

The Spanish Renewable Energy Market

London 15 January 2021, by Iain Barbour

The Spanish renewables market is highly competitive. Market pricing is increasingly less reliant on subsidy. Spain is committed to growing renewable power capacity by approx. 50GW by 2030ⁱ. This Market Insight examines some recent initiatives and significant steps being taken to reduce carbon emissions, including the impact of increased cross-border investor interest.

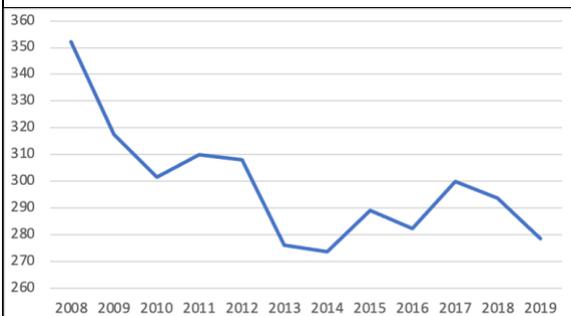
Introduction

Spanish CO² emission reduction is accelerating; the government’s ambitious CO² reduction plans are driving supply growth, supported by healthy renewable energy demand. This is evident in Figure 1, which illustrates Spanish CO² emissions through the last decade. Spain’s ambition is to reduce greenhouse gas emissions by 90% against 1990 levels, ultimately completely decarbonising its economy.

Rising demand for renewable energy

From a consumption perspective, just over 13% is reported to be derived from renewables emphasising the potential for further investment as the Spanish government seeks to achieve its carbon reduction ambitions over the coming decades. Figure 2 illustrates the growing demand for renewables through the last decade, rising from 6% to nearly 14% of aggregate energy consumption.

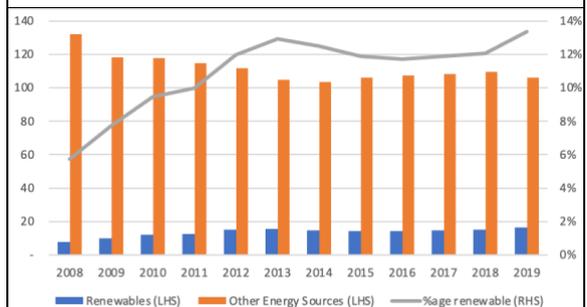
Figure 1: Spanish CO² Emissions



Source: *bp Statistical Review of World Energy 2020*; *Bishopsfield Capital Partners*

Million Tonnes of CO²

Figure 2: Spanish Energy Consumption

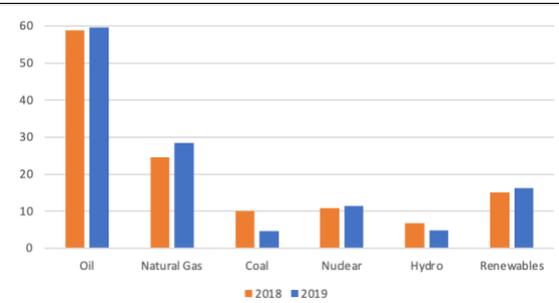


Source: *bp Statistical Review of World Energy 2020*; *Spanish Statistical Office*; *Bishopsfield Capital Partners*

Gigajoule per capita

If we examine the breakdown of energy consumption across the primary sources over the last two years in more detail, the move away from coal is evident (see Figure 3).

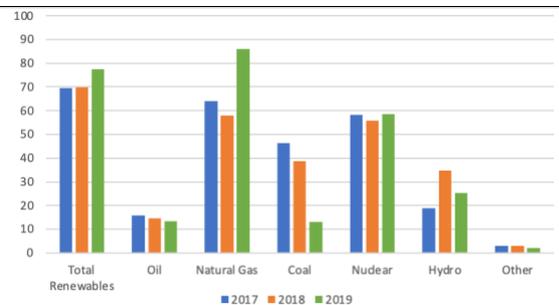
Figure 3: Spanish Energy Consumption by Fuel Source



Source: *bp Statistical Review of World Energy 2020*; Spanish Statistical Office; Bishopsfield Capital Partners
Gigajoule per capita

Renewables supply is growing steadily

Figure 4: Spanish Energy Generation by Fuel Source

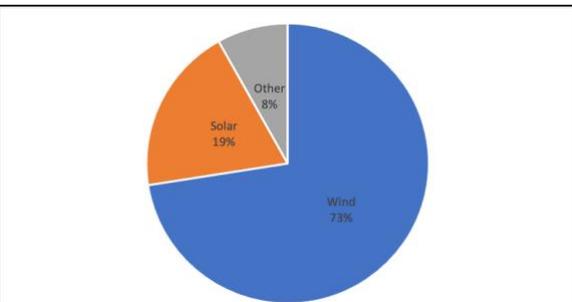


Source: *bp Statistical Review of World Energy 2020*; Bishopsfield Capital Partners
Terawatt Hours

Examining energy generation in Spain, it is evident that renewables already play an important role, comprising over 28% of energy generation in 2019 (source: BP Statistical Review of World Energy 2020). This is illustrated in Figure 4 which emphasises the growth in renewables as a fuel source, whilst also highlighting the importance of some other sources – especially natural gas.

Figure 5 emphasises the reliance, from a renewables perspective, on wind energy. This source has accounted for over 72% of Spanish renewables generation over the last two years, with solar relatively stable at just under 20%.

Figure 5: Spanish Renewable Energy Generation by Source (2019)



Source: *bp Statistical Review of World Energy 2020*; Bishopsfield Capital Partners
Terawatt Hours

We understand from discussions with some sponsors that some 7-8GW of solar is due to come onto the grid by 2022 and some commentators forecasting that up to 20GW may be added by 2024. However, given the supportive geographic location and available land, the potential for transformative growth through incremental solar energy generation is apparent.

Renewable power generators sell electricity generated through the Spanish wholesale market at market prices and receive additional regulated payments in relation to investment and operational costs and during regulated lives (30 years for solar, 20 years for wind). Regulated remuneration is periodically reviewed. There are additionally incentives available in the form of priority access and dispatch to the grid.

The NECPⁱ states ambition to increase percentage consumption of renewable energy to 42% of total energy consumption by the year 2030. The plan states that the percentage of renewable electricity generation will grow to 74% over the same period, ultimately moving towards zero greenhouse gas emissions by 2050. Table 1 summarises the projected growth in various forms of renewable energy capacity.

Source/ Year	2015	2025	2030	%age
Wind	22,925	40,633	50,333	31%
Solar PV	4,854	21,713	39,181	24%
Solar thermal	2,300	4,803	7,303	5%
Hydro	14,104	14,359	14,609	9%
Biomass	677	815	1,408	1%
Other tech ^v	62,313	51,479	48,003	30%
Total	107,173	133,802	160,837	100%

Source: Renewables Now

Amounts reflect MW capacity unless otherwise stated

It is evident that renewable energy supply presently exceeds demand; this creates the potential for the dependency on fossil-based and nuclear fuels to be reduced materially in the medium-term, in keeping with the Government's ambition to reduce its dependence on fossil fuels and draw about three quarters of its electricity from renewables by 2030.

How is the growth being funded?

Funding achieving the ambitious targets remains a key consideration and it remains to be seen how the Covid-19 pandemic impacts the plans.

The Government is however evidently revisiting the design of the funding of the energy system, moving the circa €7 billion per annum renewables subsidy cost from the consumer to energy firms. This is being implemented gradually over the coming 5 years (20% per annum). This will go some way to addressing the relatively high electricity prices observed for Spanish householdsⁱⁱ.

The Government is creating a fundⁱⁱⁱ to cover the cost of subsidies to the renewables sector; the fund will be financed by contributions from electricity, gas and oil generators. The most significantly impacted corporate sector is likely to be the oil companies, which contribute some 43% of sales volumes, followed by the electricity sector (31%) and gas (25%).

Whilst governmental support remains central to achieving the growth in renewables there has also been significant private sector involvement

outside of specific remuneration schemes, supported by corporate and institutional power purchase agreements. These arrangements are driving transparent market-based energy pricing, enabling incremental investment schemes.

Project sponsors encompass both domestic and international players, including funds, contractors, energy utilities and users. These arrangements have historically been supported primarily by domestic debt, with growing interest from international lenders and investors.

We have observed increased interest emerging from institutional lenders in either loan or private placement form, with such lenders seeking fixed rate, longer-dated lending opportunities; such financings are inevitably highly dependent on the strength of the offtake arrangement and the expected life of the technology employed. There is evident focus from lenders to align debt maturities with the shorter of the concession, technology or offtake life.

There appears to be increased interest and willingness to consider construction-phase financing of renewable projects where grid-connectivity is considered certain, where the contractor and technology are proven and where planning permissions have been concluded.

The operations and maintenance of the facilities remains a key consideration for lenders; engaging proven suppliers is fundamental to successfully financed projects whilst robust warranties remain key to any sponsors' and lenders' analysis.

Concluding remarks

Spain remained marginally behind its 2020 target (20%) for the percentage of its overall share of energy consumed from renewable sources^{iv}. Our research indicates that the initiatives being implemented, as well as the unused capacity available – especially in the solar sector, strike a note of optimism that 2030 objectives are achievable.

If you agree with our views in this Market Insight, and even if you don't, we would be delighted to hear from you via email addressed to info@bishopsfieldcapital.com

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ⁱ Spanish National Integrated Energy and Climate Plan 2021-2030 ("NECP")

ⁱⁱ Source: Eurostat, Electricity prices for households, 1st semester 2019

ⁱⁱⁱ National Fund for the Sustainability of the Electricity System (acronym in Spanish: FNSSE)

^{iv} Source: Eurostat

https://ec.europa.eu/eurostat/statistics-explained/images/1/16/Share_of_energy_from_renewable_sources_2019_infograph.jpg