European Commission

LATIN AMERICA IP SME HELPDESK

FACTSHEET

IP in the Renewable Energy Sector

1. What is renewable energy?

Renewable energy refers to energy obtained from natural energy sources, such as wind, solar, geothermal or hydropower. Widely defined, clean energy also comprises other power sources that come from waste (biomass or biogas) or are derived from organic matter such as plants (biofuel).

The main difference from traditional fossil sources is that sustainable energies are limitless or their sources have a fast regeneration rate compared to the thousands of years needed for the regeneration processes of fossil sources such as petrol, gas or carbon.

Furthermore, renewable energies contribute to environmental sustainability and to a cleaner future. For this reason, we can also refer to this type of energy as clean or green energy, because it does not generate greenhouse emissions or other types of waste that are harmful to the environment.

In this context, it is important to highlight the European Union's commitment to meet a target of at least 32 % of its energy consumption coming from renewables by 2030. Moreover, the European Union is a major player on the international market of this sector thanks to the outstanding technical level of its clean energy companies, which are leading the way for innovation in areas such as wind turbine manufacturing.

The transformation from traditional energetic resources such as carbon and oil to more sustainable resources is imminent and regarded as a top priority for the EU and other countries, considering the impact of these cleaner energy sources on stopping world climate change. This has also has been one of the axis on which the EU has worked when developing cooperation mechanisms with other countries. For example, the Low Carbon Business Action aims to enhance cooperation between EU businesses and companies based in Argentina, Brazil, Chile, Colombia and Mexico to work on the development of low carbon technologies.

There are many initiatives to support research and development in this field, from governmental investments to tax exceptions and fee waivers. Therefore, it can be said that, in addition to being good for the plant, renewable energy presents considerable business opportunities for European SMEs.

2. Relevant information when entering the sector in Latin America

According to the International Renewable Energy Agency (IRENA), many of the top markets for investment in renewable energy with great potential for growth are located in Latin America.

Projected WIND Installed Capacity in Latin America				
in MW	2020	2040	increase	% increase
Brazil	17,749	60,574	42,825	241%
Southern Cone	7,379	34,309	26,930	365%
Mexico	4,888	21,514	16,626	340%
Andean	1,976	5,248	3,272	166%
Caribbean	1,123	2,159	1,036	92%
Central America	1,235	1,420	185	15%
TOTAL	**34,350**	**125,224**	**90,874**	265%

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Renewable energies have experienced an important boost during the last decade and both private companies and public bodies have dramatically increased their investments.

The continued expansion of energy demand has resulted in a shift in the public policies of each country, each at their own pace and according to their needs, natural resources, technologies and requirements. This context has encouraged the emergence and incentive to find various energy alternatives.

According to the UN Environment Programme (UNEP) 2019 Report, *'Global investment in new renewable energy capacity is set to reach USD 2.6 trillion by the end of 2019, to close out a record-breaking decade in renewable energy investment'*.

Latin America has not been an exception to these trends and has now become a very attractive market in which to develop RE (Renewable Energy)-related business thanks to:

- the growing power-interconnection infrastructure, which will allow the creation of a regional electricity grid in the near future;
- the considerable RE potential resources and the territorial diversity, such as sun hours in the Atacama Desert, wind flows in the Andean Region and the Atlantic and Pacific shores and water flows all around the continent.
- the high level of awareness of the use of 'clean' energies.
- the degree of development of RE at policy and regulatory level.

Brazil has the highest RE generation rate with 601 TWh in 2018, most of it generated by hydraulic power, whereas wind-generated energy increased by 77.1 % from the previous year reaching a total of 48,475 GWh (source: The World Bank). According to the Renewables 2020 Global Status Report, Brazil is the third largest producer of bioelectricity in the world.

Mexico has become a significant player in the RE sector, as the government enacted the National Electric System Development Program 2019 - 2033, targeting RE innovation and development. It is, along with China, one of the leaders in the growth of solar thermal capacity worldwide (Renewables 2020). However, it should be noted that those changes in priority that are less favourable to the development of green technology by the Mexican government in 2020 may curtail the growth of this sector in the next few years.

Chile is betting on photovoltaic energy, mainly due to the climate conditions of the Atacama Desert, an area with some of the highest levels of solar radiation in the world.

Costa Rica is one of the fastest-growing location for geothermal energy production: in 2020, it ranked fourth in the world for newly installed capacity in 2019. In Latin America, only Mexico ranks higher when it comes to geothermal total production.

Not only do clean energies offer opportunities in the field of large-scale production, but they also provide "off-grid" electricity to rural communities in the framework of local development policies.

In accordance with the Peruvian Ministry of Agriculture, Peru presents great opportunities for non-conventional RE, such as wind power in the region of ICA. Currently, most of the RE in Peru derives from hydraulic energy, which transforms energy from water flow into electric power. There are 110 hydroelectric plants across the Andean country.

Four Latin American countries made the TOP 40 of the Renewable Energy Country Attractiveness Index 2020, with Chile in the 11th position, followed by Brazil in the 15th, Argentina in the 19th, and Mexico in the 33rd place on the list, which is undoubtedly a major achievement for the region.

3. Legal framework and policy

Energy markets in Latin America tend to be highly regulated and vary significantly from country to country.

Therefore, if planning to entry a RE market, you should take into account the legal framework applicable to this specific sector for each territory. Since the relative importance of each type of renewable energy source varies from country to country, the strategic implementation at policy level may also vary.

IP AND RENEWABLE ENERGY LEGAL FRAMEWORK

Argentina
Renewable Energy Law Act 27191
Regulatory Decree No. 531/2016 of Law No. 27,191

Brazil
Renewable Energy regulation and policy

Chile
Law 20.698, also known as Law 20/25 or Chile's Non-Conventional Renewable Energy Law.

Mexico
Renewable Energy Development and Financing for Energy Transition Law.
Legal regulation of renewable energy in Mexico

European SMEs should evaluate the importance of certain RE sources at policy level in each country since the greater the importance, the more public funds such as loans, grants or tax deductions are available.

A special aspect of such policies involving IPRs concerns the so-called 'green patents', which enjoy some benefits compared to patents in other sectors.

4. Intellectual property protection in renewable energies

Amongst the different categories of sustainable energy, most patent applications are filed in the solar technology field, followed by fuel cells, wind energy and geothermal energy (WIPO Indicators 2020).

IPRs come into play as an important strategic tool aiming to encourage the creation of new technical solutions by allowing IPR holders to exclude third parties from using their inventions and creations, as well as maximising their value thanks to proper protection and management.

The following table provides an overview of the different IPRs with some practical examples of how they can be used to protect renewable energy developments and related products:

IPR	SUBJECT MATTER AND EXAMPLES
Patents	New, inventive and industrially applicable inventions **Examples:** LED lamps powered with solar panels, solar energy system for a hybrid vehicle, wind energy parks, systems for geothermal energy storage, biofuels and process for extraction.
Utility models	Minor inventions, such as adaptations or improvements of existing products **Examples:** Geothermal energy central air conditioner, wind or solar charger, etc.
Industrial designs	New shape or appearance of a product but not its functional aspects **Examples:** A renewable energy torch, solar cell phone cases, portable solar panels.
Trade marks	Any sign or combination of signs capable of distinguishing the goods or services of a company from those of another. **Examples:** Name/words –for products, wind parks, logos for green technology.
Copyright	Literary, musical and artistic works, sound recordings, software, databases, etc. **Examples:** Scientific articles, software, labelling, technical manuals, etc.
Trade secrets	Valuable commercial or technical information unknown to the public. **Examples:** Processes, research notebooks, blueprints, customer lists, marketing strategies, etc.

In most cases, the innovations created in the context of research activity carried out on clean energies could be directly protected through patents and utility models. Nevertheless, SMEs wishing to protect their intellectual property must know that different types of IP rights can be combined to achieve fuller protection.

For instance, copyright can provide indirect protection of renewable energy since these rights can be applied to the product that incorporates those technologies. For example, a new system for converting geothermal energy can be patented; in this case, the patent would protect the system and its technical function. Copyright would protect the software that is used in the data analysis for calculating the amount of energy produced. Another typical illustration of such combination of IP rights is the protection of innovation via a patent, and the technical methods related to this invention protected as a trade secret.

Consequently, companies should evaluate different means of IP protection in order to build a strong, diversified IP portfolio that maximises their level of protection and economic return.

5. IP good practices when operating in Latin America

IPRs are very useful tools for companies that do research or implement renewable energies to benefit from their efforts in research and development (R&D), since they help companies to:

- create a new revenue flow by licensing them;
- attract more potential investors or financial institutions;
- increase competitiveness of the company in the market;
- improve future profitability;
- apply for public loans or grants;
- establish collaborative alliances.

While SMEs may decide to enter the 'green energy' market in Latin America on their own, one common alternative of entering these markets is by means of agreements with other local or foreign companies with greater economic, industrial or commercial muscle, such as:

- joint ventures
- project consortiums
- technology transfer agreements
- licensing (see Glossary).

This type of cooperation is needed in most of the cases, due to the complexity and scope of the projects in this sector, which go from the development to the implementation and require a wide range of skills that imply a considerable workforce as well as a sizeable infrastructure.

Take into account the applicable IP legal framework for technology transfer in general, applying to R&D, joint ventures, foreign direct investments (FDI), licences, transfers, trading of equipment, turn-key plants or outsourcing.

Note that the relevant law may differ depending on the chosen business model and, while the mere export of machinery will mostly need to take into account patents already protected as well as licensing, a joint venture will require a previous analysis of the company´s background in order to minimise risks and ensure that the cooperation is fruitful.

Identify present and future intangible assets (e.g. technological innovations, know-how, customer lists, software, databases...) that can be protected as IPR.

Perform a Freedom-to-Operate Analysis (also known as FTO or right to use). Before operating in the countries of your interest, it is highly advisable to carry out an FTO analysis, which consists of determining whether IPRs owned by third parties in the relevant territory have already been registered. This should be done even if you discard patent registration in order to avoid infringing third-party rights.

Perform due diligence before closing any deal. This consists of conducting an analysis of potential partners, for example, by checking their solvency, past dealings, and ownership of IPRs. Conducting proper due diligence is an essential tool for IP management, either for acquiring new IPRs or for strategic decision-making concerning your business partners. For more information about this topic, you can have a look at our Factsheet on IP Due Diligence.

Before entering any form of negotiations (either for commercial or technological cooperation), **sign the relevant preliminary contracts (i.e. confidential agreements or a Memorandum of Understanding) and always identify the ownership of the technical data and information exchanged** to avoid potential conflicts.

It is highly recommended that you seek the advice of a local expert to conduct the analysis. For an initial approach to the subject, there are several search tools that will make a preliminary technological search easier, for example WIPO's IPC Green Inventory for patents.

This tool has an exhaustive list of RE technologies, and using the International Patent Classification (IPC) allows users to search within the category of their interest, such as biofuels. This search engine is linked to WIPO's patent database (PATENTSCOPE), which contains over a million patent documents worldwide.

Register your most relevant and key IPRs on a country-by-country basis. Moreover, take into account the international registration systems for **trade marks** (available in Brazil, Colombia, Chile, Cuba and Mexico) and **patents** (PCT registration is available in Brazil, Colombia, Chile and Mexico, among others).

BRAZILIAN GREEN PATENT FAST-TRACK

Brazil's patent office, INPI, has been suffering from a serious backlog issue: patents typically take around ten years to be granted.

This is obviously not tenable and can make the whole process of patenting inventions completely inefficient. For this reason, INPI has been putting in place a 'fast-track' mechanism that allows patent applicants to request to have their application processed faster/as a priority. Typically, a 'fast-track' application takes around 18 months. However, this mechanism is only available under certain circumstances or for certain types of patentable inventions. You can find here the types of patents for which the accelerated "fast-track" option is available (in Portuguese).

Amongst these, 'green technology' is one of the types of innovation that qualifies for the 'fast-track' option. In addition to the standard patentability requirements (novelty, inventiveness and industrial applicability), there are three extra requirements that must be satisfied to benefit from the "fast-track" system.

- The application must be related to 'green technology'. This includes renewable energy generation, energy conservation, transportation, etc.
- The request of "fast-track" examination must be entered after the patent application has been filed. However, it must be requested before the formal examination has started.
- The patent application may not contain more than 15 claims nor may it consist of more than 3 independent claims. Independent claims are claims, which, as the name suggests, do not depend on each other for their validity. Dependent claims will be presented in the form of "If claim 2), then also...". Therefore, it can contain no more than 3 independent claims and 12 dependent claims in total (or 2 and 13, or 1 and 14, respectively).

Note that the green 'fast-track' route is also available for patent applications filed through the PCT.

As regards costs, the request for priority examination for green patents costs around € 200 (€ 80 for SMEs registered in Brazil). The usual fees for filing, examination and publication will also have to be paid (Check our IP Cost Tool).

Consult a local IP expert to obtain support with the IP negotiations and the drafting of the relevant contract. You will avoid unnecessary risks and will find the most suitable option for your business strategy, considering that IP protection and enforcement can take a wide range of forms and depends on the specialities of each country´s market conditions and industry peculiarities.

Maintain secrecy and limit the disclosure of confidential information:

- limit the disclosure among the consortium only to those partners/members strictly necessary;
- use preventive and safety measures, such as limits to access to information, firewalls, passwords, and encryption;
- make sure the information exchanged between the parties is properly identified and labelled as confidential;
- be aware that some national laws limit the scope or the duration of exclusivity or non-competition agreements.

TIPS and WATCH OUTS

Non-competition agreements or clauses can be regarded as an offence to competition law in some countries such as Colombia. Make sure you review the applicable national law before entering into any contractual obligation.

Establish a 'preferential licensing option' for the licensor in the event that during the execution of the contract, within the framework of a licence or R&D contract, the licensee develops an improvement on the technology that is being licensed. Such clause will grant the owner of the original technology a right of priority to any improvement developed by the licensee.

Monitor the changes in the legal framework in those countries where the rights are protected in relation to, for example, taxation, public funding and intellectual property.

Enforce your rights in case of infringement, activate a technological surveillance in the territories of interest and monitor IP gazettes to detect those inventions that may affect your rights.

Activity in the renewable energy sector tends to be a long-term business and investment. Therefore, take into account the duration of IPRs' maintenance and ownership, as well as the foreground that is not explicitly included in the contractual framework.

6. Additional information and related links

Observatory for Renewable Energy in Latin America and the Caribbean http://www.renenergyobservatory.org/en.html

International Renewable Energy Agency (IRENA)
https://www.irena.org/

Country profile Argentina
https://www.wipo.int/members/en/details.jsp?country_id=8

Country profile Brazil
https://www.wipo.int/directory/en/details.jsp?country_code=BR

Country profile Chile
https://www.wipo.int/members/en/details.jsp?country_id=36

Country profile Mexico
https://www.wipo.int/members/en/details.jsp?country_id=123

7. Glossary

Licensing: a contract between two parties, licensee and licensor, where the latter authorises the former to use a protected Intellectual Property Right in exchange for a royalty, while the licensor keeps the IPR ownership.

Trade secrets: any confidential, commercial or industrial information that gives a competitive advantage to a company. For example, a customer list, business plans or a database that meets consumer preferences in a given area. Trade secrets encompass manufacturing or industrial secrets, as well as commercial secrets. The unauthorised use of such information by individuals other than the holder is regarded as unfair practice and a violation of the trade secret.

Non-Disclosure Agreement (NDA): confidentiality agreements through which the parties commit not to disclose certain information, except under the agreed conditions. They are particularly relevant for protecting trade secrets, as well as the novelty and inventive step of patents and designs.

Patent Cooperation Treaty (PCT): an international agreement that allows for international patent applications. This type of application consists of a single application filed in a patent office in one language, and the payment of a set of fees is required, acting as a bundle of patent applications in the contracting states designated by the applicant. For further information about the PCT, please click here.

LATIN AMERICA IP SME HELPDESK

IP in the Renewable Energy Sector

Download Guide

The **Latin America IP SME Helpdesk** offers **multilingual services** (English, French, German, Spanish and Portuguese[1]), with free information and first-line legal advice on IP related subjects, as well as training, webinars and publications, especially designed for EU SMEs.

HELPLINE First-line advisory service on IP protection and enforcement for EU SMEs working or planning to operate in Latin America.

TRAINING Targeted trainings and webinars on IPR protection and enforcement for EU SMEs (including sector- specific approaches).

IP CONTENT State-of-the-art publications (factsheets, learning modules, videos, IP glossary, info graphics, case studies and newsletters) on the protection and enforcement of IPR in Latin America – specifically addressing IP matters from the SME business needs point of view.

AWARENESS RAISING EVENTS Participation in events attended by EU SMEs to increase the awareness of IP and of the visibility of the services provided by the Helpdesk.

IP ANALYSIS Analysis of IP challenges faced by EU SMEs in the target markets.

IP DIAGNOSTIC TOOLKIT Toolkit for self-evaluation of the IP-status of the user in terms of IP knowledge and management.

IP COST TOOL Online tool that allows the user to pre evaluate the costs related to IP management in every Latin American country covered by the Helpdesk.

[1]The language offer will depend on the specific service and experts' availability.

If you have any queries on how to protect your Intellectual Property in Latinamerica contact our Helpdesk service:

helpline@latinamerica-ipr-helpdesk.eu
+34 96 590 9684
Working Hours: Monday - Friday 9:00 -16:30 (CEST)

If you want more information on additional free services offered by the Helpdesk contact the coordination team:

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