Commercial connection

Piotr Mrowiec, a lawyer and energy policy expert, looks at Poland's "connection on a commercial basis" approach to relieving renewables-driven grid congestion.

Under Polish law, renewables sites should be treated in priority to other energy sources for grid connection, provided the technical and economic conditions for connection exist.

Transmission and distribution grid operators have nevertheless refused connections in recent years, citing the cost of grid infrastructure development. As a result, December 2022 saw Poland's Energy Law amended to introduce "connection on a commercial basis."

The law now enables grid operators to determine a fee for grid connection with generators in instances where economic conditions would otherwise have prevented connection. This is a "commercial connection." In such instances, grid operators must give generators an estimation of the grid connection fee and generators can request to see the methodology.

In August 2024, grid operator PSE S.A. proposed a six-stage process for commercial connections. Stage one involves generators that were refused a connection declaring interest in a commercial connection. A controversial stage two would see PSE select only projects which would not require the grid operator to install a new substation, among other eligibility criteria.

The legislation does not envisage such pre-qualification of projects by grid companies.

Photo: PolandMFA/Flickr

Lawmakers in Poland have made it possible for grid operators to determine fees that generators pay for their grid connections.

Stages three and four concern participation in the cost of network analyses and feasibility studies. The conclusion of electricity distribution network agreements is covered in stage five, and the final stage would concern entry into commercial connection agreements.

The resulting agreements would regulate obligations and specify completion dates and technical requirements for the equipment, installations, or networks to be connected, under PSE's proposal. The grid company said the wording would be similar to conventional grid connection agreements but would include PSE expenditure for transmission grid development according to audits and feasibility studies.

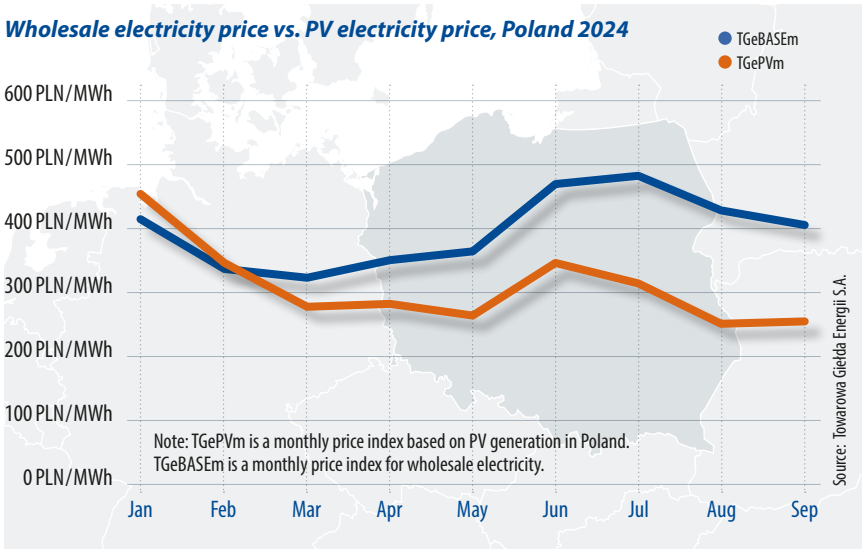
Solar prices

Solar projects that have secured an annual inflation-linked guaranteed power price in auctions since 2016 have enjoyed good returns. This is due to the per megawatt-hour price secured at auction often being higher than the average daily wholesale price of electricity.

Poland's solar boom, however, has raised competition and driven down the prices bid by developers at auction. Solar has so successfully reduced the price of electricity the subsequent price "cannibalization" tightened returns and caused periods of negative energy prices. Curtailment of excess solar electricity has become common. These trends mean that from March to October 2024, the price of solar electricity was significantly lower than the average daily energy price.

Estimates made by London-based data company Independent Commodity Intelligence Services have predicted that the problem of negative electricity prices could be solved by 2030 by deploying more battery energy storage and energy-intensive electrolyzers to help store surplus energy. Even assuming the accuracy of that forecast, however, the problem of a "negative PV price profile" will remain acute at least until 2030.

Poland's Ministry of Climate and Environment aptly diagnosed the problem of procurement auctions for renewable energy setting too-low electricity prices. It has proposed the possibility of settling the agreed price under more favorable



rules. Importantly, under the proposed rules, settling an electricity price differently will be allowed for a period of 12 months, but no later than Dec. 31, 2027. As for the specific shape of the solution, industry will have to wait until the relevant amendment to the regulation is enacted, the timing of which is difficult to predict.

Under the proposed regulation, the average price of wholesale electricity would be calculated solely from transactions during a day's 15-minute windows in periods when there is an imbalance between supply and demand. That would replace the current average daily price calculated from volume-weighted average session transactions of electricity prices in all hours of the day of delivery. The new system would make it possible to obtain auction support in periods when there are extremely low, or negative energy prices.

The proposed new approach would also involve restricting generators to injecting the electricity produced by no more than half of their generation capacity to the grid. The purpose of that would be to stabilize the electricity system during hours with the highest PV production, to prevent curtailment. Under the new system, the alternative method of calculating the daily wholesale energy price, as outlined above, would be optional for generators.

The ministry has also revealed plans for energy auctions to be held from 2027. These will be carried out in line with the European Union's Net Zero Industry Act, to allow only installations equipped with energy storage to participate in such procurements. An auction system is also planned to accommodate existing installations that decide to retrofit energy storage. At the end of October, Poland announced a new series of auctions for Dec, 16, 2024. These will be conducted on the same terms as earlier auctions, with PV in competition with onshore wind. pv

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> *"The amendment would make it possible to receive revenue in the form of positive balance"*

About the author

***Piotr Mrowiec** is an attorney-at-law with more than 16 years of experience in energy law. His professional focus is renewable energy, and he provides legal counsel to solar and wind power clients. Mrowiec, via affiliated companies, is involved in developing large-scale, ground-mounted PV projects in Poland. He has been ranked in Poland's Legal500.com list for Energy and Natural Resources.*