

EREF's reply to the European Commission public consultation on Generation adequacy, capacity mechanisms and the internal market in electricity

7 February 2013

EREF welcomes the European Commission's consultation on generation adequacy, capacity mechanisms and the internal market in electricity. We also welcome the opportunity of presenting our views and strongly encourage the Commission to conduct a thorough assessment of generation adequacy and capacity mechanisms.

Executive summary

EREF shares the concerns expressed by the European Commission that the introduction of capacity mechanisms could run counter to the EU's decarbonisation objectives, distort price and investment signals and favour fossil fuels and nuclear to the detriment of renewable energy sources, interfere with cross-border trade and competition, close national markets, distort the location of generation, and finally increase costs for all Member States.

- The real challenge for the European energy system is flexibility. This can be ensured through a better use and development of interconnections in Europe, demand side management and storage.
- Many Member States currently experience over-capacities, rather than a lack of capacity. They should conduct a national assessment of generation adequacy before considering the introduction of capacity mechanisms. Subsidies for environmentally unfriendly technologies should be phased out.
- If Member States are experiencing generation inadequacy and planning to introduce capacity mechanisms, they should show clear evidence that the market functioning is insufficient.
- Potential capacity mechanisms should then respect a very clear and compulsory set of criteria. The carbon intensity of the resources providing capacity should be factored into the possible design of capacity mechanisms so that delivery of the overall carbon reduction targets is not compromised. The approach adopted to deliver reliability should not lead to unintended adverse consequences for investment in renewable energy.

EREF is a federation of national renewable energy associations from EU Member States, such as wind, solar, small hydro, bio-energy, tidal, wave, and geothermal sources. EREF is striving to defend the interests of independent power, fuel and heat production from renewable sources and to promote non discriminatory access to the energy market. EREF is a member of EREC, the European Renewable Council.

- Studies suggest that setting up a capacity mechanism involves significant regulatory risks and that it would take up to 10 years before it operates effectively, so that it requires an even more careful approach.
- EREF calls on the Commission to provide a more detailed analysis of this issue to be followed by the publication of a Green Paper.

Flexibility can be ensured through more effective and less market distorting means

EREF is convinced that power markets with an increasing proportion of variable renewables can deliver the right kinds of generation capacity and ensure stable and secure energy supply provided an adequate framework is in place. What is needed is not capacity as such, but flexibility. More effective and less market distorting means than capacity mechanisms are or will be available in the near future to ensure security of supply through increased flexibility.

First of all, EREF believes that the further integration of neighbouring balancing markets, i.e. an increased interconnection between regions and/or neighbouring power systems, contributes significantly to ensuring security of supply. The increased interconnection capacity offers the potential for all generation and capacity resources to be shared, reducing overall resource requirements and the need for State or regulatory intervention. For this to be effective it will have to be accompanied by real-time energy balancing over wider areas, reducing the effect of extreme weather events and again reducing the overall system requirements. These advantages should (further) be exploited, e.g. by means of Network Codes and enhanced regional cooperation.

The flexibility and generation adequacy issue should not only be considered from the generation side, but also from the demand side. Generally, demand-side management will help match demand and supply so that electricity consumers continue to enjoy comparable levels of system reliability over the next decades at lowest overall cost.

Storage of renewable energy and energy efficiency should also be encouraged to provide capacity. Thus the rules of possible capacity mechanisms should ensure that participation of demand response, demand side management and storage of RES is possible and encouraged (power threshold, response time delay, reliability, etc.).

EREF

European Renewable Energies Federation

EREF particularly welcomes the Commission's recognition of consumers possibly willing to be cut off for some time, rather than paying for more capacity.

- In Germany, for example, the new Sec. 14b Energiewirtschaftsgesetz (EnWG) now enables gas consumers to enter into contracts with the system operators allowing them to be cut off for some time, in return for reduced grid tariffs. Their readiness and ability to satisfy their energy needs from other sources, use storage or drive down consumption in the short term needs to be taken into account when assessing capacity needs, and it delivers important additional flexibility.

Therefore, from the perspective of the independent RES power producers, improving the European energy system flexibility through the better use and development of interconnections, of demand side management schemes and of storage infrastructure should be a European energy policy priority indeed.

Many Member States already experience overcapacities, but still grant massive subsidies for environmentally unfriendly technologies

EREF would like to point out that there are significant overcapacities in some Member States. It is a natural consequence of the liberalization of the energy market that they can no longer operate in an economically viable way, as due to the non-internalisation of externalities technologies such as nuclear and coal have never been economically sound. Those capacities are often in the hands of former incumbents and continued subsidy would only further distort the functioning of the energy market and impede all liberalisation efforts.

- For instance in Spain capacity payments have strongly increased while huge overcapacities exist in the electricity market, mostly due to the 27 GW of CCGT plant capacity installed over the last 10 years, compared to an overall installed capacity of 102 GW in 2012 and demand peaks of less than 45 GW. These CCGT plants were foreseen to run with 5,000 – 6,000 operating hours annually, whereas in 2011/12, due to a strong decrease in overall electricity consumption they only worked for 1,500-2,000 hours.
- In Greece thermal power plants using lignite and natural gas as fuel and hydroelectric power plants receive annual revenues in return for declaring availability of their power capacity (usually 85%-90%). This capacity mechanism was originally intended to provide incentives for the installation and operation of new conventional (mainly natural gas) power capacity when demand was

EREF

European Renewable Energies Federation

increasing at a rate of 4% per year and the national electrical interconnection capacity was insufficient to secure electricity supply through imports. Nowadays, electricity demand is decreasing at a rate of 1% per year due to the on-going recession and Greece is in a situation of overcapacity. Thus, capacity mechanism payments are used primarily to support the newly built natural gas plants, which operate less hours due to a fast growing RES capacity whose output is given priority by the electrical system. Moreover, such plants are unable to export significant quantities of kWh (limited interconnection capacity, relatively high fuel and electricity production cost and unfavourable neighbouring market conditions). Therefore, it is important to emphasise that in specific individual and exceptional cases the elimination of such capacity mechanisms introduced for other reasons but now used to support system flexibility (e.g. through subsidizing the operation of certain natural gas thermal power stations so as to ensure the smooth integration of RES) in the absence of real alternative solutions in the short and medium term, is more likely to harm the market than improve the new system capabilities and the prospects of increased RES penetration.

Therefore, before authorising the implementation of any capacity mechanisms, the European Commission should request Member States to make a thorough national analysis of generation adequacy.

EREF considers it crucial that hidden subsidies for old and inflexible types of electricity generation (in particular, nuclear and coal) are phased out and that no new support schemes are introduced for those technologies.

→ A bad example would be Spain where new subsidies for the obligatory use of domestic coal have been introduced and which amounted to 400 million € in 2011.

The phasing out of environmentally unfriendly subsidies would deliver clear investment signals for flexible and more efficient generation capacity, and hence ensure adequate generation.

No capacity mechanisms before thorough national assessment and respected criteria

If Member States were to consider introducing capacity mechanisms, the said Member State(s) would have to provide clear evidence that the market functioning is insufficient. When evaluating the need and (possible) design of capacity mechanisms, specific attention has to be paid to the fact that such mechanisms are consistent with EU energy policies, i.e. the decarbonisation objectives and renewable targets and allow for innovation and change. This has been proven not to be the case at national level when Member States are implementing capacity mechanisms:

- In Spain due to the strong increase in capacity payments, retroactive measures in RES-E policy support and a freeze of support for all new RES-E installations were introduced between 2010-2012. As a result investments in RES decreased by 68% between 2011 and 2012 – the highest decrease in all RES markets worldwide.
- In France, evidence of unfair competition between renewable energy and high-emitting fossil-fuelled generators has been identified concerning connection costs. This has been introduced by a recently adopted law on cost mutualisation of transport infrastructures amongst RES, called Renewable energy regional connection schemes to the network. After the adoption of the scheme, TSOs will finance new HV/HV and HV/MV transformers needed for the development of RES by distributing their full cost to renewable energy producers that connect to all voltage levels in network (in proportion of each producer's installed capacity). In return, only part of the capacity thereby created will be reserved for RES. The remaining available hosting capacity may be available to producers other than renewable energy, despite the fact that RES will have paid for the infrastructure. Therefore, not only does the reserved capacity act as an unfair cap on renewable energy development and thus going against the provisions of Directive 2009/28/EC but contradicts the fact that RES producers contribute to decreasing the connection costs of future fossil fuel generators. If, in addition to subsidising fossil fuel generator's connection costs, capacity payments are oriented towards these conventional generators then renewable energy objectives may indeed be greatly endangered in France.

EREF believes that under this framework of objectives, Member States will find it difficult to introduce capacity mechanisms.

EREF

European Renewable Energies Federation

Would all these conditions be met and a Member State decides to introduce a capacity mechanism, the design of such a mechanism should respect a clear and compulsory set of criteria:

First of all, the carbon intensity of the resources providing capacity should be factored into the possible design of capacity mechanisms so that delivery of the overall carbon reduction targets is not compromised. If, as indicated by several studies, (existing) high-emitting fossil-fuelled generators receive the majority of capacity payments the decarbonisation objectives of the EU could not be met.

→ This is unfortunately the case for instance in Spain where capacity payments to fossil energy based power generation increased by more than 400% between 2008-2011. This entailed strong investments in gas plants and coal subsidies and increased CO₂ emissions in the power sector by 45.2% between 2010 and 2012.

Furthermore carbon intensity should not be the only aspect taken into account in possible design of capacity mechanisms. Energy saving should also be recognised as having the smallest environmental impact (in terms of GHG emissions, primary energy use, etc.).

With a quasi-collapsed carbon price under the European Emission Trading system at low levels around €2.81/t and unwillingness of key Member States and the majority of the ITRE Committee in the European Parliament to support the Commission with its “back loading proposal” such capacity mechanisms are likely to lead the European Climate policy towards full collapse.

Secondly, the approach adopted to deliver reliability should not lead to unintended adverse consequences for renewable investment making impossible for the EU to meet its 2020 renewable targets and 2050 decarbonisation targets. As such, capacity mechanisms favour the use of high-emitting fossil-fuelled generators to the detriment of renewables generators. As they generally provide for long-term guarantees, there is a significant danger of a “lock-in” situation, and thus stopping the transition to renewables.

→ For example, in Spain over the last 10 years more than 27 GW of combined cycle gas turbine (CCGT) plants have been installed and new subsidies for the use of domestic coal have been introduced.

Thirdly, a key rationale for introducing a renewable support mechanism involves the need to drive down the costs of immature technologies that have significant long term deployment potential. The same principle should be applied to those technologies requested to integrate renewables into power systems. Certain heat and power storage technologies, for instance,

EREF

European Renewable Energies Federation

have the potential to make significant contributions in the future towards system flexibility and security of supply.

Conclusion

Studies suggest that setting up a capacity mechanism involves significant regulatory risks and that it would take up to 10 years before it operates effectively. Recalling that it is unclear whether there is an actual need for such mechanisms and that there is no proof of market failure of the energy-only market, the certain costs and risks seem to outweigh the uncertain benefits.

EREF shares the concerns expressed by the European Commission over the introduction of capacity mechanisms and would like to call on the Commission to provide a more detailed analysis of this very important topic for the future of the European Energy system. This thorough analysis should be followed by a Green Paper.