Response to DS3 Consultation Paper
(System Services Finance Arrangements)

Support

I support the paper's analysis of the benefits of additional system services in facilitating an SNSP of 75% compared to the current limit of 50% so that the system can accommodate the target of 5,200MW of installed wind generation. I agree that the target will not be achievable without the provision of these system services. This is a serious issue for Ireland. Although it could be argued that our renewable electricity target of 40% by 2020 is high, our overall renewable energy target of 16% is quite modest and is reliant on meeting the renewable electricity target if it is to be achieved.

It is clear that the paper's analysis and methodology is based on system fundamentals. It is also clear that additional system services provide real value rather than being an additional cost and I agree with this value based approach. However the cost of providing these services must also be taken into account. Such services will not materialise if the costs are not covered with a reasonable return, in which case the renewable targets will not be met, so it is important that the value of all the benefits are taken into account.

In relation to the KEMA analysis, I am not sufficiently expert to know whether their cost estimations are correct but they seem intuitively reasonable. More importantly, I fully agree with the thrust of the argument which is that a high degree of assurance about the level of income from system services is required before anyone will make the required investment in plant to provide these services. Moreover, the greater the uncertainty about the rules and the level of payments, the higher the financial risk for the provider of the service and the higher the return required by the investor, resulting in higher costs eventually for the end user customer.

Allocation of Revenue

Option 3, as proposed in the paper, is a reasonable balance between having a sound basis for the allocation without being overly complex. If possible a number of scenarios should be examined to make the results as robust as possible so that the market can be assured that the values allocated to each service will remain for a reasonable period, say 5 years.

Capability Vs Dispatch-Dependent Payments

The meaning of dispatch-dependent payments and the basis of their calculation is not clear in the paper. The explanation at our bilateral meeting seemed reasonable and I would be minded to support it but would like to see it being defined more explicitly so that I am sure I understand it and the implications, particularly for the demand-side and non-conventional plant before committing support to this approach.

Demand-Side and Non-Conventional Plant

The focus of the paper is on existing conventional generation plant. There is a need to consider in more detail the contribution from the demand side and from plant such as different forms of energy storage. Although reference is made to these in the paper, all the analysis is done for traditional generation plant. For example, Table 10 in Appendix C gives some indicative values of the new system services for conventional generation plant and for existing pumped storage. It provides no information to anyone considering providing system services via the demand side or from energy storage whether in the sub-second or minutes-

to-hours timeframes. Anyone in the market looking at whether they can provide system services via the demand-side (both from large industrial customers and from the residential and SME sector) or from non-conventional plant need indicative figures for the revenues they could receive for the provision of these services, Such developments are needed to provide sufficient system services to facilitate the level of wind generation required to meet Ireland's renewable targets. These developments will only go ahead when there is clarity on the finance arrangements for system services from such sources.

I suggest that Eirgrid and SONI consider in more detail the opportunities from the demand-side and other plants which could provide system services and provide at least indicative figures of the values of the various services as it has done for conventional plant. Engagement between Eirgrid/SONI and potential providers would be useful to explore what system services could be provided from the demand-side and from non-conventional plant.

It would also be useful to understand Eirgrid/SONI's thinking on the relationship between existing demand-side schemes such as Short Term Active Response (STAR) and the various system services outlined in the paper e.g. what system services, as defined in the paper, are STAR customers providing, will STAR remain for a period with a view to replacing it and, if so, how will this relate to other demand-side system services products?

There is an implication in the paper that the TSO will guarantee to pay for the level of system services required by the grid code. In the case of technologies like energy storage for which the Grid Code does not specify system services, payment will be at the discretion of the TSO but will not to be unreasonably withheld. This introduces uncertainty which could hinder the development of such plants and needs to be clarified.

Definition of System Services products

I welcome the clarity brought by this paper to the definition of the various products.

There does appear to be one gap in the products. There is no payment for response in under 2 seconds if the device is not synchronised even though it provides great value to the system. For example, a flywheel will not be eligible for Synchronous Inertial Response if it is connected to the system via electronics and not directly i.e. if it needs a signal to respond, unlike a generator which responds automatically. Under the current proposals, even though the flywheel will respond within 2 cycles (40ms) it will receive no payment for this. It will only be paid for FFR which starts at 2 sec.

Frank Burke
Energy Industry Consultant

DS3: System Services Consultation –
Finance Arrangements

This questionnaire has been prepared to facilitate responses to the consultation. Respondents are not restricted to this template and can provide supplementary material if desired.

Please send responses in electronic format to DS3@eirgrid.com or DS3@soni.ltd.uk

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Respondent Company	Energy Industry Consultant

Note: it is the TSOs' intention to publish all responses. If your response is confidential, please indicate this by marking the following box with an "x".

Response confidential ☐

The closing date for responses is Wednesday, 13th February 2013.

Question	*Response*
Value of System Services to the Electricity System	
Do you agree that the proposed value based approach to informing the amount of funding available for System Services is necessary and appropriate to deliver the required services to achieve the renewable targets?	I support the paper's analysis of the benefits of additional system services in facilitating an SNSP of 75% compared to the current limit of 50% so that the system can accommodate the target of 5,200MW of installed wind generation. I agree that the target will not be achievable without the provision of these system services. This is a serious issue for Ireland. Although it could be argued that our renewable electricity target of 40% by 2020 is high, our overall renewable energy target of 16% is quite modest and is reliant on meeting the renewable electricity target if it is to be achieved.
Financial Modelling and Analysis Approach	
To what extent, if any, should the capital costs inform the decision regarding future system services?	In relation to the KEMA analysis, I am not sufficiently expert to know whether their cost estimations are correct but they seem intuitively reasonable. More importantly, I fully agree with the thrust of the argument which is that a high degree of assurance about the level of income from system services is required before anyone will make the required investment in plant to provide these services. Moreover, the greater the uncertainty about the rules and the level of payments, the higher the financial risk for the provider of the service and the higher the return required by the investor, resulting in higher costs eventually for the end user customer.
Do you agree with the proposed methodology for determining the aggregate available pot for System Services?	It is clear that the paper's analysis and methodology is based on system fundamentals. It is also clear that additional system services provide real value rather than being an additional cost and I agree with this value based approach. However the cost of providing these services must also be taken into account. Such services will not materialise if the costs are not covered with a reasonable return, in which case the renewable targets will not be met, so it is important that the value of all the benefits are taken into account.
Allocation of System Services Revenue	
Which of the four methods outlined to allocate the funds between the System Services products would you prefer or is there another approach which should be considered?	Option 3, as proposed in the paper, is a reasonable balance between having a sound basis for the allocation without being overly complex. If possible a number of scenarios should be examined to make the results as robust as possible so that the market can be assured that the values allocated to each service will remain for a reasonable period, say 5 years.
Remuneration Approach	
Is the rationale for proposing dispatch-dependent payments clear?	The meaning of dispatch-dependent payments and the basis of their calculation is not clear in the paper. The explanation at our bilateral meeting seemed reasonable and I would be minded to support it but would like to see it being defined more explicitly so that I am sure I understand

	it and the implications, particularly for the demand-side and non-conventional plant before committing support to this approach.
Is there further justification, not included in earlier consultation responses, for adopting a more capability-based approach?	
Proposed Contractual Arrangements and Payments	
Are the proposed general contractual and payment arrangements clear?	There is an implication in the paper that the TSO will guarantee to pay for the level of system services required by the grid code. In the case of technologies like energy storage for which the Grid Code does not specify system services, payment will be at the discretion of the TSO but will not to be unreasonably withheld. This introduces uncertainty which could hinder the development of such plants and needs to be clarified.