(7) A market design fit for renewables

WindEurope believes that in a well-functioning power market, supply choices and corresponding investment decisions are driven by short and long term price signals. The priority of the upcoming market design reform is to revitalise price dynamics and complete the Internal Energy Market through the Target Model and further network expansion. New market rules should also allow renewables producers to trade energy and ancillary services across borders on a par with conventional technologies. In general, this means markets with gate closure closer to real-time, larger trading areas, more granular products and marginal pricing in all timeframes (except for intraday where hybrid solution can apply).

RECOMMENDATIONS

- Improve power market operations:
  - Make full use of cross-border transmission capacities;
  - Ensure continuous intraday trading with harmonised gate closure times closer to real time; complementary auctions may be introduced to increase liquidity;
  - Ensure proper access to balancing markets for renewable producers; and
  - Improve existing instruments to hedge against price differences between bidding zones in case of congestion.
- Make the energy only market fit for renewables:
  - Allow for price spikes in the energy only market and help create hedging instruments for short-term price spikes inside the bidding zone;
  - End price regulation and link wholesale and retail markets;
  - Improve liquidity in power markets notably in short term timeframes.
- Create commercial markets for ancillary services.
- Avoid incentives for excess capacity (make CRMs a last resort against standardised adequacy assessment) and accelerate the decommissioning of the most polluting and inflexible generation.

These measures will all contribute to creating a more level playing field for all power generation technologies. Ultimately, they may not be sufficient to create meaningful price signals for RES investors. Revenue stabilisation mechanisms (e.g. long term contracts) would therefore be needed (cf. document on support mechanisms).

RATIONALE

1) Renewables penetration will drive market value towards shorter timeframes

Implementing well-functioning intraday markets across borders with gate-closure close to real-time will 1) provide renewable producers with opportunities to adjust their schedule in case of forecasts errors, 2) smooth out the variability induced by renewable in-feed over broader geographical areas.

2) Fair conditions for electricity balancing are needed

Today, wind power generators are balancing responsible in most EU countries where penetration is significant (above 2%). This is however not accompanied by proper access to balancing markets whereas renewables generators can provide balancing services cost-efficiently. Markets for ancillary services should be open to renewables generation and demand resources. This implies more granular products, larger balancing areas, possibility of aggregation and marginal clearing of prices.

3) Over-investment in firm capacity in separate national markets should be avoided

Further market integration would help solving the contradiction between local system adequacy concerns and the structural overcapacity in the EU power system. If a capacity gap is identified by Member State(s), it should prioritise the development of liquid short-term markets and the use of cross-border interconnectors to contract firm capacity from abroad over the introduction of CRMs.

Annex 1: Amendments to Directive 2009/72/EC

LEGEND:

NEW	new Article proposed by WindEurope
Blue text	new legal text proposed by WindEurope
Black text	existing legal text under Directive 2009/72/EC
[…]	comments by WindEurope

Article 4: Monitoring of security of supply

Member States shall ensure the monitoring of security of supply issues. Where Member States consider it appropriate, they may delegate that task to the regulatory authorities referred to in Article 35. Such monitoring shall, in particular, cover the balance of supply and demand on the national market, contribution of electricity imports and exports, the level of expected future demand and envisaged additional capacity being planned or under construction, including from renewable energy sources, and the quality and level of maintenance of the networks, as well as measures to cover peak demand and to deal with shortfalls of one or more suppliers. […]

Article 15: Dispatching and balancing

[…]

3. A Member State shall require system operators to act in accordance with Article 16 of Directive 2009/28/EC when dispatching generating installations using renewable energy sources. ~~They also may require the system operator to give priority when dispatching generating installations producing combined heat and power.~~

~~4. A Member State may, for reasons of security of supply, direct that priority be given to the dispatch of generating installations using indigenous primary energy fuel sources, to an extent not exceeding, in any calendar year, 15% of the overall primary energy necessary to produce the electricity consumed in the Member States concerned.~~

Article 22: Network development and powers to make investment decisions

[…] NEW

9. Every year, the distribution system operator shall submit an assessment of main investments needs for its grid to the regulatory authority so that the network development plans are duly approved.

Article 25: Tasks of distribution system operators

[…]

4. A Member State may require the distribution system operator, when dispatching generating installations, to give priority to generating installations using renewable energy sources in accordance with Article 16 of Directive 2009/28/EC ~~or waste or producing combined heat and power.~~

[…]

7. When planning the development of the distribution network, energy efficiency/demand-side management measures or distributed generation that might supplant the need to upgrade or replace electricity capacity ~~shall~~ may be considered by the distribution system operator provided this does not lead to disproportionate levels of curtailment of renewable energy.

Article 37: Duties and powers of the regulatory authority

1. The regulatory authority shall have the following duties:

[…] NEW

v) Monitoring investment plans of the distribution system operators, and providing in its annual report an overview of the aggregated investment plans of the distribution system operators, and an assessment as regards their consistency with renewables deployment programme enshrined in the national energy and climate action plans.

6. The regulatory authorities shall be responsible for fixing or approving sufficiently in advance of their entry into force at least the methodologies used to calculate or establish the terms and conditions for:

[…] NEW

b. The provision of balancing services which shall be performed in the most economic manner possible and provide appropriate incentives for network users to balance their input and off-takes. The balancing services shall be provided in a fair and non-discriminatory manner and be based on objective criteria. Curtailment of variable renewable energy should be considered as a service of dispatching down power and be remunerated accordingly via the balancing mechanism or a regulated compensation considering the foregone revenue and be settled close to the time when the curtailment occurs. The calculation method for the amount of spilled energy, corresponding cost and eventual compensation must be clear and plausibly assessed for all stakeholders; and

9. The regulatory authorities shall monitor congestion management of national electricity systems including interconnectors, and the implementation of congestion management rules. To that end, transmission and distribution system operators or market operators shall submit their congestion management rules, including capacity allocation, to the national regulatory authorities. They should include transparent rules for curtailment measures, including systematic justification, annual reporting and regular assessments of

the cost-benefit of curtailment against reducing must-run obligations for conventional units. National regulatory authorities may request amendments to those rules.

Annex 2: Amendments to Directive 2009/28/EC

LEGEND:

NEW	new Article proposed by WindEurope
Blue text	new legal text proposed by WindEurope
Black text	existing legal text under Directive 2009/28/EC
[…]	comments by WindEurope

Article 16: Access to and operation of the grids

[…]

2. Subject to requirements relating to the maintenance of the reliability and safety of the grid, based on transparent and non-discriminatory criteria defined by the competent national authorities:
   […]
   b) Member States shall ensure that when dispatching electricity generating installations, transmissions and distribution system operators give priority to generating installations using renewable energy sources in so far as the secure operation of the national electricity system permits and based on transparent and non-discriminatory criteria
   c) Member States may only consider removing priority of dispatch for newly installed power plants provided that the following minimum regulatory and market conditions are fulfilled:
      i. Priority of dispatch for any other technology is removed, and ensure must-run arrangements for conventional units are minimised;
      ii. Liquid intraday markets provide renewables producers with trading opportunities close to real-time;
      iii. Balancing markets provide a level playing field for the participation of renewables producers; and
      iv. Congestions are prevented by an appropriate level of investments in grid infrastructure, in line with the ambition of 2030 integrated national energy and climate plans, and the implementation of appropriate grid and market-related operational measures.
   d) As long as conditions referred to in paragraph 2-c) are not met, curtailment can only be considered as a measure of last resort, systematically justified by the responsible system operators. To this end, Member States shall require both transmission and distribution system operators to adopt transparent curtailment and congestion management rules, including regulated compensation according to the foregone revenues for the volume of electricity curtailed, and regular reporting to the competent regulatory authority.
   e) When the conditions spelled out in article 16.2-c) are met, Member States shall ensure that curtailment of electricity from renewable energy sources is valued as a system service to can be remunerated trough the balancing market

3. Member States shall require transmission system operators and distribution system operators to set up and make public their standard rules relating to the veering and sharing of costs of technical adaptations, such as grid connections and grid reinforcements, improved operation of the grid and rules on the non-discriminatory implementation of the grid codes, which are necessary in order to integrate new producers feeding electricity produced from renewable energy sources into the interconnected grid.

   Those measures shall be based on objective and non-discriminatory criteria taking particular account of all the costs and benefits associated with the connection of those producers to the grid and of the particular circumstances of producers located in peripheral regions and in regions of low population density. Those rules may provide for different types of connection.

4. Where appropriate, Member States may require transmission system operators and distribution system operators to bear, in full or in part, the costs referred to in paragraph 3. Shallow grid connection charging regimes, both at transmission and distribution level, shall be applied where costs of network reinforcements are already reflected trough power-based injection charges.

   Member States shall review and take the necessary measures to improve the frameworks and rules for the bearing and sharing of costs referred to in paragraph 3 by 30 June 2011 and every two years thereafter to ensure the integration of new producers as referred to in that paragraph.

5. Member States shall require transmission system operators and distribution system operators to provide any new producer or energy from renewable sources wishing to be connected to the system with the comprehensive and necessary information required, including:

   a) A comprehensive and detailed estimate of the costs associated with the connection
   b) A reasonable and precise timetable for receiving and processing the request for grid connection
   c) A reasonable indicative timetable for any proposed grid connection, not exceeding 12 months

   Member States may allow producers of electricity from renewable energy sources wishing to be connected to the grid to issue a call for tender for the connection work.

6. The sharing of costs referred in paragraph 3 shall be enforced by a mechanism based on objective, transparent and non-discriminatory criteria taking into account the benefits which initially and subsequently connected producers as well as transmission system operators and distribution system operators derive from the connections.

   Member States shall ensure a level playing field between new and existing generation on connection charges. New generating capacity shall not be charged the full cost of overall grid reinforcements emerging from their marginal contribution to the power system.

7. Member States shall ensure that the charging of transmission and distribution tariffs does not discriminate against electricity from renewable energy sources, in particular for the setting of injection charges. Injection charges, where applied should be harmonised on the basis of energy-based tariffs and removed in the long term as future investment decisions will be driven by resource availability.

The inclusion of locational signals in network tariffs, in particular for electricity from renewable energy sources produced in peripheral regions, such as island regions, and in regions of low population density, should be carefully evaluated by competent regulatory authorities. If locational charging is applied in a Member State, it should be reflected in connection charges rather than through injection charges. Such charges must be cost-reflective, be properly justified and scrutinised against distortive effects on investment decisions.

Member States shall ensure that the charging of transmission and distribution tariffs does not discriminate against gas from renewable energy sources.

[…]

New Paragraph 12 to be inserted:

Member States shall ensure the integration of renewable energy in all electricity markets, including the markets for balancing and other ancillary grid services.

To encourage the integration of renewable energy in all markets, Member States shall ensure that gate closure times for intra-day and balancing markets are harmonised and set as close to real time as possible and that trading intervals for all markets are shortened.

Annex 3: WindEurope position papers

- Network tariffs, April 2016
- Balancing commandments, June 2016
- Market design, June 2015
- Priority dispatch and curtailment, June 2016