

## Initial Proposals for a European Energy Union

The European Commission has an opportunity to enable Member States move towards a genuine Energy Union. ENTSO-E and its member transmission system operators (TSOs), who play an important role in the development and facilitation of the electricity market, aim to contribute to this strategic thinking.

Building on the strong foundation of the Europe-wide integrated electricity market, which already provides ample solidarity during routine market operations, we identify the missing pieces which the Energy Union should define to make solidarity a realistic, functioning part of the market. In this respect, the network codes facilitate the harmonisation, integration and efficiency of the European electricity market, preparing the market for existing and future challenges and removing redundancies. Each network code implements further necessary cross-border details for the Third Energy Package and is an integral part of the drive towards completion of the internal energy market.

### Key recommendations

#### **Implement existing regulation**

Ensure the smooth adoption of all ten electricity network codes, which form the building blocks of the Internal Energy Market.

#### **Facilitate investments in indispensable transmission infrastructure**

European institutions and policy makers should show leadership and implement a European communication plan in supporting the development of transmission infrastructure and advocating the benefits to the public.

#### **Facilitate Member States' energy-mix and security of supply policy coordination at regional and European level**

National decisions must remain consistent with the integrated market, and recognise the key role of market-based initiatives and regional co-operation. The implementation of regional coordinated system adequacy will be an important step forward, and would anchor the role of ENTSO-E's Scenario Outlook & Adequacy Forecast and seasonal outlook assessments as Member States' reference point for defining policies related to security of supply strategies. TSOs can provide objective assessments on the impacts, opportunities and risks to power system operation of different policy options.

#### **Progress towards co-ordinated mechanisms in energy scarcity situations**

The tools and rules defined by the network codes are sufficient to define operations and market reaction in most emergency situations from a technical point of view. However, for some kinds of scarcity situations, political discussions within the Energy Union framework are still necessary to define clear principles on the degree to which the allocation of available power should obey to market signals or rather to strategic orientations agreed at European or regional level.

#### **Update the market design to deliver a more secure energy supply and better prices to citizens**

The Energy Union will need to augment the present market design by fully integrating renewables into the market, empowering end-consumers, allowing the participation of demand-response solutions to all electricity markets and services, incentivising all users to play their role in system adequacy, and developing the hedging dimension of the market design.

#### **Foster RDD&D in transmission networks**

In the context of research, development, demonstration and deployment, it is in particular research that will require continued adequate public financial support in order to meet the challenges of the energy transition.

## 1. Implement existing regulation

The Third Energy Package required ENTSO-E to draft technical network codes as a fundamental prerequisite for the achievement of Europe's climate and energy policy goals. For the achievement of an Energy Union it is indispensable to deliver the smooth adoption of all ten electricity network codes. The codes should all be adopted in 2015 and in early 2016 to ensure that key rules for the energy transition and the Internal Energy Market are put in place in a timely manner. The adoption and implementation of network codes is the foundation of ENTSO-E's work and of the proposals that follow. Delivering on the Third Package likewise requires stronger governance between ACER and the national regulatory authorities to allow the Agency to fully play its coordination role. A revision of the existing governance rules between ACER and the ENTSOs should only be necessary where the ENTSOs were awarded new additional mandates, since the adoption of the Third Energy Package.

## 2. Facilitate investments in indispensable transmission infrastructure

Adequate transmission infrastructure is the most cost-efficient enabler to achieve Europe's climate and energy-policy goals (a competitive IEM, security of supply and decarbonisation of the energy mix) and to enhance concrete solidarity between Member States. Joint planning in ENTSO-E's Ten-Year Network Development Plans is important but not sufficient: TSOs have been struggling due to external constraints to build the transmission infrastructure that Europe needs and that these plans identify. **ENTSO-E therefore proposes:**

- For European institutions and political policy makers to clearly express their support to the required infrastructure and any measure which could ease public acceptance of transmission infrastructures. The European Commission should launch a pan-European communication plan to publicly support vital European infrastructure projects and advocate the benefits they will bring to European citizens;
- Foster all projects whose socio-economic benefits outweigh their costs in the context of the overall system need;
- Strengthen Ten-Year Network Development Plans as Europe's planning tools for transmission infrastructure of pan-European significance and introduce the completion of Ten-Year Network Development Plan projects as one of the key indicators of the 2030 governance framework for interconnection targets;
- No later than 2017, to perform a critical review of the impact of 2013 Infrastructure (TEN-E) Regulation (EU) 347/2013 to assess the effectiveness of its implementation, and, in particular, its impact improving the permitting processes and on administrative burden;
- To foster the financeability of the upcoming investment challenges: regulatory regimes should enable TSOs to finance the steep rise in capital expenditures;
- To provide an explicit mapping of the different funding and financing instruments, and bring clarity to eligibility rules for each of these programs: InvestEU programme, Connecting Europe (PCIs), R&D funds, structural funds, smart grid financing instruments (ERA-Net Plus, Horizon 2020 Programme (H2020), European Investment Bank (EIB), European Energy Programme for Recovery (EEPR), Connecting Europe Facility - Energy (CEF-E), NER 300, Eurogia+);
- To encourage EU Member States to submit their 2030 energy governance framework plans as of next year – to reinforce stability and predictability for stakeholders and facilitate infrastructure planning and market design adaptations, based on TSO analyses of transition cost and time consequences.

### 3. Facilitate Member States' energy-mix and security of supply policy coordination at regional and European level

Member States have the right and responsibility to ensure their security of supply and to make energy mix decisions at a national level, within the framework of the Internal Energy Market. The integrated market, the interconnected European power system and Europe's progress to achieving its 20-20-20 objectives require increasingly coordinated national energy policies. However, energy mix decisions at national level (e.g. including flexibility to balance renewables, and capacity remuneration mechanisms, generation reserves, back-up capacity) have important cross-border impacts and could result in market fragmentation. It is important to ensure that national decisions remain consistent with the integrated market and instruments such as capacity remuneration mechanisms allow cross-border participation and do not distort the market. Market-based initiatives and regional cooperation play key roles here.

#### ENTSO-E therefore underlines:

- A stable regulatory framework of the policies related to the energy mix is a prerequisite for efficient planning and realisation: frequent changes of political goals might lead to stranded infrastructure (generation and grid) investments. The European Commission should therefore foster regional co-ordination of national energy policy decisions.
- The implementation of regional coordinated system adequacy would be an important step forward, and would anchor the role of ENTSO-E's Scenario Outlook & Adequacy Forecast and seasonal outlook assessments as Member States' reference point for defining policies related to security of supply and energy-mix strategies. This could, if necessary, be addressed through a review of the Security of Supply Directive 2005/89/EC.
- As the EU and each national government pursues its security of supply and energy mix policies within this framework, TSOs offer to play a central, advisory role to policy-makers also on questions beyond adequacy: TSOs can provide objective assessments on the impacts, opportunities and risks to power system operation of different policy options – in terms of costs, prerequisites and transition times – and through that help ensure that the transition will be smooth and cost effective.

### 4. Progress towards co-ordinated mechanisms in energy scarcity situations

The electricity system is not immune to a major European or regional disturbance beyond national borders. ENTSO-E's network codes implement a multitude of connection condition, market and operational measures, including advanced levels of co-operation between TSOs, to prevent and properly manage emergency situations. They will enforce market mechanisms and rules defining how system users and market participants should react in cases of scarcity of energy as well as before and during emergencies.

For instance, the Regional Security Coordination Initiatives, which TSOs have pioneered and pro-actively developed, allow identifying and managing potential threats to secure system operations arising from large-scale, regional power flows. They already count several years of experience, cooperate with each other and are recognised as important contributors to the security of the overall network.

The tools and rules defined by the network codes are sufficient to define operations and market reaction in most situations from a technical point of view.

However, on some occasions, for instance a major international shortage of electricity, the current legal framework is not yet clear enough on the degree to which market scarcity prices vs. national allocation decisions govern where the energy flows and where curtailments occur.

ENTSO-E offers to contribute to this policy discussion by describing realistic options for the narrowly defined scarcity cases without clearly prescribed rules. Some of these options relate to regulatory choices in

each Member State, but with important cross-border effects, on the prices charged by TSOs to energy traders whose portfolio is not in balance.

## **ENTSO-E therefore emphasises:**

- Political discussions within the Energy Union framework should be held, including especially at regional level, to define clear principles on the degree to which the allocation of available power should obey to market signals or rather to strategic orientations agreed at European or regional level.
- TSOs will implement and enforce a higher level of coordination at regional level for operating the European transmission in response to the transformation of the European electricity system. Regional Security Coordination Initiatives will create a Europe-wide harmonised power system operation framework with cross-regional and pan-European geographical coverage.

## **5. Update the market design to deliver a more secure energy supply and better prices to citizens**

On its way towards 2020 and 2030, the current market design does not match ideally the physical reality of the power system, thus not ideally yet supporting system security and competitiveness. The Energy Union will therefore need to augment the present market design: complementing the Target Model with additional features, while preserving it. Since this enhanced Target Model must be consistent with the respective responsibilities of market participants and TSOs, this work will require the contribution from TSOs and all other stakeholders, as well as some regulatory evolutions.

## **ENTSO-E therefore proposes:**

- The current market design should be improved by fully integrating renewables into the market, introducing cost reflective balancing prices, if appropriate through reviewing the Renewable Energy Directive 2009/28/EC.
- A stronger liberalisation and harmonisation of the retail market is necessary. Market opening should not stop at wholesale level, and should be clearly visible by European consumers. This is a prerequisite to consumer empowerment and to fully enable the potential of demand management in terms of security of supply and competitiveness;
- The market design should be stimulating demand-side participation in all markets. Information and communication technologies should be used more effectively in order to make consumption related data more widely available and usable by consumers themselves as well as by third parties.
  - Consumers should be equipped with the right tools, while protecting their rights. Universal and secure data sharing attracts new energy services and players to the market and turns consumers from passive to active ones (“right data to the right needs”).
  - The rules for demand assets to participate in all electricity markets should be established through the adoption of the Demand Connection Network Code, which should go through Comitology in 2015.
  - Smart grid technology should be further promoted through the European Commission’s smart grids task force, and through the on-going smart grids standardisation work at CEN/CENELEC. The operational and planning arrangements between TSOs and DSOs need to be revised and developed further in order to support a market framework that successfully unlocks the potential of consumers.
- All market participants should be incentivised to ensure system adequacy based on cost-reflective balancing responsibility, and the market should be designed to take into consideration the physical constraints of the grid.

- This needs to be addressed through an appropriate market design and, if necessary, by a review of the Renewable Energy Directive, and by providing support to the full implementation of ENTSO-E's Balancing Network Code. An update of this network code should be considered after the implementation period, scheduled to last seven years after entry into force.
- As the grids become smarter, DSOs role in the market facilitation organised by TSOs will increase. National regulatory frameworks need to evolve to give all system operators the right incentives for these important tasks, e.g. with respect to risks, R&D, information technology or manpower costs. Both ACER and the EC will have roles to ensure this evolution.
- The hedging dimension of the market design needs to be developed to enable market participants to hedge their adequacy-related risk, allowing for cross-border participation.
  - In this regard, the European Commission's State Aid Guidelines for Environmental Protection and Energy are instrumental in prohibiting market distortions.
  - The imbalance prices mentioned in the previous section play a key role as a basis for adequacy-related hedging products. Thus, the political discussion of their role during scarcities will add clarity on the best mix of administrative and regulatory vs. market-based hedging approaches.
- The EU Emissions Trading Scheme needs to deliver an investible carbon price.

## 6. Foster RDD&D and innovation investments in the transmission networks in order to meet the challenges of the energy transition

Research, development, demonstration and deployment (RDD&D) is key to keeping the European grid efficient and cost effective, and to keeping Europe in the forefront of grid technologies development. Europe, which is committed to rapid decarbonisation, cannot afford not to foster maximum private and public investments in RDD&D. It is in particular the research which will depend on public funding as it does not attract sufficient private funds.

### ENTSO-E therefore underlines:

- Regulatory certainty, in particular providing visibility on an appropriate rate of return, is a prerequisite for private investments to flow in RDD&D projects;
- The list of subjects eligible to financing through TSOs regulated activities needs to be opened to new technologies, which will in the future actively participate in grid operations. For instance, demand, supply and storage need to be treated as equal sources of flexibility;
- Innovative financing solutions need to be elaborated and promoted to incentivise private investments in RDD&D, and in particular into research.