



Chile: a land of opportunity for renewable energy investments

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*Prepared
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LATAM Renewable Energy Market Overview

Chile values its energy independence and has developed the Energía 2050 strategy focusing on renewable energy with remarkable results over the last years

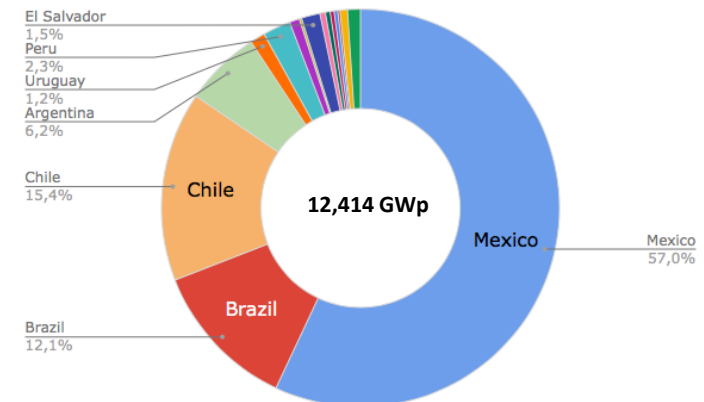
Renewable industry growth over the last years has been mainly driven by new wind and solar installations, while hydro is historically a more mature and consolidated market

- The Chilean renewable energy industry is underpinned by the **Energía 2050 plan of the Chilean government** based on 4 pillars: Security and Quality of Supply, Energy as a Motor of Development, Compatibility with the Environment and Efficiency and Energy Education.
- In February 2017, **Chile has ratified the Paris Agreement** with United Nations Framework Convention on Climate Change (UNFCCC) dealing with greenhouse gas emissions mitigation.
- In 2018, **Chile was the leader in LATAMs renewable installed capacity** (two thirds of total installed capacity), followed by Brazil and Mexico.
- Until 2021, **Chile is expected to add further 2GW** of PV solar capacity, accounting for over 15% of all added capacity on the continent.
- By far the **biggest new solar capacity is expected to be added in Mexico**, 57% of total LATAM added capacity
- Potentially strong player in both PV solar and wind is **Argentina**, where more rapid deployment of renewable technologies is caused by **unstable political and economic situation**.

Installed capacity in Latin America & Caribbean

GWs	2016	2020 (forecast)	GW increase	% increase
Wind	17.9	31.5	13.6	76 %
Solar	2.7	15.1	12.4	459 %
Total	20.6	46.6	26.0	126 %

New Solar Capacity 2017-2020



Installed and Under Construction Power in Chile

Chilean Renewable Energy market growth was remarkable and mainly driven by Solar PV and Wind installations

The growth of the sector in terms of capacity installed was followed by a growth of the incidence of RES in electricity market: today Renewable Energy plants satisfy approximately 35% of the gross internal consumption

- Renewable energy market in Chile (including large hydro) reached in 2018 a **total installed capacity of 11.2 GWp**
- **The growth of the sector was mainly concentrated in a 4-year period (2014-2017)** and driven by high marginal costs of electricity in the country. The market works without incentives for generators and works on the supply and demand basis determining the prices with a partial exception of PMGD category which enjoys certain benefits over larger projects.
- **The growth of installation was mainly due to the strong development of PV solar and wind sectors**, with respectively 2 GWp and 1.2 GWp of new plants realized in the last 4 years;
- In August of 2018 the renewable energy sources contributed to satisfy **approximately 35%** of the gross internal consumption.
- Current annual electricity demand in Chile reaches 80 TWh with expected growth rate of 3% per year projected to reach 150 TWh by 2040
- The Chilean electrical system comprises of **two main sub-systems: SIC (central Chile) and SING (northern Chile)**, together accounting for over 99% of total installed capacity

Installed and Under Construction Capacity SIC and SING Systems (excluding large hydro); end of 2016

SIC installed capacity (MW)

Mini hydro NCRE	570
Solar PV	1,302
Wind energy	1,214
Bioenergy	481



SIC under construction capacity (MW)

Mini hydro NCRE	43
Solar PV	414
Wind energy	230
Bioenergy	1



SING installed capacity (MW)

Mini hydro NCRE	16
Solar PV	570
Wind energy	202
Geothermal	48



SING under construction capacity (MW)

Solar PV	409
CSP	110



Solar PV market in Chile

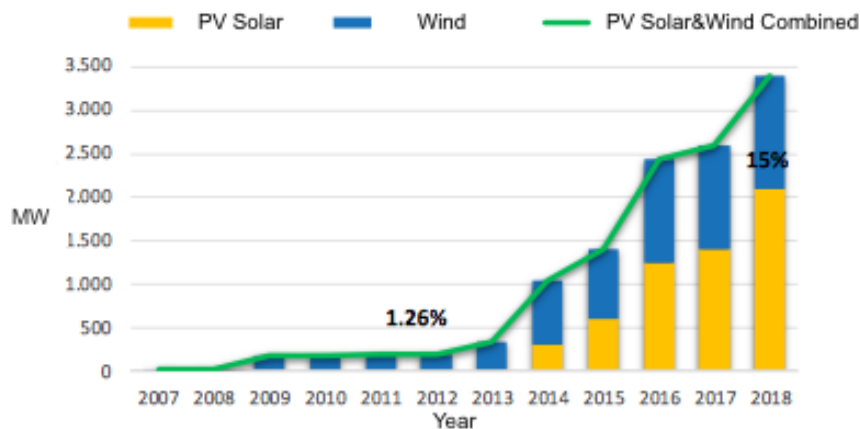
Investments in Solar photovoltaic ("PV") power capacity in Chile has been reached over EUR 2,6 bn since 2013)

Chile is one of the Latin America's largest market for PV energy, with a total installed capacity of over 2 GWp

The market is segmented into PMGD category build mainly in the central part of Chile and large scale PV plants in the north with secondary market gathering momentum as more transactions are taking place

- PV growth in Chile was remarkable, with **over 2 GWp installed since 2013**; growing over 250% per year
- The growth has been driven by costs of electricity, at the time among the highest in Latin America
- Chile is home to **some of the largest PV solar plants in the world**, such as El Romero Solar Farm of 246MW build by Acciona
- PMGD category (<=9MW) has also shown strong growth with **total installed capacity of over 440MW in 2018**
- **Average installed capacity of a PMGD plant** is approximately **2,7MWp**
- As of february of 2018 according to CNE (National Energy Commission), the additional **PV solar capacity under review was over 7,5GW**
- Increasing number of transactions are taking place between original developers and longer term institutional investors as secondary market develops

Chilean PV Solar Evolution 2007-2018



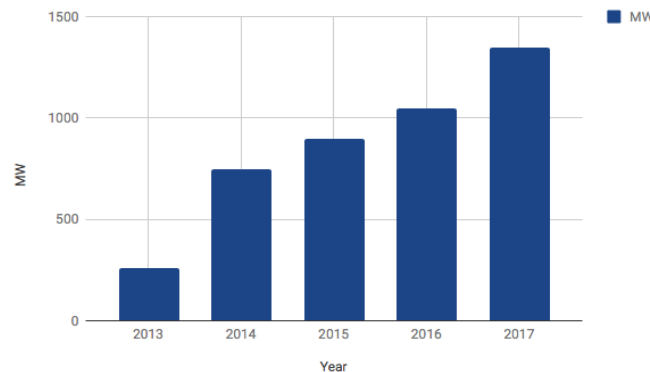
Wind market in Chile – Overview

The market is dominated by industrial operators / utilities, which contributed to the growth of the sector

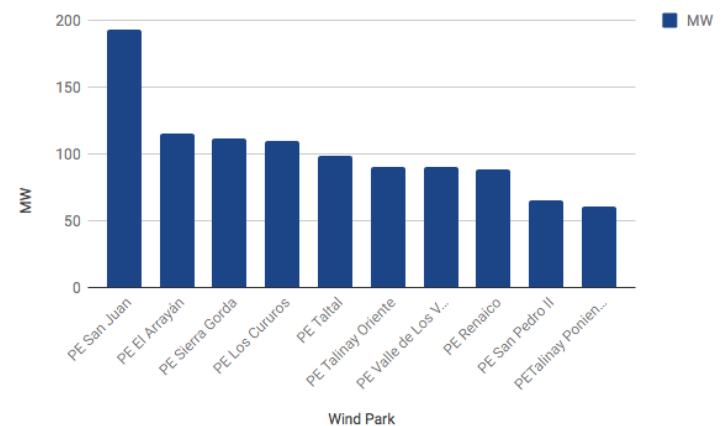
The secondary market is characterized by an average size of transactions higher than Solar PV

- Wind market growth in Chile was remarkable with a total capacity installed in early 2018 equal to 1.7 GWp
- The market is consolidated with the combined installed capacity of 10 largest wind parks close to 1 GW
- As of 2017, wind has represented 4.7% of total energy generation in Chile
- Currently in development by Colbún is the largest wind project in the LATAM region named “Proyecto Horizonte” with installed capacity of 607 MW
- The Chilean Wind Utility Scale Market is dominated by utilities and large industrial players
- Both new project development and transactions are being announced ((i.e. Aela’s sale of the 332MW portfolio announced in Q3 2018))

Chilean Wind Market Evolution (MWp) – 2013-2017



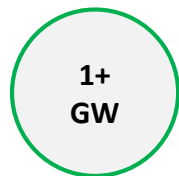
Top 10 Wind Portfolio Owners – 2017



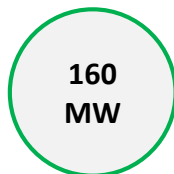
Source: Generadoras de Chile

Overview

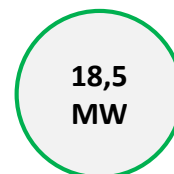
- Prothea was established in 2007 as **an independent advisory boutique** based in Milan **providing advisory and asset management services** in the renewable energy sector.
- Over the last five years **Prothea executed transactions with a total value of approximately Euro 1.5 billion**, advising primarily institutional investors both Italian and International.
- Today Prothea is a market leader in the renewable energy advisory and **it is also able to offer established technical knowledge in the sector being active in the O&M for more than 160 MW** renewables energy plants through the operating subsidiary LT.
- Prothea also operates, on behalf on an institutional investor, a 18.5MWp Italian solar PV portfolio under a REIT scheme.
- Prothea provides **its services** to a range of institutional investors and corporate clients:
 - Project development
 - Corporate Finance and M&A Advisory services
 - Debt and equity capital raising
 - Financial restructurings
 - Asset management
- **Leveraging on its market positioning and sectorial network, Prothea has expanded its advisory services to Asia and LATAM.**
- Prothea management team includes professionals with highly complementary skills coming from advisory firms, companies involved in the specific sectors, international public institutions in the natural resources sector, investment banks and private equity firms.



Development



O&M



A&M



Advisory

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