efficiency savings.

This section, although promulgated in the Income Tax Act, has not yet come into effect. It will be effective on a date as prescribed by the Minister of Finance in the Government Gazette, potentially during 2015 because the National Treasury has indicated that "some of the revenues generated through the carbon tax will be recycled to fund the energy efficiency savings tax incentive."

Production of renewable energy and fuels allowance

Section 12B provides for an accelerated capital allowance for machinery, plant implements, utensil or articles, owned by the taxpayer which was brought into use for the first time by the taxpayer for purpose of its trade.

This section applies where the assets are used for purposes such as the generation of electricity from wind, sunlight, gravitational water forces or biomass.

The allowance is calculated as 50 percent of the cost and construction of the assets for the taxpayer in the first year, 30 percent in the second year, and 20 percent in the third year. The allowance also applies to all improvements (other than repairs) and supporting structures that would form part of the machinery, plant, implement, utensil or article.

Research and development allowance

Aside from the general 100 percent deduction, this allowance (Section 11D) provides for an additional 50 percent for all expenditures incurred in respect of eligible R&D activities.

The additional 50 percent uplift will only apply to R&D approved by the Department of Science and Technology. R&D in respect to green and energy-

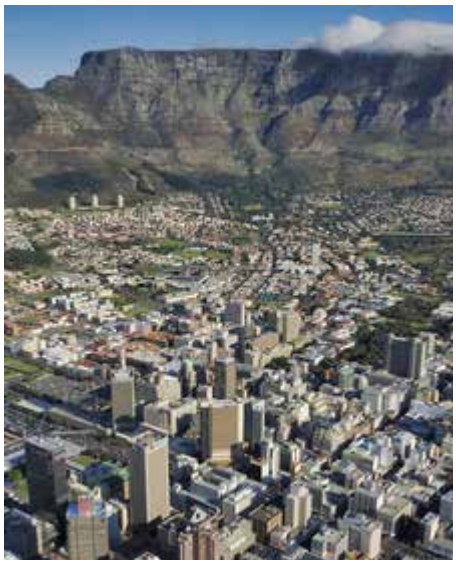
saving industries has been identified as a new area of focus.

Environmental incentives

Environmental treatment and recycling or waste disposal asset allowance

Section 37B provides for an allowance with regard to the cost incurred in acquiring a new and unused environmental treatment and recycling asset or environmental waste disposal asset used in the context of manufacturing.

The allowance in respect of an environmental treatment and recycling asset is 40 percent of the cost of the asset in the first year and 20 percent per annum for the next three years. The cost of waste disposal assets can be written off on a straight line basis over 20 years (five percent per year).



Government grants/subsidies

Grants			
Potential Grant	**Description**	**Rates/Basis**	**Source**
Manufacturing Competitive Enhancement Programme	The MCEP is a cost-sharing incentive available to existing manufacturers for expanding or upgrading facilities. The grant is based on Unilever's Manufacturing Value Added (MVA) which is calculated on sales less costs of production. The MCEP is further broken into several components, including the Capital Investment and Green Technology and Resource Improvement components.	The maximum grant available is limited to 7-10 percent of MVA. Within this limit a benefit of 30 to 40 percent of the expenditure may be granted, capped at ZAR50 million.	Department of Trade and Industry (DTI)
MCEP	The Capital Investment component is utilized to support upgrading and expansion of equipment that will lead to the creation of new jobs or the retention of existing jobs.		
	The main qualifying criteria is that jobs should be maintained for two years and the company must be a level four B-BEEE contributor or must have plans in place to achieve this score in two years.		
	Applications need to be submitted at least 60 days prior to the commencement of the commercial use of the assets.		

Incentives			
Potential Grant	**Description**	**Rates/Basis**	**Source**
Manufacturing Investment Programme	The MIP is a tax-free grant available to manufacturing entities which is calculated based on the size of the project.	The grant is 15 percent of qualifying costs of the project.	Department of Trade and Industry (DTI)
MIP	The MIP is available to existing manufacturers who plan to increase their production facilities. The grant is payable over a two year period.		
	A scoring system is in place to establish if the project will qualify for this grant. Points are allocated based on the sector, the B-BEEE score and the number of additional jobs created.		
	Applications need to be submitted at least three months prior to planned commencement date of production.		

South Korea

Support schemes

Investment and other subsidies

In 2004, the South Korean government passed the Act on the Promotion of the Development, Use And Diffusion of New And Renewable Energy (the Act). With the goal of becoming one of the five largest producers of new and renewable energy, the government has announced that a total of South Korean won (KRW)40 trillion (EUR25.8 billion, USD34.2 billion) will be invested in renewable energy by 2015.

This investment includes KRW22.4 trillion invested by the nation's 30 largest industrial groups by 2013, KRW7 trillion of government contribution, and KRW10.6 trillion from other private sectors. South Korea has already seen substantial financial investment in renewable energy in recent years, including KRW2 trillion (EUR1.3 billion, USD1.7 billion) from the government in the last two years.

The revision of the Act on the Promotion of the Development, Use And Diffusion of New And Renewable Energy (the 4th) will be issued by the first half year of 2013 and the target is expected to be revised upward from existing target 'renewable energy supply rate 11 percent in 2030.

To reach this goal, the government is implementing initiatives in four major areas:

- strategic R&D and commercialization
- promotion of industrialization and market creation
- promotion of exports of new and renewable energy products
- infrastructure development.

Operating subsidies

Feed-in tariff

- The feed-in tariff was abrogated at the end of 2011 due to introduction of a renewable portfolio standard (RPS) in 2012. (The government maintains a feed-in tariff only for existing recipients).
- To accommodate small renewable energy facilities that could not receive support by RPS, the Seoul Solar Power Plant Support Plan was announced in May 2013. The plan supports operations from the installation of solar power plants to sales for small entities under 50kW capacity in Seoul. According to the plan, the small entities can receive KRW50/kWh (approximately 10 percent of installation cost) for five years from 2013.

Premium

The R&D tax credit program is applied for renewable energy technologies. Import duties are reduced by 50 percent for all components and/or equipment used in renewable energy power plants.

The Financial Support Program for Renewable Energy in South Korea is comprised of two main categories: the Electricity Fund and the Special Account for Energy and Resource Projects.

The total budget in 2013 is KRW79.2 million, KRW64.2 million from the Special Account, and KRW15 million from the Electricity Fund. The government provides subsidies up to 90 percent (in the case of conglomerate, 50 percent) to the approved applicants. Subsidies were set at a variable interest rate (from 1.75 percent to 2.25 percent in 2012), including a five-year grace period followed by a 10-year payment period.

Quota obligation

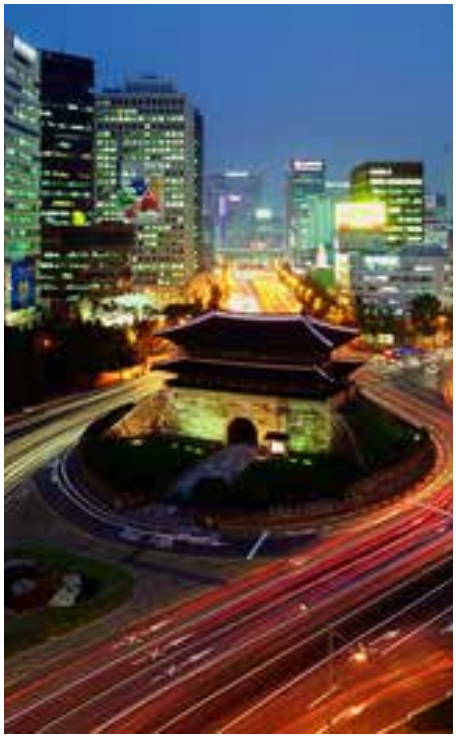
- In 2012, the existing feed-in tariff was replaced by an RPS that was approved by the government assembly in March 2010.
- The RPS requires 13 state-run and private power utilities with a capacity in excess of 500 MW to generate two percent of the energy production from renewable sources by 2015. This percentage will be increased in stages to 10 percent by 2022.
- In terms of the standard price per certificate, REC for solar power was KRW184,200 averagely in 2012, while REC for non-solar power was determined to be KRW 32,331 regardless of its implementing method.
- The total RPS target for 2013 was confirmed as being 9,210,381 MWh; increasing 41 percent from last year's target (6,420,279 MWh), while the RPS target for solar power rose 270 percent from 276,000 MWh to 723,000 MWh in the same period.

Additional information

One Million Green Homes Project: As a part of the 2009 budget, the government appropriated KRW94.3 billion (USD72 million) for the One Million Green Homes Project. The intent is to build one million homes by 2020 that use one of the following renewable energy technologies: solar thermal, solar photovoltaic, geothermal, biomass and wind energy. Each year, the government will set a new budget for the coming year.

The green homes being built are environment-friendly and use new and renewable energy resources. In addition, green homes create no carbon emissions and use less energy, water and natural resources.

Other support programs: The government will support 10 major green projects that have impressive promotional and installation effects.



Spain

Support schemes

Tax incentives

The following includes a brief description of certain tax incentives that have not been specifically created for the renewable energies sector. Careful tax planning is therefore required to take advantage of these tax incentives.

Reduction of income from certain intangible assets

The income derived from the license of the right to use or exploit certain intangible assets as defined in article 23 of CIT Law, shall be included in the CIT taxable base with a 50 percent reduction, and provided certain requirements are met. This 50 percent reduction shall not be applicable for the tax period following that when the total income derived of the license of each intangible asset that has benefited from the reduction, calculated from the date on which the license is issued exceeds six times the cost of the intangible created.

Corporate Income Tax (CIT) credit for investments in assets to protect the environment

Article 39 of the Spanish CIT supports investments in fixed assets aimed to protect the environment, including facilities designed to avoid atmospheric or acoustic pollution from industrial installations, or water pollution. An eight percent tax credit is granted for any investment included in programs, arrangements or agreements entered with the environmental public authorities of regional governments.

Tax credits may be carried forward to the following tax year if they have not been applied in a given fiscal year and have not been used in that fiscal year because the tax due was insufficient.

R&D Corporate Income Tax credits

R&D tax credits: The tax credit base shall consist of the amount of research and development expenses and, if applicable, investments in tangible fixed assets and intangible assets, excluding real estate and land.

Tax credit rates are set at 30 percent of the expenses incurred in the tax period for this purpose. In the event that the expenses incurred in pursuing the R&D activities in the tax period exceed the average of those incurred in the two preceding years, the rate established in the preceding paragraph shall apply up to that average, and 50 percent to the amount by which that average is exceeded.

Technological innovation activities tax credits: The tax credit base shall consist of the amount of the expenses incurred in the technological innovation activities. The tax credit rate is 15 or 10 percent, depending on the nature of the activities.

Capital duty exemption

As a result of the modifications introduced by RD 13/2010, Spanish Transfer Tax Law foresees an exemption of the Capital Duty regarding:

- incorporation of companies
- share capital increase
- contributions of shareholders that do not constitute a share capital increase
- transfer to Spain of the office of effective management of a company not previously located in the EU.

Tax allowances on local taxes

For certain local taxes such as construction and urban canon, tax allowances could be determined at the local level. These tax allowances would depend on each local authority, and should be negotiated on a case-by-case basis.

New taxes on energy

New taxes on electricity generation

Law 15/2012 entered into force on 1 January 2013. These taxes are not strictly environmental taxes. Revenues created by them will finance the Spanish deficit for the cost of generation and distribution of electricity. Taxes apply to:

- electricity generation
- nuclear raw and radioactive waste
- nuclear raw and radioactive waste storage
- use of continental waters to generate electricity (hydroelectricity generation).

Law 15/2012 has also established that the electrical energy attributable to the use of fuels in facilities that use any of the non-consumable renewable energies as primary energy shall not be subject to a premium-based economic regulation. This affects solar-thermal installations in particular.

Operating subsidies

Applicable for solar, wind, geothermal, hydro, combined heat and power (CHP) systems and biomaterials under 50 MW of installed capacity.

Feed-in tariff

Fixed remuneration is available for electricity produced by power plants.

Premium

Spot price with a fixed premium (fixed with an overall cap and floor, depending on technology). The option of spot price plus premium has been eliminated by Royal Decree-Law 2/2013.

Other subsidies

General regulation of the legal regime of electricity production from renewable sources is contained in RD 661/2007. As per operating subsidies for renewable energy (except photovoltaic or PV), they are determined by RD 661/2007 governing renewable technologies. Solar PV technology incentives for the plants entering in the system after September 2008 are specifically governed by RD 1578/2008 and refer only to feed-in tariffs.

Until January 2012, incentives for new renewable plants were granted, provided that projects were filed with the "registry for pre-allocation," subject to limitations on the total capacity defined.

However, all incentives granted to new renewable plants that are not yet included in the registry of pre-allocation (for instance, those wind power plants envisaged to enter after 1 January 2013) are currently suspended by the RD-L 1/2012. The registry of pre-allocation has been cancelled as well, leaving open the establishment of new special economic regimes for certain

installations and the right to receive a specific economic system under certain assumptions.

Prior to this RD-L 1/2012, relevant regulatory changes have been recently introduced by RD 1614/2010, RD 1565/2010 and RD-Law 14/2010. Mainly focused on wind, solar PV and solar thermal energy production, these changes concern existing power plants or those under construction. Some of the legal changes substantially modify the legal regime (both economic and operational) of these plants.

The following sections provide an outline of some of these changes.

Wind and solar thermal technologies (RD 1614/2010)

- Operational hourly limits that are entitled for feed-in tariffs and premiums:
  - For wind, a number of hours for all the plants under this technology are established (2,589 hours per year),; provided that an overall average of production hours for total installed wind power is reached (2,350 hours per year).
  - For solar, the hourly limits are considered individually and depend on technology, as follows:

Solar thermal technology	Hour limitation per year
Parabolic cylinder without storage capacity	2,855
Parabolic cylinder with storage capacity of 9 hours (h)	4,000
Parabolic cylinder with storage capacity of 7 h	3,950
Parabolic cylinder with storage capacity of 4 h	3,450
Saturated steam tower	2,750
Salt tower with 15 h storage capacity	6,450
Fresnel	2,450
Stirling	2,350

  Once exceeding such limitations, pool prices should apply.
- A review of incentives granted by RD 661/2007 includes the following:
  - For wind technology, in terms of the feed-in tariff, the amount to be applied will be the ones set under regulation Order ITC/3519/2009.

Furthermore, RD 1614/2010 clarified that the revisions of premiums, caps and floors mentioned at article 44.3 of RD 661/2007 shall not affect those wind and SCP Plants included in the pre-register.

As with solar thermal, during the 12 month period after the start up of these plants, the energy produced will have to be sold to the market mandatorily under feed-in tariffs. Furthermore, a time extension is granted for the start up of solar thermal plants filed in the Incentives' Registry under phase 4 (until 31 December 2013).

Solar PV technology (RD 1565/2010 and RD-Law 14/2010)

- Operational hourly limitation with the right to be granted feed-in tariffs, depending on tracking technology and individual considerations. In this regard, a two-stage limitation is expected.
- A general hourly limitation for all PV plants is approved with the following conditions, with Spain divided into five irradiation areas:

	Hourly limitation per year				
	Area I	Area II	Area III	Area IV	Area V
Technology					
Fixed support	1.232	1.362	1.492	1.632	1.753
Single axis tracker	1.602	1.770	1.940	2.122	2.279
Dual axis tracker	1.664	1.838	2.015	2.204	2.367

Source: KPMG International, Taxes and Incentives for Renewable Energy, 2011

- For those PV plants under RD 661/2007 economic regime, a special and extraordinary limitation has been approved until 31 December 2013:

Technology	Hourly limitation per year
Fixed support	1.250
Single axis tracker	1.644
Dual axis tracker	1.707

- As compensation for the hourly limitation set out above, feed-in tariffs are extended from 25 to 30 years. New relevant technical obligations are established for PV plants to permit a global technical management of the grid.

Decrease of the feed-in tariffs established under RD 1578/2008 with the Incentives Registry (RD 1565/2010):

- 5 percent decrease for type I1 installation
- 25 percent decrease for type I2 installations
- 45 percent decrease for type II installations.

Cancellation of the registry of pre-allocation of new special regime installations (RD-Law 1/2012)

- Due to the deficit problem generated by the Spanish electrical system, and based on a possible excess of renewable capacity considering the objectives of 2020, the government has decided to temporarily suspend the registration of new special-regime plants along with the special regime of incentives for these plants. As a result, developers who wish to construct new plants in this situation will not receive incentives but only the market price.
- This new policy change will apply only for those special-regime facilities that would not have been entered in the registry of pre-allocation according to RD-Law 6/2009 and RD 1578/2008 for PV technologies. This change was made with the intention of avoiding the retroactive character of the measure.
- Feed-in tariffs, premiums and limits laid down are cancelled for new plants, as well as the supplement for efficiency and reactive energy.
- Additionally, Royal Decree-Law 29/2012 of 28 December 2012 established that the economic regime of incentives applicable to renewable producers of the special regime will be cancelled if an installation registered in the pre-allocation registry has not been completed by the deadline for definitive registration in the registry of special regime production installations and has started to sell energy.

Measures introduced by Royal Decree-Law 2/2013 of 1 February 2013

This regulation, which seeks to reduce the costs of the Spanish electrical system, has established the following measures:

- Replacement of the Consumer Price Index (CPI) with the CPI at constant tax rates (excluding unprocessed food and energy products). This measure is designed to update the remuneration of those technologies referenced in this index.
- Cancellation of the premium established for renewable installations that sell their energy to the market. In this sense, RD 661/2007 has been modified and now establishes that the value of the premium applicable to all groups and sub-groups shall be EUR0.0/kWh.
- Renewable generators do not have the choice to opt between market price plus premium and feed-in tariffs. By contrast, all renewable generators have to be subject to feed-in tariffs unless they choose to sell at market price without premium.

Additional information

Considerations regarding operating subsidies for renewables:

Duration: Subsidies are granted from 15 to 25 years. Depending on the technology, subsidies are substantially reduced after this period.

Update: Subsidies are updated annually according to the CPI at constant tax rates excluding unprocessed food and energy products.

Payment: Part of the total subsidies amount is liquidated by the Spanish National Energy Commission (Comisión Nacional de Energía or CNE) and paid by the energy distributors. The remainder is liquidated and paid by the market and system operator.

Administrative procedures: Main permits and authorizations include electric sector authorizations, municipal permits and licenses, and environmental procedures. At an environmental level, it should be emphasized that public tenders are carried out for onshore wind and PV projects to determine locations that are environmentally friendly. As per offshore wind, a national map has been approved with possible project locations.

Grid access: Access priority is given over other non renewable electricity producers. Full access is not guaranteed but depends on the technical management of the grid and demand. The costs concerning the access to the grid will be paid by the energy producers. Access to the grid will only be denied by grid operators in the case of a lack of capacity according to security, quality supply and regularity criteria.

Sweden

Support schemes

Depreciation of windmills

Swedish tax law allows tax payers to depreciate windmills for (corporate) income tax purposes at a rate that is much faster than the actual rate of economic loss. The maximum depreciation allowance is 30 percent of the aggregate book value at the beginning of the tax year, plus the building or acquisition costs that have been made during the year.

If a straight-line depreciation of 20 percent per annum results in a lower aggregate book value in any year, the annual depreciation allowance may be increased correspondingly. The depreciation allowance is calculated on a pool basis, with the book value of all the taxpayer's assets taken into account in order to calculate the maximum depreciation allowance.

Operating subsidies

For each MWh produced by renewable sources (solar, geothermal, wind, wave, bio fuels or hydro) the producer receives one certificate. (Some limitations exist for hydro power generation). A distributor is obliged to buy certificates up to a certain percentage of the power distributed. In this way a market is established for selling and buying certificates.

To support the transition to more sustainable energy sources for heating and transportation, no taxes are levied on renewable fuels while energy taxes, CO_2 taxes and sulphur taxes are levied on fossil fuels.

There is also a fee-based system for the reduction of greenhouse gas (GHG) emissions.

Turkey

Support schemes

Investments and other subsidies

General Investment Incentive Regime has changed in June 2012. This new incentive regime is applicable to ENR investments, mainly by providing the following:

- VAT exemption on purchase (or import) of investment equipment
- customs duty exemption on import of investment equipment
- exemption from other funds and surcharges.

Other subsidies

The new Electricity Market Law 6446 became effective as of 30 March 2013. The incentives provided under this law apply to investors holding a generation license and beginning operations before 31 December 2015:

- A 50 percent discount is applied to the transmission system utilization fee for five years following the start of operations.
- Documents and transactions related to the power plants and concluded throughout the investment period are exempted from stamp tax and duties.

Operating subsidies

Feed-in tariff

The tariff and the government purchase guarantee are applied for 10 years following the start of operations of a generation power plant until 31 December 2015.

Resources:

- Hydro: USD cent (ct)7.3kWh
- Wind: ct7.3/kWh
- Geothermal: ct10.5/kWh
- Solar: ct13.3/kWh
- Biomass (including landfill): ct13.3/kWh

Discount on fees

The new Electricity Market Law 6446 has become effective as of 30 March 2013. Under this law, an 85 percent discount is applied to the lease, easement and utilization right of energy transfer lines for 10 years in both investment and operating periods.

Additional information

- If the mechanical and electromechanical equipment used in renewable energy facilities that have started operation before 31 December 2015 are manufactured in Turkey, an additional incentive of between ct0.4 and 2.4/kWh for five years will be provided to such facilities, under certain conditions.
- Renewable energy sources based electricity generation power plants with an installed capacity of maximum 1 MW and other similar investments are allowed to operate without a generation license.

United Kingdom

Support schemes

Investments and other subsidies

Exemptions are in effect from the Climate Change Levy and Emissions Trading Scheme.

Operating subsidies

Renewable obligation scheme

Long-term banded quota mechanism designed to support renewable electricity generation.

Feed-in tariff (small scale generation)

Tariff support payments for small-scale electricity generation from a variety of technologies.

Renewable heat incentive

Long term tariff support payments for renewable heat generation.

Additional information

Electricity market reform: In November 2012, the UK government introduced the Energy Bill, expected to become law in summer 2013, outlining major reforms to the UK market. Key features include the introduction of a two way, feed-in tariff with Contract for Difference ("CfD") for each low-carbon generation technology. This provision is scheduled to replace the Renewable Obligation Scheme by 2017. The CfD is expected to last for at least 15 years and take effect from 2014/15 onwards.

Renewable Obligation (RO) scheme: This requires electricity suppliers to source a specific percentage of electricity from renewable sources. Renewable generators receive Renewable Obligation Certificates (ROCs) for each MWh of electricity generated, and these ROCs can be traded independently of the electricity generated.

There is a banded ROC mechanism whereby different renewable electricity technologies receive different levels of support according to their technological maturity and levelized costs (see table below). A supplier who does not obtain sufficient ROCs over a year has to make buy out payments at British pound (GBP) 42.02/MWh (2013 to 2014 rate).

The government has confirmed that applications for the RO regime can be made until 2017, thereby extending the scheme until 2037. Renewable generators may not receive a CfD and also participate in the RO regime.

ROC banding regime

Band	Technologies	Current	Banding (2013-2017)
Established 1	Landfill gas	0.25	0.00 - 0.20
Established 2	Sewage gas Co-firing of regular biomass (std) Co-firing of regular biomass (enhanced)	0.50	0.50 0.30 (2013-15)/0.50 (2015-16) Mid-range (50-85%): 0.60 High-range (85-100%): 0.70 (2013-14)/0.90 (2014-17)
Reference	Onshore wind Hydro-electric Co-firing of energy crops EfW with CHP Geopressure Co-firing of biomass with CHP Standard gasification and Pyrolysis	1.00	0.90 0.70 1.50 - closed to new accreditation from 1 April 2015 1.00 1.00 1.50 (2013-15) closed to new accreditation from 1 April 2015 2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17)
Post-demonstration	Offshore wind (2014-15) Biomass conversion Biomass conversion with CHP Dedicated regular biomass Co-firing of energy crops (with CHP)	1.50	2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17) 1.00 1.50 (2013-15) closed to new accreditation from 1 April 2015 1.50 (2013-16)/1.40 (2016-17) 2.00 (2013-15) closed to new accreditation from 1 April 2015
Engineering technologies	Offshore wind (2013-14) Wave and tidal stream Tidal barrage (<1GW) and lagoon (<1GW) Advanced conversion technologies Dedicated energy crops Dedicated biomass with CHP Solar photovoltaic Geothermal Micro-generation	2.00	2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17) 2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17) 2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17) 2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17) 2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17) 2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17) Subject to further consultation 2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17) 2.00 (2013-15)/1.90 (2015-16)/1.80 (2016-17)

Source: Renewables Obligation for the period 2013-17-DECC response to public consultation, July 2012

Climate Change Levy (CCL), renewables exemption:

The CCL is a specific energy tax on non-domestic users of electricity in the United Kingdom. Most electricity generated from renewables is exempt from the CCL. Renewable Levy Exemption Certificates (LECs) are issued to renewables generators for each MWh of electricity supplied. LECs transfer along with the electricity and can be used by electricity suppliers to claim the CCL exemption.

The Carbon Price Floor, introduced from 1 April 2013, applies a levy on certain types of fossil fuels used to generate electricity and so provides a disincentive for fossil fuel generators which renewable electricity generators will not be subject to:

- gas at GBP0.00091/kWh (GBP0.00175 from 1 April 2014)
- LPG at GBP0.01460/kg (GBP0.02822 from 1 April 2014)
- Coal at GBP0.44264/GJ (GBP0.85489 from 1 April 2014)

Feed-in tariffs (small scale generation)

Feed-in tariffs are available for small-scale, low-carbon electricity generated by private/business users (maximum capacity 5 MW) providing payment of up to British pence (p) 21.65/kWh generated (depending on the type and size of the system used to generate renewable energy) plus a guaranteed p4.64/kWh sold to the UK electricity grid. Typically the tariffs last for 20 years.

Renewable Heat Incentive (RHI)

A two phase long-term tariff support for renewable heat generation:

- Phase 1, which began in December 2011, provides tariff support to help meet the cost of installing renewable heat technologies for organizations in the non domestic sector. Payments of up to p8.9/kWh may be made depending on the technology used. Phase 1 also introduced the RHI Premium payment, which is a GBP15 million fund for households that install renewable heating. In return for the payments, participants will have to provide feedback on how the equipment performs in practice.
- Phase 2, extending the scheme to tariffs for domestic properties as part of the "Green Deal," whereby householders may make energy-efficiency improvements to their houses and pay back the cost of these over time through their electricity bill. This incentive is expected to be introduced in spring 2014.

EU Emissions Trading Scheme exemption

Renewable generators are exempted from the requirement to purchase carbon allowances in order to generate electricity, as stipulated by the EU Emissions Trading Scheme.

Other direct tax allowances/ incentives potentially relevant to renewables generators

- From 1 April 2012 capital allowances of 18 percent reducing balance for capital expenditures on plant and machinery (reduced to eight percent if the asset's useful expected economic life exceeds 25 years).
- Enhanced capital allowances (a 100 percent First Year Allowance for expenditure incurred on or before 31 March 2013 on specified energy-saving plant and machinery). A 19 percent cash tax credit is available for loss-making companies up to GBP250,000 or the company's PAYE and NIC liabilities, whichever is less.
- Contaminated land remediation tax relief on qualifying expenditure, attracting an additional 50 percent tax deduction (or a 16 percent cash tax credit for loss-making businesses).
- R&D tax relief of an enhanced tax deduction of 130 percent for large companies and 225 percent for SMEs from 1 April 2012 for revenue expenditure on qualifying projects seeking to achieve an advance through the resolution of scientific or technological uncertainty. From 1 April 2013, large companies may instead claim an above-the-line tax credit which gives a taxable payment of 10 percent (7.7 percent after tax) on qualifying revenue expenditure.
- 100 percent allowance on capital expenditure on R&D in the year of expenditure.

United States

Support schemes

Investments and other subsidies

Production Tax Credit (PTC)

Applicable for wind, geothermal, landfill gas, trash combustion, open-loop biomass, closed-loop biomass, hydropower and wave tide.

- The PTC provides a tax credit for the production of electricity from renewable sources and the sale of that electricity to an unrelated party.
- Credit amount is:
  - USD cents (ct) 2.3/kWh for wind, closed-loop biomass and geothermal
  - ct1.1/kWh for other renewable energy resources.
- Available for facilities that begin construction prior to 1 January 2014.
- Available for a 10-year period beginning the year the facility is placed in service.
- There are two methods that a taxpayer may use to establish that construction has begun:
  - A taxpayer may establish the beginning of construction when "physical work of a significant nature" is started.
  - A taxpayer may establish the beginning of construction by meeting a safe harbor rule.
- In general:
  - Work performed by the taxpayer and work performed for the taxpayer by other persons under a binding written contract that is entered into prior to the manufacture, construction, or production of the property for use by the taxpayer in the taxpayer's trade or business (or for the taxpayer's production of income) is taken into account in determining whether physical work of a significant nature has begun.
  - Whether a taxpayer has begun construction of a facility before 1 January 2014, will depend on the relevant facts and circumstances.
  - The IRS will closely scrutinize a facility, and may determine that construction has not begun on a facility before 1 January 2014, if a taxpayer does not maintain a continuous program of construction.
- The safe harbor rule provides that construction of a facility will be considered as having begun before 1 January 2014, if:
  - the taxpayer pays or incurs – within the meaning of Reg. section 1.461-1(a)(1) and (2) – 5 percent or more of the total cost of the facility before 1January 2014; and
  - subsequently, the taxpayer makes continuous efforts to advance towards completion of the facility (as determined under Notice 2013-29).

Investment Tax Credit (ITC) in lieu of the PTC

Applicable for facilities that are eligible for the PTC and that begin construction before 2014.

- The ITC is available in lieu of the PTC.
- The ITC provides a credit for qualifying energy property.
- The credit amount is 30 percent of the eligible cost basis of the property.
- Eligible property is tangible personal property or other property that is integral to a PTC-eligible facility.
- The definition of "begin construction" is the same for the ITC in lieu of the PTC as for the PTC.

Investment Tax Credit (ITC)

Applicable for solar, geothermal, qualified fuel cell or micro turbine property, combined heat and power systems, small wind and geothermal heat pumps.

- The ITC provides a credit for qualifying energy property.
- The ITC for any taxable year is the energy percentage of the basis of each energy property placed in service during the taxable year.
- Credit amount is:
  - 30 percent of eligible costs for fuel cell, solar, and small wind property
  - 10 percent of eligible costs for combined heat and power, microturbine property and geothermal heat pumps.
- The ITC is generally available for eligible property placed in service on or before 13 December 2016.

Grant in lieu of PTC and ITC

Applicable for tangible personal property or other property that is an integral part of a qualified facility (as defined by the PTC and ITC rules).

- The American Recovery and Reinvestment Act of 2009 (ARRA) enacted a grant program which provides a cash grant in lieu of the PTC or ITC.
- ARRA permits PTC or ITC projects to elect a grant of up to 30 percent of costs of construction of PTC or ITC energy property in lieu of tax credits.
- Projects must begin construction before 2012 and submit a grant application no later than 30 September 2012.
- Projects must be placed in service:
  - before 2014 for PTC-eligible facilities (before 2013 for wind)
  - before 2017 for other ITC eligible projects.

Operating subsidies

Quota obligation

Renewable Portfolio Standards (RPS)

This standard generally places an obligation on electric supply companies to produce a specified fraction of their electricity from renewable energy sources and enumerates mechanisms that are permitted to achieve compliance, such as renewable energy credits (RECs). Currently no federal RPS legislation has been enacted. A total of 29 states and the District of Columbia have an RPS. The states include Arizona, California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Indiana, Kansas, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, Texas, Washington and Wisconsin.

Uruguay

Support schemes

Investments and other subsidies

General Investment Regime

Investment Law 16.906 declares the national interest of the promotion and protection of domestic and foreign investment and, through Decree 2/012, establishes the following benefits for the investments carried out in the country:

- Corporate Income Tax (CIT) exemption equivalent to a percentage of the investment in fixed assets (machinery, equipment and civil works).[43] The referred percentage varies between 20 percent and 100 percent of eligible investment and it is determined by the score the project receives for its impact in terms of:
  - employment
  - decentralization
  - exports
  - clean production
  - industrial indicator.
- Capital Tax exemption for the fixed assets included in the investment:
  - civil works: Eight years for civil works in Montevideo and 10 years in the rest of the national territory
  - machinery and equipment for the useful life
- Fiscal credit for VATs included in civil works.
- Exemption from all taxes and duties levied on the import of machinery and equipment that is not competitive with national industry.

Particular Investment Regime for renewable energy

Within the frame of Law 16.906, Decree 354/009 establishes particular benefits for the generation of electricity from non-traditional renewable sources (defined as the native renewable sources such as wind, solar thermal, photovoltaic (PV), geothermal, tidal and wave energy, as well as the energy produced from the use of different types of biomass).

The main benefit consists of CIT exemptions equivalent to:

- 90 percent of net fiscal income generated by the promoted activity for all fiscal years up to 31 December 2017.
- 60 percent of net fiscal income generated by the promoted activity for all fiscal years from 1 January 2018 to 31 December 2020.
- 40 percent of net fiscal income generated by the promoted activity for all fiscal years from 1 January 2021 to 31 December 2023.

Other benefits:

- The law declares of national interest the national production of machines and equipment necessary for the production of these renewable energies and also applies to this activity the CIT exemption described in the Particular Investment Regime for renewable energy. As a condition for the application of this exemption, at least 35 percent of their cost must correspond to Uruguayan inputs.
- Purchase of the wind turbine and its accessories are exempt from VAT.

Promotion of solar thermal energy

In 2009, Law 18.585 declared of national interest the investigation, fabrication, implementation and development of solar thermal energy. The law, along with Decree 451/011, established the exemption of VAT, Internal Excise Tax (IMESI), duties and custom taxes applicable to:

- National and imported (non competitive with the national industry) goods and services necessary to fabricate solar collectors in Uruguay.
- Sale of solar collectors fabricated in Uruguay.
- Import of solar collectors non competitive with the national industry.

In 2012, the Government launched a Solar Program focused on developing solar thermal energy for residential users. The new program provides loans, financial discounts and payment facilities for those who install solar thermal technology in their houses.

Quota obligation

Law 18.585 also introduced the obligation of incorporating solar thermal technology in sport clubs, hospitals, hotels and heated swimming-pool, under certain circumstances. According to this law, at least 50 percent of the energy required to heat the water should come from solar thermal energy. If this requirement is not fulfilled, the permit for the construction works is denied.

New public buildings (that is, state owned) are also obliged to incorporate this source of energy.

[43] Corporate Income Tax regular rate is 25 percent of the net Uruguay-sourced income of the company.

As from June 2012, the Ministry of Industry is entitled to request to all new industrial and agro-industrial developments to perform a technical study on the feasibility of incorporating solar thermal technology to the project.

Additional information

Uruguay is recognized as a country with excellent conditions for the development of renewable energy, attracting the attention of national and international investors. The government – with the support of the opposition parties – has set forth the goal of becoming a model country in this area. The authorities intend that, by the year 2015, at least 50 percent of the primary energy matrix of the country will come from renewable sources.

Wind

Although the focus is placed on all types of renewable energy, the most popular these days is wind power. The initial goal of reaching 300 MW of wind generation by 2015 is expected to be fully achieved, as well as the 2016 goal of 1200 MW, assuming all the awarded wind farm projects are implemented. Investment in this area has reached USD2 billion.

Biomass

In 2010 the government set the goal of incorporating 200 MW from biomass sources to the primary energy matrix by 2015. Accordingly, the Uruguayan energy utility (Usinas y Trasmisiones Eléctricas or UTE) promoted one tender during 2011, in which the total amount offered by the private companies has already exceeded the 350 MW.

Uruguay has several natural resources that can be used as primary elements for the generation of biomass energy:

- extensive forests providing wood for energy generation
- industrial forestry residues (saw mill residues, black liquor, etc)
- rice husks
- residues from sugar cane, sweet sorghum and other cereals
- excellent conditions for elephant grass
- a guaranteed supply of biomass from livestock and agriculture.

Solar Photovoltaic (PV)

At the moment, the only ongoing project is a solar PV farm of 480 kilowatts-peak (kWp) and 10.000 m2 of PV modules, located in the north of the country. The farm is owned by UTE and was financed by the International Cooperation Agency of Japan under the scope of the "Cool Earth Program" of the Japanese government.

In May 2013 the Government launched a tender call for the purchase of solar PV energy. The tender contemplates projects of three different ranges: i) 500 kW to 1 MW, ii) 1 MW to 5 MW and iii) 5 MW to 50 MW.

For ranges i) and ii), the bidders have to offer a price and the total amount to be awarded cannot exceed 6 MW. On the other hand, for range iii), bidders will have to adhere to a pre-established price of USD91.5/MWh, and the total amount to be awarded cannot exceed 200 MW.

Top five countries 2012

TOP FIVE COUNTRIES	1	2	3	4	5
Annual investment/additions/production in 2012					
New capacity investment	China	United States	Germany	Japan	Italy
Hydropower capacity	China	Turkey	Brazil/Vietnam	Russia	Canada
Solar PV capacity	Germany	Italy	China	United States	Japan
Wind power capacity	United States	China	Germany	India	United Kingdom
Solar water collector (heating) capacity[44]	China	Turkey	Germany	India	Brazil
Biodiesel production	United States	Argentina	Germany/Brazil	France	Indonesia
Ethanol production	United States	Brazil	China	Canada	France
Total capacity as of end-2012					
Renewable power (including hydro)	China	United States	Brazil	Canada	Germany
Renewable power (not including hydro)	China	Unites States	Germany	Spain	Italy
Renewable power per capita (not including hydro)[45]	Germany	Sweden	Spain	Italy	Canada
Bio-power	United States	Brazil	China	Germany	Sweden
Geothermal power	United States	Phillippines	Indonesia	Mexico	Italy
Hydropower	China	Brazil	United states	Canada	Russia
Concentrating solar thermal power (CSP)	Spain	United States	Algeria	Egypt/Morocco	Australia
Solar PV	Germany	Italy	United States	China	Japan
Solar PV per capita	Germany	Italy	Belgium	Czech Republic	Greece
Wind power	China	United States	Germany	Spain	India
Solar water collector (heating)[44]	China	Germany	Turkey	Brazil	India
Solar water collector (heating) per capita[44]	Cyprus	Israel	Austria	Barbados	Greece
Geothermal heat capacity	United States	China	Sweden	Germany	Japan
Geothermal direct heat use[46]	China	United States	Sweden	Turkey	Japan/Iceland

[44] Solar water collector (heating) rankings are for 2011, and are based on capacity of glazed water collectors only (excluding unglazed systems for swimming pool heating and air collectors). Including all water and air collectors, the 2011 ranking for total capacity is China, United States, Germany, Turkey, and Brazil.

[45] Per capita renewable power capacity ranking considers only those countries that place among the top 12 for total renewable power capacity, not including hydro.

[46] In some countries, ground-source heat pumps make up a significant share of geothermal direct-use capacity; the share of heat use is lower than the share of capacity for heat pumps because they have a relatively low capacity factor. Rankings are based on a mix of 2010 data and more recent statistics for some countries.

Notes: Most rankings are based on absolute amounts of investment, power generation capacity, or biofuels production; if done on a per capita basis, the rankings would be quite different for many categories (as seen with per capita rankings for renewable power, solar PV, and solar water collector capacity). Country rankings for hydropower would be different if power generation (TWh) were considered rather than power capacity (GW) because some countries rely on hydropower for baseload supply whereas others use it more to follow the electric load and match peaks in demand.

Appendix A: REN21 2012 Renewables Global Status Report

Table 1. Renewable energy support policies

	REGULATORY POLICIES AND TARGETS							FISCAL INCENTIVES				PUBLIC FINANCING	
▲ Some states/ provinces within these countries have state/provincial-level policies but there is no national-level policy.	Renewable energy targets	Feed-in tariff/ premium payment	Electric utility quota obligation/ RPS	Net metering	Biofuels obligation/ mandate	Heat obligation/ mandate	Tradable REC	Capital subsidy, grant, or rebate	Investment or production tax credits	Reductions in sales, energy, CO_2, VAT or other taxes	Energy production payment	Public investment, loans, or grants	Public competitive bidding/tendering
HIGH-INCOME COUNTRIES													
Australia	●	▲			▲		●	●				●	
Austria	●	●			●		●	●	●			●	
Barbados	●			●								●	
Belgium	●		▲	▲	●		●		●			●	●
Canada	▲	▲	▲	▲	●			●	●	●		●	●
Croatia	●	●						●				●	
Cyprus	●	●			●			●					
Czech Republic	●	●			●		●	●	●	●		●	
Denmark	●	●		●	●		●	●		●		●	●
Estonia	●	●			●						●	●	
Finland	●	●			●		●	●		●	●		
France	●	●			●		●	●	●	●		●	●
Germany	●	●			●	●		●	●	●	●	●	
Greece	●	●			●			●	●	●		●	
Hungary	●	●			●			●		●		●	
Ireland	●	●			●	▲	●						●
Israel	●	●	●			●				●		●	●
Italy	●	●	●	●	●	●	●	●	●	●		●	●
Japan	●	●	●	●			●	●	●			●	
Luxembourg	●	●			●			●		●			
Malta	●	●		●				●		●			
Netherlands	●	●		●	●		●	●	●	●	●	●	
New Zealand	●												
Norway	●				●		●	●		●		●	
Oman								●			●	●	●
Poland	●		●		●		●	●		●		●	●
Portugal	●	●	●	●	●	●		●	●	●		●	●
Singapore				●								●	●
Slovakia	●	●						●		●			
Slovenia	●	●						●					●
South Korea	●		●	●	●		●	●	●	●		●	
Spain[47]	●	●		●	●	●		●	●	●		●	
Sweden	●		●		●		●	●	●	●		●	
Switzerland	●	●						●		●			
Trinidad and Tobago	●								●	●			
United Arab Emirates	▲		▲			▲					▲	▲	▲
United Kingdom	●	●	●		●	●	●	●		●	●	●	
United States		▲	▲	▲	●	▲	▲	●	●	●	●	●	●

[47] In Spain, the feed-in tariff (FIT) and net metering programmes have been temporarily suspended by Royal Decree for new renewable energy projects; this does not affect projects that have already secured FIT funding. The Value Added Tax (VAT) reduction is for the period 2010–12 as part of a stimulus package.

Note: Countries are organised according to GNI per capita levels as follows: "high" is USD 12,476 or more, "upper-middle" is USD 4,036 to USD 12,475, "lower-middle" is USD 1,026 to USD 4,035, and "low" is USD 1,025 or less. Per capita income levels and group classifications from World Bank, 2012. Only enacted policies are included in the table; however, for some policies shown, implementing regulations may not yet be developed or effective, leading to lack of implementation or impacts. Policies known to be discontinued have been omitted. Many feed-in policies are limited in scope of technology.

Table 1. Renewable energy support policies (continued)

▲ Some states/provinces within these countries have state/provincial-level policies but there is no national-level policy.

	REGULATORY POLICIES AND TARGETS							FISCAL INCENTIVES				PUBLIC FINANCING	
	Renewable energy targets	Feed-in tariff/ premium payment	Electric utility quota obligation/ RPS	Net metering	Biofuels obligation/ mandate	Heat obligation/ mandate	Tradable REC	Capital subsidy, grant, or rebate	Investment or production tax credits	Reductions in sales, energy, CO_2, VAT or other taxes	Energy production payment	Public investment, loans, or grants	Public competitive bidding/tendering
UPPER-MIDDLE INCOME COUNTRIES													
Algeria	●	●											●
Argentina	●	●			●			●	●	●	●	●	●
Belarus										●			
Bosnia and Herzegovina	●	●						●					●
Botswana	●							●		●			
Brazil	●			●	●	▲			●	●		●	●
Bulgaria	●	●			●			●		●		●	
Chile	●		●	●		●		●		●		●	
China	●	●	●		●	●		●		●	●	●	●
Colombia	●				●					●			
Costa Rica	●			▲									
Dominican Republic	●	●		●		●		●	●	●			●
Ecuador		●								●		●	
Grenada	●			●						●			
Iran		●							●		●		●
Jamaica	●			●	●				●	●			●
Jordan	●	●		●	●					●		●	●
Kazakhstan		●					●						
Latvia	●	●			●					●		●	●
Lebanon	●			●		●				●		●	
Libya	●									●			
Lithuania	●	●	●		●	●						●	
Macedonia	●	●											
Malaysia	●	●	●		●					●		●	●
Mauritius	●	●											
Mexico	●			●		●			●			●	●
Montenegro	●	●											
Palau	●		●										
Panama		●		●					●	●	●		●
Peru		●			●					●			●
Romania	●		●		●		●			●		●	
Russia	●							●					
Serbia	●	●						●					
South Africa	●							●		●	●	●	●
St. Lucia	●			●									
Thailand	●	●			●					●		●	
Tunisia	●			●				●		●		●	
Turkey	●	●			●			●				●	
Uruguay	●	●		●	●	●		●		●		●	●

Table 1. Renewable energy support policies (continued)

▲ Some states/provinces within these countries have state/provincial-level policies but there is no national-level policy.	REGULATORY POLICIES AND TARGETS							FISCAL INCENTIVES				PUBLIC FINANCING	
	Renewable energy targets	Feed-in tariff/ premium payment	Electric utility quota obligation/ RPS	Net metering	Biofuels obligation/ mandate	Heat obligation/ mandate	Tradable REC	Capital subsidy, grant, or rebate	Investment or production tax credits	Reductions in sales, energy, CO_2, VAT or other taxes	Energy production payment	Public investment, loans, or grants	Public competitive bidding/tendering
LOWER-MIDDLE INCOME COUNTRIES													
Armenia		●											
Cameroon										●			
Cape Verde	●			●					●		●		●
Côte d'Ivorie	●									●			
Egypt	●			●				●		●		●	●
El Salvador									●	●	●	●	●
Fiji	●								●	●			
Ghana	●	●			●			●				●	
Guatemala	●			●	●				●	●			●
Guyana	●									●			
Honduras		●							●	●			●
India	●	●	●	●	●	▲	●	●	●	●	●	●	●
Indonesia	●	●	●		●			●	●	●		●	●
Lesotho	●	●		●				●	●		●	●	●
Marshall Islands	●									●			
Micronesia, The Federated States of	●			▲									
Moldova	●	●								●		●	
Mongolia	●	●											●
Morocco	●											●	●
Nicaragua		●								●			
Nigeria	●	●						●				●	
Pakistan	●	●		●				▲				●	
Palestinian Territories[48]	●	●			●					●			●
Paraguay					●					●			
Philippines	●	●	●	●	●			●	●	●	●	●	●
Senegal	●	●								●		●	
Sri Lanka	●	●	●	●	●			●		●	●	●	
Sudan	●									●			
Syria	●	●		●					●				●
Ukraine	●	●							●	●			
Vietnam	●						●	●	●				

[48] The area of the Palestinian Territories is included in the World Bank country classification as "West Bank and Gaza." They have been placed in the table using the 2009 "Occupied Palestinian Territory" GNI per capita provided by the United Nations (USD 1,483).

Table 1. Renewable energy support policies (continued)

▲ Some states/provinces within these countries have state/provincial-level policies but there is no national-level policy.

	REGULATORY POLICIES AND TARGETS							FISCAL INCENTIVES				PUBLIC FINANCING	
	Renewable energy targets	Feed-in tariff/ premium payment	Electric utility quota obligation/ RPS	Net metering	Biofuels obligation/ mandate	Heat obligation/ mandate	Tradable REC	Capital subsidy, grant, or rebate	Investment or production tax credits	Reductions in sales, energy, CO_2, VAT or other taxes	Energy production payment	Public investment, loans, or grants	Public competitive bidding/tendering
LOW INCOME COUNTRIES													
Bangladesh	●							●		●		●	
Burkina Faso									●	●	●		●
Ethiopia	●				●					●		●	
Gambia										●			
Guinea										●			
Haiti												●	
Kenya	●	●				●				●			
Kyrgyzstan			●					●		●			
Madagascar	●									●			
Malawi	●				●					●			
Mali	●									●			
Mozambique	●				●							●	
Nepal	●							●	●	●		●	●
Rwanda	●	●								●		●	
Tajikistan	●	●											
Tanzania		●						●		●			
Togo										●			
Uganda	●	●						●		●		●	
Zambia					●			●		●			

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Designed by Evalueserve.
Publication name: Taxes and incentives for renewable energy
Publication number: 130491
Publication date: September 2013