



Power Purchase Agreements country sheets

Monitoring Report 2025

5 November 2025

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ACER PPAs country sheets

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Country sheet guidance

Legal background - Pursuant to Article 19b(1) of Regulation (EU) 2019/943, introduced by Regulation (EU) 2024/1747, European Union Agency for the Cooperation of Energy Regulators (hereinafter 'ACER') is mandated to conduct an annual assessment of the Power Purchase Agreement market both at Union and Member State level. To fulfil this obligation, ACER has developed dedicated country sheets for each Member State and Norway and one summary sheet for the European Union.

Purpose - The Power Purchase Agreement (hereinafter 'PPA') market has been significantly increasing in size over the last years, with disclosed contracted capacity almost tripling and the number of (corporate) PPAs rising from around 70 to almost 300 between 2020 and 2024¹, thereby driving investments in new renewable capacity across the European Union.

PPAs can enhance the strategic priorities of the electricity market, by providing long-term price stability and investment predictability. The former shields producers and off-takers from market volatility, while the latter supports new investments in renewable energy sources driven by market participants, thus reducing the reliance on public subsidy schemes.

The aim of ACER is twofold. On the one hand, to ensure that the PPA market integrates efficiently with existing spot and long-term markets without destabilising them (e.g. reducing liquidity, increasing the likelihood of negative prices). On the other hand, to monitor the status quo of the PPA market. This encompasses constructively assessing its main challenges and opportunities and highlighting the main financing and regulatory tools currently available that could facilitate its further development (e.g. state-backed guarantees, platform for power purchase agreements, demand pooling facilities).

The goal of the country sheets is to increase the transparency of the PPA market both at EU and Member State level.

Content of the country sheets – The country sheets include the following three sections: (1) market landscape, (2) financing and regulatory framework, and (3) challenges, opportunities and useful links.

Additional details on the sources and the methodological details are provided in the Annex.

Limitations - ACER aimed at collecting comprehensive information for each country. However, the quality of the information at the disposal of ACER varies substantially among Member States. ACER developed the country sheets according to the information at its disposal on the market maturity, and regulatory/financing tools available in each Member State and Norway. Based on these criteria, ACER grouped Member States and Norway into two categories:

- (1) **Satisfactory information available**. Twenty-one Member States² and Norway fall in this category.
- (2) Limited or no information available. Due to limited market maturity, deficient data, or market design constraints, no country sheets were developed for five Member States³. Despite national regulatory authorities' relevant insights and isolated PPA activity being recorded in these Member States before and after 2024, no transactions were identified in the given Member States during the reference period. Although Estonia and Lithuania fall under this category, a country sheet was nevertheless developed.

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¹ Source: S&P Global.

² Austria, Belgium, Bulgaria, Czechia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxemburg, Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden.

³ Cyprus, Croatia, Latvia, Malta and Slovenia.

ACER PPAs country sheets

Please note that the information displayed in the country sheets is non-exhaustive. As this is the first edition of the report, ACER is committed to strengthening market monitoring through continuous improvement of the data collection process. However, available information remains sparse, reflecting the relatively limited transparency of the PPA market. Stakeholder input is essential to ensure the relevance and accuracy of future editions, and feedback is warmly encouraged. Comments and suggestions can be sent to PPA.assessment@acer.europa.eu.

Data disclaimer - The data featured in the Market Landscape section of the ACER PPA Country Sheets 2025, presented in this report, are for informational purposes only; ACER does not guarantee the adequacy and accuracy of these data, and it does not give any warranty, expressly or implied, on their accuracy and completeness, or their suitability for a particular purpose. ACER shall not be liable, under any circumstances, for any analysis, assessment or any derivative work resulting from the use of this data.

Furthermore, it is important to note that the underlying data used by ACER for the creation of the data presented in the Market Landscape section were sourced from S&P Global Commodity Insights on 5 August 2025, and they may have been updated afterwards; also, the underlying data relates only to publicly available PPAs. Therefore, the data presented in the Market Landscape section do not encompass any private or undisclosed PPAs.

ACER expressly prohibits the use of the data featured in the Market Landscape section of the ACER PPA Country Sheets 2025 for or in connection with the creation, structuring, development, management, issuance, underwriting, sponsorship, settlement, clearing, trading, marketing, selling and/or promotion of any financial instruments or investment products whatsoever (including, without limitation, swaps, options, forward contracts, notes, warrants, exchange-traded options or futures contracts) and for any commercial purposes.



EU-27 and Norway



MARKET LANDSCAPE

Signed PPAs in the EU and Norway in 2024 ~300 PPAs by type (%) Virtual PPA On-site PPA Contracted volumes by technology (%) 6-10 years Sectors with the highest Offtaker sectors consumption

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

- Record negative prices in 2024 call for careful risk allocation, causing potential delays in PPA negotiations.
- · Difficulty accessing credit guarantees, unstable regulatory environments, and lengthy administrative procedures
- · Existing support schemes reduce producers' interest for PPAs.



Opportunities

- · Green targets to drive demand and
- Fast-paced industry able to design innovative PPAs (such as hybrid and multi-buyer PPAs, clauses on negative prices) address emerging challenges.

FINANCING & REGULATORY LANDSCAPE



- State-backed guarantees are reported to be available or under development in France, Italy, Norway, Poland, Portugal, and Spain.
- In 2025, the EU Commission together with the European Investment Bank (EIB) launched the Lending Envelope Programme, a pan-European pilot designed to support long-term clean energy purchases. Through partner banks, the EIB provides counter-guarantees for a portion of Corporate PPAs signed by mid-sized and large electro-intensive consumers.

PPA platforms



PPA platforms are reported to be available or under development in several European countries, including Germany, Greece, Italy, Norway, Portugal, Spain, and Sweden.

Demand pooling facilities



Demand pooling facilities are in place or under development in Belgium, Denmark, France, and Italy mainly driven by private sector initiatives.

Contracts for difference

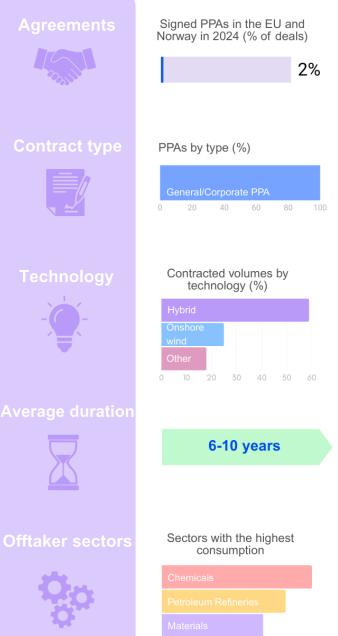


Support schemes, designed as CfDs, are reported to provide liquidity towards PPAs in Belgium, France, Ireland, Italy and Lithuania.

- "RE-Source's corporate PPA" guide", RE-Source, 2025
- "Pan-EU Power Purchase Agreement Guarantee LE", EIB, 2025
- "Power Purchase Agreements: Overview and Evaluation", CREG, 2024







FINANCING & REGULATORY LANDSCAPE



A state-backed guarantee scheme has not been reported as being under development or implemented.



A PPA platform has not been indicated as under development or implemented.



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

- · Existing feed-in-tariff might discourage RES producers from signing a PPA.
- · Limited industry demand for PPAs.



Opportunities

· The importance of green hydrogen in Austria's National Energy Climate Plan (NECP) creates new demand for renewable PPAs.

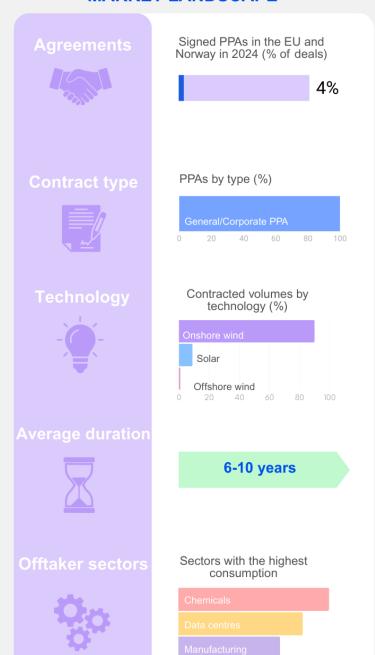


Useful resources

• "Key developments in European electricity and gas markets -2025 Monitoring Report", ACER, 2025







FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling mechanisms exist but do not seem to be the prevailing practise in the Belgian market.

Contracts for difference

- The support scheme designed for the Princess Elisabeth offshore zone, is a two-way contract for difference (CfD).
- Subject to the tender's conditions, this support scheme allows for the so called "carve-out", i.e. the possibility to sell up to 75% of the installed capacity through fixed price PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

 Increasing occurrences of negative prices pose new challenges for risk allocation and bankability, potentially leading to delays during the negotiation process.



Opportunities

 The ability to combine renewable energy support mechanisms with PPAs provides enhanced investment certainty and flexibility for both producers and off-takers.



- "Power Purchase Agreements: Overview and Evaluation", CREG, 2024
- "Summary of tender principles for the Princess Elisabeth Zone",
 FOD Economie, 2024







FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

 Bureaucratic, lengthy administrative and permitting processes.



Opportunities

- Evolving virtual PPA market, expanding the pool of buyers and the range of project options for off-takers.
- Installed solar capacity tripled since 2020 and with PV module prices declining, Bulgaria's solar PPA market is emerging.



- <u>"Eastern Europe's solar surge:</u>
 <u>spotlight on Bulgaria,</u>

 <u>Romania, and Czechia",</u>
 <u>SolarPower Europe, 2024</u>
- "OECD Investment Policy Reviews: Bulgaria", OECD, 2022





Agreements

Signed PPAs in the EU and Norway in 2024 (% of deals)

1

Contract type



Technology



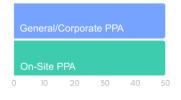
Vyorogo durotion



Offtaker sectors



PPAs by type (%)



Contracted volumes by technology (%)



6-10 years

Sectors with the highest consumption

Manufacturing

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

3

Challenges

 Increasing occurrences of negative prices pose new challenges for risk allocation and bankability, potentially leading to delays during the negotiation process.



Opportunities

 30% renewables target by 2030, up from 17.7% in 2021, requires major capacity growth and signals strong PPA growth potential, driven by higher industrial demand.



Useful resources

 National plan of the Czech Republic in the area of energy and climate, 2024





Signed PPAs in the EU and Norway in 2024 (% of deals) 3% PPAs by type (%) Contracted volumes by technology (%) 0 10 20 30 40 50 60 70 **6-10** years Sectors with the highest Offtaker sectors consumption

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities

Private initiatives are available and operational.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, @2025 by S&P Global Inc.



Challenges

 Signed (10-year solar pay-asproduced) PPAs show a wide price gap, signalling diverging opinions on the exact value of future electricity, potentially slowing down the negotiation process.



Opportunities

 Growing momentum for multibuyer and hybrid PPAs.



Useful resources

Pexapark's latest Reported
 Price Range for Denmark
 shows widening gap between
 bid prices, Pexapark, 2025





Signed PPAs in the EU and Norway in 2024 (% of deals)

0%

FINANCING & REGULATORY LANDSCAPE



A state-backed guarantee scheme has not been reported as being under development or implemented.



No Power Purchase Agreement was concluded in 2024.



A PPA platform has not been indicated as under development or implemented.



No Power Purchase Agreement was concluded in 2024.



Demand pooling facilities have not been reported as in development or operation.



Offtaker sectors



No Power Purchase Agreement

was concluded in 2024.

No Power Purchase Agreement was concluded in 2024.



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

Challenges

- · A small market with limited PPA opportunities may cause a mismatch between demand and supply.
- Regulatory uncertainty discourages the signature of longterm agreements.



Opportunities

 REKK 2030 (Estonia's NECP) includes measures to boost the PPA market, such as allowing the network operator to cover up to 50% of network losses through renewable PPAs.



- · Draft update of Estonia's National Energy and Climate Plan for 2030
- · Pikaajaliste elektri ostumüügilepingute analüüs ja ettepanekud, Konkurentsiamet, 2025





Agreements

Signed PPAs in the EU and Norway in 2024 (% of deals)

2%

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

Contract type



PPAs by type (%)



PPA platform

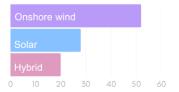


A PPA platform has not been indicated as under development or implemented.

Technology



Contracted volumes by technology (%)



6-10 years

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

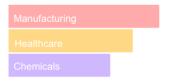
Average duration



Offtaker sectors



Sectors with the highest consumption



Source of the underlying data: S&P Global Commodity Insights, @2025 by S&P Global Inc.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

1

Challenges

 Increasing occurrences of negative prices pose new challenges for risk allocation and bankability, potentially leading to delays during the negotiation process.



Opportunities

 Hybrid PPAs can boost onshore wind capture rate.



Useful resources

"PPAs to support renewables
 Key Trends and Themes in
 the Nordic markets",
 Pexapark, 2023





Signed PPAs in the EU and Norway in 2024 (% of deals) 13% PPAs by type (%) Self-generation PPA On-site PPA 40 Contracted volumes by technology (%) 10 20 30 40 50 60 70 16-20 years Sectors with the highest Offtaker sectors consumption

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee

Public investment bank Bpifrance launched a guarantee scheme to support renewable Corporate PPAs signed in metropolitan France.

- Pricing is tailored to each project and is paid by the customer.
- This initiative covers up to 80% of the producer's remuneration in the event of default by the industrial off-taker.
- This guarantee targets off-takers operating in the field of: mining, quarrying and manufacturing.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



The Public Procurement Code includes provisions for demand pooling, allowing aggregated customers to collectively sign long-term PPA contracts.

Contracts for difference

The APER Law established "mixed tenders," allowing producers to develop new renewable capacity with dual revenue streams, i.e. public CfD and private PPA.



Challenges

 Protective subsidy schemes and low capture market prices may discourage producers from pursuing PPAs.



Opportunities

 APER Law, allowing for "mixed tenders", could provide the developers of new RES facilities the opportunity to opt for dual revenue streams, thus diversifying the investment risks.



- "Commercial Power Purchase Agreements", Baringa, 2022
- Report on French PPA Market by CRE, 2025





Signed PPAs in the EU and Norway in 2024 (% of deals) 17% PPAs by type (%) On-site PPA Virtual PPA 40 Contracted volumes by technology (%) 6-10 years Sectors with the highest Offtaker sectors consumption

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE



A state-backed guarantee scheme has not been reported as being under development or implemented.

Private initiatives are operational and available.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.



Challenges

· Low capture market prices may discourage producers from pursuing PPAs.



Opportunities

- · Fast implementation of EU permitting rules.
- · Growing momentum for hybrid PPAs contributes to tackle market volatility in events such as Dunkelflaute.



- "The Cannibalisation Effect: Behind the Renewables' Silent Risk", Pexapark
- "Ausbau- und Genehmigungsentwicklung der Windenergie an Land im 1. Quartal 2025", Fachagentur Wind und Solar, 2025







FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



- HEnEx provides a standard PPA contract template in line with the platform's rulebook
- Market participants can submit non-binding and anonymous bids, and in case of mutual interest the contracting parties will continue the negotiation and contract signing outside the platform.
- Successfully signed PPAs can be recorded on the platform for administrative purposes.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

- Complex and lengthy permitting procedures for new RES projects might deter stakeholders from PPA contracting.
- The lack of consumer aggregation mechanisms may limit off-taker demand.



Opportunities

 PPA platform is expected to contribute to market transparency, facilitating the signature of new PPAs.



- Webinar "The new PPA platform of the HEnEx, Hellenic Energy Regulation Institute, 2025
- "RES CPPAs platform", a GrantThornton analysis commissioned by HEnEX. 2022







Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.



Challenges

- Favourable subsidy scheme "KÁT" drove investments in renewables but slowed the take-off of the PPA market.
- Meeting the off-takers' sustainability goals by purchasing Guarantees of Origin (GOs) may constrain the offtakers' interest for Corporate PPAs.



Opportunities

- Improved design of subsidy scheme "METÁR" contributes to additional supply of PPAs.
- Improved regulatory framework supports hybrid PPAs with colocated BESS.



- "Charging ahead: Hungary's newly introduced rules fuel colocated BESS expansion", Wolftheiss, 2025
- "Information on the renewable energt support system (METÁR)", MEKH, 2022







Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE



A state-backed guarantee scheme has not been reported as being under development or implemented.



A PPA platform has not been indicated as under development or implemented.



Demand pooling facilities have not been reported as in development or operation.



- · RESS support scheme is a two-way CfD with the unique feature that the received of the subsidy is the supplier (i.e. off-taker/buyer) and not the producer.
- To be eligible for RESS, supplier must have contracted a PPA.
- The price specified in the PPA is freely negotiated by both parties.



Challenges

 Locational mismatch of supply and demand might further exacerbate grid congestion, leading to curtailment of renewable generation.



Opportunities

- · Growing electricity demand for data centres will drive off-takers' interest to sign renewable PPAs.
- · Celtic interconnector go-live will unlock cross-border PPAs between SEM (i.e. Single Electricity Market of Ireland and Northern Ireland) and France.



Useful resources

 "Renewable Electricity Corporate Power Purchase Agreements Roadmap", DECC - Government of Ireland, 2022





Signed PPAs in the EU and Norway in 2024 (% of deals) 12% PPAs by type (%) On-site PPA Virtual PPA 40 Contracted volumes by technology (%) Onshore wind 6-10 years Sectors with the highest Offtaker sectors consumption

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



State-owned GSE is currently developing statebacked guarantees.

PPA platform



- GME is currently developing a PPA platform.
- GME will act as central counterparty
- Only standardised PPAs are tradable in the platform:
 - Contract type: physical
 - Volume structure: baseload and peakload
 - Contract duration: 5 years ≤ tenor ≤ 10 years)
- Auction-based mechanism with marginal pricing.
- Accepted transactions are transferred to MTE on a yearly rolling basis.
- · A PPA Bulletin Board is already operational.

Demand pooling facilities



Demand pooling is enabled through the PPA platform.

Contracts for difference

Legislative Decree 199/2021 introduced CfD-based incentives aligned with EU market reforms intended to allow for complementarity with PPAs.





Challenges

- Italy has multiple bidding zones, adding complexity to hedging.
- Existing support schemes may discourage producers from pursuing PPAs.



Opportunities

 Upcoming regulatory tools will support the development of the market.



- <u>Italian PPA platform,</u>
 <u>"Consultation Document no.</u>
 <u>1/2025", GME, 2025</u>
- CONSULTAZIONE "Proposta di regole operative per la partecipazione al mercato PPA e per la disciplina delle garanzie di ultima istanza", GSE, 2025





Agreements



Contract type



No Power Purchase Agreement was concluded in 2024.

Signed PPAs in the EU and Norway in 2024 (% of deals)

0%

Technology



No Power Purchase Agreement was concluded in 2024.

No Power Purchase Agreement

was concluded in 2024.

Average duration



Offtaker sectors



No Power Purchase Agreement was concluded in 2024.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference

- The tender conditions allow specifying the annual amount of electricity produced that is supported through the CfD scheme.
- The generated electricity can be sold either on the exchange or through PPAs, as the tender conditions do not impose any restrictions on the method of sale.



Challenges

- Increasing frequency of negative electricity prices.
- Limited number of large energy consumers (in short term).



Opportunities

- Supportive regulation for offshore wind development (CfD related instruments);
- National Energy Independence Strategy foresees development of hydrogen production, expansion of the electric vehicle sector and widespread use of heat pumps.



Useful resources

• Final updated NECP 2021-2030 of Lithuania, 2024







FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

- Market participants outside Luxembourg need to familiarise with national legal and regulatory framework as well as scheduling rules.
- Current feed-in premium subsidy scheme does not allow the producers to sell GOs, reducing offtakers' appetite for PPAs.



Opportunities

 37% renewables target by 2030 requires major capacity growth and signals strong PPA growth potential, driven by higher industrial demand.



Useful resources

 "Key developments in European electricity and gas markets -2025 Monitoring Report", ACER, 2025



Signed PPAs in the EU and Norway in 2024 (% of deals) 5% PPAs by type (%) On-site PPA Contracted volumes by technology (%) 6-10 years Sectors with the highest Offtaker sectors consumption

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, @2025 by S&P Global Inc.



Challenges

- Competition with auctions under the SDE++ scheme could reduce the incentive for developers to pursue PPAs.
- Low capture market prices may discourage producers from pursuing PPAs.



Opportunities

 The Netherlands has one of the largest gaps in the EU between current renewable capacity and 2030 targets, particularly with a strategic focus on offshore wind, creating significant potential to drive PPA demand.



Useful resources

 "Commercial Power Purchase Agreements", Baringa, 2022





Signed PPAs in the EU and Norway in 2024 (% of deals) 3% PPAs by type (%) 40 80 Contracted volumes by technology (%) **6-10** years Sectors with the highest Offtaker sectors consumption

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee

- State-owned Eksfin offers state-backed guarantees.
- Eligible power purchasers operating in specific industries (e.g. metals, timber, wood processing, and chemical products).
- The scheme provides two products: a producer guarantee against offtaker default, and a guarantee to lenders who finance PPA prepayments.
- Coverage is up to 80% of supplier losses

PPA platform

Private initiatives are operational and available.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs (e.g. carve-out mechanism, PPA as a requirement, etc.)

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

 Since the electricity mix already largely comprises renewable and low-carbon sources, hedging opportunities are expected to be more influential drivers for engaging in PPAs than sustainability incentives.



Opportunities

- EPADs (i.e. Electricity Price Area Differentials) contribute to mitigating inter zonal risks.
- Data centre growth is likely to drive demand for long-term PPAs.



- Eksfin's power purchase guarantee scheme, Eksfin, 2021
- "Breaking Down the Data Center Surge in the Nordics: Key Players", Trends and PPAs, Pexapark, 2025







FINANCING & REGULATORY LANDSCAPE

State-backed guarantee

State-owned KUKE S.A. launched in September 2024 a new program related to financing the green transition in Poland.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

- Complex and lengthy permitting processes slow down the development of onshore wind projects.
- Only in-country PPAs possible as Poland does not belong to the Association of Issuing Bodies (AIB).



Opportunities

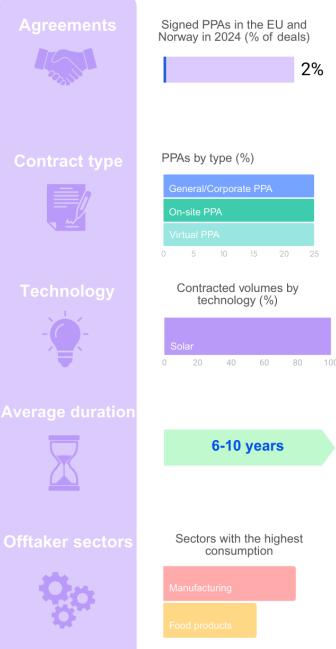
 Evolving virtual PPA market, expanding the pool of buyers for renewable developers and increasing the range of project options for off-takers.



- "Commercial Power Purchase Agreements", Baringa, 2022
- "Virtual PPAs: State of Play in 2025", Pexapark, 2025
- "Green Transformation of the Polish Economy with KUKE Support", KUKE, 2024







Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE

- Banco Português de Fomento issues statebacked guarantee schemes to electro-intensive industrial consumers.
- The guarantees cover up to 80% of the payment obligations in case of purchaser default.
- To qualify, PPAs must have a minimum duration of 5 years and represent at least 10% of the consumer's annual electricity consumption.

A PPA platform has been indicated as under development.



Demand pooling facilities have not been reported as in development or operation.



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Challenges

· Low capture market prices for solar may discourage producers from pursuing PPAs.



Opportunities

· Significant expansions are planned in solar PV, onshore wind, and offshore wind creating strong demand for PPAs to secure long-term revenue for developers.



- · "Power Purchase Agreements", MIBEL, 2024
- "The Cannibalisation Effect: Behind the Renewables' Silent Risk", Pexapark





Signed PPAs in the EU and Norway in 2024 (% of deals)

4%







Offtaker sectors



PPAs by type (%)

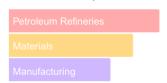


Contracted volumes by technology (%)



6-10 years

Sectors with the highest consumption



Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE



A state-backed guarantee scheme has not been reported as being under development or implemented.



A PPA platform has not been indicated as under development or implemented.



Demand pooling facilities have not been reported as in development or operation.



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Challenges

- Romania is not part of AIB (Association of Issuing Bodies), restricting the trade of GOs at cross-border level and therefore limiting off-takers' interest to sign
- · Regulatory constraints delayed the development of the PPA market.



Opportunities

 The strike price of the CfD subsidy scheme was decreased, allowing for a more level playing field with PPAs.



Useful resources

• "Corporate PPAs - An international perspective", Bird&Bird, 2024





Signed PPAs in the EU and Norway in 2024 (% of deals) 1% PPAs by type (%) Contracted volumes by technology (%) **6-10** years Sectors with the highest Offtaker sectors consumption

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform



A PPA platform has not been indicated as under development or implemented.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

 Low market maturity, due to regulatory landscape and limited renewable installed capacity.



Opportunities

- The 2030 NECP highlights the need for significant additional RES capacity, creating opportunities for growth in the PPA market.
- Indirect support measures (e.g. tax relief, free connection to the distribution network, etc.)



- "Slovak Market Outlook for Renewables 2025", SAPI, 2025
- <u>"Corporate PPAs An international perspective"</u>, <u>Bird&Bird</u>, <u>2024</u>
- Act No. 309/2009 Coll., 2009
- Decree of the Regulatory Office No. 154/2024 Coll., 2024



Signed PPAs in the EU and Norway in 2024 (% of deals) 17% PPAs by type (%) 10 Contracted volumes by technology (%) Onshore wind 20 30 40 50 6-10 years Sectors with the highest Offtaker sectors consumption

Source of the underlying data: S&P Global Commodity Insights, @2025 by S&P Global Inc.

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee

- FERGEI Reserve Fund provides state-backed guarantees to electro-intensive consumers.
- Eligibility criteria for off-takers are established by RDL 24/2020 and RD 1106/2020
- The PPA must have a tenor of at least five years and be linked to a renewable asset that does not receive subsidies.

PPA platform

Private initiatives are operational and available.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.



Challenges

- Different hedging needs of producers and off-takers create mismatch between demand and supply.
- Lack of information and expertise as an entry barrier for SMEs.
- Low capture market prices may discourage producers from pursuing PPAs.



Opportunities

 The largest and most welldeveloped PPA market in the EU, featuring innovative PPA designs (e.g. multi-technology, multi-buyer) capable of addressing emerging market challenges (e.g. negative prices).



- "Power Purchase Agreements", MIBEL, 2024
- "The Cannibalisation Effect: Behind the Renewables' Silent Risk", Pexapark
- <u>"Renewables Market Outlook</u> 2025", <u>Pexapark</u>, 2025





Signed PPAs in the EU and Norway in 2024 (% of deals) PPAs by type (%) 60 80 Contracted volumes by technology (%) **6-10 years** Sectors with the highest Offtaker sectors consumption

FINANCING & REGULATORY LANDSCAPE

State-backed guarantee



A state-backed guarantee scheme has not been reported as being under development or implemented.

PPA platform

Private initiatives are operational and available.

Demand pooling facilities



Demand pooling facilities have not been reported as in development or operation.

Contracts for difference



Support schemes, in the form of CfDs, have not been reported to provide liquidity towards PPAs.

Source of the underlying data: S&P Global Commodity Insights, ©2025 by S&P Global Inc.



Challenges

 Increasing occurrences of negative prices pose new challenges for risk allocation and bankability, potentially leading to delays during the negotiation process.



Opportunities

Growing data centre demand for electricity.



- "Breaking Down the Data Center Surge in the Nordics: Key Players, Trends and PPAs", Pexapark, 2025
- <u>"Bilater hedging of electricity in Sweden"</u>, a Hagman Energy,
 <u>Bodecker Partners and DNV</u>
 <u>analysis commissioned by Ei. 2024</u>

PPA Country Sheets 2025

THE STATUS OF THE PPA FINANCING & REGULATORY LANDSCAPE IN EU-27 AND NORWAY



	State-backed guarantee	PPA platform	Demand pooling facilities	Contracts for difference
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1. METHODOLOGY

This section describes the information included in each country sheet, structured in three blocks, namely:

- 1.1 Market landscape
- 1.2 Financing and regulatory landscape
- 1.3 Challenges, opportunities and useful resources

1.1. Market landscape

This section provides information on the Corporate PPAs⁴ (hereinafter 'CPPA') signed in 2024, delving into the specificities of type, technology, average duration range, off-taker sector. Additional details are provided below.

The underlying data used for the creation of the information displayed in the Market Landscape section were sourced from S&P Global Commodity Insights, @2025 by S&P Global Inc, and were used exclusively for the Market Landscape section of the PPA Country Sheets. S&P Global Commodity Insights provides regular updates to the data available in the online platform; therefore, it is important to specify that data displayed in the ACER PPA Country Sheets were downloaded on 05 August 2025.

Agreements (%) - Number of deals signed during 2024, displayed as share of the total number of PPAs signed in the European Union. The computation considers the number of deals. Percentage values were rounded up.

Contract type (%) - Shares of signed CPPAs during 2024 by type. Each country sheet ranks (up to) the top three contract types per country. The computation considers the number of contracts. Please find below additional information on contract types:

- General/Corporate PPA "A contract in which a corporation or offtaker takes physical delivery
 of, and pays for, each megawatt-hour of electricity generated from an asset located offsite.
 Typically, the offtaker also receives the Guarantee of Origin associated with the electricity
 generated. The corporation typically engages with an energy management service provider or
 supplier to assist with delivery, balancing, and system operation requirements."
 - Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc.
- Self-generation PPA "The corporation partially or fully owns the generation assets and is
 responsible for their operation and maintenance. The asset may be developed by a renewable
 generator through a build, own, operate, and transfer mode or through an energy service
 agreement between the generator and the corporation. The customer generates electricity for
 their own use, and any excess energy can be sold back to the grid or used in other ways."
 - Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc.
- Virtual PPA "This is a financial contract between a corporation and a renewable energy project developer, where the corporation agrees to pay a price for the electricity generated by

⁴ A Power Purchase Agreement is a long-term contract between a power producer and a customer (consumer or trader) defining electricity supply terms such as quantity, prices, and penalties. It can vary widely in form, providing physical or virtual electricity, and helps large consumers manage market price risks and reduce investment costs in renewable energy. If the consumer is a corporate off-taker, then it is defined as Corporate PPA (i.e. CPPA), while if the consumer is a utility company or an energy trader, then this pertains as a Utility PPA (i.e. UPPA).

the project without the physical delivery of power. The corporation enters into a Contract for Difference (CFD), hedge, or option with the generator based on the revenue of a specific project's output and Guarantee of Origin certificate."

Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

• On-site PPA - "A developer installs, owns, and operates a renewable energy system (such as solar panels) directly on the customer's property. The customer agrees to purchase the electricity generated by these systems at a predetermined rate for a specified period. This arrangement allows the customer to utilize renewable energy without the upfront capital costs, while the developer retains ownership of the equipment."

Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

Technology (%) - Shares of signed PPAs during 2024 per technology. Each country sheet ranks (up to) the top three technologies with highest shares. The computation considers the volumes. The signed PPAs report the following technologies: solar, onshore wind, off-shore wind, hybrid and other. Please note the following:

Hybrid - "A hybrid Power Purchase Agreement (PPA) is a contractual arrangement where a
buyer agrees to purchase electricity from a seller that generates power using multiple
technologies. This type of deal combines different energy sources, such as solar, wind, hydro
and battery storage, allowing for a diversified energy supply and enhanced reliability.

Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

• Other - "Other refers to a Power Purchase Agreement that includes non-wind and non-solar energy sources, specifically hydro, biogas, geothermal, and nuclear"

Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

Average duration - The average contract duration range is calculated based on the number of signed PPAs during 2024.

Off-taker sector - Largest off-taker sectors for PPAs signed in 2024. Each country sheet ranks (up to) the top three off-taker sectors. The computation considers the contracted capacity.

1.2. Financing and regulatory landscape

This section describes four financing and regulatory tools available in each Member State and Norway, providing a visual representation of the implementation status of each tool, which is structured as follows:

- 1. Red circle
 - The tool is not available
 - The tool is not applicable
- 2. Orange circle
 - o The tool is currently under development
- 3. Green circle
 - The tool is available and operational

Moreover, in cases 2 (i.e. "Tool is currently under development") and 3 (i.e. "Tool is available and operational"), additional details are provided.

State-backed guarantee - This regulatory tool, provided by state-owned companies (e.g., Eksfin in Norway, Bpifrance in France), is used to reduce the credit risk associated with off-taker default. Mitigating this risk provides greater certainty for producers' revenue streams, an essential factor in facilitating the financing of new assets. Therefore, state-backed guarantees can further foster the development of the PPA market.

Power purchase agreement platform - This (private or public) initiative increases transparency in the PPA market. The specifics of these platforms can vary significantly - some offer standardised PPAs, while others simply serve as marketplaces to advertise the willingness to enter PPAs. Moreover, these initiatives can be complemented by other regulatory tools, such as demand pooling and state-backed guarantees.

Demand pooling facilities - This tool is used to pool together multiple off-takers, mostly SMEs (Small and Medium-sized Enterprises), interested in collectively entering a PPA. Demand pooling facilities can be a useful tool for increasing off-taker demand and unlocking additional multi-buyer PPAs.

Contracts for difference - Contracts for Difference (CfDs) can be used as support schemes to drive investment in new renewable energy assets. Some of these schemes are designed to provide liquidity towards PPAs - for example, requiring a PPA to be eligible for the CfD, or through carve-out mechanisms. Support schemes should not hamper the development of the PPA market; instead, they should incentivise the private sector to drive the investments necessary for the green energy transition.

1.3. Challenges, opportunities and useful resources

Country sheets also highlight some of the identified challenges and opportunities relevant to each national PPA market. Additionally, they include links to relevant materials for further reading.

2. LIST OF SOURCES

Market landscape

Data Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

Regulatory and financing landscape Challenges & Opportunities

- "Act No. 309/2009 Coll.", Collection of Laws of the Slovak Republic, 2009
- "Analysis and proposals for long-term electricity purchase—sale agreements", Konkurentsiamet, 2025
- <u>"Bilater hedging of electricity in Sweden", a Hagman Energy, Bodecker Partners and DNV</u> analysis commissioned by Ei. 2024
- <u>"Breaking Down the Data Center Surge in the Nordics: Key Players"</u>, Trends and PPAs, Pexapark, 2025
- "Charging ahead: Hungary's newly introduced rules fuel co-located BESS expansion", Wolftheiss, 2025
- "Commercial Power Purchase Agreements", Baringa, 2022
- "Consultation Document no. 1/2025 on the Italian PPA Market", GME, 2025

- <u>"Consultation: Proposed operational rules for participation in the PPA market and for the regulation of the last-resort guarantee"</u>, GME, 2025
- "Corporate PPAs An international perspective", Bird&Bird, 2024
- "Decree of the Regulatory Office No. 154/2024 Coll., Collection of Laws of the Slovak Republic", 2024
- "Draft update of Estonia's National Energy and Climate Plan for 2030", European Commission, 2023
- <u>"Eastern Europe's solar surge: spotlight on Bulgaria, Romania, and Czechia", SolarPower Europe, 2024</u>
- "Eksfin's power purchase guarantee scheme", Eksfin, 2021
- "Green Transformation of the Polish Economy with KUKE Support", KUKE, 2024
- "Information on the renewable energt support system (METÁR)", MEKH, 2022
- "Key developments in European electricity and gas markets 2025 Monitoring Report", ACER, 2025
- "National Energy and Climate Plan of Lithuania: Final Update", European Commission, 2024
- "National plan of the Czech Republic in the area of energy and climate", European Commission, 2024
- "OECD Investment Policy Reviews: Bulgaria", OECD, 2022
- "Pan-EU Power Purchase Agreement Guarantee LE", EIB, 2025
- <u>"Pexapark's latest Reported Price Range for Denmark shows widening gap between bid prices"</u>, Pexapark, 2025
- "Power Purchase Agreements", MIBEL, 2024
- "Power Purchase Agreements: Overview and Evaluation", CREG, 2024
- "PPAs to support renewables Key Trends and Themes in the Nordic markets", Pexapark, 2023
- "Renewable Electricity Corporate Power Purchase Agreements Roadmap", DECC Government of Ireland, 2022
- "Renewables Market Outlook 2025", Pexapark, 2025
- <u>"Report on PPAs located in mainland metropolitan France, and recommendations to support their development"</u>, CRE, 2025
- "RES CPPAs platform", a GrantThornton analysis commissioned by HEnEX, 2022
- "RE-Source's corporate PPA guide", RE-Source, 2025
- "Slovak Market Outlook for Renewables 2025", SAPI, 2025
- "Summary of tender principles for the Princess Elisabeth Zone", FOD Economie, 2024
- "The Cannibalisation Effect: Behind the Renewables' Silent Risk", Pexapark
- <u>"The new PPA platform of the HEnEx, webinar by the Hellenic Energy Regulation Institute, 2025</u>
- "Virtual PPAs: State of Play in 2025", Pexapark, 2025