



**EUROPEAN COMMISSION CONSULTATION PAPER ON GENERATION ADEQUACY, CAPACITY
MECHANISMS AND THE INTERNAL MARKET IN ELECTRICITY**

EIRGRID GROUP RESPONSE FEBRUARY 2013

EirGrid and SONI¹ welcome the opportunity to respond to the European Commission (EC) Public Consultation on generation adequacy, capacity mechanisms and the internal market in electricity. This is an important and timely consultation paper that acknowledges the need for network infrastructure and the implementation of the European Union (EU) target model as a means to complete the aims of the internal energy market and provide the basis for a secure energy supply in the years ahead. EirGrid and SONI have already contributed to and fully support the ENTSO-E response to this consultation; however, there are a number of developments on-going in Ireland that we believe are worth noting.

First, the electricity landscape in the EU is in a period of transition. The ambitious national and European energy policy objectives, particularly with respect to renewable energy and the internal energy market, will result in a fundamental change to the generation portfolio, the operational characteristics of the power system, and increase the need for new network infrastructure. In Ireland we are already experiencing the practical implications of these policy objectives; implications that many larger synchronous power systems in Europe will not experience for some time. Indeed, even today, Ireland has one of the highest penetrations of renewable generation, as a percentage of system size, in the world. And we are managing instantaneous penetration levels of variable wind generation above 40% more often than ever before, putting us in a world-leading position for managing high levels of wind generation on a synchronous power system. The management of large amounts of non-synchronous variable generation (essentially wind and High Voltage DC interconnection) on a relatively small island is a complex task and many of the solutions developed to overcome these challenges could be transferable to other larger European synchronous areas.

Second, in the context of the evolving generation portfolio and energy market developments in Europe, ensuring power system resilience and generation adequacy are essential. It is not surprising therefore that many Member States are considering implementing forms of Capacity Mechanisms. This view appears to be primarily driven by existing conventional plant that experiences higher risks, more volatile pricing and a reduction in operating revenue with the increasing levels of more renewable generation.

In Ireland, the Single Electricity Market (SEM) utilises a gross mandatory pool market system with a capacity payment mechanism and harmonised all-island arrangements for ancillary services. Under the explicit capacity payment mechanism, all generators that are available for dispatch receive a

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share of the allocated funds for remunerating available generating capacity, calculated *ex ante* by the regulatory authorities. The calculation of the capacity pot is based on the assessed total generating capacity required and the costs of a best-new-entrant peaking plant. The capacity payment in the SEM was designed to reduce market uncertainty and reduce risk premiums to investors, compared to an energy-only market. The capacity payment premium aimed to provide an incentive for the construction of capacity in time and to avoid periods of generation scarcity. Indeed, as a mechanism designed solely to incentivise generation to build in Ireland it functioned well. However, the capacity payments do not account for either plant performance reliability or for flexibility - two essential requirements in power system operations with increasing amount of non-synchronous renewable generation. The introduction of a capacity mechanism designed simply to incentivise generation to build may not be the most appropriate method to address these emerging operational deficiencies or “scarcities.” EirGrid and SONI believe that this can best be delivered by a combination of Grid Code changes and a paradigm shift in the way System Services payments are assessed and allocated. This process is currently underway in Ireland.

EirGrid and SONI published a third consultation paper on the System Services Review in December 2012. The behaviour of the power system will change with increasing levels of variable non-synchronous generation on the power system out to 2020. In particular, the key operational functions of frequency control and voltage control will become more challenging, and these issues, if not mitigated, will limit the penetration of renewable generation. Maintaining system security in the context of these issues will require the provision of enhanced System Services, which will therefore become a key enabler of a more sustainable power system. EirGrid and SONI believe that it will be important that existing and new generation capacity is incentivised through appropriate investment measures (outside of the energy market) to provide the system operators with the appropriate flexibility and capability through a range of system services that will be needed to operate the electricity system securely with large amounts of wind generation. This flexibility/capability is currently not incentivised through the current Capacity Payment Mechanism.

Finally, EirGrid and SONI believe that it is important to develop a clearer understanding of how the market design should evolve in the context of increasing amount of variable non-synchronous renewable generation. Encouraging the development of an energy market that is closely aligned with the technical operational needs of the power system is an essential part of achieving a well functioning internal energy market with high levels of renewables. It is our view that the EU

Commission should give consideration to the need for system reliability and flexibility before taking any decisions on the need for and design of a capacity mechanism.

In summary:

1. EirGrid and SONI are currently experiencing the operational and market related challenges associated with integrating increasing amounts of variable non-synchronous renewable generation and the implementing the EU target model. The system operational issues will become more pronounced in other synchronous power systems on the continent in the coming years;
2. While generation adequacy is important, the requirements for system reliability and flexibility will increase in significance in the future;
3. EirGrid and SONI are currently engaged in a System Services Review process that aims to clarify system needs – now and projected for the future, review the effectiveness of existing services and payment structures, develop new services, determine appropriate valuations of these services and develop new/revised payment structures that foster a continued focus on performance and where appropriate drive investment, develop an appropriate timetable for the implementation of any new arrangements in order to provide early signals to investors.
4. The introduction of an inappropriately designed capacity mechanism has the potential to distort market functioning and fail to incentivise for essential system services.

EirGrid and SONI would welcome the opportunity to discuss the issues raised in this response with the EU Commission if deemed appropriate.