



Assistance to NERC: Regulatory Support Program

E-RES operation in the Competitive Electricity Market

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AF-MERCADOS
ENERGY MARKETS INTERNATIONAL
Finding new paths for energy markets

Objectives

- Preparing the conditions and essential requirements to facilitate the sale of E-RES energy in the Ukrainian wholesale electricity market,
- Developing an adequate system related to the system's balancing costs and ancillary services.



Key Issues on the Sales of RES-E

- The market is under design and we received from NERC two alternatives for analysis:
 - Bilateral Contracts and the Balancing Market (BCBM); and
 - Draft version of the Law for the new wholesale electricity market (WEM), based on a “pool” for the day-ahead market.
- The draft Law is much in line with the recommendations of our reports, so our final suggestions are oriented to this draft rather than the original BCBM design.
- In the transition process, the Single Buyer will remain; therefore this would not affect E-RES sales. However, the Single Buyer will disappear and RES producers will have to sell directly to a supplier or customer, or other entity.



Key Issues on the Sales of RES-E

Shall RES-E have priority dispatch?

- There is no need to introduce dispatch priority for RES-E (as mandatory in EU)
 - Non-intermittent RES: participate a conventional power plant, presenting bids (at their variable cost) and without dispatch priority.
 - Intermittent RES: dispatch priority shall be granted by presenting daily schedules.
 - The settlement will be performed by paying RES the market price for electricity. The difference between market price and the green tariff is paid through a Fund.
- In order to allow the dispatch of intermittent generation, conventional plants should present mandatory flexibility offers (bid a price at which they accept a reduction of its notified generation at least in 15%)
- Implement intra-day markets to facilitate of the adjustment of the day-ahead schedule to improved RES forecasts.



Key Issues on the Sales of RES-E

How RES-E producers should collect their invoices?

- The Draft Law proposes the creation of a “Fund of Imbalance Cost Settlement” to compensate RES-E producers for the difference between the day-ahead price and the green tariff.
- The Fund collects money from Nuclear PP, Large Hydro PP (including PSPP), TSO and Importers.
- The mechanisms for ensuring proper collection are still to be developed.
- Nonetheless, the Fund should be designed with automatic mechanisms for ensuring cash availability on daily operations
- Also, it should include enough guarantees to allow E-RES producers to maintain the collection process in the case of default of some of the companies providing cash to the Fund.



Key Issues on Balancing Costs

Shall they pay balancing costs?

- RES should pay balancing costs as this provides an incentive for good forecasting.
- RES should form balancing groups to reduce the volatility of the forecast and, thus, the balancing costs.
- The MO settles the differences between the accepted total volume bids of the balancing group and actual generation:
 - Both positive and negative deviations should be settled at the relevant balancing price. (Incentives good forecasts).
 - The settlement is on the total deviation of the group. Then, allocated to its members proportionally.
- Simulations performed showed that the average costs of deviations during one year are very low in relation to total revenues (very low impact on the return of RES investors).



Key Issues on Ancillary Services

Shall RES-E provide ancillary services?

- Although presently RES generation units (except PV), have the capability to provide frequency control, it makes no sense to oblige intermittent RES with zero fuel cost to participate in this service. Only in emergencies.
- In the case of reactive generation, the RES plants should contribute to the maintenance of the targeted voltage level in the points where they are connected (either through the generation units or with static compensation provided by each plant).
- The SO should have the ability to curtail wind generation only when technically the system security is threatened.
- The SO should take into consideration the expected forecast errors to define the reserves required to prevent large errors in intermittent RES production.



Thank You

