

## EU Electricity Regulation: Future-proofing the grid

In view of the upcoming trilogue meetings on the revision of the EU Electricity Regulation, T&D Europe asks your support to include the European Parliament's amendment 84 (on Article 16, see Annex I) in the final text of the legislation as a pragmatic approach to future-proofing the electricity grid by means of greater transparency. The examples in Annex II illustrate of how increased transparency helps in creating a truly modern grid.

T&D Europe is the European Association of the Electricity Transmission and Distribution Equipment and Services Industry, representing 12 national associations and 5 corporate members. The companies represented by T&D Europe account for a production worth over €25 billion.

The Clean Energy Package is an important driver for the energy transition in the EU: Grids will play a crucial role in facilitating and enabling the energy transition to incorporate increasing levels of distributed generation, changing demand patterns and the implementation of new technology and solutions.

The European medium and high voltage electricity networks play a crucial role in making the energy transition a success: As we move on from traditional energy systems, new, smarter solutions will be required. This means that not only the generation sector will have to undergo a fundamental transformation, but also the grids will have to change and develop accordingly to ensure a successful transition and to deliver value and quality of supply to consumers.

As the EU is moving to more and more electrification, it is vital that the EU will future-proof its electricity network: Today's regulation does not reflect this need for transformation. Regulation is primarily or in many cases even exclusively focusing on cost-efficiency of the grids, while maintaining the quality of service known from the past, but not on their active contribution to a successful energy transition.

The Clean Energy Package is the right place to embed a visionary yet pragmatic approach to secure a smart and robust electricity network for Europe. The European Parliament and Council already approved in their [compromise text on the revised Energy Efficiency Directive](#) a requirement for a common methodology to make the grid infrastructure more energy-efficient. A "grid smartness monitoring process" in the Electricity Regulation would create transparency on the transition to smarter grids in Europe, increase the awareness of smart technologies and their potential and promote the use of best practices. By doing so it is expected to help Member States investing to reach their emissions reduction and energy efficiency targets while incentivising investments in innovative technologies.

**We ask you to support the adoption of the text of amendment 84.** T&D Europe and its members are available to provide further information in writing or in a meeting.

**ANNEX I**

*Council “Four Column Document”*

**Proposal for a regulation of the European Parliament and of the Council on the internal market for electricity (recast) -2016/0379 (COD)**

**European Parliament Amendment 84**

Article 16- paragraph 9 a (new)

Network charges

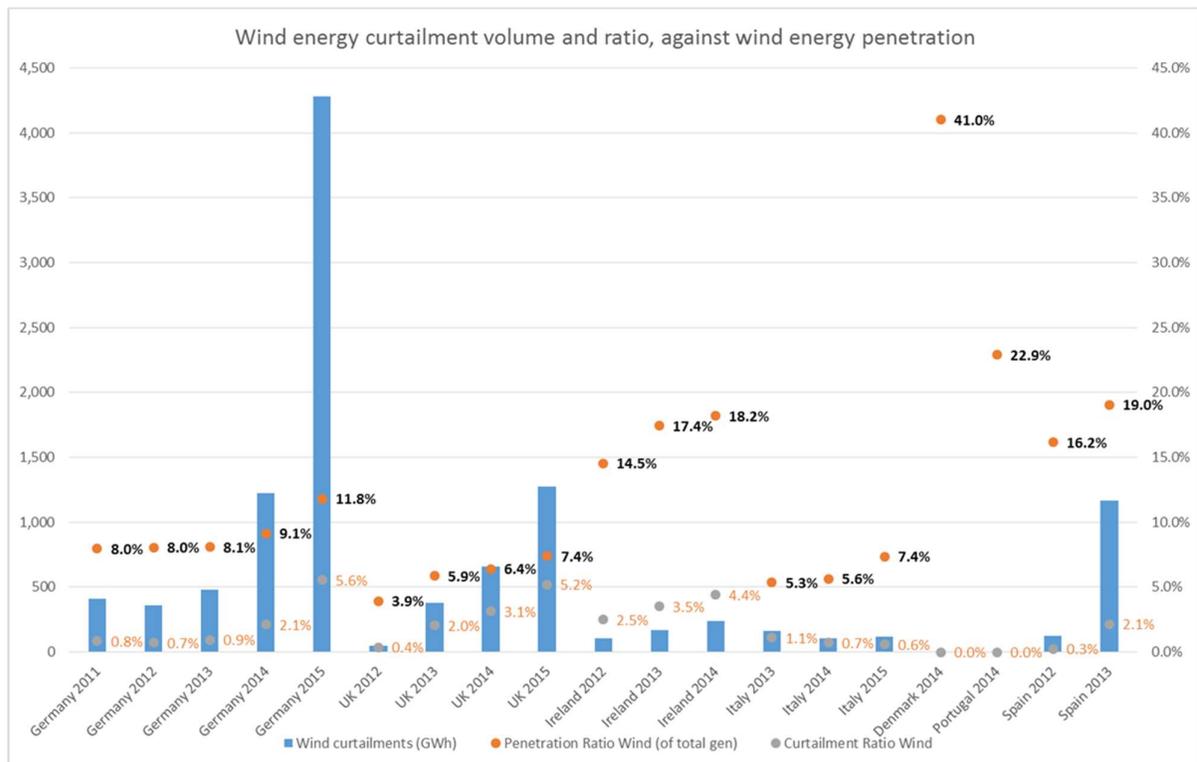
COMMISSION PROPOSAL	EP PLENARY TEXT	COUNCIL GENERALAPPROACH	Compromise proposal
<i>Article 16 Charges for access to networks</i>	AM 84 Article 16 – paragraph 9 a (new)		
	<p>Regulatory authorities shall adopt a set of indicators for measuring the performance of transmission and distribution system operators, which should at least include all of the following:</p> <p>(a) volume of curtailed energy in MWh, disaggregated per type of generation source;</p> <p>(b) percentage of the length of lines operated under dynamic line ratings;</p> <p>(c) percentage of substations remotely monitored and controlled in real-time;</p> <p>(d) percentage of the length of lines operated under dynamic line ratings (<i>sic</i>);</p> <p>(e) losses in high, medium and low - voltage grids;</p> <p>(f) the frequency and duration of power interruptions on the grid.</p> <p>By [two years after the entry into force of this Regulation], and every two years thereafter, regulatory authorities shall publish a report on the performance of transmission and distribution system operators, together with recommendations for improvement where necessary.</p>		

## ANNEX II

The European Parliament’s amendment 84 on the EU Electricity Regulation lists a number of aspects to be included in a grid smartness indicator. The following real life examples illustrate the value of establishing such an EU-led process to increase transparency, thereby helping to create a truly modern grid. **EP amendment 56 on Article 12 paragraph 3 and amendment 84 on Article 16 paragraph 9(a) (new) of the Electricity Regulation both support this approach.**

*(a) volume of curtailed energy in MWh, disaggregated per type of generation source;*

Today, curtailment remains one of the most significant challenges for renewable energy integration into systems such as Ireland and the Iberian Peninsula, which are weakly interconnected to other electrical systems, or in countries like Germany, where the roll out of infrastructure is lagging behind the development of wind generating plants and a large number of conventional generators benefit from must-run obligations, making the supply side very inflexible. An overview of curtailment rates is provided in the graph below and in [Annex 3 of WindEurope’s position paper](#).



Source: WindEurope

Today there is a lack of transparency regarding the volume of curtailed energy for the different types of generation. In practice, it proves to be very difficult to find this important information for the EU28. The adoption and use of an indicator of the volume of curtailed energy in the EU

will help to identify the priority areas and provides the generators, the network operators, the regulator and the technology providers with a basis for the development of appropriate solutions.

*(b) percentage of the length of lines operated under dynamic line ratings;*

Dynamic line rating (DLR), which uses sensors to identify the current carrying capability of a section of network in real time, can optimise the utilisation of existing transmission assets, without the risk of causing overloads. In 2011 the IEA already identified DLR as one of the enabling technologies for smart grids. ENTSO-E published a technical paper on dynamic line ratings in 2014. The good news is that at that time, 11 European TSOs were using this technology. Unfortunately, few details about the lines actually equipped are available today. Information on the use of DLR by DSOs is non-existent.

*(c) percentage of substations remotely monitored and controlled in real-time;*

To allow the extensive and intricate European electricity grid to be future-proof requires the remote monitoring and controlling in real time. While we know this technology is increasingly used, there is no accurate, publicly available data available that enables regulators to take a holistic view on the state of the electricity grid in the EU.

*(d) losses in high, medium and low-voltage grids;*

Energy efficiency and savings are a top priority for the EU. Grid losses are an important area to consider. Today only a minority of network operators publish information on their grid losses. The French TSO RTE makes [information available](#) on hourly losses. However, there is no information on where the losses occurred, or at which voltage level.

*(e) the frequency and duration of power interruptions on the grid.*

Since 2001, CEER has been benchmarking quality of supply across Europe. Their latest benchmark was published in 2016, and as the CEER admits it, it is difficult to draw general conclusions because every country (and sometimes region, or DSO) uses a slightly different definition of an “interruption”. The CEER also notes that data collection itself is not sufficient, a clear incentive mechanism based on this data is needed to influence the performance of the network operators.

## *Conclusion*

We have tried to illustrate that today data on smart grids is patchy and difficult to find. There is a need to improve the transparency about the future-readiness of the EU electricity grid. In the US the [Grid Modernisation Index](#) is a good example of how increased transparency helps in creating a truly modern grid. The proposal of the European Parliament’s amendment 84 to the Electricity Regulation provides a pragmatic approach to enhancing transparency about the future-readiness of the electricity grid. It is a practical tool that will enable regulators, generators, network operators, technology providers, investors and consumers to identify the most effective way to ensure the European electricity grid is smart and ready for the future.