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Taxes and incentives for renewable energy

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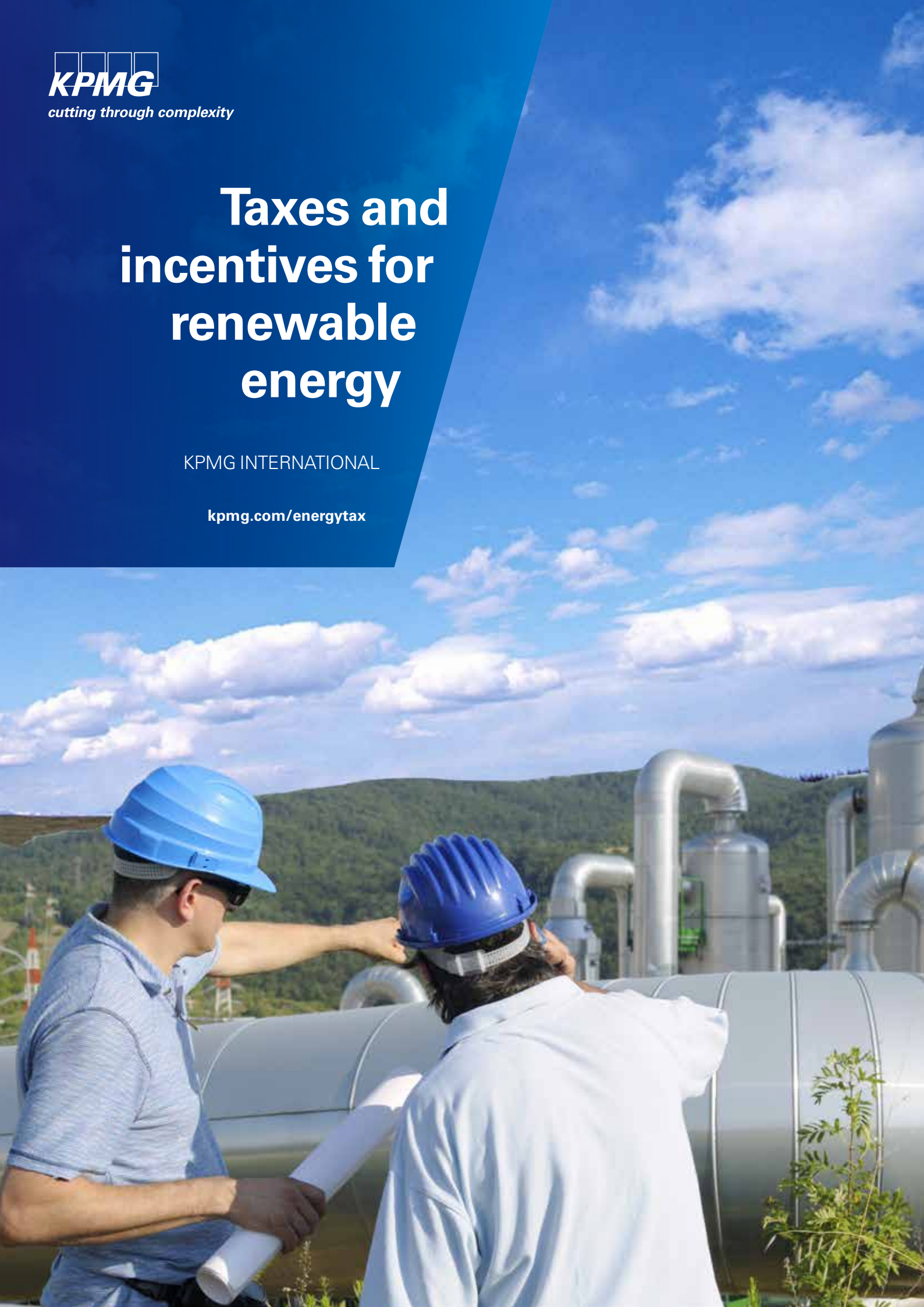

This report describes the 2013 taxes and incentives provided by 31 countries around the world to promote renewable energy from wind, solar, biomass, geothermal and hydropower. These policies also support other areas such as increased energy efficiency, smart-grid management, biofuels, carbon capture 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 31 countries.

André Boekhoudt
Head of Global Energy and Natural Resources Tax Practice

Lars Behrendt
Tax Partner,
KPMG in Germany

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Introduction

Over the past decade, renewable energy has demonstrated remarkable growth as a significant source of global energy. Since 2004, the industry has seen a –

- 53-fold increase in solar PV capacity
- 15-fold increase in biodiesel production
- 10-fold increase in concentrating solar thermal power (CSP) capacity
- 10-fold increase in wind capacity.[1]

In fact, the International Energy Agency, the World Bank, Greenpeace, and others all projected levels of renewable energy for the year 2020 that were met and even exceeded by 2010.[2] As of last year, renewables were providing:

- 43.6 percent of the new power capacity added in all technologies[3]
- 22.1 percent of global electricity, with hydropower providing about 16.4 percent[4]
- 8.5 percent of global energy generation.[5]

Today, renewable energy is recognized as delivering a number of key benefits[6] for countries, regions, markets, industries and the global population:

Energy security and diversity – contributing to energy security by providing more diversity in the energy supply and reducing the need for fossil fuels, which for many countries can reduce fuel import bills.

Environmental protection – helping to reduce local air pollution and emissions of CO_2 as well as other pollutants such as sulfur dioxide and nitrogen oxides.

Economic growth – supporting widespread and sustainable economic growth. Renewable energy has featured strongly in economic recovery packages put in place in response to the global economic downturn. An estimated 6.5 million people worldwide now work directly or indirectly in the renewables sector.[7]

Energy access and affordability – providing electricity access and modern energy services to the 1.3 billion people currently without access to electricity and the 2.6 billion that still rely on traditional biomass energy sources. Mini-grid and off-grid solutions are often less costly than grid extension to rural areas.

The rapid increase in renewables is driven by a number of factors, including falling technology costs, the continued high price of crude and carbon pricing. However, growth is driven mainly by government incentives, which totaled USD101 billion globally in 2012, up 11 percent over the previous year.[8]

This report describes current incentives provided by 30 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.

Renewable energy incentives take a variety of forms, including blending mandates, quotas, portfolio obligations, tax credits and feed-in tariffs, all of which offer a higher return than market prices, to offset higher costs. With schemes like feed-in tariffs, blending mandates or quota obligations, this remuneration is paid by the end-users. However, some schemes, such as tax credits are funded from government budgets. Many forms of support mechanisms are specific to electricity produced by renewables, capacity installed in a particular year, and have a fixed duration. Subsidies for biofuels predominately take the form of blending mandates.[9]

Since 2004, the number of countries promoting renewable energy with direct policy support has tripled, from 45 to 144, and an ever-increasing number of developing and emerging countries is setting renewable energy targets and enacting support policies.[10] The EU is maintaining its target of 20 percent by 2020. According to recent reports, three EU Member States (Bulgaria, Estonia, and Sweden) already reached their 2020 targets in 2012.[11] Discussions about setting 2030 EU climate and energy targets are now in progress.

Mention should also be made of the continued growth of policies at the local level. Hundreds of community, city, district, state and island governments worldwide have set renewable energy targets and enacted fiscal incentives or other policies to foster the deployment of renewables. In 2013, Sydney, Australia, announced the goal of achieving 100 percent renewable energy for power, heating, and cooling by 2030, and Yamanashi, Japan, targeted local generation of 100 percent renewable electricity by 2050. Over 40 other cities have already achieved their goal of 100 percent renewable energy in at least one sector or aim to do so over the next few decades.[12]

For additional information about these policies, see appendix A page 76.

1. REN 21 Renewables 2014 Global Status Report
2. Ibid.
3. Adapted from Global Trends in Renewable Energy Investments 2014, Bloomberg New Energy Finance
4. Op. cit., REN 21 Renewables 2014 Global Status Report
5. Ibid.
6. World Energy Outlook 2013
7. Op. cit., REN 21 Renewables 2014 Global Status Report
8. Ibid.
9. Ibid.
10. Ibid.
11. Ibid.
12. Ibid.

2014 Industry trends

Over the long term, the energy industry in general and renewables in particular will see steady growth. Between now and 2035, research and analysis suggests that:[1]

- Global electricity demand will increase 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.

However, trends for renewables in 2014 suggest a maturing industry affected by changing attitudes among investors, a reassessment of incentives, the growing importance of emerging economies, and new challenges for key energy subsectors. As explained more fully in the next section, global investments in renewables declined 13 percent from 2012 to 2013.[2] Some of this decline can be attributed to lower production costs or, as with biofuels, slowing growth rates. However, the decrease in investment has also been the result of changing views about policies supporting renewables, especially in developed countries.

For example, Australia – one of the first major countries outside Europe to adopt a carbon price – repealed its national carbon tax in July of 2014. In the US, the federal 30 percent solar investment tax credit for residential and commercial properties is scheduled to expire at the end of 2016, and policies supporting other renewable energy sources such as ethanol are being reconsidered, especially in the wake of the "shale gale" of natural gas made available with hydraulic fracturing (fracking) and horizontal drilling. European countries are also questioning their incentive policies or allowing incentive programs to lapse, driven by the ongoing economic crisis in some member states, by related electricity over-capacity, and by rising competition with fossil fuels.

In view of these changes and other factors involving global economic growth trends, it is not surprising that major renewable energy companies continue to shift their focus away from developed economies and into Africa, Asia, and Latin America, where strong new markets are emerging in all sectors, both on and off the grid. In developing countries, rural energy markets offer significant business opportunities, and products are being tailored specifically to meet the needs of these markets. Wind power moved more firmly into Africa and Latin America. While CSP shifted its focus further to South Africa and the Middle East and North Africa region.

Responding to these global changes, companies involved in renewable energy have increased their flexibility and developed cross-regional strategies and supply chains. Manufacturers have diversified products to increase product value, and many have advanced further into project development and ownership. Many renewable industries saw a rapid increase in worldwide demand for construction and engineering, consulting, equipment maintenance, and operations services.

The following major subsectors represent a sample of industry trends for 2014:

Biomass and Biofuels: Demand continued to grow steadily in the heat, power, and transport sectors. Total primary energy consumption of biomass reached approximately 57 exajoules (EJ) in 2013, of which almost 60 percent was traditional biomass, and the remainder was modern bioenergy (solid, gaseous, and liquid fuels). Ethanol production was up 6 percent after two years of decline, biodiesel rose 11 percent, and hydrotreated vegetable oil (HVO) rose by 16 percent to 3 million liters. New plants for making advanced biofuels, produced from non-food biomass feedstocks, were commissioned in Europe and North America.

Hydropower: Global hydropower generation during the year was an estimated 3,750 TWh. About 40 GW of new hydropower capacity was commissioned in 2013, increasing total global capacity by around 4 percent. The most capacity was installed in China (29 GW), with significant capacity also added in Turkey, Brazil, Vietnam, India, and Russia. Growth in the industry has been relatively steady in recent years, fuelled primarily by China's expansion.

Solar PV: The solar PV market had a record year in 2013, adding more than 39 GW for a total exceeding 139 GW. China saw spectacular growth, accounting for nearly one-third of global capacity added, followed by Japan and the US. Interest continued to grow in corporate- and community-owned systems, while the number and size of utility-scale systems continued to increase. Although it was a challenging year for many companies, predominantly in Europe, the industry began to recover during 2013. Module prices stabilized, while production costs fell and solar cell efficiencies increased steadily.

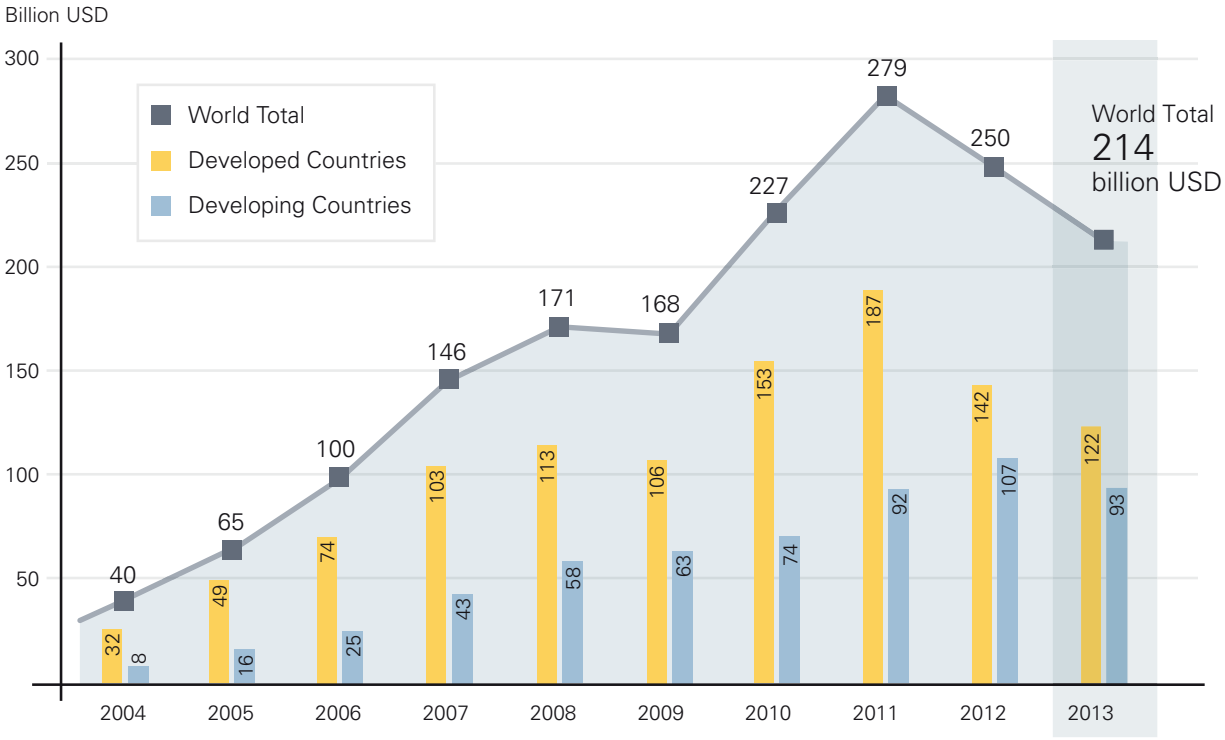
1. OECD, International Energy Association (IEA), World Energy Outlook 2012, REN 21 Renewables 2013 Global Futures Report
2. Op. cit., REN 21 Renewables 2014 Global Status Report

Solar Thermal Heating And Cooling. Solar water and air collector capacity exceeded 283 GWth in 2012 and reached an estimated 330 GWth by the end of 2013. As in past years, China was the main demand driver, accounting for more than 80 percent of the global market. Demand in key European markets continued to slow, but markets expanded in countries such as Brazil, where solar thermal water heating is cost competitive. The trend toward deploying large domestic systems continued, as did growing interest in the use of solar thermal technologies for district heating, cooling, and industrial applications.

Wind Power. More than 35 GW of wind power capacity was added in 2013, for a total above 318 GW. However, the market was down nearly 10 GW compared to 2012, reflecting a steep drop in the US market. While the EU remained the top region for cumulative wind capacity, Asia is positioned to take the lead in 2014. New markets continued to emerge in all regions, and, for the first time, Latin America represented a significant share of new installations. Offshore wind had a record year, with 1.6 GW added, almost all of it in the EU. However, the wind industry continued to be challenged by downward pressure on prices, increased competition among turbine manufacturers, competition with low-cost gas in some markets, reductions in policy support driven by economic austerity, and declines in key markets.

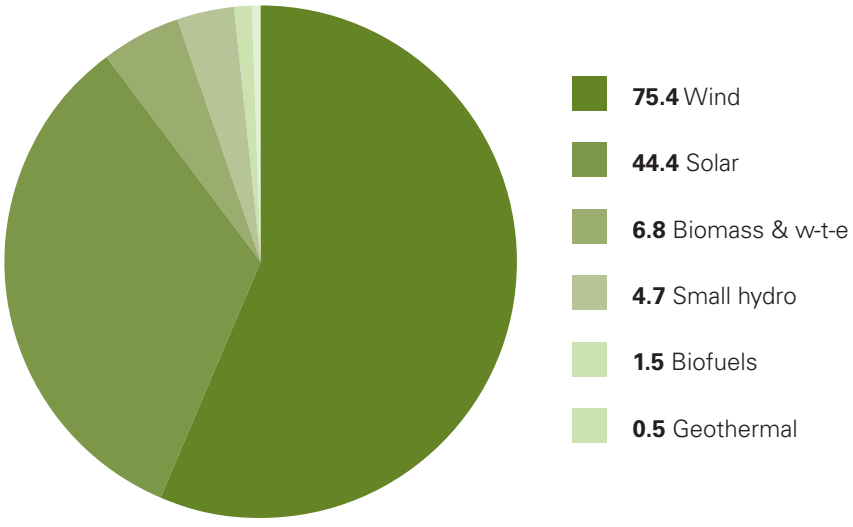
Global investment in renewable energy production

Global New Investment in Renewable Power and Fuels, Developed and Developing Countries, 2004–2013



Source: *REN21 Renewables 2014 Global Status Report, 2014.*

Asset finance of renewable energy assets by sector, 2013, $bn



Total values include estimates for undisclosed deals

Source: *Global Trends in Renewable Energy Investments 2014*, Bloomberg New Energy Finance, 2014.

In 2013, total investment in renewable power and fuels (excluding large hydro-electric projects) fell for the second year running, reaching USD214 billion worldwide.[1] This figure is 14 percent lower than in 2012 and 23 percent below the 2011 record. However, the beginnings of a recovery in renewable energy investment has been detected in 2014. The release of 1Q numbers showed a 4 percent gain compared to the same period in 2013.[2]

The decline in investment can be explained by several factors, starting with uncertainty about renewables policy in developed economies. In the US, investments have declined 33 percent over the past two years, from a peak of USD53.4 billion in 2011 to USD35.8 billion in 2013.[3] European renewable energy investment was down 44 percent from 2012. Former champions for renewables in Europe such as Italy and Spain saw significant contractions based on policy changes and cuts in tariff supports.

Dramatically lower prices for renewable energy have also discouraged investors. Solar PV module prices continue to drop dramatically. In 2013, a record amount of PV capacity (39GW) was constructed and for less money than the smaller 2012 total of 31GW. Wind power was excluded from one of Brazil's national auctions because it was pricing all other generation sources out of the market. Overcapacity in the manufacturing supply chain in North America and Europe has also discouraged investors.

That being said, renewables continue to be recognized as a growth industry by both investors and financial institutions. During the global downturn, the WilderHill New Energy Global Innovation Index (NEX), which tracks 96 clean energy stocks worldwide, recorded a 78 percent drop in clean energy stocks. The slump bottomed out in July 2012 and turned into a strong rally during 2013, gaining 54 percent. The improved share price performance took place as many companies in the solar and wind manufacturing chains moved back towards profitability after the painful period of over-capacity and corporate distress in 2011-12.

In North America, innovative yield-oriented financing vehicles have emerged as investment tools for renewables, and crowd funding moved further into the mainstream in a number of countries. In Europe, institutional investors continued to play an increasing role, with a record volume of renewable energy investments for tools such as Green Bonds in France and Renewable Financing Company Bonds in the United Kingdom. Development banks were again an important source of clean energy investment, with some banks pledging to curtail funding for fossil fuels, especially coal power.

A major performer among investment types was public market equity raising by renewable energy companies. This jumped 201 percent to $11 billion, the highest since 2010, spurred on by the rally in clean energy share prices and by institutional investors' increased appetite for funds offering solid yields on portfolios of operating projects.

Solar power was the leading sector by far in terms of money committed during 2013, receiving 53 percent (USD 113.7 billion) of total new investment in renewable power and fuels (with 90 percent going to solar PV). Wind power followed with USD 80.1 billion. Asset finance of utility-scale projects declined for the second consecutive year, but it again made up the vast majority of total investment in renewable energy, totaling USD 133.4 billion.

For additional information, see appendix A page 76

China:

China was once again the dominant country in 2013 for investments in renewable energy, accounting for USD56 billion in renewables investment. In fact, China invested more in renewable energy in 2013 than the whole of Europe, this despite a 6 percent decline from 2012. Not surprisingly, the year also saw China's new renewable power capacity surpass new fossil fuel and nuclear capacity for the first time.

Asset financing in 2013 for China increased, but contributions from public markets and private equity shrank to low levels. Despite the overall decline, China's investment in additional renewable power capacity surpassed their fossil fuel capacity additions in 2013 for the first time. The vast majority of the country's investment was for solar and wind power projects, and China was the global leader in spending on utility-scale projects, followed by the US and the UK. China also invested significant sums in hydropower, bringing about 29 GW of new capacity into operation during the year, based mainly on large projects greater than 50 MW.

Based on the 2005 Renewable Energy Law, the government's support for renewables in China includes reduced corporate income taxes, significant reductions in value added taxes, other tax incentives, feed-in tariffs, R&D incentives, and subsidies for energy conservation technologies improvement.

More on page 21.

1. Bloomberg New Energy Finance, IHS Research, REN 21 Renewables 2014 Global Status Report. Figure excludes large hydroelectric projects using traditional technology
2. Op. cit., REN 21
3. Ibid.

United States

Although first among developed economies, the US again ranked second in 2013 for renewables investments, with a total of USD35.8 billion. This figure represents a decline in investment of nearly 10 percent compared to 2012, attributed largely to the impact of low natural gas prices caused by the shale gas boom, and to uncertainty over the continuation of policy support for renewables. US venture capital and private equity investment in renewables fell to just USD1 billion, the lowest since 2005, indicating a loss of confidence among early-stage capital providers. However, this decline was offset by a big jump in US public markets investment, from USD 949 million in 2012 to USD 5.3 billion in 2013. These investments were mainly for solar power and biofuels.

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Japan:

Following the events at Fukushima in 2011, Japan began a national initiative to support renewables. In 2013, the country saw a record increase in renewable energy investment, up 80 percent from 2012 to USD28.6 billion.

The largest part of that commitment was for small-scale solar PV projects, as investors sought to capitalize on the generous feed-in tariff that was introduced in 2012. Investment in this area increased 76 percent in 2013 for a total of USD 3 billion, making Japan the top country for investments in small-scale distributed renewables. At the same time, Japan's asset finance in utility-scale projects nearly doubled, to USD5.6 billion.

More on page 43.

United Kingdom

In the UK, investments rose by 14 percent, with the largest component coming from asset financing of utility-scale projects. This was followed by public markets, where a new breed of funds that owns and operates wind and solar power assets raised significant money during the year.

In April of 2014, the government announced eight major renewable electricity projects are unveiled as part of national electricity reforms. By 2020, the projects will provide up to GBP12 billion of private sector investment, supporting 8,500 jobs. Involving offshore wind and biomass conversion technology, the projects will add 4.5GW of low-carbon electricity to Britain's energy mix (or around 4 percent of capacity), generating enough clean electricity to power over three million homes. Once built, the projects will contribute approximately 15TWh or 14 percent of renewable electricity generation expected by 2020.

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Germany:

Although still ranking among the top five investors in renewables, Germany's investment level declined again in 2013 to USD33.7 billion – less than one-third of its 2010 peak. The low investment level in 2013 can be attributed in part to the policy uncertainty faced by investors ahead of the general election in September 2013. However, other factors contributed to the dampened activity levels, including reduced prices of solar PV and a shortage of good quality, unexploited wind sites on land.

However, Germany's commitment to renewables has not faltered. In 1Q 2014, clean-energy sources such as solar and wind met a record 27 percent of demand in Germany because of additional installations and favorable weather.[18] Renewable generators produced 40.2 billion kilowatt-hours of electricity, up from 35.7 billion kilowatt-hours in the same period last year. Germany, Europe's biggest clean-energy market, seeks to increase the share of renewables to at least 80 percent by 2050 to replace nuclear reactors closed by 2022.

As a part of its Energiewende or energy transformation program, 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.

More on page 28.

4. Renewables Meet Record 27 Percent of German Electricity Demand, Bloomberg News, May 9, 2014

Renewable energy promotion policies by country

The following chart is a summary of the support schemes available in the 31 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.

COUNTRY		REGULATORY POLICIES							FISCAL INCENTIVES AND PUBLIC FINANCING				
	Renewable energy targets	Feed-in tariff/ premium payment	Electric utility quota obligation/RPS	Net metering	Tradable REC	Tendering	Heat obligation/ mandate	Biofuels obligation/ mandate	Capital subsidy 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
Argentina	○	○				○		R	○	○	○	○	○
Australia	○	R*	●		○			●	○				○
Austria	○	○			○			○	○	○			○
Brazil	○			○		R	●	R		○	R		R
Belgium	○		●	●	○	○		○	★*	○	○		
Canada	●	R*	●	●		○		○	○	○	○		○
China	R	R	○			○	○	○	○	○	○	○	○
Costa Rica	○	R		●		○		○	○		○		
France	R				○	R		○		R	○		○
Germany	○	R					○	○	○	○	○		○
Greece	○	R		★				○	○	○	○		○
India	R	○	○	★*	○	R	●	R	R	○		R	○
Ireland	○	○			○	○	●	○					
Italy	○	R	○	○	○	R	○	○	○	○	○		○
Japan	○	○	○	○	○	○			○				○
Mexico	○			○		○	○			○			○
Netherlands	○	R		R	○			○	○	○	○	○	○
New Zealand	○								○				
Norway	○		○		○	★		○	○		○		○
Peru		○				○		○			○		★
Philippines	○	○	○	○		○		R	○	○	○	○	○
Poland	○		○		○	R		○			○		○
Romania	○		○		○			○					○
South Africa	○		○	○		R		★	○		○		○
South Korea	○		○	○	○			○	○	○	○		○
Spain[1]	○			○	○			○	○	○		○	
Sweden	○		○		○			○	○	○	○		○
Turkey	○	R						○	○				○
United Kingdom	R	R	○		○		○	○	R		○	○	○
United States	R*	R*	R*	R*	●	R	●	R	○	5	○	○	R
Uruguay	R	○		○		R	○	○	○		○	○	○

○ – existing national, ● – existing sub-national, ★ – new, R – revised, × – removed/expired, * – sub-national

1. Spain removed FIT support for new projects in 2012. Incentives for projects that had previously qualified for FIT support continue to be revised.

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 regular surveys 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 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).

Bill:

In March 2014, a bill to make the application of Law 26190 more flexible and to achieve an 8 percent share in the satisfaction of the national demand of electric energy within a ten-year term (expiring in 2016) has been brought before the Argentine Senate. In addition, such bill sets a new goal for 2025, which consists in increasing the aforementioned share to 20 percent.

Apart from the benefits provided for in prior regulations, the current bill offers a novelty by including the collection of a tax bonus to be allocated to the payment of national taxes.

Australia

Support schemes

Investments and other subsidies

Australia's clean energy sector is currently experiencing ongoing transformation following the change in Federal Government in September 2013 and the recent Federal Budget announcement in May 2014. Of particular importance to the renewable sector are potential changes to the Renewable Energy Target (RET) scheme which is currently under review by an independent expert panel that is due to report back to Government in mid 2014. In addition to the current review of Australia's RET, presently set at 20 percent by 2020, the Government has reaffirmed its commitment to reviewing its international emissions targets in 2015. This review will focus on the extent to which other nations, including the major economies and Australia's major trading partners, are taking real and comparable actions to reduce emissions.

In addition to potential RET changes, the Government is preparing legislation to repeal the Carbon Pricing Mechanism including its associated programs and replace it with a Direct Action Plan (DAP). The main support scheme within the DAP is the Emissions Reduction Fund (ERF), which is set to operate alongside existing programs that work to offset Australia's emissions. If the DAP is passed into legislation, the Government will commit $2.55 billion Australian dollars (AUD) of funding to the ERF. The focus of this program is the reduction of emissions through driving productivity, innovation and investment into projects utilising clean technologies. Details of this initiative are contained in a White Paper that was released in April 2014 with funding intended to be offered via a reverse auction process that will begin in the second half of 2014 (subject to successful legislative passage through the Federal Parliament).

There are also a number of policies, programs and incentives, with key initiatives specifically related to renewable energy that are described below.

Australian Renewable Energy Agency (ARENA)

ENA is the Australian Renewable Energy Agency, an independent agency established by the Australian Government on 1 July 2012, with two key objectives: to improve the competitiveness of renewable energy technologies, and to increase the supply of renewable energy in Australia. In the recent 2014 Federal Budget it was announced that ARENA will be abolished. This will however be require the *Australian Renewable Energy Agency Act 2011* to be repealed, which is subject to a majority vote in Australian Parliament. Until such time as this Act has been repealed, ARENA continues to manage its existing projects and to assess and progress proposals received. The changes to ARENA's funding will not affect projects that already have a funding agreement in place with ARENA.

By way of background, ARENA is currently 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. 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 ARENA's current initiatives which will close if the *Australian Renewable Energy Agency Act 2011* is repealed.

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 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 ARENA Project. The application process is undertaken in one phase and is expected to fund up to AUD3 million, with a maximum funding pool of AUD10 million.

In addition to these two phases ARENA also has a **Supporting High value Australian Renewable Energy Knowledge (SHARE)** initiative that seeks to build on the store of publicly-available knowledge about renewable energy technologies and approaches that are best suited to Australia. The SHARE iniative can support the direct commissioning research, studies or knowledge products that meet knowledge gaps within the industry or help overcome barriers to its growth in priority areas including understanding renewable energy potential, grid integration and international engagement.

Regional Australia's Renewables (RAR)

The RAR program aims to demonstrate the viability of renewable energy in regional and remote locations. The initiative has two parts:

- **RAR Industry Program (I-RAR)** – I-RAR supports a portfolio of renewable energy solutions in regional and remote Australia, focusing on hybrid and integrated systems in off-grid and fringe-of-grid communities.
- **Community and Regional Renewable Energy Program (CARRE)** – The RAR CARRE offers support for renewable energy systems in grids for small communities and islands, grow supporting technologies, show commercial viability and contribute to knowledge sharing.

Accelerated Step Change Initiative (ASCI)

ASCI supports exceptional, breakthrough projects that are not otherwise eligible under existing ARENA programs. Expressions of interest from Australian and international companies and research institutions will be accepted until 2018. Eligible projects must require an ARENA contribution of $5 million or more, with the overall project cost expected to be more than $20 million.

Projects that are at the research and development (R&D) phase of a renewable energy technology or include a technology that has yet to be proven at the pilot scale are not eligible. Projects can, however, include R&D components where they assist in the demonstration, commercialisation or deployment of a renewable energy technology.

Integrating Renewables in the Grid

ARENA is investigating the introduction of a new initiative that focuses on demonstration projects that address barriers to higher penetration of renewables in distribution networks, at both residential and commercial scale.

Clean Energy Finance Corporation (CEFC)

The CEFC is a commercially oriented fund which is expected to make a positive return on its investment. The future of the CEFC remains uncertain as a second bill to abolish the CEFC was introduced into parliament in March 2014. The CEFC has to date been responsible for investing in firms and projects that utilize renewable energy and clean energy enabling technologies as well as manufacturing businesses that focus on producing the inputs required. To date, the CEFC has to date offered just under $600 million of complementary financing alongside private sector financing for renewable energy and clean energy enabling technologies.

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.

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. In many instances, activities conducted as a part of renewable energy development may be eligible for the R&D tax incentive. Currently 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.

However, following the recent Federal Budget announcement, the rate of the incentive is due to be decreased to 43.5 percent and 38.5 percent respectively. This decrease will be subject to new legislation being passed by parliament.

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.

Quota obligation

20 percent reduction by 2020, subject to review.

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 6 percent capital yield.

Waste liquor plants

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

- up to 100 MW: 300 Euros (EUR)/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[1]

Wind energy:

- cents (ct)9.36/kWh

Solar:

On buildings:

- 5 kWp to 350 kWp: ct12,50/kWh

In open space:

- 5 kWp to 350 kWp: ct10,00/kWh

Geothermal:

- ct7.36/kWh

Sewage gas

- ct5.88/kWh

Landfill gas

- ct4.90/kWh

Compact biomass (such as forest woodchips or straw)

- ct8.81/kWh to ct13.86/kWh, depending on the production capacity (declining tariff)

Waste with high biogenic contingent

- Same as for compact biomass, minus 25 percent

Liquid biomass

- ct5.68/kWh; surplus of ct2/kWh for production in an efficient power-heat cogeneration

Biogas from agrarian production

- ct 12.80/kWh to ct19.31/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/).

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,[1] 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 26.41 Brazilian real (BRL) 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 until December 31st 2016, 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 approved Federal Law n. 12.859/2013 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, as long as the commodities' contracts do not estipulate physical delivery (i.e. applies to contracts that are financially settled).

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 taxexempt 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.

Additional information

Brazil is considered the world's sixth largest investor in renewable energy.[2]

1. 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.
2. Global Trends in Renewable Energy Investment 2012 – UNEP

Nationwide, 44.1 percent of the Internal Energy Supply (Oferta Interna de Energia or OIE) is renewable,[3] whereas the world's average is 20.3 percent.[4]

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.[5]

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.[6] 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:

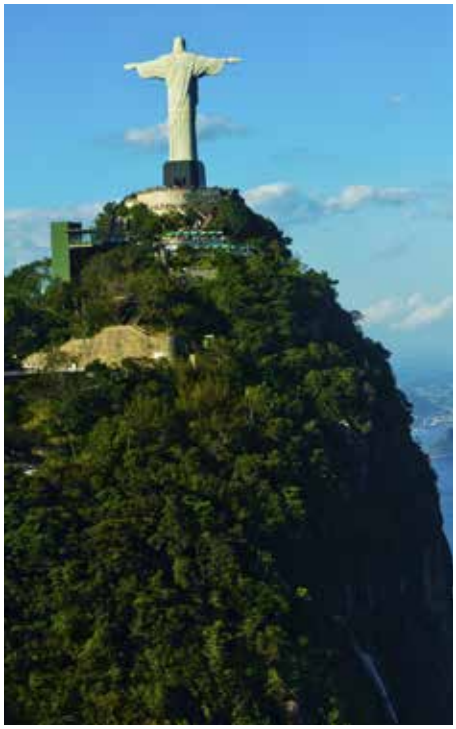
The Brazilian Commission of Infrastructure Services (CI) approved PLS 311/09, a federal project law that establishes the Special Regime of Taxation to encourage the development and generation of electric power from alternative sources (Regime Especial de Tributação para o Incentivo ao Desenvolvimento 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.

In 2013, the government created 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 BRL 6 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.



3. Energetic National Balance (Balanço Energético Nacional) 2012
4. United Nations Environment Programme – 2012
5. Brazilian government website, 2013
6. GLOBAL Wind Energy Outlook of 2012

Belgium

Support schemes

Investment and other subsidies

Corporate income tax incentives

An increased investment deduction is available for investments made by a Belgian company into newly acquired or built tangible or intangible fixed assets. This deduction is provided if the investment is made in "energy saving assets," which are fixed assets used for a more rational approach to energy consumption, for the improvement of industrial processes from energetic considerations, and especially for the recovery of energy in industry.

Applicable rules and rates

A percentage of the acquisition or investment value of certain assets that have been acquired or established during the taxable period and that relate to energy savings is tax deductible. This is in addition to the accounting depreciations that are also tax deductible.

The increased investment deduction should therefore be applied as a one-off deduction and equals 13.5 percent (indexed yearly – percentage investments 2014) of the acquisition value or investment value.

Tax deduction

The investment deduction can be deducted from the profits of the taxable period in which the assets are acquired or established (that is, become depreciable). When the deduction cannot be fully set off against the profits of the taxable period, the proportion of the investment deduction that has not been used can be carried forward without any time limit and can be set off against the profits of the subsequent taxable periods.

Formalities

The Royal Decree implementing the Belgian Income Tax Code contains a list of eligible investments. Some examples are wind turbines, solar panels, combined heat and power plants, biomass and waste handling, processing installations or heat recovery devices.

A certificate issued by the competent Regional Authority confirming that the assets are enlisted should be requested within three months following the last day of the taxable period in which the assets are acquired or established. In order to verify the authenticity of the investment, it is necessary that the application is accompanied with supporting documents and other items for determining the accuracy of the amount and the value of the investments.

Regional Support Schemes

In Belgium, renewable energy is a regional matter; only offshore wind power and hydro power are governed by national regulations. Depending on the competent Regional Authority, specific support schemes could be applied for.

Financial support which encourages companies to invest in state-of-the-art, ecological technologies can be obtained via an open online system and is granted by the competent Regional Authorities. These state-of-the-art technologies are described in limitative lists of eco-friendly or energy-saving technologies and are granted financial support of between 5 and 50 percent.

The regionally granted subsidies are under certain conditions tax-free for corporate income tax purposes.

Federal System of Certificates

In Belgium, electricity from renewable sources is promoted mainly through a quota system based on the trade of certificates (in other words, green energy certificates and / or combined heat and power (CHP) certificates).

The certificate is a transferable intangible asset demonstrating that the energy plant mentioned therein realized a significant amount of energy savings. The competent Regional Authorities grants the certificate to the owner of the energy plant as a reward for the energy savings achieved. The certificate should be granted on a monthly basis, taking into account several factors.

Electricity suppliers in Belgium have to make sure that a minimum share of the electricity they provide to the end consumers can be considered as green or renewable energy ("the minimum renewable energy requirements"). To verify this minimum amount of renewable energy, the electricity suppliers need to be granted a sufficient number of certificates. These certificates should be submitted to the Regional Authority, showing that the minimum renewable energy requirements are met. Suppliers that do not produce electricity (and are not granted certificates) or suppliers that do not provide enough renewable energy are able to buy the certificates on the market.

A producer of renewable energy that is granted certificates can sell the certificates to a supplier that meets the minimum renewable energy requirements. Moreover, to ensure the sale of a minimum volume of certificates at a certain minimum purchase price, the distribution network operator, as part of its duty as a public service, should purchase at a minimum guaranteed value, upon request of the energy producer, the certificates granted to the energy producer by the Regional Authority.

As a result, a producer of renewable energy can use the certificates that were granted to his energy plant by the Regional Authority to:

- meet the minimum renewable energy requirements (if it is a producer and supplier of electricity)
- sell the certificates on the market at market price
- transfer the certificates to the distribution network operator at a certain minimum guaranteed value.

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.
    - Equipment used to remove non-combustibles and containments from gas
- The 2014 budget proposes to broaden the eligible equipment in Class 43.2 to include
  - Water-current energy equipment.
  - A broader range of equipment used to gasify eligible waste.

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 fasttracking clean technologies through their development and demonstration phases, in preparation for commercialization. SDTC is an arm'slength foundation that was created by the Federal government to invest 1.09 billion Canadian dollars (CAD) in innovative technologies and projects that deliver economic, environmental, and health benefits to Canadians.

Backed by CAD598 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 246 clean technology projects, for a total value of CAD2.2billion, of which over CAD1.6 billion is leveraged primarily from the private-sector. In February 2014, SDTC announced its 23rd call for applications, which was open until 16 April 2014.

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 9 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 7 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 CO2. 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 CO2 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 CAD1.15 billion.

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 precommercial 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 March 2013, there were 1,706 contracts executed to generate 4,541 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 3 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 3 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 5 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.
- 50 percent refund of VAT is paid on the sale of self-produced photovoltaic power from 1 October 2013 to 31 December 2015.
- 100 percent refund of VAT is paid on the sale of biodiesel oil generated by the utilization of abandoned-animal fat and vegetable oil.
- The portion of VAT paid in excess of 8 percent shall be refunded on the sale of self-produced electricity by hydroelectric power station with 1 million KW installed capacity from 1 January 2013 to 31 December 2015, while the portion of VAT paid in excess of 12 percent shall be refunded on the sale of self-produced electricity by hydroelectric power station with 1 million KW installed capacity from 1 January 2016 to 31 December 2017.
- 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, re-trodden 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 240 Chinese yuan (CNY) 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 3 years and a tax reduction by half (an effective rate of 12.5 percent) over the following 3 years, starting from the tax year in which the revenue from the project first arises. Where an EPC project lasts less than 6 years, the ESCO shall be entitled to the incentives based on the actual project period.
- 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 5 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.

Costa Rica

Support schemes

Investment and other subsidies

Law 7447

Law 7447 (Regulation of the Rational Use of Energy), Article 38, lists a number of energy-related products that are exempt from the following taxes:

- Excise tax
- Ad valorem
- General sales tax
- Specific customs tax.

These exempt products include –

- Multipurpose solar water heaters
- Water storage tanks for solar heating systems (boiler type)
- Photovoltaic (PV) panels for power generation, any capacity
- Control systems for PV panels, wind and hydro generators working with direct current (DC)
- Static DC to AC converters for PV systems, wind and hydroelectric generators with direct current systems

Deep cycle Lead-acid batteries, nickel-cadmium and nickel-iron, with capacities greater than 50 amps per hour

- Head economizers for hot water showers and sinks, with consumption of less than 9.5 liters / minute
- Efficient fluorescent and halogen lighting
- Wind and hydro-generators for use not related to private generation of electricity (Law 7200 of 28 September 1990)
- Equipment for controlling voltage and frequency for wind and hydro generators
- DC electronics equipment for use with PV panels, wind and hydro generators
- Materials to build equipment for renewable energy use
- Tempered glass with less than 0.02 percent iron content
- Thermal insulation for thermal solar collectors such as polysocyanurate and polyurethane insulation, additives for preparing them, or both
- Plate-finned tubes and absorbent plates for water heaters
- Specific aluminum profiles to build solar water heaters
- Thermal insulation for water pipes
- Any heat insulator useful to improve the insulation of storage tanks with solar heated water systems
- Measuring instruments related to renewable energies variables, such as: temperature gauges, pressure gauges fluids, solar radiation meters, and anemometers to measure wind speed and direction
- Pump-fed systems with PV and wind systems
- Refrigerators, solar cookers and hydraulic ram pumps.

Moreover, tax reductions for green technology have been introduced, such as a 30 to 10 percent tax reduction for hybrid cars.

Temporary import

Law 7557 (General Customs Law), Article 165, states that the products listed above are exempt from import taxes if they are imported with a temporary purpose related to a renewable energy project. After the renewable energy project is finished and the imported products are no longer needed, they can be exported without incurring any customs tax. The products must remain in the country for no longer than 1 year and must then be exported or definitively imported without any transformations.

Operating subsidies

Feed-in tariff

Costa Rica currently has no feed-in tariff policy.

Additional information

Renewable energy production is supported by Costa Rica's natural resources and local conditions, including six months of summer (for solar energy production), open plains (for wind energy), and abundant supplies of water (for hydropower). As a result, Costa Rica produces 99 percent of its electricity from renewable resources.

The Costa Rican government has set a goal for the country to become carbon neutral by 2021. Public institutions have been developing plans to begin offsetting all of the country's carbon dioxide emissions.

For 2012, the country's energy mix was made up of the following resources:

- Hydroelectric – more than 66 percent
- Thermal – 20 percent
- Geothermal – 7 percent
- Wind – 5 percent
- Biomass – 2 percent.

Grupo ICE operates 76 percent of installed capacity with its own plants and 13 percent with plants contracted to independent private generators. Distribution companies operate plants that reach 11 percent of the installed capacity.

Figure 1: Shows the percentage of the installed capacity and 2012 generation production for each source.

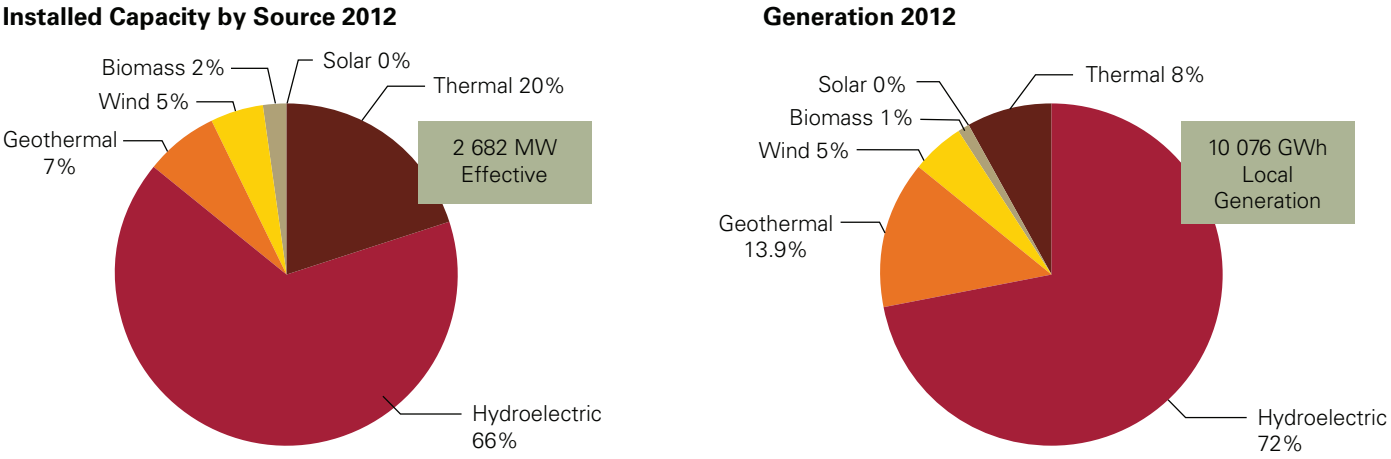
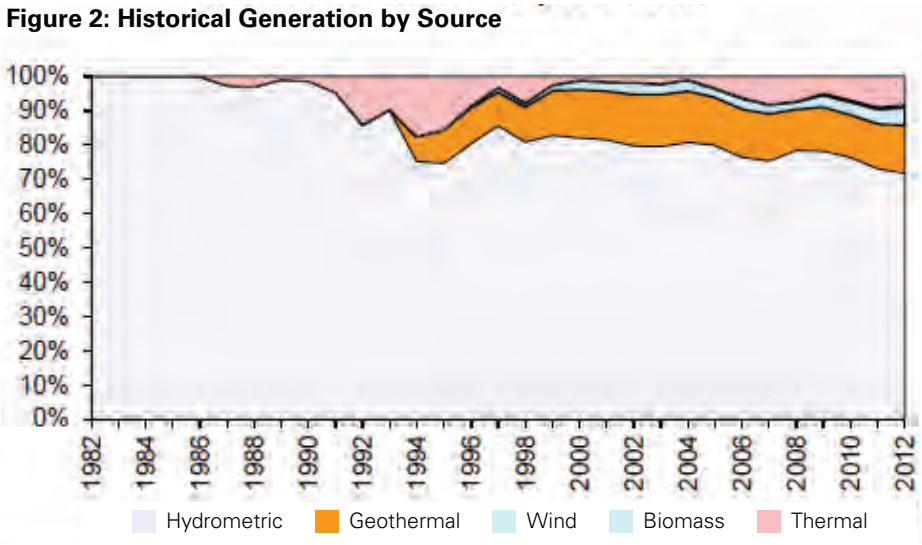


Figure 2 shows the historical percentage of use of different sources for electric generation in Costa Rica. At the beginning, after the construction of the Arenal complex, there was hardly any use of thermal generation. Subsequently, its use has increased to a maximum of 17.4 percent in the year 1994, due in part to a severe drought. During recent years, thanks to the contribution of geothermal generation, favorable hydrological conditions and wind, it has been possible to reduce to a minimum the use of thermal generation. In 2012 the heat production was 830 GWh, only 8 percent of the national production.

Figure 2: Historical Generation by Source



Current Projects

The following renewable energy projects are being implemented in Costa Rica. All these projects have the inherent benefit of reducing GHG emissions.

- PV power at the thermal plant in San Antonio
- Micro-hydropower station on Coco´s Island
- "El Paramo" Hybrid System (Chirripó National Park)
- Miravalles geothermal project
- Cogeneration with biomass at the "Azucarera el Viejo"
- Electricity generation project from biogas at the SERMIDE farm
- Tejona wind power generation plant
- Hybrid system: wind-solar PV at the Iztarú National School Field
- Self-sufficient house at the INBIO Park - Compañía Nacional de Fuerza y Luz
- "Los Anonos" PV power plant
- Garabito thermal plant
- "Peñas Blancas" hydroelectric plant

Future Projects

- Las Pailas II geothermal project
- Reventazon hydroelectric plant

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 2014 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 according to tariff which are revised on indexation formula.

Wind

- Onshore wind power plants: EUR0.082/ kWh for 10 years and between EUR0.028/kWh and EUR0.082/kWh for the next 5 years depending on the location of the wind farms and the hours of electricity production.

  On December 19, 2013, the CJEU considered that the mechanism relating to the obligation to purchase wind-generated electricity meets the conditions for being characterized as State aid. Based on said decision, the French Supreme Administrative Court has decided to cancel the Order of 17 November 2008 setting the tariff amounts (Decision dated May 28, 2014).

- Further to this decision, a new tariff should be issued soon.

- 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 kind of projects (tariffs for the first quarter 2014):

- ground-based PV power plants: EUR0.717 /kWh

- simplified building-integrated generating facilities: EUR0.1345kWh or EUR0.1416/kWh

- building-integrated generating facilities: EUR0.2794/kWh, 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 5 percent or 10 percent applicable on the above-mentioned tariffs was granted for the components of the PV system made in Europe. This bonus has been cancelled effective May 2014 since this system has been considered as non-compliance with EU rules on freedom of movement.

The above-mentioned tariffs are mainly applicable for installations below 100 KW power. For the installations exceeding this threshold, they are subject to invitation to tender.

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.

For the installation of PV, the invitations to tender 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.

A statement issued in 2013 by the French Ministry in charge of energy, the selection will be made, interalia, on 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).

However, due to lack of consensus over the tender process, it appears that, to date, no calls for tender have yet to be launched. Consequently, several expired concessions – including 2 that expired in 2012 – have yet to be renewed and are still being operated by the incumbent utility company. This process shall take into account the rules of EU competition for any public – private mechanism which could be created by French government in the form of this process

A decision as regards the tender process should be taken in the coming months.

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. On May 7, 2014, the French government has awarded a tender to build and run two offshore windfarms to a consortium led by French gas and power group, GDF.

Furthermore, the Ministry of environment indicated that France wants to have 6000 MW offshore capacity before 2020. Therefore, specific organisms have to identify new zones for the construction of offshore wind parks and in the coming months, the French government should announce a new tender.

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 three 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.
  - Storage: in new installations of stationary battery storage systems combined with photovoltaic systems.
- Premium funding was initiated to strengthen the establishment of the renewable technologies in the heat market through low-interest KfW loans and repayment subsidies by the Federal Ministry for Economic Affairs and Energy. 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
  - heat-controlled biomass CHP with a thermal output at par with at least 100 kW and 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, a minimum thermal fluid temperature of 20°C and a minimum geothermal heat output of 0,3 MW_{th}.
- All plants shall be commissioned in accordance with their designated purpose for at least 7 years.
- 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 2013, KfW provided a total credit volume of EUR298 million for Premium and around EUR4.4 billion for Standard. Funding for Storage since initiating the program in May 2013 amounted to EUR45 million.
- Loan-term: 5, 10 or 20 years with a repayment-free, start-up period of up to 3 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. In 2013, KfW provided a credit volume of EUR194 million.
- Loan-term: up to 20 years with a repayment-free start-up period of up to 3 years.

KfW Energy Efficiency Program

Low-interest loans are granted for investments in and outside Germany that achieve substantial energy-saving effects. As part of the joint initiative "Energy Efficiency of Small and Medium Sized Enterprises" by KfW and the Federal Ministry for Economic Affairs and Energy, SMEs are additionally supported by favourable interest rates.

- Outside the EU, the share provided by the German partner will be financed.
- Replacement investments must lead to energy end-use savings of at least 20 percent on the basis of

the average consumption of the previous 3 years. New investments must achieve energy savings of at least 15 percent compared with the industry average.

- The funding is available as a loan to finance investments in energy efficiency measures (i.e. renewal of machine base, new building etc.) up to 100 percent of investment costs and usually up to EUR25 million per project.
- Loan-term: 5, 10 or 20 years with up to three repayment-free start-up years.

It is complemented by the "SME Energy Effiency Advice" program, which subsidizes small and medium enterprises identifying energy savings potential as well as reducing costs by improvement of energy efficiency.

KfW Energy Turnaround Financing Initiative

High volume loans for large-scale investment projects in Germany in the areas of energy efficiency, innovative projects in the areas of energy conservation, electricity generation, storage and transmission as well as the use of renewable energies.

- Two promotional funds are available:
  - Direct loans under a banking consortium, with KfW contributing 50 percent to the financing of the project.
  - Financing package composed of a loan on-lent through a bank and a syndicated loan with participation by KfW
- Amount of loan: usually from EUR25 million up to EUR100 million per project.
- Loan-term: up to 20 years with a repayment-free start-up period of up to 3 years.
- Eligibly to apply: large commercial enterprises in and outside Germany with an annual group turnover EUR500 million to EUR4 billion.

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.
- Commitment volume in 2013 around EUR10.4 billion.

Administrative procedures:
Applications must be filed via credit institution or with the governmental-owned bank KfW.

Sources: KfW Bankengruppe, BMWi Förderdatenbank

Operating subsidies

Based on current information, the reformed Renewable Energies Act (EEG 2014) shall be in force as of 1 August 2014. Legislative procedure being on-going, the following statements are provided on the basis of the Draft Law of 11 April 2014 and may be subject to further amendments.

The reformed law aims to make renewable energy development more predictable and more efficient by using tools as expansion corriodors. Furthermore, a new approach or renumeration is pursued by replacing the feed-in tariffs with renumeration of subsidized direct marketing.

Applicability

Remuneration is available for electricity produced. All tariffs and ranges in principle apply to plants commissioned as of 1 August 2014. Plants approved prior to 23 January 2014 that begin operations by 31 December 2014 will still be governed by the provisions of to the previous EEG 2012.

Expansion Corridors

The percentage of renewable enegies is to be expanded within specific corridors:

- by 2025 renewables are to produce 40 to 45 percent of the total energy mix,
- by 2035 rising to 55 – 60 percent.

These targets are to be achieved by individual corridors laid down for the specific technology.

Mandatory Direct Marketing

Plants are to market their power directly. Compulsory direct marketing is introduced in stages:

- As of 1 August 2014, plants with an output of 500 kW and above are obligated to direct marketing.
- As of 1 January 2016 for plants with an output of 250 kW,
- As of 1 January 2017 for plants with an output of 100 kW or more.

Market Premium

In addition to the revenue from directly sold electricity a market premium can be claimed. The market premium consists of a fixed statutory payment (anzulegender Wert) differentiated by technology and rated power minus a technology-specific monthly market value (Monatsmarktwert).

In order to receive the market premium, plants must be remote-controllable as of 1 January 2015, including plants already commissioned.

Exemptions from Mandatory Direct Marketing

Exemptions from mandatory direct marketing exist for small plants and in case of so called 'default marketing' when plant operators are temporarily unable to market their electricity, receiving a tariff in the amount of 80 percent of the respective fixed statutory payment.

Technology-specific corridors and remunerations

Hydro

- No individual expansion corridor
- Fixed statutory payment depending on nominal generation capacity of the individual plant:
  - up to 5 MW: cent (ct)6.31/kWh to ct12.52/ kWh
  - more than 5 MW: ct4.28/kWh to ct5.54/kWh
  - more than 50 MW ct3.3/kWh.
- Degression: 1 percent per annum (p.a.). as of 1 January 2016.

Biomass

- Expansion corridor: annual increase of approximately 100 MW (gross)
- Fixed statutory payment depending on nominal generation capacity of the individual plant: ct5.85/kWh to ct13.66/ kWh.
- Plants with a nominal generation capacity of more than 100 kW:
  - Fixed statutory payment just for 50 percent of nominal generation capacity per annum
  - Additional flexibility premium: EUR40 per kW installed capacity and annum.
- 'Breathing Caps': financial support increases or decreases if growth exceeds or falls below the targets of the expansion corridor.
- Degression: according to 'breathing caps' between 0.5 and 1.27 percent per quarter as of 2016.

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

- Fixed statutory payment depending on nominal generation capacity of the individual plant: ct4.00/ kWh to ct8.42/kWh.
- Plants with a nominal generation capacity of more than 100 kW:
  - Fixed statutory payment just for 50 percent of nominal generation capacity per annum.
  - Additional flexibility premium: EUR40 per kW installed capacity and annum.
- Degression: 1.5 percent p.a. as of 2016.

Geothermal

- Fixed statutory payment: ct25.20/ kWh.
- Degression: 5 percent p.a. as of 2018.

Wind

Onshore

- Expansion corridor: annual expansion 2.5 GW (net)
  - Repowering measures will be considered only with respect to the net increase of nominal power.
- Fixed statutory payment:
  - ct4.95/kWh (basic payment)
  - Increased basic payment (initial payment) of 8.9 ct/kWh for at least 5 years; possibility of extension for locations with a reference yield below 130 percent.
- 'Breathing Caps'
- Degression:
  - Basically 0.4 percent per quarter as of 2016
  - Decreases or increases in a range between zero and 1.2 percent depending on reaching breathing caps.

Offshore

- Expansion corridor: 6.5 GW until 2020, 15 GW until 2030.
- Fixed statutory payment:
  - Basic payment: ct3.90/kWh
  - Increased initial payment (Basic model): ct15.4/kWh during the first 12 years after commissioning (extended depending on water depth and distance from shore)
  - Acceleration model: if the OWP will be commissioned until 31 December 2019, operator can select an increased initial payment of ct19.4/kWh for 8 years (extended depending on location with a payment of ct15.4/kWh for the prolonged period).
- Degression:
  - For Basic model: annually ct0.5/ kWh as of 1 January 2018, ct1.0/ kWh as of 1 January 2020 and ct0.5/kWh as of 1January 2021.
  - For Acceleration model: ct1.0/kWh as of 1 January 2018 p.a. (in 2019 degression will be suspended)
- Grid connection from the offshore switch station to the shore borne by the TSO (Sec 17 par 2a EnWG).

Solar

- Expansion corridor: annual growth of 2.5 GW (gross)
- Plants from 10 kW installed capacity must be remote-controllable,
- Plants of 800 watts to 10 kW must be equipped with adustable performance inverters.

In and on buildings

- Depending on the amount of nominal generation capacity: ct9.23/kWh to ct13.15/kWh
- Degression:
  - 0.5 percent per month as of 1 September 2014.
  - Degression decreases or increases according to 'breathing caps' in a range between zero and 2.8 percent on a quarterly basis.

Ground-mounted plants in open spaces

Support of plants in open spaces is shifted from feed-in tariffs to a support involving tendering. Therefore, a pilot project of tendering 400 MW is launched organized by the Federal Network Agency. If this concepts proofs to be successful, it is to be adopted for all other renewable technologies.

- Fixed statutory payment: up to a nominal generation capacity of 10 MW ct9.23/kWh
- Available for plants 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 or
  - a land-use plan that designated the area as commercial-industrial prior to 1 January 2010.
- Degression is equivalent to plants erected on buildings.

Additional information

Duration of subsidied market premium: Up to 20 years plus year of initial operation.

Greece

Support Schemes

Investments and Incentives under Investment Incentives Law 3908/2011

Various entities can apply for incentives, including joint ventures (JVs) that qualify as synergy and networking JVs and engage in the production of energy from renewable resources such as wind and hydro. Entities active in the production of energy from photovoltaic systems are not eligible (NACE Code 35.11.10.09[1]). Investments are separated in to General Business Investments and Special Investment Plans[2].

Incentives Available

Investment Incentives Law 3908/2011 became effective February 2011, replacing the previous incentive Law 3299/2004. However, investments made under the previous incentive Law 3299/2004 continue to be subject to the requirements of that law and are eligible for the incentives of that law. According to Law 3908/2011, the following incentives are available:

- Tax relief. It is noted that the tax relief incentive constitutes an income tax exemption on profits before taxes as determined on the basis of tax legislation. The amount of the tax relief granted becomes a tax free reserve for the equivalent amount
- Cash grants provided by the State that cover part of the expenses of the investment project
- Leasing subsidies provided by the State that cover part of payable installments related to the leasing of new equipment. It is noted also that the leasing subsidies do not exceed a seven-year period. These incentives may be granted solely or in combination. However, apart from tax relief (which is available to all investments qualifying for incentives under Law 3908/2011), cash grants and leasing subsidies may not be available to all qualifying investments.

General Eligibility Requirements:

According to Law 3908/2011, certain criteria should be met in order for the aforementioned incentives to be granted. In general, these criteria include the following:

- The investment should be initiated after the official eligibility approval. Under certain conditions, the investment may be initiated prior to the official approval as above but in any case after the filing of the respective application.
- The minimum amount of the investment is set at EUR1 million for large enterprises, EUR500 000 for medium-size enterprises, EUR300 000 for small enterprises and EUR200 000 for very small enterprises. The above minimum amounts are reduced to 50 percent for General Business Investments
- The enterprises must be established in Greece and have the form of either a sole trader, a commercial entity/partnership or a co-operative. Enterprises must maintain double-entry accounting books or an income and expenses book (category B of the Code of Books and Records). Also, enterprises that submit business plans exceeding EUR500,000 (instead of EUR300,000 which was provided by the prior investment scheme of Law 3299/2004) must operate in the form of a commercial entity or co-operative
- Investor's own participation of at least 25 percent is required for investments for which cash grants or tax relief is provided
- Certain requirements exist in respect to loans received that are to be used for the subsidized investment
- Special requirements may apply depending on the nature of each investment project.

1. Limited capacity investments in photovoltaic systems by individuals and small entities may be eligible for subsidies under EU-sponsored investment schemes.
2. Certain criteria related to the purpose, nature and value of the investment should be met in order to qualify as a Special Investment Plan, whereas all other eligible investments qualify as General Business Investments.

Operating Subsidies

According to the provisions of the relevant legislation (Laws 3468/2006, 3734/2009 and 3851/2010) the following apply:

Feed-in Tariff

Price of energy (EUR/MWh)		
Electricity generated by:	**Electricity Price (EUR/MWh)**	
	Connected System	**Non-connected Islands**
a. Wind energy generated from onshore wind farms with capacity above 50 kW	87.85	99.45
b. Wind energy generated from stations with capacity of less than or equal to 50 kW	250	
c. Photovoltaic systems with capacity up to 10 kW peak used in the household sector and in small enterprises (i.e. installed on buildings – Ministerial Decision 12323/175/4.6.2009)	550	
d. Hydroelectric plants with a capacity up to 15 MWe	87.85	
e. Solar energy from solar thermal stations	264.85	
f. Solar energy from solar thermal stations with storage system which ensures at least 2 hours of operation in the nominal capacity	284.85	
g. Geothermal energy of low temperature (25˚ to 90˚ C)	150	
h. Geothermal energy of high temperature (above 90˚ C)	99.45	
i. Biomass from stations with installed capacity of 1 MW or less (excluding the biodegradable fraction of household waste)	200	
j. Biomass from stations with installed capacity of between 1 MW and 5 MW (excluding the biodegradable fraction of household waste)	175	
k. Biomass from stations with installed capacity of more than 5 MW (excluding the biodegradable fraction of household waste)	150	
l. Gas released from landfills and biological cleaning installations and biogas produced by biomass (including the biodegradable fraction of waste) with installed capacity of 2 MW or less	120	
m. Gas release from landfills and biological cleaning installations and biogas produced by biomass (including the biodegradable fraction of waste) with installed capacity of more than 2 MW	99.45	
n. Biogas from biomass (animal farm and feed stock organic waste) with installed capacity of 3 MW or more	220	
o. Biogas from biomass (animal farm and feed stock organic waste) with installed capacity of less than 3 MW	200	
p. High-efficiency co-generation of electricity and heat	87.85 x Natural Gas Factor	99.45 x Natural Gas Factor
q. Other RES (including the stations for the energy exploitation of the biodegradable fraction of municipal waste which meet the requirements of the European legislation as in force from time to time)	87.85	99.45

Solar energy produced by photovoltaic units

Year	Month	(mainland grid) A (greater than 100 kW)	(mainland grid) B (100 kW or less)	(autonomous island grids) C (regardless of capacity)
2009	February	400.00	450.00	450.00
2009	August	400.00	450.00	450.00
2010	February	400.00	450.00	450.00
2010	August	392.04	441.05	441.05
2011	February	372.83	419.43	419.43
2011	August	351.01	394.89	394.89
2012	February	333.81	375.54	375.54
2012	August	314.27	353.55	353.55
2013	February	298.87	336.23	336.23
2013	August	281.38	316.55	316.55
2014	February	268.94	302.56	302.56
2014	August	260.97	293.59	293.59
For every year from 2015 onwards		1.3 x SMCn-1	1.4 x SMCn-1	1.4 x SMCn-1

SMCn-1 = System Marginal Cost during the previous year n-1

Law 3851/2010 provides that the electricity produced by stations developed without use of a public grant (except for photovoltaic and solar thermal stations) is priced on the basis of the feed-in tariffs mentioned above with an increase of:

a. 20 percent for technologies listed under (a), (d), (g), (h) and (q);

b. 15 percent for technologies listed under (i) to (o);

c. as regards the technology listed under (p), the 15 percent increase applies to the stable part of the pricing, provided that the investment is made without a grant from any national, European or international program or incentive law and it is not subject to any kind of tax relief (including the non taxed reserves).

Especially for RES stations installed on non interconnected islands and rocky islets throughout the country that are connected with the System through an independent undersea cable necessary for the transmission of the electricity to the System (note that the construction cost of the undersea connection is exclusively borne by the producers), there is a special increase on the pricing tariff which may vary from 10 percent up to 25 percent depending on the length of the connection line and the installed capacity of the RES stations. This increase will continue to apply after the interconnection of the island to the System and is added to the increase that may be applicable in accordance with the above paragraph.

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

Additional Information

Operating Incentives: Law 3468/2006 implemented the EU directive 2001/77 concerning the promotion of renewable energy sources and regulates the production of electricity from renewable energy sources in Greece, as amended by Laws 3734/2009 and 3851/2010.

The feed-in tariffs referred to in the previous table were introduced by Law 3851/2010.

Duration: In general, the sale agreement for electricity produced by stations using renewable resources and combined heat and power is valid for 20 years and may be extended under certain conditions. The sale agreement for electricity produced by solar thermal stations is valid for 25 years and may be extended under conditions.

Administrative Procedures: The specific licenses required depend on the installed power. Main licenses and authorizations include the following:

- Production license
- Establishment/installation license
- Operation license
- Approval of environmental terms
- Conclusion of connection agreement with Public Power Corporation (PPC)
- Conclusion of sale agreement of electric power with the Administrator (DESMIE or PPC).

Grid Access: Generally, priority access to the grid is provided to renewable energy producers for connection to the mainland grid, subject to the fulfillment of all conditions and requirements provided by the Code of Grid's Administration.

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.

Giving a boost to infrastructure sectors, Rserve Bank of India ('RBI') has relaxed the External Commercial Borrowings ('ECB') norms. Earlier, ECB was allowed to be raised for investment in infrastructure sector which included power. Now, the RBI has expanded the definition of infrastructure to cover sector such as Energy which in turn covers sub-sectors such as Electricity generation/transmission/distribution, Oil pipelines, Oil/Gas/Liquefied Natural Gas (LNG) storage facilities, Gas Pipelines (includes city gas distribution network).

With a view to strengthen the flow of resources to infrastructure sector, RBI has also now permitted raising ECB for project use in SPVs in the infrastructure sector under the automatic route/ approval route, as the case may be.

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. This date has not been extended as there was a vote on account budget. Post forming of new Government, the budget may either extend the tax holiday or may not extend the same (which is unlikely). 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).

Recently, the Finance Minister has released the Direct Taxes Code, 2013 (DTC 2013) for public discussion/ comments. However, next development in DTC depends on the policies and priorities of the next government. 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 National Action Plan on Climate Change (NAPCC) has receommended renewable purchase obligation (RPO) target of 10 percent by 2015 and 15 percent by 2020 at the national level.

Several measures such as RPO and REC (Renewable Energy Certificate) have been created to promote renewable energy. 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.

To meet RPO targets, REC market has been introduced and RECs started trading in Feb 2011. However, REC mechanism has not adequately picked up yet and steps are being considered to review the market. We believe that going forward, enforcement of RPO will create the volumes needed for the REC market.

Additional information

Jawaharlal Nehru National Solar Mission (JNNSM)

The objective of JNNSM, which was launched in 2010, is to establish India as a global leader in solar energy and to deploy 20,000 MW of solar power capacity by 2022. JNNSM targets to achieve this in three phases: Phase 1 (upto early 2013), Phase 2 (2013-17) and Phase 3 (2017-22).

In the Phase 2 – Batch 1, Solar Energy Corporation of India (SECI) auctioned total 750 MW of solar projects divided in two categories - open and domestic with 375 MW in each. This had a strong interest with bids from 58 developers for 2,170 MW as against 750 MW capacity on offer.

Besides the national program, solar programs at the state level are also driving solar growth in the country.

Renewable Energy in India

India's grid-connected renewable energy capacity has reached 31.7 GW by the end of March 2014 with Wind energy at 21.1 GW and solar energy at 2.6 GW. The Ministry of New & Renewbale Energy (MNRE) has prepared an action plan to take solar energy installations to 10 GW by 2017 and add total 30 GW of renewable energy to its energy mix by 2017.

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 taxfriendly 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 either structured as a single contract or as divisible contract. 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.

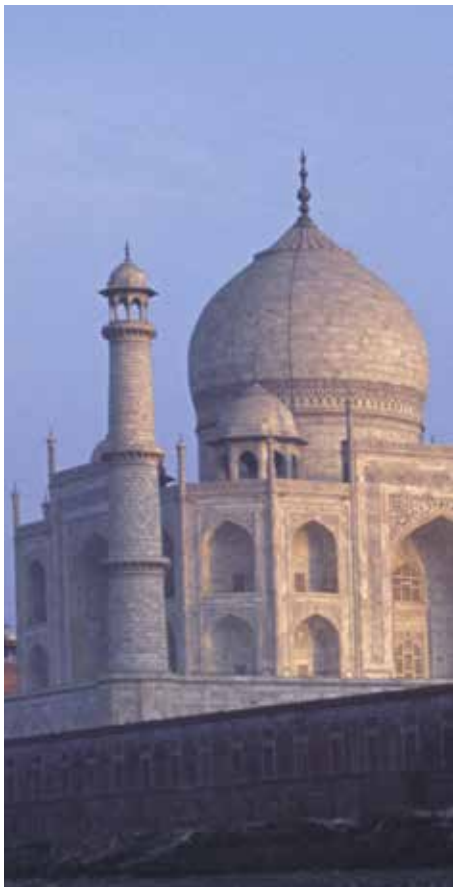
The procurement of goods and supply chain structuring play a vital role in the solar power project costs, since the tax rates are different for procurement of goods from outside India, from other states or from the same state.

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.



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 invest 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 and a further deduction 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 qualifying expenditure incurred on R&D activities. The credit is typically claimed on incremental qualifying expenditure over the amount spent on R&D activites in the base year (i.e. an accounting period ending in 2003). Companies can avail of a volume based regime (i.e. a 25 percent credit for every euro incurred) on the first EUR200,000 of qualifying expenditure for periods commencing between 1 January 2013 and 31 December 2013 and the first EUR300,000 for periods commencing on or after 1 January 2014. Qualifying expenditure includes expenses such as salaries, overhead, materials consumed, etc. A tax deduction is also available against the company's profits which are taxable 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 in the first instance to shelter a group's current year corporation tax liability. It can also be carried back for offset against the company's corporation tax liability in the preceding period, or carried forward to reduce future corporation tax liabilities. Instead of carrying the credit forward, a company may elect (subject to certain conditions) to have any remaining excess credit paid as a cash refund by Revenue over 3 years.

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 2014 reference prices for the REFIT 2 and REFIT 3 schemes are as follows:

REFIT 2	
Category	**Price**
Onshore wind (above 5 MW)	EUR69.581/MWh
Onshore wind (equal to or less than 5 MW)	EUR72.023/MWh
Hydro (equal to or less than 5 MW)	EUR87.892/MWh
Biomass Landfill Gas	EUR85.451/MWh

REFIT 3	
Category	**Price**
AD CHP (units less than or equal to 500 kWe)	EUR157.299/MWh
AD CHP (units of greater than 500 kWe)	EUR136.326/MWh
AD (non CHP) (units less than or equal to 500 kWe)	EUR115.353/MWh
AD (non CHP) (units of greater than 500 kWe)	EUR104.866/MWh
Biomass CHP (units less than or equal to 1500 kWe)	EUR146.812/MWh
Biomass CHP (units of greater than 1500 kWe)	EUR125.839/MWh
Biomass combustion (non-CHP)	EUR99.623/MWh for using energy crops EUR89.136/MWh 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

In addition to the above, the Irish government has committed to a 20 percent notional energy savings target by 2020 which represents a reduction of approx EUR2.4 billion in energy spend across all sectors. To boost this, the government has set itself the target of achieving a 33 percent reduction in energy use in the public sector. As a result of these energy reduction measures, substantial investments in renewable energy projects/funds are being actively encouraged resulting in real investment opportunities in Ireland.

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

Renewable energy in Italy: recent changes to legislation

In 2013 several changes to the law adversely affected the photovoltaic business in particular and the overall renewable energy industry in Italy.

The system of incentives for energy generated from renewable sources (introduced by the Ministerial Decree of 5 July 2012 – the "**FER Decree**") was abolished and, as a result, several energy incentives expired at the end of 2013.

In particular, the FER Decree introduced:

- the Fifth Energy Incentives Plan revising the system of incentives for the production of electricity from photovoltaic plants;
- new procedures supporting the production of electricity from other renewable energy sources at plants with a capacity of at least 1 kW.

The FER Decree applies to plants already operating by 31 December 2013.

To safeguard investments in projects approaching completion and to support existing plants already benefiting from incentives (green certificates, feed-in tariffs or premium tariffs), further changes to the rules were introduced early in 2014 by Law Decree no. 145/2013[1] (the **"Destinazione Italia Decree"**). This Decree introduces an optional incentive system for existing plants and new rules for plants benefiting from incentives based on electricity rates.

The end of 2013 also saw the expiry of a number of fuel and energy efficiency incentives; it is unclear whether or when the legislation will be passed to extend these incentives.

The regulatory changes of 2013 have had the biggest impact on existing large ground-mounted plants, hit by the reductions in guaranteed minimum prices and higher taxation. The changes may discourage future investments in plants used in the industrial sector (>200kW) and power plants (>1 MW), making grid parity very difficult to achieve without a significant amount of 'self-consumption'. Thanks to efficient consumption systems (SEUs), plants of under 200 kW still have the best prospects, as net-metering (the Italian mechanism is called "Scambio sul Posto") remains viable, despite the changes.

Subsidies available under the FER Decree

Feed-in tariff premiums for solar energy

Various feed-in tariff systems are affected by the changes introduced by the Destinazione Italia Decree. These schemes, listed below, are still in force for plants up and running by 31 December 2013.

Solar plants going into operation by 31 May 2011

The Ministerial Decree of 6 August 2010 (the 'Third Energy Incentive') offered a fixed premium (a bonus on top of the market price of electricity).

The size of the premium depends on:

- the type of plant;
- the nominal output;
- when the plant started to operate.

The premium ranges from EUR0.251/kWh to EUR0.402/kWh.

The premium is paid for 20 years after the plant starts operating. For thermodynamic plants, the premium is paid for 25 years.

Solar plants going into operation between 1 June 2011 and 31 December 2012

The Ministerial Decree of 5 May 2011 (the "Fourth Energy Incentive") offered a fixed premium based on the type and nominal power of the plant.

The premium is paid for 20 years after the plant starts operating. For thermodynamic plants, the premium is paid for 25 years.

Solar plants going into operation between 27 August 2012 and 31 December 2013

A Ministerial Decree of 5 July 2012 (the "Fifth Energy Incentive" or – as defined above – the FER Decree), redefined the subsidy system for the production of photovoltaic energy.

The tariff scheme is the following:

- for plants with capacity of up to 1 MW, there is a feed-in tariff based on the electricity sold to the GSE (the national energy manager).
- for plants with capacity exceeding 1 MW, there is a premium tariff based on the electricity generated and not sold to the GSE.
- for 'self-consumption', there is a special tariff.

Subsidies for plants using other renewable energy sources and entering into operation by 31 December 2013

There are two separate subsidies, which can be used as an alternative to net metering and simplified purchase/resale arrangements.

An inclusive feed-in tariff

There is 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 (defined for each energy source, type of plant and capacity class) and

1. Converted, with amendments, into Law no. 9 of 21 February 2014, and in force since 22 February 2014.

any premiums, such as those for high efficiency, emission reductions, etc.

For plants entering into operation from 2013, the FER Decree identifies the base feed-in tariff for each energy source, type of plant and capacity class. The tariffs decrease by 2 percent in each subsequent year until 2015, except in certain specific cases.

The FER Decree also provides a number of premiums on top of the base tariff for plants that meet specific operating requirements.

A special incentive

There is a special incentive for:

- plants with a capacity of more than 1 MW;
- those with a capacity of up to 1 MW that do not opt for the all-inclusive feed-in tariff.

This incentive is the difference between the base feed-in tariff – plus any premiums 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.

Other types of support for energy producers

In addition to the subsidies available under the FER Decree, there are other forms of support:

- *Green certificates*, representing the environmental value of the renewable energy generated.
- *All-inclusive tariffs,* these are a type of premium tariff and differ according to the length of the incentive period, the source of renewable energy, and the type of incentive scheme.

New rules governing the other types of support: the Destinazione Italia Decree

Among other things, the Destinazione Italia Decree offers a new optional incentive scheme to certain renewable electricity producers. Producers owning power plants that have already obtained green certificates and/or all-inclusive tariffs, may do one of the following:

- They may continue to benefit from their existing incentive scheme over the remaining original period. In this case, for 10 years after the end of the original incentive period, any new initiative on the same site will not benefit from further incentives, including dedicated withdrawal[2] and net-metering.
- They may restructure their existing incentive scheme. In this case, the existing incentive is reduced by

2. "Dedicated withdrawal" means the electricity taken by GSE from the producer and fed into the grid.

a percentage which differs according to the type of plant, while the incentive period is extended by seven years. This new scheme operates from the first day of the month following the deadline for exercising the option.

This rule does not apply to power plants which benefit from:

- the CIP 6 incentives scheme[3];
- the incentives available under the FER Decree, with the exception of those covered by the interim regime.

Guaranteed minimum prices defined by AEEG for simplified purchase and resale arrangements

Guaranteed minimum prices were introduced by AEEG Resolution no. 34/05[4] to cover the production costs of power plants with a capacity of less than 1 MW and generating electricity from renewable sources. The prices are available for the first 2 million kWh produced and injected into the grid.

With effect from 1 January 2014, the Destinazione Italia Decree made two important changes:

- it reduced the minimum prices significantly, to the hourly zonal electricity price.
- it eliminated the guaranteed minimum price for plants with a capacity of more than 100 kW.

Additional information

Taxation

Companies are subject to IRES (corporate income tax) of 27.5 percent and IRAP (a regional business income tax) of 3.9 percent to 4.82 percent.

Important changes were made by the Italian Revenue Agency in Circular no. 36/E/2013 (concerning photovoltaic systems – land register and tax aspects), with effect from 1 January 2014:

- photovoltaic systems, that have been built on land, are now classified as 'immovable property' (cadastral category D/1-D10) and, as such, are subject to taxation on the cadastral income, to property tax "Unified Municipal Tax" (called "IMU", that has replaced the old Municipal tax on real estate called ICI) starting from January 2012) and to an annual depreciation rate, currently 4 percent;
- photovoltaic system on the rooftop are exempt by IMU, because they are classified as 'movable property'. This type of photovoltaic system, on flat roofs both of private buildings and public buildings, is considered as an integral part of the existing building and, as such, contribute to the determination of the total land rents of housing units because it is part of the same building. In this case, the photovoltaic plants built on rooftop are subject to an annual depreciation rate, currently 9 percent.

Robin Hood Tax

In 2011, a surtax was introduced for the energy industry, known as the 'Robin Hood Tax'[5]. It applies to companies with the following business activities:

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

The surtax tax applies when the following thresholds are both exceeded in the previous fiscal year:

- gross revenues of EUR3 million;
- a corporate income tax base of EUR300.000.[6]

In 2014, the surtax is 6.5 percent. Therefore, the total corporate income tax rate is 34 percent (27.5 percent + 6.5 percent).

Non-operating or dormant companies

The IRES rate is 38 percent for dormant companies.

A company is considered to be dormant if:

- it makes a tax loss (reported in its tax return) for three consecutive years;
- it is subject to a minimum IRES and IRAP charge;
- it is not eligible to claim a VAT refund.

There is a special test to determine whether a company is dormant: if the actual amounts reported in the profit and loss account are lower than the presumed amounts, the company is deemed to be dormant.

Depreciation

Wind and solar plants are subject to ordinary depreciation rules for tax purposes.

3. Regulated by Inter-ministerial Price Committee Resolution no. 6 of 29 April 1992.
4. AEEG is the Italian Electricity and Gas Authority.
5. Law Decree no. 138/2011 (the "Mid-August Measure").
6. Law Decree no. 69/2013

Japan

Feed-in tariff

Feed-in tariffs (FIT) for renewable energy became available in Japan in July 2012. The FIT rate for the period from 1 April 2014 to 31 March 2015 is 34.56 Japanese yen (JPY)/1kW for solar energy, JPY23.76/1kw for wind power energy, respectively. The operation period is 20 years. The FIT rate is revised annually.

In order to get the FIT, 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 31 March 2015 will be awarded the FIT, which is applicable without time limit. However, since some plans might have received approval to secure the FIT tariff without a concrete investment schedule, the Ministry of Economy, Trade and Industry (METI) changed its approval procedure from April 1, 2014 for solar power equipment. Thus, from the application received by the METI on or after April 1, 2014, the applicant is required to submit copies of land register and purchase agreement/order for equipment to the METI within 180 days from the next day of approval. The METI rescinds its approval if the required documents are not submitted within the deadline or the submitted documents are not sufficient to substantiate land and equipment for solar energy.

Green Investment Tax Incentive

Green Investment Tax incentive is available for the taxpayer who obtained approval for the FIT and acquires solar or wind power generation equipment and places in business within 1 year from the acquisition. The taxpayer can choose one incentive from the following. The equipment is required to be placed in business by 31 March 2016 for 1) and 3), by 31 March 2015 for 2), respectively.

1) 30 percent special depreciation in addition to ordinary depreciation
2) 100 percent depreciation (i.e. total acquision costs can be expensed upfront.)
3) Tax credit (7 percent of acquisition costs, only available for small and medium sized enterprise (SME). SME is a company with its paid-in capital of JPY100 million or less and is not 50 percent or more owned by a large corporation with its paid-in capital of JPY100 million.)

Mexico

Support schemes

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

It is important to mention the country is currently undergoing discussions of new Energy Reforms. Its' potential effects would be important to Mexico in the mid and long term as well as for potential investors, from the social and economic point of view. Therefore, new information and business opportunities can be expected, both in terms of significant changes in renewable energy regulations and available funds to promote the creation and development of alternative energy projects.

This proposed legal reforms consist on allowing production gains sharing contracts looking forward to secure investment from the private sector, sharing gains and risks related to such activity. In this sense, drilling, processing, transport, storage and marketing of hydrocarbons could be performed either by the government or a private party. In consecuence, this would lead to greated integration in the upstream value chain, allowing sufficient suppy of gasoline, methane gas and liquefied petroleum gas at competitive prices.

Additional information

FIDE (Fideicomiso para el Ahorro de Energía Eléctrica) energy efficiency

Through this Trust for energy saving 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, electronic ballasts, energy generators on a small scale with alternative sources, transformers, processing equipment, remote monitoring systems, presence detectors, renewable energy systems for refrigeration, ventilation, speed control, thermal insulators, and other energy efficiency equipment. Applicants must file a request for the fund and be approved.

FIDE business Eco-credit

Projects up to USD27,000 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 (SENER) 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. A new bid is expected for 2014.

Fund for hydrocarbon projects

The Renewable Energies Exploit and Energy Transition Financing Law (LAERFTE: Ley para el Aprovechamiento de Energías Renovables y el Financiamiento de la Transición Energética 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. Alternatively, contracts may be signed with the CFE stating different means of consideration for the sale of this excess production.

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 the mentioned fiscal year assigned 3.1 billion Mexican pesos (MXN) (USD260 million) to the fund. An amount has since been budgeted each year for the fund. For fiscal year 2014, the Federal Expenditure Budget allocated (MXN) 1.53 billion (USD117 million).

Companies or individuals compete for cash incentives from the fund by submitting proposals for projects that involve renewable energies and energy transition. The bid for 2010, 'Bioeconomy,' called for projects that promote the production and use of alternative fuels in primary sectors.

Since the government is currently undergoing through new energy reforms discussions, this fund may not publish future bids in the short term, however, a boost could be expected once these reforms take place in the midterm.

Fund for energy sustainability

Every fiscal year SENER and the CONACYT establish a special fund for energy sustainability projects oriented for universities and research centers. The bid in force calls for projects of universities and/or research centers along with public or private companies interested in creating a Mexican Geothermal Energy Investigation Center. This center must be responsible for addressing existing scientific and technologic challenges, develop new projects related to geothermal energy, promote the development of specialized human resources and serve as a connection between the academic and the industrial sectors. The project will have duration of 48 months, and will be funded for the corresponding expenses biannually.

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 and 2013, nor has a public bid been released for 2014.

Some of the main government projects funded 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 smallscale 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 amount per qualifying investment must be more than EUR2,500.
  - 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 (EUR111 million in 2014).

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 amount per qualifying investment must be more than EUR2,500.
  - 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 (EUR93 million in 2014).

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 milieuinvesteringen 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 EUR2.500 per application.
  - 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 (EUR38 million in 2014).

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 EUR56,420 on an individual basis.

Applicability: Investments in green funds.

Operating subsidies

Feed-in tariff

As of 1 April 2014, the regulation for the feed-in tariff (Stimulering Duurzame Energieproductie or SDE+) for 2014 has opened. This regulation includes the following features:

- a budget ceiling is established 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 (EUR3.5 billion in 2014).

New Zealand

Support schemes

Investments 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

Investments 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. Enova manages the EU program (Intelligent Energy Europe) and the International Energy Agency (IEA) program. In addtition Enova, inter alia, represents the IEA activity 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 2013 the Energy Fund supported 1 350 new projects within energy effectiveness, conversion and increased utilization of renewable energy amounting to approximately 1.8 billion Norwegian krone (NOK).

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 support for R&D projects. Support is granted in the form of a tax deduction, and in certain cases direct funding to the company. 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 NOK22million 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

Electricity certificatescertificates

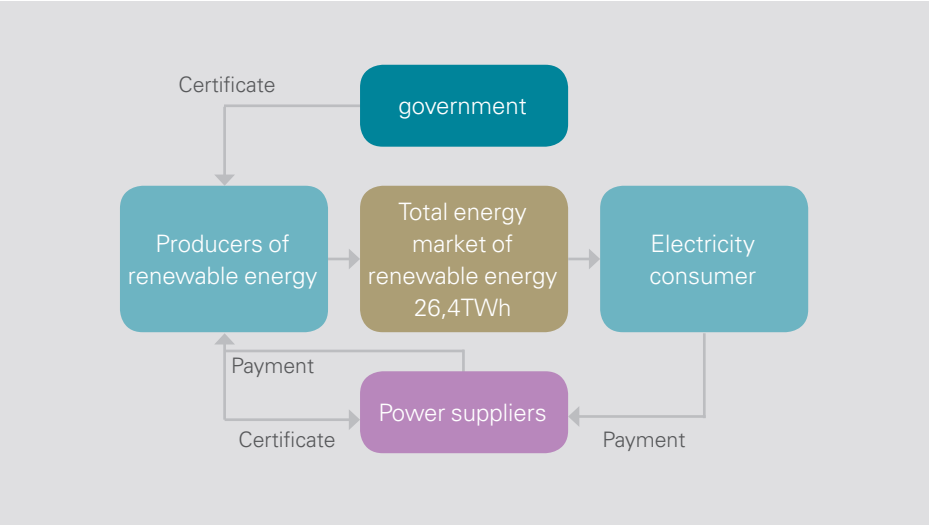
The issuance of electricity certificates is an economic subsidy scheme that will make it more remunerative to invest in power production based on renewable energy sources such as hydro, wind, solar and bio energy. The scheme is regulated by the Green Certificates Act.

The Norwegian government has entered into an agreement with the Swedish government establishing a common electricity 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 electricitycertificates that can be sold in the Norwegian-Swedish electricity certificates market. Power suppliers and certain power users are required to purchase electricity certificates for a share of the electricity they sell or use.

The following power producers may apply, subject to certain requirements, for electricity 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 electricity certificates, and it is the end consumer who finances the scheme through increased costs when invoiced for usage. The electricity 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 2 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 23 May 2014, a total of 787 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.

Philippines

Investments and other subsidies

Republic Act 9513 or the Renewable Energy Act of 2008.

In 2009, Republic Act (RA) 9513, otherwise known as the Renewable Energy Act, was passed. The law is intended to accelerate the development and commercialization of renewable energy resources in the Philippines. Among other items, the Act includes the setting up of the Renewable Portfolio Standard which sets a minimum percentage of generation from renewable energy resources by power generators, distribution utilities and suppliers; the creation of a Renewable Energy Market and the adoption of the Feed-In Tariff (FIT) System.

RA 9513 also provides for fiscal incentives to renewable energy (RE) developers of renewable energy facilities, including hybrid systems, in proportion to and to the extent of the RE component, for both power and non power-applications. Incentives include the following:

a. Income Tax Holiday (ITH)

Duly registered RE developers are exempt from income taxes for the first 7 years of commercial operations. Additional investments are entitled to additional income tax exemptions during an entitlement period not exceeding 3 times the period of the initial availment of the ITH.

b. 10 percent Corporate Tax Rate

A corporate tax rate of 10 percent (reduced from the regular 30 percent) on net taxable income shall be imposed on all RE developers after 7 years of the ITH.

c. 10-year Duty-free Importation of RE Machinery, Equipment and Materials

This incentive is available within the first 10 years of RE Certification, provided that an endorsement from the Department of Energy (DOE) is obtained before importation. The machinery, equipment, and material must be directly and actually needed and used exclusively in the RE facilities.

d. Net Operation Loss Carry-Over (NOLCO) of 7 years

The RE developer's NOLCO during the first 3 years starting commercial operation may be carried over as a deduction from the gross income for the next 7 consecutive taxable years immediately following the year of loss, provided it has not been previously offset and it does not result from the availment of the incentives under RA 9513.

e. Zero percent Value-Added Tax Rate

The sale of fuel or power from RE sources shall be subject to 0 percent value-added tax (VAT) rate. All RE developers are entitled to zero-rated VAT on purchases of local supply of goods, properties and services needed for plant facilities. This may be claimed throughout the whole process of exploring and developing RE sources up to its conversion to power, including those performed by subcontractors and contractors.

f. Special Realty Tax Rates on Equipment and Machinery

Realty and other taxes on equipment, machinery and other improvements actually and exclusively used for RE facilities shall not exceed 1.5 percent of their original cost less accumulated normal depreciation or net book value. In an integrated resource development and generation facility, only the power plant shall be imposed real property tax.

g. Accelerated Depreciation

If an RE project fails to receive an ITH before its full operation, it may apply for an accelerated depreciation in its tax books and be taxed accordingly, although the project or its expansions shall no longer be eligible for an ITH.

h. Cash Incentive of Renewable Energy Developers for Missionary Electrification

RE developers shall be entitled to a cash incentive per kilowatt-hour of power generated, that is equal to 50 percent of the universal charge for power needed to service missionary areas where it operates. This incentives is chargeable against the universal charge for missionary electrification.

i. Tax Exemption of Carbon Credits

All proceeds from sale of carbon emission credits are exempt from all taxes.

j. Tax Credit on Domestic Capital Equipment and Services

RE operating contractor holders purchasing RE machinery, equipment, materials and parts from a domestic manufacturer shall be entitled to a tax credit equivalent to 100 percent of the value of the VAT and customs duties that would have been paid on the equipment, materials and parts had they been imported.

k. Exemption from the Universal Charge

Power and electricity generated through the RE system for the generator's own consumption or for free distribution to off-grid areas shall be exempt from the universal charge.

l. Payment of Transmission Charges

Power and electricity produced from an intermittent RE resource may opt to pay the transmission and wheeling charges, on a per kilowatt-hour basis at a cost equivalent to the average kilowatt-hour rate of all other electricity transmitted through the grid.

m. Hybrid and Cogeneration Systems

Incentives and tax exemptions under RA 9513 may be claimed by registered RE developers of hybrid and cogeneration systems using both RE sources and conventional energy, but only for the equipment and machinery using RE resources.

n. Benefit of a Priority Dispatch

Qualified and registered RE generating units with intermittent RE resources shall be considered 'must dispatch' based on available energy and shall enjoy the benefit of priority dispatch. An RE-generating unit with intermittent RE resources includes plants utilizing wind, solar, run-of-river hydro or ocean energy.

o. Incentives for RE Commercialization

Incentives are given to all manufacturers and suppliers of locally-produced RE equipment and components, provided they are duly accredited by the DOE.

- Tax and Duty-free Importation of Components, Parts and Materials – exemption from VAT and importation tariffs and duties
- Tax Credit on Domestic Capital Components, Parts and Materials
- Income Tax Holiday and Exemption – available for 7 years from day of accreditation
- Zero-rated VAT Transactions with local suppliers

p. Incentives for Farmers of Biomass Resources

For a period of 10 years from the enactment of RA 9513, those engaged in the cultivation of crops and trees used as biomass resources are entitled to duty-free importation and VAT exemption on all types of agricultural inputs, equipment and machinery.

q. Tax Rebate for Purchase of RE Components

Rebates for all or part of the tax paid for purchases of RE equipment for residential, industrial, or community use.

Operating subsidies

Feed-in Tariff

The FIT system is a scheme that involves the obligation on the part of the power industry participants to source electricity from RE generation at a guaranteed fixed price applicable for a given period of time, that shall in no case be less than 12 years.

The FIT system is mandated for wind, solar, ocean, run-of-river, hydropower and biomass energy sources.

Resource/Technology	ERC Approved FIT rates[1]		Installation Targets
	(PhP/kWh)	(USD/KWH)	
Run-of-River Hydropower	5.9	0.14	250
Biomass Energy	6.63	0.15	250
Wind Power	8.53	0.19	200
Solar Power	9.68	0.22	50
Ocean Energy	–	–	10
Total exchange rate: 1 USD = PhP 43.00			760

Additional information

- **Green Energy Option** – End-users are given the option to choose RE resources as their source of energy by enrolling under this program.
- **Nationality Requirement** – Under the Philippine Constitution, the exploration, development and utilization of natural resources in the Philippines is an area generally reserved for Filipino citizens or domestic companies with at least 60 percent of its capital owned by Filipino citizens.

1. Energy Regulatory Commission Resolution No. 10, series of 2012.

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 could be excluded from real estate tax as other constructions.
- 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 Stork Programme – financing of distributed, renewable energy sources (RES)**

- Support under the Stork Programme will be given for investments involving construction or reconstruction of RES installations with capacities from the following ranges:

1. wind power plants – from 3 MWe,
2. photovoltaic systems – from 200 kWp to 1 MWp,
3. energy from geothermal waters – from 5 MWt to 20MWt,
4. hydropower plants – to 5 MW,
5. biomass-fired heat Sources – to 20MWt,
6. biogas plants – from 300 kW to 2 MWe,
7. production of electricity in high efficiency cogeneration biomass – to 5 MWe.

- All companies may apply for support.
- The level of support, given in the form of preferential loan, is between 30 percent and 75 percent of eligible cost of the project (depending on the investment type). The amount of support reaches from 2 million Polish Zloty (PLN) up to PLN 40 million.
- The Stork Programme will be implemented in the years 2014 – 2022, the spending is possible up to 2020.
  - **Support for of a low-carbon and resource-efficient economy: part 1) energy and electricity audits, part 2) improvements of energy effectiveness of companies, part 3) e-accumulator-ecological battery for industry**
- Companies investing in undertakings leading to energy savings may apply for support.
- Support under Part 1) will be given in the form of grant up to 70 percent of eligible investment costs. Support under Part 2) and Part 3) is given in the form of preferential loan. The amount of support reaches from PLN 300 000 up to PLN 50 million. The maximum level of the loan may not exceed 75 percent of eligible cost of the project.
- All three parts will be implemented in the years 2014 – 2017, the spending is possible up to 2017.

Other incentives

Besides aid sources mentioned above, the investor may also apply for other incentives related to broadly defined energy sector, in particular:

- **grants from EU funds for the Financial Framework for 2014-2020 and national programmes designed inter alia for investment and employment (i.e. new manufacturing plants, innovative technologies), R&D activities (i.e. development or improvement of products, services or technologies), other activities, such as environmental protection, training sessions, logistics.**
- **incentives from the Polish Government (R&D projects, environmental projects, the Programme of support of investments of considerable importance for Polish economy for years 2011-2020),**

Incentives obtained by the investors in Poland are subject to Polish and European Union state aid rules which determine, inter alia the maximum level of support, beneficiaries and the detailed conditions of support.

Operating subsidies

Green certificate system

Remuneration for renewable energy produced: the average market price of 181.55 PLN/MWh for the last year (2013) plus the market value of green certificate (certificate of origin) granted by the Energy Regulatory Office.

Quota obligation

Rates (2014): 13 percent of all energy produced (floors relate to all types of renewable energy). The quota is increasing in stages and will reach 14 percent in 2015 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.

In April 2014, the Council of Ministers announced the draft of the act on renewable energy resources which will implement the provisions of Directive 2009/28/WE into the Polish law. According to the new act, the level of support for renewable energy will differ depending on the source of renewable energy. The highest support will be provided for small energy installations (e.g. photovoltaic installations and micro-instalations used solely for energy producer's purpose). This act provides also new mechanism for sale of renewable energy at auction. Additionally, it is not entirely sure whether the current regime of RE support will be applicable to the existing energy installations once the new act on renewable energy resources comes into force (under the current wording of the new act, the energy producers will be eligible to chose between the current scheme and the new one).

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. Generally, if energy producer does not achieve the minimum level of share of renoweble energy (for 2014 – 13 percent), he is obliged to purchase green certificates at the market (for redemption) or has to make a compensation payment.

Sale: Electricity distributors have a legal obligation to acquire a certain amount of renewable energy generated in Poland. For the year of 2014, the above percentage limit of renewable energy will amount to 13 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 2013 was 181.55 PLN/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, hydraulic utilized in power plants with an installed capacity of maximum 10 MW, biomass and residues fermentation gas.

- Electricity from renewable sources is excise duties exempt.
- Accelerated depreciation for tax purposes can be used for technological equipment, tools and installations 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.
- Reinvested profit - starting 1st of July 2014, is applicable the tax relief for the profit reinvested in the production and/or acquisition of technical equipment (machines, equipment and work installations) used for carrying out economic activities put into operation no later than 31 December 2016.
  - The types of equipment eligible for this tax relief are defined in subgroup 2.1 of the Catalogue regarding the classification and the normal useful life of fixed assets.
  - The profit which can be reinvested represents the balance of profit (loss) account for the period, namely the accumulated accounting profit from the beginning of the year, in the year in which the investment is realized. The tax relief is granted up to the limit of corporate tax due for the period in which these investments are made.
  - The corporate tax relief applies only for new fixed assets. Also, taxpayers which benefit from this incentive are required to keep the specific fixed assets for at least half of their normal economic useful life established according to the accounting applicable regulations, but no more than 5 years.
  - Also, taxpayers who benefit from this incentive cannot apply the accelerated depreciation method for this equipment.

Operating subsidies

Green certificate system

The price of a green certificate has been set between the Romanian new leu (RON) equivalent of EUR29/ General Certificate (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

On 21 march 2014, the Romanian Regulatory Authority in the Field of Energy (ANRE) calculated the estimated quota of GCs acquisition for 2014 for the electricity suppliers as 0.237 GC/MWh supplied to final consumers.

Additional information

Legal basis: Electricity Law 123/2012 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 by filling a request for accreditation and accompanied by a specific set of documentation.

The license is granted for a fixed term, but no longer than 15 years. In case of production of electricity from renewable sources, the maximum period during which ANRE should issue the relating license is of 30 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 and delivered 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:

- 0.7 GC/MWh for new hydroelectric power plants with installed capacity of maximum 10 MW;
- 1 GC for each 2 MWh for hydroelectric power plants with an installed capacity of maxim 10 MW;
- 0.5 GC/MWh for wind power, up to 31 December 2017 and 0.25 GC/MWh starting with 1st of January 2018
- 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 2014, the estimated quota of acquisition of GCs for the electricity suppliers is 0.237 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 EUR119.293 per each non-purchased certificate.

The GCs are issued by the transmission system operator and are valid for 12 months. The trading value of a GC has been established by ANRE as between the RON equivalent of EUR29/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.

During the period 1st of July 2013 – 31 March 2017 it is temporarily deferral from trading of a certain number of GC for each 1MWh generated and delivered by the electric energy producers from renewables resources, accredited by ANRE up to the date of 31 December 2013, as follows:

- 1GC for hydroelectric power plants with installed capacities of maximum 10 MW;
- 1GC for wind power plants;
- 2GC for solar power plants.

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 4 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 greenfield projects costing more than 200 million South African rand (ZAR) qualify or brownfield projects costing the higher of ZAR 30 million; or the lesser of ZAR 200 million or 25 percent of expenditure on existing assets will 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

Section 12L allows 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 is calculated at 45 cents per kilowatt hour (or equivalent) of energy efficiency savings. The energy efficiency savings have to be measured and confirmed by a measurement and verification body as defined in the published regulations in relation to section 12L. No deduction is allowed if the taxpayer receives a concurrent benefit in respect of energy efficiency savings.

No person may receive the section 12L allowance in respect of energy generated from renewable sources or co-generation other than energy generated from waste heat recovery. Furthermore, a person generating energy through a captive power plant may not receive the allowance unless the kilowatt hours of energy output of that captive power plant for that year of assessment is more than 35 percent of the kilowatt hours of energy input in respect of that year of assessment.

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 of not more than 30 megawatts 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 and which assets are required by any law for purposes of protecting the environment.

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 3 years. The cost of waste disposal assets can be written off on a straight line basis over 20 years (five percent per year).

Deductions in respect of environmental conservation and maintenance

Section 37C deems that expenditure incurred by a taxpayer to conserve or maintain land in terms of a 5 year biodiversity management agreement entered into in terms of the National Environmental Management: Biodiversity Act will be deemed to be expenditure incurred in the production of income and will therefore be deductible.

Land used by the taxpayer for the production of income and for the purposes of trade (the productive land) needs to be in the immediate proximity of the land that is subject to the biodiversity management agreement for section 37C to find application. In addition, the expenditure deductible in terms of this section is not allowed to exceed the income generated by the taxpayer on the productive land.

Furthermore where a taxpayer agrees to the declaration of its land as a nature reserve, game reserve or the like and certain additional requirements are met, then broadly, the taxpayer is entitled to;

- A deduction of expenditure incurred to conserve and maintain such land; and
- The land is deemed to constitute a deductible donation for purposes of the Income Tax Act.

In this regard the aggregate deduction will be limited to 10 percent of taxable income.

Special Economic Zones (SEZ)

Special Economic Zones (legislation to yet in force)

In terms of section 12R, any qualifying companies, which are South African incorporated companies, alternatively, companies which have their place of effective management in South Africa, and which are located in a SEZ, will be entitled to apply a reduced income tax of 15 percent (as opposed to 28 percent).

The precise requirements to qualify for the reduced rate of tax referred to above have not yet been determined by the legislature.

New or improved buildings in a SEZ (legislation to yet in force)

A qualifying company located within a SEZ may deduct from its income an allowance equal to 10 percent of the cost to the qualifying company of any new or unused building owned by the qualifying company or any new or unused improvement to a building owned by the qualifying company. The building must be used by the qualifying company and used by it in the course of trade.

Government grants/subsidies

Grants			
Potential Grant	**Description**	**Rates/Basis**	**Source**
Manufacturing Competitiveness Enhancement Programme	The MCEP is a cost-sharing incentive available to existing manufacturers for expanding or upgrading their facilities. The MCEP is broken into several components, each of which qualify for a separate grant, including Capital Investment, Green Technology and Resource Efficiency Improvement, Enterprise Level Competitiveness, etc. The main qualifying criteria for this grant to apply is that jobs should be maintained for 2 years and the company must be a level four B-BEEE contributor or must have plans in place to achieve this score in 2 years.	Broadly the maximum grant available varies depending on the size of the enterprise and is typically limited to a benefit of approximately 30 percent of qualifying expenditure, capped at ZAR 30 million.	Department of Trade and Industry (DTI)

Incentives			
Potential Grant	**Description**	**Rates/Basis**	**Source**
Critical Infrastructure Programme	The CIP is a cost sharing grant that is available to the approved applicants for infrastructure projects in respect of infrastructure development costs. The infrastructure must typically be available for public use, for example, road, bridges, telephone lines, etc.	The grant ranges from 10 percent to 50 percent of qualifying cost, capped at ZAR 30 million.	Department of Trade and Industry (DTI)

South Korea

Support schemes

Investments 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 40 trillion South Korean won (KRW) (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 KRW1.8trillion (EUR1.3 billion, USD1.8 billion) from the government in the last 2 years (2012–2013).

According to the second national energy plan announced in January 2014, the former renewable energy target, 11 percent of the total energy supply from renewable sources by 2030, has been reaffirmed.

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 four main categories: R&D support, soft loan for renewable projects, Feed-in-tariff and renewable energy distribution support.

The total budget in 2014 is KRW802 billion, KRW249 billion for R&D, KRW103 billion for R&D, KRW336 billion for FIT and KRW114 billion for distribution.

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 KRW175,503 averagely in 2013, while REC for non-solar power was determined to be KRW 137,844.
- The total RPS target for 2014 was confirmed as being 11,578,809 MWh; increasing 26 percent from last year's target (9,210,381 MWh), while the RPS target for solar power rose 87 percent from 723,000 MWh to 1,353,000 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 net income derived from the license of the right to use or exploit or from the transfer of certain intangible assets as defined in article 23 of CIT Law, shall be included in the CIT taxable base with a 60 percent reduction, provided certain requirements are met.

Corporate Income Tax credit for investments in assets to protect environment

Article 39 of Spanish CIT set forth that investment in fixed assets aimed to protect the environment (facilities to avoid atmospheric or acoustic pollution from industrial installations, or water pollution). 8 percent tax credit of any investment included in programs, arrangements or agreements entered with the environmental public authorities (Regional Governments).

Those tax credits which have not been applied in a given fiscal year and which have not been used in that fiscal year as the tax due was insufficient may be carried forward to the following 15 tax years.

Research & Development 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 12 percent.

R&D and Technological innovation activities tax credits which have not been applied in a given fiscal year and which have not been used in that fiscal year as the tax due was insufficient may be carried forward to the following 18 tax years. In addition to that, in case tax due is insufficient for the application of these tax credits, a cash refund in the amount of the pending tax credits can be requested to the Spanish Tax Administration, with a discount of 20 percent of the amount of the pending tax credits (i.e. the payment in cash implies a reduction of the pending amount of the tax credit).

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 agreed with the corresponding local authority. The tax allowances to be agreed would depend on each local authority, and should be negotiated on a case-by-case basis.

Taxes on Energy

Taxes on electricity generation

These taxes are not strictly environmental taxes. Revenues which will arise from them will finance the Spanish deficit of the cost of generation and distribution of electricity.

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

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

Remuneration of energy production facilities under the special regime has been recently revised through Royal Decree-Law 9/2013, which entered into force on Sunday July 14. Such Royal Decree-Law comprises the main following provisions:

1. The amendment of Article 30.4 of the Electricity Sector Law, which basically provides that:
   - The new remuneration framework of special regime facilities (including facilities in operation) will be established by Royal Decree issued by the Council of Ministers.
   - In addition to the compensation for the sale of energy valued at market price, facilities may receive a *"specific remuneration consisting of a term per unit of installed capacity, to cover, where appropriate, the investment costs of a typical installation that cannot*

be recovered from the sale of energy and a term per operation, if applicable, to cover the difference between operating costs and revenues for the market share of such typical installation."

The regulated tariff regime, for a given period and updatable according to a prefixed formula, is consequently abolished.

- In order to calculate the specific remuneration of a typical installation, it is necessary to consider, "*over its regulatory life*" and referring to the activity of an "*efficient and well-managed company*":
  - Standard revenues from the sale of energy generated, valued at the market price of production.
  - Standard operating costs.
  - Standard value of the initial investment.

  Therefore, the determination of these parameters or assumptions will be critical in order to assess the remuneration for each installation. It will be necessary to wait for the approval of Royal Decree.
- The costs or investments that are made in connection with rules or acts which are not applicable throughout all of Spain (i.e. regional authorizations and registrations) will not be taken into account. Also, the costs and investments that do not respond solely to the activity of electricity production.

2. The introduction of an additional first provision, called "*reasonable return on production facilities entitled to economic premium regime*" which, as explained by the Minister, will mean that, as of July 14, 2013, special regime facilities shall receive a "*supplement for their investment costs based on standards by technologies*", according to a cost formula of 10-year Treasury + 300 basis points, representing a return of 7.5 percent.
3. The above-mentioned return is '*before taxes*' and may be revised every 6 years.
4. The repeal of the following provisions:
   - Royal Decree 661/2007, of May 25.
   - Royal Decree 1578/2008 of 26 September.
   - Article 4 and paragraph 2 of the fifth transitional provision of Royal Decree-Law 6/2009, of April 30.
5. To maintain compensation flows to facilities, such repealed rules shall apply temporarily, except for certain aspects, pending the approval of the Royal Decree with the new regulation. Thus, the facilities will continue receiving the current compensations under the transitional provisions commented above subject to regularization with the new methodology as of July 14, 2013.
6. Two immediate measures to reduce the costs of the electricity system are approved. The efficiency complement to facilities that were receiving it under Article 28 of Royal Decree 661/2007 is abolished, as well as the reactive power bonus of article 29 of the same regulation.

Currently, it is been processed the enactment of the Proposal of Royal Decree passing the regulations of the activity of electricity generation through renewable sources, cogeneration and wastes.

Additionally, new Renewable RD foresees the drafting and enactment of a new Ministerial Order that shall set the new remuneration parameters of the existing installations. Such Order is currently being processed too.

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

Investment 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 who start operating before 31 December 2015:
  - A 50 percent discount is applied to the transmission system utilization fee for 5 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: USD ct7.3/kWh
- Geothermal: USD ct10.5/kWh
- Solar: USD ct13.3/kWh
- Biomass (including landfill): USD 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 to the power plants that are in operation or to be in operation until 31 December 2020.

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 USD ct0.4 and USD ct.3.5/kWh for 5 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 MWe 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 EU Emissions Trading Scheme.

Operating subsidies

Renewables Obligation Scheme

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

Feed-in Tariff with Contract for Difference

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

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: The Energy Act 2013 brought in major reforms to the UK electricity market. The key market mechanisms relevant to this publication are Feed-in Tariffs with Contracts for Difference (CfDs) to give revenue certainty to investors in low-carbon generation and the Carbon Price Floor which imposes a fossil fuel tax.

The CfD for each low carbon generation technology is available from 2014/15 and is scheduled to replace the Renewable Obligation Scheme by 2017. For most renewable technologies, the CfD is expected to last for at least 15 years and take effect from 2014/15 onwards.

The table below sets out the CfD strike prices for renewable technologies for 2014/15 to 2018/19 (with each year beginning on 1 April). Support will be paid based on net renewable electricity generated.

Strike Prices GBP/MWh (2011/12 prices)					
	2014/15	2015/16	2016/17	2017/18	2018/19
Advanced Conversion Technologies (with or without CHP)	155	155	155	140	140
Anaerobic Digestion (with or without CHP)	150	150	150	140	140
Dedicated Biomass (with CHP)	125	125	125	125	125
Energy from Waste (with CHP)	80	80	80	80	80
Geothermal (with or without CHP)	145	145	145	140	140
Hydro	100	100	100	100	100
Landfill Gas	55	55	55	55	55
Sewage Gas	75	75	75	75	75
Onshore Wind	95	95	95	90	90
Offshore Wind	155	155	150	140	140
Biomass Conversion	105	105	105	105	105
Wave	305	305	305	305	305
Tidal Stream	305	305	305	305	305
Large Solar Photo-Voltaic	120	120	115	110	100
Scottish Islands Onshore	N/A	N/A	N/A	115	115

Source: Department of Energy and Climate Change; Investing in renewable technologies – CfD contract terms and strike prices.

Renewables Obligation (RO) scheme: This requires electricity suppliers to source a specific percentage of electricity from renewable sources. Renewable generators receive Renewables Obligation Certificates (ROCs) for each MWh of electricity generated, and these ROCs can be sold independently of the electricity generated, allowing renewable generators to receive a premium to the wholesale electricity price. Where an electricity supplier has an insufficient number of ROCs to meet an obligation, it must pay an equivalent amount of GBP 43.30 per MWh (2014/2015 rate) into a buy-out fund. This fund is used to cover the administration cost of the scheme and

the rest is distributed back to suppliers in proportion to the number of ROCs they produced. 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 table summarising the banding levels for the banding review period (2013-17) in England and Wales:

Band	13/14 support (ROC/MWh)	14/15 support (ROC/MWh)	15/16 support (ROC/MWh)	16/17 support (ROC/MWh)
Advanced gasification/pyrolysis	2	2	1.9	1.8
Anaerobic Digestion	2	2	1.9	1.8
Co-firing (low- range)	0.3	0.3	0.5	0.5
Co-firing (mid-range)*	0.6	0.6	0.6	0.6
Co-firing (high- range)*	0.7	0.9	0.9	0.9
Co-firing (low-range) with CHP*	0.8	0.8	1**	1**
Co-firing (mid- range) with CHP*	1.1	1.1	1.1**	1.1**
Co-firing (high-range) with CHP*	1.2	1.4	1.4**	1.4**
Co-firing of regular bioliquid	0.3	0.3	0.5	0.5
Co-firing of regular bioliquid with CHP	0.8	0.8	1**	1**
Co-firing of relevant energy crops (low range)	0.8	0.8	1	1
Co-firing of relevant energy crops with CHP (low range)	1.3	1.3	1.5	1.5
Conversion (station or unit)	1	1	1	1
Conversion (station or unit) with CHP	1.5	1.5	1.5	1.5
Dedicated biomass	1.5	1.5	1.5	1.4
Dedicated biomass with CHP	2	2	1.9	1.8
Dedicated energy crops	2	2	1.9	1.8
Energy from waste with CHP	1	1	1	1
Geothermal	2	2	1.9	1.8
Geopressure	1	1	1	1
Hydro	0.7	0.7	0.7	0.7
Landfill gas – closed sites	0.2	0.2	0.2	0.2
Landfill gas heat recovery	0.1	0.1	0.1	0.1
Microgeneration	2	2	1.9	1.8
Onshore wind	0.9	0.9	0.9	0.9
Offshore wind	2	2	1.9	1.8
Sewage gas Solar PV	0.5	0.5	0.5	0.5
Building mounted solar PV	1.7	1.6	1.5	1.4
Ground mounted solar PV	1.6	1.4	1.3	1.2
Standard gasification/pyrolysis	2	2	1.9	1.8
Tidal barrage	2	2	1.9	1.8
Tidal lagoon	2	2	1.9	1.8
Tidal stream***	5	5	5	5
Wave***	5	5	5	5

Source: Department of Energy and Climate Change website

*Includes solid and gaseous biomass and energy crops
**These support levels are only available in circumstances where support under the RHI is not available
*** 5 ROCs subject to 30 MW cap at each generating station. 2 ROCs for any additional capacity added above 30 MW cap.

The government has confirmed that applications for the RO regime can be made until 2017, thereby extending the scheme until 2037. From 2027 the Department of Energy & Climate Change (DECC) will fix the price of the ROC for the remaining 10 years of the RO at its long-term value, and buy the ROCs directly from the generators to reduce volatility in the final years of the scheme. Renewable generators may not receive a CfD and also participate in the RO regime.

Climate Change Levy (CCL), Renewable Source Energy Exemption: CCL is a specific energy tax on the supply of gas and electricity to non-domestic users in the United Kingdom.

Most electricity generated from a renewable source is exempt from the CCL. Levy Exemption Certificates (LECs) are issued to generators of renewable source energy for each MWh of electricity produced. LECs transfer along with the electricity and can be used by electricity suppliers to support the CCL exemption and so, like ROCs, they have a value which a renewable generator can realize. HMRC require a number of conditions to be met for the exemption to apply and a LEC alone is not sufficient evidence to support exemption from CCL.

Carbon Price Floor: The Carbon Price Floor (CPF) applies a levy on certain types of fossil fuels used to generate electricity and so represents a cost advantage to renewable generators, who will not be subject to the CPF. Published rates from 1 April 2014 are:

Supplies of commodity liable to:	2014-15	2015-16	2016-17
Carbon Price Support rates of CCL			
Natural gas (GBP per kilowatt hour)	0.00175	0.00334	0.00331
LPG (GBP per kilogram)	0.02822	0.05307	0.05280
Coal and other taxable solid fossil fuels (GBP per gross gigajoule)	0.81906	1.56860	1.54790
CPS rates of fuel duty			
Gas oil; rebated bioblend; kerosene (GBP per litre)	0.02642	0.04990	0.04916
Fuel oil; other heavy oil; rebated light oil (GBP per litre)	0.03011	0.05730	0.05711

Source: HMRC; Carbon Price Floor: Reform

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 GBP0.2223 /kWh generated (depending on the type and size of the system used to generate renewable energy); plus a guaranteed GBP0.0464 /kWh sold on to the UK electricity grid. Typically the tariffs last for 20 years.

Renewable Heat Incentive (RHI): two schemes operate to provide long term tariff support for renewable heat generation:

- Domestic RHI, which is available for domestic properties where households receive payments of between GBP0.073 and GBP0.192/kWh depending on the technology generating the renewable heat. Any public grants previously received, including the Renewable Heat Premium Payment (RHPP), will be deducted to avoid a double subsidy. Non-domestic RHI, which provides a subsidy, payable for 20 years, to eligible, non-domestic renewable heat generators and producers of biomethane. The tariff payments are dependent on the technology of the heat generation source and the size of the plant, with payments ranging from between GBP0.010/kWh and GBP0.094/kWh for the period commencing 1 April 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:

The rate of capital allowances is 18 percent reducing balance for capital expenditures on plant and machinery allocated to the main pool. This is reduced to 8 percent if the asset's useful expected economic life exceeds 25 years

- Most businesses can claim the Annual Investment Allowance (AIA) on the majority of plant and machinery except cars. From 2013 the AIA is being increased to GBP500,000 in relation to expenditure incurred on or after 1 April 2014. From 1 January 2016 the AIA will reduce to GBP25,000.
- Enhanced Capital Allowances (ECAs) give a 100 percent First Year Allowance for expenditure incurred on specified energy-saving plant and machinery. A 19 percent cash tax credit of its surrenderable loss is available for loss-making companies up to a maximum of GBP250,000 or the company's PAYE and NIC liabilities, whichever is less. However, ECAs are explicitly not available in

respect of expenditure on plant or machinery which generates electricity or heat or produces biogas or biofuel, that attracts a FiT (small scale generation) or RHI payment.

- Land remediation relief provides a deduction of 100 percent, plus an additional deduction of 50 percent, for qualifying expenditure incurred by companies in cleaning up land acquired from a third party in a contaminated state. A 16 percent cash tax credit of the qualifying land remediation surrenderable loss can be claimed for loss-making businesses.
- The Patent Box enables companies to apply a lower rate of corporation tax of 10 percent to profits derived from patented inventions and certain other innovations, phased in over 5 years from 1 April 2013. The company must own or exclusively license-in the patents, and must undertake qualifying development on them to be eligible for the lower tax rate. Research and Development (R&D) tax relief enables 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 (effective benefit of 7.9 percent after tax in 2014/15) on qualifying revenue expenditure. If the R&D expenditure is capital in nature, a 100 percent allowance can be claimed on the R&D capital expenditure in that year.

United States

Support schemes

Investment 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 201329).

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, micro turbine 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

Investment 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).[1] 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: 8 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.

[1] 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 exceeded the 350 MW. However, not all the projects offered are currently coming to life and, in virtue of this, a new tender call for biomass projects is expected to be launched during 2014.

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 had to offer a price and the total amount to be awarded could not exceed 6 MW. On the other hand, for range iii), bidders had to adhere to a pre-established price of USD 91.5/MWh, and the total amount to be awarded could not exceed 200 MW.

The companies that participated in the referred tender call, proposed projects for a total amount of 166 MW. Some of these projects are already under construction. New tender calls are expected to be launched in 2015.

Top Five Countries 2013

TOP FIVE COUNTRIES	1	2	3	4	5
Annual investment / net capacity additions / production in 2013					
Investment in renewable power and fuels	China	United States	Japan	United Kingdom	Germany
Share of GDP 2012 (USD) invested[1]	Uruguay	Mauritius	Costa Rica	South Africa	Nicaragua
Geothermal power capacity	New Zealand	Turkey	United States	Kenya	Philippines
Hydropower capacity	China	Turkey	Brazil	Vietnam	India
Solar pv capacity	China	Japan	United States	Germany	United Kingdom
CSP capacity	United States	Spain	United Arab Emirates	India	China
Wind power capacity	China	Germany	United Kingdom	India	Canada
Solar water heating capacity[2]	China	Turkey	India	Brazil	Germany
Biodiesel production	United States	Germany	Brazil	Argentina	France
Fuel ethanol production	United States	Brazil	China	Canada	France
Total Capacity Or Generation[6] As Of End-2013					
POWER					
Renewable power (including hydro)	China	United States	Brazil	Canada	Germany
Renewable power (not including hydro)	China	Unites States	Germany	Spain / Italy	India
Renewable power capacity per capita (not incl. hydro)[3]	Denmark	Germany	Portugal	Spain / Sweden	Austria
Biopower generation	United States	Germany	China	Brazil	India
Geothermal power	United States	Philippines	Indonesia	Mexico	Italy
Hydropower[4]	China	Brazil	United States	Canada	Russia
Hydropower generation[4]	China	Brazil	Canada	United States	Russia
Concentrating solar thermal power (CSP)	Spain	United States	United Arab Emirates	India	Algeria
Solar PV	Germany	China	Italy	Japan	United States
Solar PV capacity per capita	Germany	Italy	Belgium	Greece	Czech Republic
Wind power	China	United States	Germany	Spain	India
Wind power capacity per capita	Denmark	Sweden	Spain	Portugal	Ireland
HEAT					
Solar water heating[2]	China	United States	Germany	Turkey	Brazil
Solar water heating capacity per capita[2]	Cyprus	Austria	Israel	Barbados	Greece
Geothermal heat[5]	China	Turkey	Iceland	Japan	Italy

1 Countries considered include only those covered by BNEF; GDP is for 2012 and from the World Bank. The following renewable energy projects are included: all biomass, geothermal, and wind generation projects of more than 1 MW; all hydropower projects of between 1 and 50 MW; all solar power projects, with those less than 1 MW estimated separately and referred to as small-scale projects or small distributed capacity; all ocean energy projects; and all biofuel projects with an annual production capacity of 1 million litres or more.

2 Solar water collector (heating) rankings are for 2012, and are based on capacity of water (glazed and unglazed) collectors only; however, including air collectors would not affect order. Note that past editions of this table have not considered unglazed water collectors.

3 Per capita renewable power capacity ranking considers only those countries that place among the top 20 worldwide for total installed renewable power capacity, not including hydropower.

4 Country rankings for hydropower capacity and generation differ because some countries rely on hydropower for baseload supply whereas others use it more to follow the electric load and match peaks in demand.

5 Not including heat pumps. Rankings are based on a mix of 2010 data and more recent statistics for some countries.

6 Capacity, otherwise noted.

Note: Most rankings are based on absolute amounts of investment, power generation capacity or output, or biofuels production; if done on a per capita, national GDP, or other basis, the rankings would be quite different for many categories (as seen with per capita rankings for renewable power, solar PV, wind, and solar water collector capacity).

Appendix A: REN21 2014 Renewables Global Status Report

Table 1. Renewable energy support policies

COUNTRY	Renewable energy targets	REGULATORY POLICIES							FISCAL INCENTIVES AND PUBLIC FINANCING				
		Feed-in tariff/ premium payment	Electric utility quota obligation/RPS	Net metering	Tradable REC	Tendering	Heat obligation/ mandate	Biofuels obligation/ mandate	Capital subsidy 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
HIGH INCOME COUNTRIES													
Andorra												○	
Australia	○	R*	●		○			●	○				○
Austria	○	○			○			○	○	○			○
Barbados	○			○							○		○
Belgium	○		●	●	○	○		○	★*	○	○		
Canada	●	R*	●	●		○		○	○	○	○		○
Chile	R		○	○		★	○		○		R		○
Croatia	○	○						○					
Cyprus	○	○		★		○		○	R				
Czech Republic	○	5			○			○	○	○	○		
Denmark	○	○		○	○	○		○	○	○	○		R
Estonia	○	○						○				○	○
Finland	○	○			○			○	○		○	○	
France	R	R			○	R		○	○	R	○		○
Germany	○	R					○	○	○	○	○		○
Greece	○	R		★				○	○	○	○		○
Ireland	○	○			○	○	●	○					
Israel	○	○	○			○	○				○		○
Italy	○	R	○	○	○	R	○	○	○	○	○		○
Japan	○	○	○	○	○	○			○				○
Kuwait	○					★							
Latvia	○	○		★		○		○			○		
Lithuania	○	R	○					○					○
Luxembourg	○	○						○	○				
Malta	○	○		○					○		○		
Netherlands	○	R		R	○			○	○	○	○	○	○
New Zealand	○								○				
Norway	○		○		○	★		○	○		○		○
Poland	○		○		○	R		○			○		○
Portugal	R	R	○			○	○	○	5	5	○		5
Russia	★					★			○				
Singapore				○		○					○		○
Slovakia	○	R			○			○			○		
Slovenia	○	○			○	○			○	○	○		○
South Korea	○		○	○	○			○	○	○	○		○
Spain[1]	○			○	○			○	○	○		○	
Sweden	○		○		○			○	○	○	○		○
Switzerland	○	○							○		○		
Trinidad and Tobago	○									○	○		
United Arab Emirates	●		●			●	●					●	●
United Kingdom	R	R	○		○		○	○	R		○	○	○
United States	R*	R*	R*	R*	●	R	●	R	○	5	○	○	R
Uruguay	R	○		○		R	○	○	○		○	○	○

○ – existing national, ● – existing sub-national, ★ – new, R – revised, × – removed/expired, * – sub-national

1. Spain removed FIT support for new projects in 2012. Incentives for projects that had previously qualified for FIT support continue to be revised.

Table 1. Renewable energy support policies (continued)

COUNTRY	Renewable energy targets	REGULATORY POLICIES							FISCAL INCENTIVES AND PUBLIC FINANCING				
		Feed-in tariff/ premium payment	Electric utility quota obligation/RPS	Net metering	Tradable REC	Tendering	Heat obligation/ mandate	Biofuels obligation/ mandate	Capital subsidy 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
UPPER-MIDDLE INCOME COUNTRIES													
Albania	O	O	O	O	O	O	★			O	★	O	O
Algeria	O	O				O				O			
Angola								O					O
Argentina	O	O				O		R	O	O	O	O	O
Azerbaijan	★												O
Bahrain													O
Belarus											O		O
Bosnia and Herzegovina	O	O				O			O				
Botswana	O								O		O		
Brazil	O			O		R	●	R		O	R		R
Bulgaria	O	O						O					O
China	R	R	O			O	O	O	O	O	O	O	O
Colombia	O							O			R		
Costa Rica	O			●		O		O			O		
Dominican Republic	O	O		O		O	O		O	O	O		
Ecuador[2]		★				★		★			O		O
Fiji	O									O	O		
Grenada	O			O							O		
Hungary	O	O						O	O		O		O
Iran		O								O		O	★
Jamaica	O			O		O		O		O	O		
Jordan	O	O		O		O		O			O		O
Kazakhstan	★	★			O				★				
Lebanon	O			O							O		
Libya	R										O		
Macedonia	O	O											
Malaysia	O	R	O			O		R			O		O
Maldives	O	O				O							
Marshall Islands	O										O		
Mauritius	O	5				O			O				
Mexico	O			O		O	O			O			O
Palau	O		O										
Panama		O		O		O		O		O	O	O	
Peru		O				O		O			O		★
Romania	O		O		O			O					O
Serbia	O	O							O				
South Africa	O		O	O		R		★	O		O		O
St. Lucia	O			O									
Thailand	R	R						O	O		O		O
Tunisia	O			O					O		O		R
Turkey	O	R						O	O				O

O – existing national, ● – existing sub-national, ★ – new, R – revised, × – removed/expired, * – sub-national

2 Ecuador's FIT that expired in 2012 was re-launched in 2013.
3 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).
Note: Countries are organised according to annual GNI per capita levels as follows: "high" is USD 12,616 or more, "upper-middle" is USD 4,086 to USD 12,615, "lower-middle" is USD 1,036 to USD 4,085, and "low" is USD 1,035 or less. Per capita income levels and group classifications from World Bank, 2014.
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 in 2013 are marked with an X; historic discontinuations have been omitted from the table.. Many feed-in policies are limited in scope of technology. In cases where a national and sub-national policy exist within the same policy category, the national policy is displayed.
Source: See Endnote 1 for this section.

Table 1. Renewable energy support policies

COUNTRY	Renewable energy targets	REGULATORY POLICIES							FISCAL INCENTIVES AND PUBLIC FINANCING				
		Feed-in tariff/ premium payment	Electric utility quota obligation/RPS	Net metering	Tradable REC	Tendering	Heat obligation/ mandate	Biofuels obligation/ mandate	Capital subsidy 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
LOWER-MIDDLE INCOME COUNTRIES													
Armenia		○											
Cameroon											○		
Cape Verde	○			○		○					○	○	
Côte d'Ivoire	○										○		
Egypt	R			○		R			○		○		
El Salvador						R				○	○	○	○
Federated States of Micronesia	○			●									
Ghana	○	R	○		○		○	○	○		○		○
Guatemala	○			○		○		○		○	○		
Guyana	○										○		
Honduras	○	○		★		○				○	○		
India	R	○	○	★*	○	R	●	R	R	○		R	○
Indonesia	○	R	○			○		○	○	○	○		○
Lesotho	○			○		○			○	○		○	○
Moldova	○	○											○
Mongolia	○	○				○							
Morocco	○					○							○
Nicaragua	○	○									○		
Nigeria	○	○							○		○		○
Pakistan	○	○		○					●				○
Palestinian Territories[3]	○	○		○							○		
Paraguay								○			○		
Philippines	○	○	○	○		○		R	○	○	○	○	○
Senegal	○		○				○				○		
Sri Lanka	○	○	○	○				○	○		○	○	○
Syria	○	○		○		○				○			
Ukraine	○	R		★				★	○		○		○
Uzbekistan						○							
Vanuatu	○										○		
Vietnam	○	○			○			○	○	○	○		
LOW INCOME COUNTRIES													
Bangladesh	○								○		○		○
Benin	○										○		
Burkina Faso						○				○	○	○	
Ethiopia	○							○			○		○
Gambia											○		
Guinea	○										○		
Guinea-Bissau	○										○		
Haiti													○
Kenya	○	○				○	○				○	○	○
Kyrgyzstan			○						○		○		
Madagascar	○										○		
Malawi	○							○			○		
Mali	○							○			○		○
Mozambique	○							○					○
Nepal	○					○			○	○	○		○
Niger	○										○		
Rwanda	○	○									○		○
Sudan	○							○					
Tajikistan	○	○											
Tanzania		○							○		○		
Togo											○		
Uganda	○	R							○		○		○
Zambia								○	○		○		
Zimbabwe	○							R					

Contact us

André Boekhoudt
Head of Global Energy and Natural Resources Tax Practice
T: +31 20 6 561358
E: boekhoudt.andre@kpmg.nl

kpmg.com/socialmedia

kpmg.com/app

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