

THE RENEWABLE
ENERGY LAW
REVIEW

FIFTH EDITION

Editor
Munir Hassan

THE LAWREVIEWS

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SPAIN

José Antonio García, Pedro L Marín and Jack Stirzaker¹

I INTRODUCTION

In the first half of 2021, Spain approved the final version of the Integrated National Energy and Climate Plan 2021–2030 (the INECP 2021–2030) and the Climate Change and Energy Transition Act (the CCET Act), which set ambitious energy targets for 2030. From 2021 to 2030, the plan requires a total deployment of about 60GW of renewable capacity – mainly wind and solar photovoltaic (PV) – along with 6GW of storage to be put into operation, with a total investment of €200 billion.

By 2030, a total installed capacity in the electricity sector of 161GW is foreseen, of which 50GW will be wind power; 39GW PV; 27GW combined cycle gas turbine (CCGT); 16GW hydro; 9.5GW pumped-storage hydropower; 7GW solar thermal; and 3GW nuclear, as well as smaller capacities of other technologies.

Renewable energy auctions under a pay-as-bid model are a cornerstone in the energy transition and in achieving the renewable energy capacity targets for 2030. The projects awarded in the auctions are receiving financial support in the form of stable and predictable fixed feed-in tariffs (FiTs) per MWh produced for up to 20 years, adjusted in each case for market price exposure. The planned auction schedule indicates that, until 2025, the goal is to auction 8.5GW of wind and 10GW of PV capacity.

Spain launched two auctions in 2021, one in January and one in October. A third auction is expected in the second half of 2022 for a total additional capacity of 6.7GW, made up of 3GW of PV capacity, 3.3GW of wind and 0.4GW for other technologies.

Other measures and mechanisms envisaged by the INECP 2021–2030 to comply with renewable and storage targets include the use of corporate power purchase agreements (PPAs) and merchant plants.² Distributed PV, driven largely by self-consumption in the commercial sector, is expected to account for at least 15 per cent of Spain's renewable capacity growth.

II THE YEAR IN REVIEW

Spain provides long-term financial support to renewable energy projects in recognition of the benefits that renewable energy investments offer to the environment, the diversity and security of energy supplies, and the economy. European governments knew that they would

1 José Antonio García, Pedro L Marín and Jack Stirzaker are principals at The Brattle Group.

2 Merchant plants are projects where the only source of income is the sale of energy at market prices.

have to provide financial support to meet the renewable targets established under different European directives.³ In Spain, independent reviews concluded that the benefits of renewable generation justified financial incentives.⁴

The two most common approaches for support include:

- a price-based mechanisms, where renewable producers receive a minimum guaranteed price for the electricity produced, the FiT per MWh or the capacity installed, or a combination thereof; and
- b quantity-based mechanisms, where regulatory authorities fix the quantity of renewable electricity to be installed and allocate it through a competitive process or where the energy produced receives green certificates, or both.

Since 2016, quantity-based mechanisms in the form of competitive auctions have become the main policy tool to foster investments in renewable energy in Spain.

Renewables in 2021 surpassed all records in electricity production and generation capacity. As at 31 December 2021, the installed power capacity of Spain's renewable energy generation fleet stood at 63.9GW, 7 per cent more than in the previous year. Renewables accounted for 57 per cent of Spain's entire power generation fleet.

The growth in installed capacity, mainly wind but also PV, together with the increase in hydro production in the previous year, allowed 47 per cent of the total electricity generated in Spain in 2021 to come from renewable technologies. In 2021, renewable technologies produced more than 121,300GWh, 10 per cent more than in the previous year, setting an all-time high. PV production saw the highest increase of 38 per cent between 2020 and 2021, reaching about 8 per cent of Spain's total. Wind became the largest source of electricity generation in Spain for the first time since 2013, producing more than 23 per cent of total generation. Wind energy exceeded 60,600GWh, an increase of 10 per cent relative to 2020.

In terms of total energy consumption, renewable energy in Spain is around the EU average: 21.2 per cent in 2020, compared with 22.1 per cent for the European Union.⁵ However, the INECP 2021–2030 requires by 2030 an ambitious renewable target of 42 per cent share of total energy consumption, with 74 per cent of electricity generation from renewable sources.

To meet the 2030 target, Spain projects an increase in electricity capacity from renewable sources of more than 60GW by 2030. Reaching these goals will require investments of over €200 billion in renewable power plants and storage.

In May 2021, Spain approved the CCET Act to establish the foundations and mechanisms to achieve the targets set in the INECP 2021–2030. In July 2021, the European Council approved Spain's Recovery, Transformation and Resilience Plan (RTRP), which will provide financing for many of the initiatives to deploy renewable energy facilities and electrify the economy, in particular for the transport sector, which are among the main pillars leading to the energy transition.

3 Directive 2001/77/EC of 27 September 2001 and Directive 2009/28/EC of 23 April 2009.

4 See, for instance, Institute for the Diversification and Energy Savings (IDAE), *Renewable Energy Plan in Spain 2005–2010*, August 2005, pp. 8, 15, 23–25; and IDAE, *National Action Plan for the Renewable Sector in Spain (PANER) 2011–2020*, 30 June 2010, p. 9.

5 Eurostat figures for 2020.

Among other issues, the new framework relies on the use of competitive mechanisms to assign new renewable capacity based on the recognition of a stable and predictable FiT per MWh. According to Spain, the new regulatory framework for future auctions will:

- a make new renewable projects bankable by providing greater certainty in respect of their future revenues;
- b compensate for the relative illiquidity of Spanish electricity forward markets; and
- c foster the pass-through of lower costs for renewables to final consumers.⁶

The steep drop in costs for renewable technologies and the additional economic incentives, combined with Spain's new ambitious climate targets and abundant wind and solar resources, mean that Spain remains one of the hottest markets globally.⁷ However, recent regulatory interventions in the market potentially increase uncertainty and temper investor confidence.

III THE POLICY AND REGULATORY FRAMEWORK

i The policy background

In July 2013, Spain began an electricity market reform, with the stated aim of ensuring the financial sustainability of the Spanish electricity system.⁸ Parliament passed Law 24/2013 of 26 December 2013 (the 2013 Electricity Act), which was followed by secondary legislation passed between June 2014 and March 2022 (the Specific Remuneration Regime).⁹ The Specific Remuneration Regime switched from the previous performance-based incentive system to a variant of rate base regulation, and it applies to both existing renewable plants built prior to July 2013 and new renewable installations assigned by the 2016 and 2017 auctions.¹⁰

Price-based mechanism

The Specific Remuneration Regime established an incentive mechanism that aims to allow an efficient plant to cover its costs and obtain a pre-tax target return (before financing). Under the Specific Remuneration Regime, the bulk of remuneration comes from a fixed investment

6 Preamble of Royal Decree-Law (RDL) 23/2020 of 23 June 2020; and Preamble of RD 96/2020 of 3 November 2020.

7 REE, the Spanish electricity transmission agent and system operator, concludes that, as at 28 February 2022, it is processing applications for renewable projects for about 130GW, with about 92GW coming from PV and the remaining 38GW from wind. Out of the 130GW, about 99GW have already obtained access permits – about 77GW from PV, and 22GW from wind. For additional details, see <https://www.ree.es/es/clientes/consumidor/acceso-conexion/conoce-el-estado-de-las-solicitudes>.

8 For additional details, see RDL 9/2013 of July 2013.

9 The six main secondary pieces of legislation are Royal Decree (RD) 413/2014 of 6 June 2014; Ministerial Order (MO) IET/1045/2014 of 16 June 2014 (the June 2014 MO); MO ETU/130/2017 of 17 February 2017 (the February 2017 MO); RDL 17/2019 of 22 November 2019; MO TED/171/2020 of 24 February 2020; and RDL 6/2022 of 29 March 2022.

10 No additional renewable capacity was installed in Spain between 2013 and the launch of the first auction in 2016. RDL 1/2012 of 27 January 2012 (Preamble and Articles 1–3) imposed a renewable generation moratorium in Spain for an indefinite period. Even if certain projects, mainly PV, started operations after the implementation of the January 2012 moratorium, they were officially registered prior to the approval of RDL 1/2012 of 27 January 2012 and are, therefore, entitled to the provision of financial support under the Specific Remuneration Regime.

incentive per MW of installed capacity.¹¹ Spain also offers an operating incentive per MWh produced to compensate for the standard operating costs that an ‘efficient, well-managed company’ could not recover on the market. Spain reviews and may update the estimates of produced hours and operating costs for standard installations and the Spanish electricity prices forecast every three years (the semi-regulatory period),¹² and the target return on investment every six years (the regulatory period).

In November 2019, Spain announced a reduction of the pre-tax target return level from 7.398 per cent in the first regulatory period¹³ to 7.09 per cent for the second regulatory period starting in January 2020. The 7.09 per cent target return applies to renewable installations under the Specific Remuneration Regime whose owners have initiated legal proceedings against Spain due to the 2013/2014 regulatory reform and have decided not to waive them. Spain retains the discretion to alter the target return every regulatory period.¹⁴

Capacity-based mechanism

The 2013 Electricity Act envisaged the possibility of launching competitive concurrence mechanisms to provide financial support for new renewable installations.¹⁵ Due largely to the renewable generation moratorium initiated in 2012,¹⁶ starting around 2014, Spain began to miss the interim annual targets to reach the long-term target of providing 20 per cent of final energy consumption from renewable energy sources by 2020.

Spain ended the moratorium in 2016. Pursuant to the provision in the 2013 Electricity Act, in 2016 and 2017, Spain launched auctions for 8.7GW of additional renewable capacity. New renewable installations assigned by the 2016 and 2017 auctions were entitled to financial support under the Specific Remuneration Regime.¹⁷

In June 2020, Spain approved a new regulation for the promotion of renewable energy, including auction rules based on a pay-as-bid mechanism (the 2020 Regulatory Regime).¹⁸ The 2020 Regulatory Regime overhauls the Specific Remuneration Regime. Where the prior

11 Calculated by reference to a pre-tax target rate of return to the estimated investment costs of a standard installation.

12 February 2017 MO with the adjusted remuneration parameters for the second semi-regulatory period from 2017 to 2019.

13 In July 2013, Spain set the target return by reference to the average yields on the 10-year Spanish government bond calculated over the 10 years leading up to July 2013, 4.398 per cent, plus a 300 basis points risk premium, which resulted in 7.398 per cent. See RD 413/2014 of 6 June 2014 and subsequent June 2014 MO.

14 The target return for renewable investors that have either not initiated legal proceeding against Spain or have waived the legal proceedings against Spain due to the 2013/2014 reform will remained unaltered at 7.398 per cent for the next two regulatory periods, until 2031. See RDL 17/2019 of 22 November 2019, Final Second Disposition (2).

15 2013 Electricity Act, Article 14.7.

16 See footnote 10.

17 According to the 2016 and 2017 auction's regulations, projects bid a discount on the financial incentives in the form of capacity payments under the Specific Remuneration Regime. For the 2016 and 2017 auctions, all winning bidders proposed the maximum discount available of 100 per cent. They will, therefore, not obtain any financial support on top of the market price. See MINETUR, Resolution of 18 January 2016; METDA, Resolution of 19 May 2017; and METDA, Resolution of 27 July 2017.

18 Including, among other things, RDL 23/2020 of 23 June 2020; RD 960/2020 of 3 November 2020; MO TED/1161/2020 of 4 December 2020; Resolution of 10 December 2020; Resolution of 26 January 2021; and Resolution of 8 September 2021.

auctions launched in 2016 and 2017 set discounts to the capacity payment per MW, the new system applies a traditional performance-based incentive in the form of a FiT per MWh. The new auction rules apply to both new renewable facilities and the repowering of existing renewable facilities.

In the pay-per-bid mechanism,¹⁹ renewable developers bid a specific strike price.²⁰ The daily financial support awarded to the winning bidders will be the strike price adjusted by the difference between the strike price and the market price, multiplied by an adjustment factor. The adjustment factor is specific for each technology and contingent on the ability to dispatch, totalling 25 per cent for renewable installations with dispatchable capabilities²¹ and 5 per cent for non-dispatchable technologies.²²

The financial support will also depend on two thresholds:

- a* a maximum energy threshold, defined as the maximum volume of energy from the auction which can receive financial support; and
- b* a minimum energy threshold, which refers to the minimum volume of energy that needs to be delivered in order to be entitled to financial support.²³

Any generation sold beyond the maximum threshold will not be entitled to receive financial support on top of the market price. Penalties may be imposed on facilities that do not reach the minimum threshold. The awarded facilities may also face penalties if, for instance, they suffer construction delays or opt out of the scheme.²⁴

Once set, the strike price will not be modified during the maximum delivery period, which is set between 10 and 20 years depending on the type of technology,²⁵ and defined as the maximum period within which winning bidders have to comply with the obligation to sell the minimum energy.²⁶

The CCET Act also introduces a commitment to publish an annual forecast for the auctions planned in the five years ahead, indicating approximate time frames, frequency of the auctions, expected capacity and, if applicable, planned technologies.

¹⁹ Pay-per-bid means that the price awarded coincides with the bid price.

²⁰ The product to be auctioned will be the electricity produced or the installed power capacity, or a combination of both. Irrespective of whether the auctioned product is capacity (MW) or energy (MWh), the winning facility will receive the same awarding price (in terms of euros per MWh) multiplied by the energy sold in the wholesale markets, including day-ahead, intraday, adjustment services or balance markets, or a combination thereof. The new auction design clarifies that energy auctioned cannot be in physical bilateral agreements.

²¹ Installations are considered to have such capacity if they have storage capacity equivalent to two hours of the project's installed generation capacity. See Annex of MO TED/1161/2020 of 4 December 2020.

²² According to Article 18 of RD 960/2020 of 3 November 2020, the final remuneration received by the winning bidders is calculated according to the following formula:

$$\text{Final remuneration} = \text{Strike Price} + \text{Adjustment Factor} \times (\text{Market Price} - \text{Strike Price}).$$

See MO TED/1161/2020 of 4 December 2020, Article 4 and Annex.

²³ If the auctioned product is energy, rather than capacity, both amounts will be the same.

²⁴ RD 960/2020 of 3 November 2020, Articles 15 and 16.

²⁵ The maximum delivery period is set at 20 years, only under exceptional circumstances and for installations with high initial capital investments; immature technologies facing significant technological risk, such as biogas, biomass and solar thermal installations; or a combination thereof. See RD 960/2020 of 3 November 2020, Article 16 and Draft Resolution of December 2021 announcing the third renewable energy auction under the 2020 Regulatory Regime.

²⁶ Preamble of RD 960/2020 of 3 November 2020.

The first auction under the 2020 Regulatory Regime was launched in January 2021, setting a maximum delivery period for the energy at auction of 12 years.²⁷ Spain awarded approximately 2GW of PV capacity (required to come online before the end of February 2023) and 1GW of wind capacity (required to come online before the end of February 2024). The average price was €24.50 per MWh for PV and €25.30 per MWh for wind.

The second auction was launched in October 2021 and awarded a total of 3.1GW. Of that, 2.3GW went to wind projects at an average FiT of about €30.20 per MWh and 0.9GW to PV at an average price of €31.70 per MWh.²⁸ FiTs were €5 to €7 per MWh higher in the October 2021 auction than in the January 2021 auction due to market energy prices rallying in 2021 in the wake of covid-19 pandemic-related recovery.

A third auction is expected in the second half of 2022 for a total of 0.5GW of additional renewable capacity, divided into 0.2GW for thermoelectric solar, 0.14GW for distributed solar PV, 0.14GW for biomass and 0.02GW for other technologies.

Clawback mechanisms

In September and October 2021, Spain adopted urgent regulatory measures on a temporary basis to reduce the effect of record wholesale energy prices on consumers' electricity bills since the beginning of the 2021 energy crisis.²⁹ This new legislation established a gas clawback mechanism to redistribute the alleged excess remuneration received by infra-marginal and clean generation technologies, including nuclear and renewables, due to the increase in prices in the wholesale market as a consequence of the escalation in natural gas prices.

Pursuant to the September and October 2021 legislation, the alleged excess remuneration for each MWh produced is determined on a monthly basis, provided that the average monthly price of gas in the Iberian gas market (MIBGAS) exceeds €20 per MWh, and increases with the price of gas and the number of hours in which CCGTs set the marginal price in the wholesale electricity market. The gas clawback mechanism was originally set to apply only during the third quarter of 2021. Subsequent legislation has extended its validity until 30 June 2022.³⁰

Renewable technologies affected by the gas clawback mechanism have internalised the cost imposed on their bids by the mechanism, thereby increasing their supply bids. In the absence of the internalisation, renewables could end up producing at a loss.

Certain generation facilities are exempted from the gas clawback mechanism, including facilities and projects that meet at least one of the following conditions:

- a* are located outside Spanish mainland;
- b* are remunerated under the Specific Remuneration Regime;
- c* were assigned by the 2021 auctions under the 2020 Regulatory Regime; and
- d* have a net capacity of 10MW or less.

27 Resolution of 26 January 2021, resolving on the first renewable energy auction under the 2020 Regulatory Regime.

28 Resolution of 20 October 2021, resolving on the second renewable energy auction under the 2020 Regulatory Regime.

29 See Preambles of RDL 17/2021 of 14 September 2021; and of RDL 23/2021 of 26 October 2021.

30 See RDL 17/2021 of 14 September 2021; RDL 29/2021 of 21 December 2021; and RDL 6/2022 of 29 March 2022.

Exemptions also apply to energy supplied through certain long-term (physical or financial) PPAs,³¹ including:³²

- a PPAs not indexed to the wholesale electricity price;
- b fixed-price PPAs indexed to the wholesale electricity price, provided that they were signed before 31 March 2022 or at prices below €67 per MWh; and
- c intra-group PPAs between vertically integrated power generation and commercialisation companies if final consumers pay a price below €67 per MWh.

According to Spain, the exemptions to PPAs are trying to avoid irrational situations in which generation facilities with a signed PPA have to pay to produce the electricity committed in the PPA, thereby producing at a loss.

An additional CO₂ clawback mechanism is expected to take effect in the second half of 2022.³³ The new mechanism aims to further reduce the alleged excess remuneration received by infra-marginal and non-CO₂-emitting technologies to the extent that their variable costs are below the prevailing high wholesale electricity prices driven by the price rise in CO₂ emission rights. The CO₂ clawback mechanism would apply to infra-marginal non-emitting technologies, including nuclear, hydro and wind technologies commissioned prior to the publication of the EU Emission Trading Scheme Directive in October 2013.³⁴ The reduction in remuneration under the CO₂ clawback mechanism will be calculated on a monthly basis, and based on the electricity production of the aforementioned facilities and the difference between the average price of the equivalent ton of CO₂ for that month and a reference value of €20.67 per ton of CO₂.

Other legislative tax measures

In June 2021, Spain approved a temporary suspension from July to September 2021 of the 7 per cent generation levy on gross revenues for all generation plants.³⁵ Subsequently, new legislation approved between September 2021 and March 2022 extended the suspension until 30 June 2022.³⁶

Since the second half of 2021, Spain has further adopted other exceptional and transitory tax measures to reduce the cost of the final electricity bill, including, among other things, the reduction to the taxable amount for value added tax purposes on certain supplies from

31 Long-term indicates longer than one year.

32 See RDL 17/2021 of 14 September 2021, Eighth Additional Provision.

33 Like the gas clawback mechanism, Spain justifies the proposed CO₂ clawback mechanism on the basis that non-emitting infra-marginal technologies benefit from an alleged windfall profit as they sell their electricity production at prevailing high wholesale electricity prices driven by recent spikes in CO₂ prices and set by emitting marginal technologies, but their variable costs are sheltered from higher CO₂ prices. See Draft Bill: https://www.congreso.es/public_oficiales/L14/CONG/BOCG/A/BOCG-14-A-65-1.PDF.

34 The EU Emission Trading Scheme Directive (Directive 2003/87/EC) was approved on 13 October 2003 and established the EU system for greenhouse gas emission allowance trading, which entered into force in 2005.

35 Article 8 of Law 15/2012 of 27 December 2012 imposed the 7 per cent generation levy starting on 1 January 2013. In June 2021, RDL 12/2021 of 24 June 2021 suspended the 7 per cent generation levy during the third quarter of 2021.

36 See RDL 17/2021 of 14 September 2021; RDL 29/2021 of 21 December 2021; and RDL 6/2022 of 29 March 2022.

21 per cent to 10 per cent³⁷ and the reduction of the excise tax rate charged on electricity bills for electricity use from 5.1 per cent to 0.5 per cent.³⁸ As at May 2022, the exceptional and transitory tax measures have been extended until 30 June 2022.³⁹ The legislative tax measures described in this section could be extended beyond June 2022 if energy prices remain high.

ii The regulatory and consenting framework

The Secretary of State for Energy within the Ministry for Ecological Transition is the ministerial department responsible for the regulation and implementation of the economic regime governing renewable energy. Autonomous regions have the competence to regulate the deployment of renewable projects and may introduce additional requirements in their territory.

The independent regulator, the National Commission for Markets and Competition, has authority to, among other things:

- a supervise the management, allocation and charges for connection capacity;
- b monitor the origin of electricity from renewable energy sources and high-efficiency cogeneration;
- c issue reports in relation to authorisations, amendments or closures of facilities and in application for approval or authorisation of economic or remuneration regimes; and
- d implement and enforce rules contained in certain secondary regulation published by the Ministry for Ecological Transition.

IV RENEWABLE ENERGY PROJECT DEVELOPMENT

i Merchant projects and PPAs

The costs for new renewable energy facilities have fallen to the point that plants located in optimal climate conditions can now compete with conventional sources of electricity generation without much financial support, if any. In this context, the use of sophisticated PPAs forms a core part of the Spanish market, especially as investment funds, private corporations and utilities are gaining relevance.

While Spain is still the market leader in Europe for such PPAs, the energy price crisis and the current regulatory uncertainty and intervention have caused a reduction in new signings. Long-term fixed-price PPAs with pay-as-produced structures are still common in the Spanish PV and wind markets.⁴⁰ However, the turmoil and unprecedented energy price volatility have led to an increasing demand for shorter-term and baseload-type PPAs.⁴¹

Nevertheless, PPAs are viewed as the future of renewable development in Spain. As renewables are often characterised by large upfront capital costs and low operating costs, project developers look for stable cash flows over the life of the project, which can also help to raise debt financing. Corporate PPAs and bilateral contracts between large consumers and developers are expected to continue to be important drivers of renewable investment, mainly

³⁷ RDL 12/2021 of 24 June 2021, Article 1.

³⁸ RDL 17/2021 of 14 September 2021, Fourth Additional Disposition.

³⁹ See RDL 29/2021 of 21 December 2021; and RDL 6/2022 of 29 March 2022.

⁴⁰ Most PPAs apply to PV and wind facilities with a term ranging from eight to 12 years.

⁴¹ Several price arrangements coexist in the Spanish PPA market. The three most typical options are fixed prices, step prices adjusted over the term and price indexation, including caps, floors and collar arrangements. Hybrid forms of these three options can also be found.

in PV and wind. Regulatory uncertainty related to a potential extension of the gas clawback mechanism beyond June 2022 and the implementation of the CO₂ clawback mechanism in the coming months could slow new contract signings or delay the financial closure of merchant projects.

ii Stable and predictable revenue streams, and investment-grade buyers

Non-recourse project financing has continued to be the most common way of financing renewable projects in recent years. Projects assigned by the 2021 auctions under a stable and predictable FiT regime are expected to attract significant interest from financial institutions, with advantageous financing conditions and high leverage ratios between 80 and 90 per cent. The next projects in terms of attractiveness and financing conditions are those with long-term fixed PPAs and investment-grade buyers. Currently, the conditions are attractive and allow leverage between 70 and 80 per cent. In contrast, the financing market has shown less of an appetite for merchant projects with no PPAs and it is unusual to see leverage ratios above 60 per cent.

V DISTRIBUTED AND RESIDENTIAL RENEWABLE ENERGY

In 2018, Spain was behind other European countries in installed capacity of distributed renewable energy. For instance, rooftop PV capacity for residential use was around one fifth the per capita capacity in Germany or the Netherlands.

Legislation has been amended since 2018 to favour the deployment of distributed generation and, in particular, renewable energy by applying a more general definition of self-consumption,⁴² introducing economic incentives, removing toll payments to self-consumption facilities and reducing the administrative burden to customers interested in installing self-consumption capacity. In particular, 2018 and 2019 legislation:

- a* updated the framework for the connection and energy supply to the electricity grid and the economic compensations attached to different schemes;
- b* authorised self-consumption for a group of customers (beyond single owners);
- c* eased the regulatory process for small-scale producers; and
- d* simplified the registry of self-consumption, which, moving forward, will serve only statistical purposes.⁴³

Within the context of Spain's RTRP,⁴⁴ the Housing Rehabilitation and Urban Regeneration Plan includes lines for the installation of solar panels on roofs, and the deployment of distributed renewable energy and smart and efficient street lighting. Other levers within the RTRP also contemplate lines of action for self-consumption and distributed generation. In this context, the third auction for additional renewable capacity under the 2020 Regulatory Regime to be launched in the second half of 2022 contemplates, for the first time, a specific line for distributed PV for a total of 0.14GW.

As a result of the measures implemented since 2018, installed capacity has grown rapidly. According to the Spanish Association of Renewable Energy Companies, by the end of 2021, solar self-consumption capacity had increased approximately tenfold since 2018,

42 Mainly by RDL 15/2018 of 5 October 2018 and RD 244/2019 of 5 April 2019.

43 RD 15/2018 of 5 October 2018; and RD 244/2019 of 5 April 2019.

44 See https://ec.europa.eu/info/files/spains-recovery-and-resilience-plan_en.

with an accumulated capacity of approximately 2.5GW. The expectation is that distributed PV will keep growing in the coming years, with the aim of reaching at least 9GW by 2030, approximately 15 per cent of Spain's renewable capacity growth.

VI CONCLUSIONS AND OUTLOOK

After the recent legislative and regulatory reforms introduced in Spain – especially the return to a stable, predictable fixed FiT per MWh over a long period, and the approval of new targets and commitments for 2030 – the Spanish renewable market is gaining momentum and is expected to provide attractive opportunities in the next decade. The most recent auctions and the growing investment in distributed renewable electricity, mainly PV, will lead new renewable installed capacity in 2022 and 2023. Publication of a calendar with the planned capacity auctions for the years ahead will facilitate the planning of new investments in future years.

The approval of the new CCET Act and the RTRP provide a more stable regulatory and financial environment for the next decade, facilitating new investment and corporate transactions. However, regulatory uncertainty concerning clawback mechanisms to reduce alleged excess remuneration in the context of the energy price crisis may deter or slow investment.

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