# Harmonised Ancillary Services Workshops
# 29th April 2008 and 1st May 2008

# A Note of the Discussion

## Introduction

This information note provides a summary of the discussions at the two ancillary services workshops held on the 29th April and 1st May, 2008.

The workshops were organised by EirGrid and SONI to initiate a consultative process with all interested parties on the detailed design and implementation of the Regulated Authorities' (RAs) policy principles for future harmonised ancillary services, as stated in the RAs' Decision Paper of February 2008. The workshops also considered the treatment of generator performance penalties, which were also specified in the aforementioned Decision Paper.

The workshops therefore provided an opportunity for Market Participants and other stakeholders to inform the TSOs' and RAs' thinking of how to implement harmonised ancillary services on the island. The workshops were intended to be highly interactive events, taking the format of a series of presentations by both the TSOs and RAs on each of the unbundled ancillary services, where workshop participants were asked to offer their own thoughts.

The focus of this note is to capture the thoughts of participants at the workshops to provide a good summary of the points raised over the two days. It is not intended to be a comprehensive transcript of the proceedings and if any points have been missed we would please ask that these are raised again with the TSOs over the next few weeks. As was stressed at the workshops, the TSOs would welcome further contributions from all stakeholders to help inform their thinking. In particular, the TSOs ask for written submissions to be provided during May 2008 in order to allow them to develop detailed proposals over the summer.

This note does not seek to make value judgments on the points raised at the workshop or to weight them – this will occur over the course of the TSOs' work to develop, evaluate, refine and propose arrangements. Similarly, the points are not attributed to an individual or organisation. The only exception to this is answers given by the TSOs and RAs.

Please also note that no attempt has been made to summarise the material presented by the TSOs and RAs at the workshop – the full presentation is available on the AIP website.

## Scope of Workshops

Both workshops followed an identical format, focusing on the provision and payment of the following unbundled Ancillary Services:

- Black start.
- Operating Reserve.
- Reactive Power.

- Other services.

In addition, the workshops discussed generator performance and sought views on how associated incentives might be implemented.

## Format of Note

The note provides a simple chronological account of the points raised, grouped by workshop and ancillary service.

No attempt has been made to link points made during the day or between the two workshops.

## Discussion Points

**WORKSHOP 1: 29TH APRIL 2008**

***General:***

- Current ancillary services costs across the island are similar – approximately 0.14 c/kwh in ROI and 0.13 c/kwh in NI. In round terms, Euro 40m is spent in RoI and Euro 20m in NI. The RAs stressed that they do not see any significant increase in the total figure for the island as a result of harmonisation.

***Black Start:***

- Transparency of process is key for investors and developers.
- Developers also need some certainty - it is important that the potential revenue is understood by developers early in the process.
- Historically, the connection offer process in EirGrid has not been conducive to securing new Black Start.
- Participants require an early indication of the likely allowable rate of return, likely contract length and any other relevant information to their investment.
- Some questioned if the proposed "cost plus an appropriate rate of return" would correctly value the service and encourage sufficient generation to provide Black Start capability.
- One participant said it was difficult to assess the cost of Black Start and therefore queried if this made the proposed rate of return methodology inappropriate. Black Start capability comes with the cost of their flexible machine and trying to separate out this cost to determine a rate of return was difficult.
- It was asked that all payments be considered over a minimum 10 year period, with 15 years being preferable. All payments needed to be considered over the full contract term – energy, capacity, and ancillary services - in order to work out an appropriate rate of return.
- When assessing the cost of black start, not only should the rate of return be based upon the cost of the investment, but it should also take into account the cost of testing, other operational costs, and general wear and tear on the machine.
- A debate on the length of Black Start contracts focused on both the need from a developer's/generator's perspective for these to be sufficiently long for a capital investment to be made/recovered and a rate of return made, but also that they were not

 

too long so as to exclude competition in service provision in the future. Striking the appropriate balance was key to secure the Black Start capability in the short term, but to also ensure that over the medium to long term an efficient mix of plant and outturn cost results.

- Some argued that it was inadvisable to get locked into what may prove to be unattractive, long term and uneconomic Black Start contracts. Maintaining long term flexibility may come at a short term price, but this may be worth paying if new providers are to be encouraged in the future and an efficient mix of plant is to be encouraged.
- Although some argued for shorter contracts, the consensus view was that for new investment a ten year minimum contract term was required. Some suggested fifteen years or the lifetime of the plant. There was a general consensus that the length should be determined on a case by case basis, subject to an agreed minimum.
- When setting a rate of return, many felt it was important for the rates to be published. Some suggested that a minimum rate of return should be published and/or a banded cap and collar to any rate within which the TSOs would negotiate with generators. Others thought that the rate of return should be fixed, whilst some felt that there should be no artificial constraints imposed on site specific rates of return.
- It was stated that the new East West Interconnector could be built with Black Start capability. Given that there is some competition for Black Start in the Dublin area, it was felt that it would be relatively easy to assess the value of any Black Start offering from the Interconnector and to tender accordingly.
- Given the focus on new generation, it was questioned how existing plant would be treated. For example, the plant in Northern Ireland currently receives no additional payment for Black Start, as it is a condition of its connection.
- An existing provider made the point that it cost them money to provide Black Start capability and that they would therefore want to recover this cost and make a rate of return, just like any new investment. If any new arrangements are proposed, they would need to make sure that their existing costs are covered and if necessary to renegotiate existing Black Start contracts to reflect the new reality.
- A participant claimed that any analysis of historic costs would stop new providers from competing for Black Start services. Therefore, the analysis should be undertaken on a current cost basis and not an historic cost basis.
- It was stated that electrical geography impacts on Black Start capability. Therefore, changes in the transmission system in a given vicinity may impact on the cost/viability of a Black Start option for an existing plant. Thus, existing plant shouldn't be stopped from offering Black Start in the future, even if they haven't provided the service historically.
- Keeping options open for future provision of Black Start capability was seen to be valuable and that this value should be recognised by the payment of option payments where these payments would facilitate future development of Black Start capability which would otherwise be too expensive/difficult to deliver at that time. For example, it might be worth the TSOs paying at the time of the initial plant development for generators to invest in an extra bay which could be used at a later date for Black Start capability. Thus, the option is kept open for relatively small sums, rather than excluded because there is no current need and later not being an economic option because the basic infrastructure just isn't there upon which to build to Black Start capability.
- The provision, settlement and testing of Black Start capability may be by trading period (i.e. half hour) or by trading/settlement day.

 

- The TSOs stated that it in the event of failing a Black Start test, it may be difficult to schedule a second test to reprove within a reasonable period of time.
- It was argued that there is a lost opportunity cost for a generator associated with a test, which they would want to ensure that they could recover (i.e. not disadvantaged). It was stated that generators would want to be kept whole in the SEM.
- Testing one generator unit may also impact on associated (multiple) units and the additional costs on these units would need to be taken into account when testing.
- It was questioned if any retest needed to take into account the full retest capability, or whether it could just focus on that part which failed, where it is possible to isolate. Thus, it was felt that there were a number of levels to any test and that these should be considered by the TSOs in any testing proposals. For example, if it is just the diesels which failed to start for a specific reason, then just test these diesels once they have been fixed and not necessarily to whole of the Black Start provision.

***Reactive Power:***

- There is a relationship between MWs and MVars. The greater the number of MWs dispatched, the less the reactive capability.
- Wind's value should be based upon capability and not just its availability when the wind is blowing.
- It is important that the TSOs are not prescriptive about the sources of generation which can provide reactive power – instead, all service offerings should be judged on the basis of capability and location. These should be the sole determinants.
- Location is the key determinate of the need for and value of reactive power.
- The appropriateness of paying for utilisation was questioned, as it is unlikely to provide a signal for providing reactive power. Hence, rather than utilisation there was a preference for an availability payment as the provider can maximise its availability but cannot control its utilisation.
- A number of parties expressed the view that the balance between utilisation and availability payments for the provision of reactive power should be weighted towards availability. This is because the predictability of revenue is important and this can prove difficult for utilisation. It is also not possible to control utilisation and therefore maximise revenue.
- The increase in wind generation was also cited as a reason for weighting payments towards availability rather than utilisation. This is because wind would displace a lot of mid-merit plant which would no longer run very often, resulting in low utilisation payments.
- It was requested that reactive power rates are published annually by location.
- A view was expressed that the greater the level of complexity of the payment mechanism the less predictable it actually becomes. This was seen as undesirable and therefore a simple, transparent payment is to be encouraged.
- A more general point was made that there was too much uncertainty for investors which was perceived as undesirable. This comment was wider than ancillary services and is a fundamental market issue which needs to be considered in that context.
- There is a danger that some assets may become stranded. This is because investment decisions based upon assumed revenue streams may become invalid over time due to

 

changes in the network which change the value of reactive power at a given location. The example of TLAFs was quoted for illustration; however, the TSOs believed that this was a different example and also questioned the validity of the stranded assets argument - the provision of minimum levels of reactive power is a Grid Code requirement, as it is contained in connection agreements and payment for reactive power provision is not intended to decide investment decisions.

- The TSOs questioned what additional MVar services could be provided over and above that required under the Grid Codes. No firm proposals were forthcoming at the workshop, but would be welcomed by the TSOs in any subsequent communications.

***Reserve***

- The TSOs expressed a desire to incentivise the provision of both reserve mandated in the Grid Codes and also additional reserve.
- It was questioned whether the TSOs were just considering the minimum levels of reserve required under the Grid Codes, or also the provision over and above that in the Grid Codes?
- A participant argued that all generation should be compliant with the Grid Code as it imposes costs on others. The example was given of how in any possible future curtailment of wind generation without compensation this could result from "failures" of other so called 'brown' generators to comply with the Grid Code. This was believed to be unacceptable.
- The relationship of reserve payments to the SEM was questioned.
- Once again, there was a call for certainty and transparency of payment revenues. Payment for availability was seen as necessary, regardless of whether the reserve was dispatched.
- It was stated that the need for flexible plant would likely increase over the next six years given the increase in renewable generation.
- It was questioned if wind generation which is curtailed can still be used for providing operating reserve?
- A view was expressed that availability for primary reserve should not be based upon the machine capability/availability but on actual availability of reserve on the bars. Thus, primary reserve should be paid to synchronous units only.
- In contrast, for quick start reserve, it is the ability to come in the required time frame which is important. Therefore, payment should be based upon availability of reserve and speed of response; not on whether it is dispatched on the bars.
- Smaller machines should also be encouraged to provide reserve.
- A view was expressed that post 2012 much of the plant which will still be required to provide operating reserve won't actually be dispatched in the SEM as it falls down the merit order.
- It was questioned if distribution connected generation could qualify for operating reserve. The TSOs answered that it would not currently qualify, but that they didn't want definitions to get in the way of the future provision of services. Thus, the door was open provided that such generation was capable of providing a service which was of value to the operation of the transmission system.

 

- Concern was expressed that generation investments are long term and that ancillary service revenue may become diluted over time if there is a fixed payment pot and an increased amount of generation.
- A number of participants proposed that the Ancillary Service pot should increase.
- The RAs stated that they did not want to see a jump in the cost paid by customers for ancillary services as a result of harmonisation. However, if there are valid reasons for additional services (such as the increased penetration of wind generation) then they accepted that total payments may increase.
- A view was expressed that looking at the bigger picture the end game should be to reduce the amount of $CO_2$ released into the atmosphere. Thus, it was believed ironic that with the increase in wind generation in order to make this viable from a transmission system perspective it may result in an increase in the requirements for "dirty diesels" on the grid. The reason for this was that it was believed that there were no effective incentives to build new, cleaner flexible generation plant. Environmental considerations should therefore be factored into any proposals developed by the TSOs.
- The example of co-optimisation of various services, such as in North America, was extolled as being worthy of consideration. Thus, ancillary services should be linked to and viewed in the wider context of the energy market. It was important to optimise across all of the services in order to derive reserve prices, thereby providing the necessary economic signals – for example, to ensure that SMP isn't unduly influenced by a change in ancillary service payments, etc.
- Markets were said to evolve and that it was therefore necessary to adopt a longer term perspective.
- One view was that the faster the response to provide operating reserve, the more the service was valuable and should be rewarded.

***Other Services:***

- It was questioned if the provision of static reserve by interruptible load could be defined as "other services" or whether this was better classified as a special case of reserve.
- Another possible service suggested was an environmental ancillary service – for example, to encourage more environmentally friendly provision of services where such services may otherwise be uneconomic. The example of battery storage was provided.
- Short term maximisation was suggested as another service.
- Other suggested services included storage, efficiency and minimum load dispatchability.
- It was suggested that smaller units should be encouraged.
- Other services can be contracted if their benefits can be justified and the associated costs of providing these new services will be allowed to increase the ancillary services pot.

***Grid Code Compliance and Generator Performance Penalties***

- It was questioned if the TSOs' proposals in relation Grid Code compliance and the imposition of Generator performance penalties marked a change in policy, given recent comments at the EirGrid Customer conference by a new CCGT which said that it was finalising its derogations from the Grid Code. It was further questioned whether these new derogations were now likely to be granted?

 

- The RAs stated their support of the proposals to give teeth to the TSOs to encourage Grid Code compliance.
- The TSOs encouraged developers/manufacturers of new generation plant to enter into discussions early in any design process to ensure that the generation was Grid Code compliant.
- The TSOs also said they wanted pro-active communication of any non-compliance issues by generators – this was likely to incur lower penalties than if non-compliance was subsequently discovered by the TSOs.
- In response to the argument that penalties should apply to both derogated and non-derogated plant, one party suggested that it was difficult to sensibly put derogations and penalties together – if a derogation had been granted then it was effectively deemed to be Grid Code compliant and therefore could not be penalised for Grid Code non-compliance for the derogation in question.
- A call was made for penalties to be based on the deviation away from Grid Code values (or where appropriate from derogated values). Thus, the greater the deviation the greater the penalty.
- It was also suggested that penalties should be banded to reflect the severity of the deviation from that required under the Grid Code.
- It was argued that the Grid Codes should evolve to reflect different technologies.
- If the Grid Codes are deemed unsuitable then Modifications should be raised by the generator representatives on the Grid Code Review Panels.
- There was a debate on the possible linkages between penalties for generator performance and capacity payments in the SEM. Some felt that a proportional reduction in capacity payments was appropriate – i.e. that the reduction should relate directly to the capacity reward received. If this was the case, this could be imposed directly via the SEM, but this would require a Modification to the Trading & Settlement Code (TSC). Alternatively, penalties although the value is indexed-linked to capacity payments could be handled by the TSOs under the Grid Code rather than via the SEM.
- An alternative suggestion was that any performance penalties should be proportional to the cost imposed on other users by the non-compliance.
- It was questioned if the principles of non-compliance and generator penalties applied equally to Demand Side Units. Similarly for Aggregated Generator Units, are these covered under the Grid Codes?
- Links back to the SEM and the limitations of the Market Systems were also cited as possible reasons for non compliance with the Grid Code - for example, the possible restrictions imposed by the construction and format of Commercial Offer and Technical Offer Data.

## WORKSHOP 2: 1ST MAY 2008

### *Black Start:*

- The history of Black Start was questioned. In response, EirGrid stated that in RoI there had been no new Black Start in the last 25 years. New capability was now required, but two recent competitions had failed to deliver any generation which was capable of delivering the stated criteria. A different approach was therefore proposed which would allow the TSOs more flexibility to negotiate with individual generators without being tied to stated criteria.

 

- A participant responded that there was a not insignificant cost associated with responding to the recent Black Start tenders and that there was a loss of credibility associated with EirGrid having made no award on the previous two competitions. These two issues needed to be considered and addressed if future tenders were to attract participation.
- The TSOs questioned how they could get Black Start higher up a developer's agenda? The TSOs expressed willingness to better fit with a developer's timelines and therefore questioned if a formal competitive tender was compatible with the development timelines of new generation.
- The TSOs also offered the possibility of providing some funding to developers for the installation of basic infrastructure to allow the option of future provision of Black Start capability.
- A call was made for there to be transparency on Black Start decision criteria. It was also asked that the minimum criteria be published along with the TSOs' Black Start requirements. Publication would allow developers to approach the TSOs, rather than wait for the TSOs to approach them. In this way, discussions could be entered into early in the process thereby maximising the opportunity for outcomes which met the needs of the TSOs and the developers.
- In order to facilitate transparency and competition, it was suggested that all negotiated Black Start rates should be published.
- It was believed that new investment in Black Start capability should be rewarded with an appropriate rate of return.
- Another participant argued that awarding a fixed rate of return on the cost of the investment failed to adequately reward the value of the service to the system and may fail to incentivise the necessary investment as the relative size of the Black Start reward was small compared with the whole investment in the new generation. Value rather than cost was the appropriate way to reward and thereby incentivise new Black Start provision. This was believed particularly important for plant with a lower cost and therefore competitive advantage – why shouldn't it extract full value in addition to a rate of return on the lower cost?
- It was questioned what new investment in Black Start was EirGrid looking for at the current time? EirGrid responded by stating that it currently sought at least one additional Black Start unit in its Eastern Region, but that it was also looking at the requirements of all four of the areas in its Power Restoration Plan.
- It was questioned how the TSOs would assess the relative merit and value of competing Black Start offerings? EirGrid responded that the minimum requirement was that it must be able to start up two 'adjacent' units[1]. Ultimately, it is a call that must be left to the TSOs to make for anything above the minimum criteria and the answer will depend upon a potential complex set of considerations. These would be evaluated using modelling and other dynamic studies to assess the relative merits of competing Black Start offerings and their impact on the overall Black Start plan.
- It was argued that the current Black Start rates are not a very good guide to future rates. In the case of EirGrid, it was believed that they were too low and in the case of SONI it didn't currently explicitly pay for Black Start as it was a requirement of the connection

[1] Subsequent discussion suggested that adjacent might not be the most appropriate term. When questioned whether the TSOs have specified criteria for "adjacent", the reply was "no". It was established that distance was not necessarily the criteria and that therefore maybe "electrically adjacent" was a better term.

 

agreement. Thus, existing rates would not provide the necessary incentive. Instead, it was argued that the TSOs should assess any new provision based upon its merits.

- In response to a question about whether Black Start can be applied to individual units or only to a whole station, the TSOs responded that individual units should be ok provided that they met the minimum criteria.
- Regarding the minimum criteria, it was questioned whether these would include a MW value? The TSOs responded by saying that one of potentially a large set of criteria would likely be a MW value.
- It was also questioned whether any new process for securing Black Start provision only applied to new Black Start plant? In response, the TSOs said that the answer was "no", that existing plant could be eligible but only on capability additional to that already contracted/provided.
- In common with many questions that day, a participant requested to be told how existing Black Start plant would be treated in future and the TSOs replied that they did not yet have a definitive view and were seeking participants' views before formulating their own.
- It was questioned what was the impact on adjacent units during a Black Start test and if there was an adverse financial impact would these adjacent units be compensated? The TSOs answered that there would not be an impact in the energy/capacity market, as a unit declaring available shouldn't be disadvantaged in the SEM.
- In response to questions on the numerical example of payments under Black Start, it was stressed that all numbers in the presentation were for example only and should not be treated as necessarily representing reality. No actual payments have yet been worked out.
- A participant said that the rate or return (RoR) was key to any new investment in Black Start - the RoR measures the amount of risk that a developer is prepared to accept, as do any associated penalties.
- There were questions asking what the RoR would be and also on whether the return was based solely on the cost of the project, or the project plus the cost of service.
- The point was made that the price of equipment is rising all the time and that therefore timing was a real issue to structuring any deal to develop a new Black Start capability. This puts pressure on decision timelines, requiring the TSOs to be quick in assessing the merits of projects and to negotiating contracts with potential providers. If this process was too drawn out, it was likely that deals would be missed.
- It was also stressed that the size of a project is important. Time and cost must therefore be appropriate to the reward on offer. As Black Start is relatively small compared with the overall investment in new generation, the effort to negotiate a Black Start contract should not be disproportionate to the relative size/importance. It was questioned whether a 1MW Black Start capability was "too small to bother with". A higher rate of return was the obvious conclusion to attract interest together with a simplified process to cut down on the time and effort to negotiate contract agreements for Black Start.
- In response to the question "would there be penalties for not being available" the answer was "yes". The basis of any penalties would most likely come through testing.
- When asked whether the TSOs planned full scale tests, such as the disconnection of a substation, the answer was yes, whenever possible. It was suggested that a likely frequency was once every one to two years.

 

***Reactive Power:***

- There were a number of questions based upon concern that the cap on the overall regulated pot of money available to ancillary services would result in generators' income being scaled back. This focused on whether the pot was fixed to set the original rates but not to necessarily constrain the actual payments or whether, like the Capacity Payment Mechanism in the SEM, the actual amount of money to be paid was fixed and therefore payments could be diluted if there was greater call on ancillary services than had been assumed when the rates were set. That is, are rates fixed for a year or do they vary depending upon the amount of reactive power which is available to the system?
- A number of generator representatives stated that it would not be appropriate for generators providing ancillary services to fund any shortfall if the payment cap is hit. The TSOs indicated a preference for agreeing rates up front based upon a fixed pot of money, which would guarantee that rate for all services procured and delivered during the period in question.
- It was questioned whether generation connected to the distribution system is eligible to provide reactive power? The TSOs replied that generation must be transmission connected, as otherwise it was of no practical value to the transmission system. To be of value, any offering must deliver a service to the TSOs and in this case it would not.
- Discussion on the electrical geography and reactive power payments by location confirmed that these were likely to vary over time as the system is fairly dynamic. However, as the Grid Codes require reactive capability and there is no intention of changing this requirement, no new investment should be required to respond to the dynamic situation.
- It was questioned if the TSOs had considered the examples of other countries with similar topography? Had any benchmarking of international best practice been conducted or any other studies commissioned? It was argued the island of Ireland could be viewed as being a more compact system than for example Great Britain and that therefore it was surmised that the value of reactive power and other ancillary services should be relatively greater in Ireland than GB. In response, the TSOs said that they had studied applicable structures internationally and learned from these to inform best practice. However, given the different regulatory regimes and the fixed nature of the proposed pot of money, it was not appropriate to use international studies to inform the rates to be paid for ancillary services. The TSOs stressed that they were constrained by the fixed nature of the overall pot of money and that it wasn't possible to directly link payments to those for capacity in the SEM. The RAs confirmed the need to crack the current issue first, before considering wider issues such as any interaction with the capacity pot.
- On a related point, participants highlighted the link between capacity payments in the SEM and payments for ancillary services. The Annual Capacity Pot is set annually by the RAs through a process which is the product of the total all island generation capacity to satisfy a stated capacity adequacy standard and the fixed costs of an efficient Best New Entrant peaking unit. From this is deducted the anticipated ancillary services revenue to be received in the year – hence, the link between the two. The TSOs responded by saying that the impact of ancillary service payments on the capacity payments would be small, given the relative sizes of the two (i.e. ancillary services is small) and the fact that the ancillary services pot was unlikely to change significantly year on year, everything else being equal.

 

- A number of participants commented that ancillary services will become increasingly important with the changing generation mix and thus the ancillary services pot should increase.
- A participant noted that the fact the ancillary services pot would not vary significantly from that currently paid and that it would not change significantly year to year was not written down in the Decision Paper or anywhere else to his knowledge.
- The RAs noted that they would take away the concerns raised at the workshop to discuss with those currently producing the Annual Capacity Pot for next year.
- A participant said it was an issue that the capacity payment pot was only known for a year at a time, as this introduced uncertainty and risk.
- Simplicity was seen to be a desirable objective of any payment mechanism.
- A participant made the point that under a non command and control system the opportunity was lost to influence decisions regarding the location of plant, optimality, etc. Ancillary services could provide some means of correcting for this if applied appropriately. The TSOs replied that they had some flexibility to contract directly with generation where necessary and that as a consequence not everything had to be via the SEM. The RAs said that locational signals were provided by TUoS, TLAFs and Ancillary Services. Whilst not a topic for this debate, they were aware of the wider issues and considering.
- It was questioned whether utilisation payments would reflect the cost of fuel that was being burned? The TSOs reply was that utilisation payments should reflect the additional cost of provision, which was not believed to be significant.
- The large increase in wind generation projected for the future was likely to impact significantly on the future requirements for ancillary services – particularly looking out to the 5 to 15 years time horizon. It was therefore questioned whether the increasing need for MVars was likely to be a big issue? In response, the TSOs said that the likely requirement would be for more complex and flexible ancillary services. However, the current focus in designing the harmonised ancillary service arrangements was to look at the needs over the next five years and not at the possible longer term requirement. It was difficult to look too far ahead and there was a danger that in so doing the current needs could be inadequately addressed.
- A follow up point was made that planning for the longer term should be possible as the Seven Year Statement and Generation Adequacy Report contained reasonably detailed information about the future levels of demand, technology, investment, interconnectors, topology, etc. This would indicate an increased MVar requirement which should be addressed at this time. In response, the TSOs said that the Seven Year Statement and GAR are an annual snapshot of a forecast of future requirements and therefore said appropriate caution should be exercised in the way this information is used.
- One participant expressed concern that although the options being considered should incentivise the delivery of short term requirements for MVars, they would not incentivise the speed of response to ensure that more could be delivered as the system topology changes.
- A point was made that any investment in reactive power capability was likely to be significant and that as a consequence certainty of payment was required. In response, the TSOs stated that the provision of reactive is a Grid Code requirement.

 

***Reserve***

- One participant referred to the RAs' paper on the Proposed High Level Design for the SEM (AIP SEM 06-05) and asked if the RAs' policy decision stated in that paper relating to ancillary services remained true today. In response, the RAs confirmed that the policy position had not changed.
    - Ø The High Level Design states that "*the SEM will require a number of ancillary services for its efficient and reliable operation*" and that these would be procured via contract to "*reflect the fee that a generator wishes to receive for providing reserve over and above the opportunity cost of not running*."
    - Ø In addition, the paper states that "*the TSO will deploy operating reserves in a manner that seeks to minimise the overall cost to the system with respect to the contract prices and the marginal cost of energy*" and "*it is proposed that the cost of the reserve requirement in each trading period is apportioned for on a 'causer-pays' basis. The generation unit that causes the largest single risk of failure will pay the largest portion of the reserve costs. This may be extended to cover groups of generation, which act as a single contingency*."
- Harmonisation of the Grid Codes would pick up any remaining differences in definition of reserve on the island.
- One participant said that as baseload plant can't contribute any more reserve, this implied that peaking plant should have more value to the system and be rewarded accordingly.
- There was a debate about when reserve is of value and therefore eligible for payments. One participant questioned if someone who is disconnected was eligible for reserve payments. If a unit could start in 5 hours, is it eligible for reserve or not? How was it to be decided who was technically able to deliver and therefore eligible for reserve? Was it the speed of response which was important? It was suggested that maybe what was required was an increased granularity of types of reserve.
- It was also questioned how the TSOs would optimise the cost of reserve, the cost of constraints and the cost of running the system?
- In response to the proposal for a possible rebate to be paid, one participant specified a preference there was a clear preference expressed for carrot rather than stick. It was questioned how the price signal would reflect generators' performance and whether money is to be paid to generators who perform? One participant said that it required certainty of payment and therefore it would be the base rate rather than any potential bonus that it would use to evaluate any investment decisions, etc.
- The on the day incentive for generators to provide reserve was questioned, given that the regulated rate of return is set annually in advance. The TSOs responded by reaffirming the requirement to provide a minimum amount under the Grid Codes. If this proved insufficient, the TSOs will consider securing additional amounts via direct contracting. The TSOs also said that they would welcome other thoughts and suggestions.

***Other Services:***

- The debate struggled somewhat to understand and identify other potential services.
- One suggestion was for warming contracts. Another was maximisation – being part of the drive for more flexibility.

 

- For any new service, one participant asked that both carrot and stick were appropriately deployed. Grid Codes should be tightened were necessary and performance incentives introduced which encouraged good performance through reward
- One view expressed was that there should be disincentives applied to inflexible, very slow generation plant. This would seek to stop them coming or declaring very slow characteristics.
- There was interest in understanding to what extent the new East-West Interconnector would be providing ancillary services as well as energy? A number of participants asked for transparency from EirGrid, as developer, on this matter. The East West Interconnector was competition to other generation providers and therefore they would like to know how much ancillary services are being provided and the impact it will have on the ancillary services revenues of the remaining plant. Clarity was requested on how the proposed Interconnector would operate. EirGrid in response said that it was too early to provide such clarity at this time, but that information would be forthcoming and would start to materialise later in the year once a decision had been taken on the tenders currently under consideration.

***Grid Code Compliance and Generator Performance Penalties***

- One participant stressed that whilst Grid Code compliance was an essential principle, there had to be exceptions particularly for those stations that were first conceived and built before the Grid Codes. It was argued that it was unfair to penalise generators who were there before the rules were introduced and that therefore these should be treated as a separate tranche in any proposals.
- Others feared that treating old plant differently would produce an unfair advantage for such old plant and would result in an incentive to keep old plant open. It was questioned if this was either reasonable or desirable? It was further argued that there should be an incentive for all plant to be Grid Code compliant and if old plant couldn't meet this then maybe it was sending the right signal for that plant to close. In response, an operator of older plant said that such plant was never designed to achieve the Grid Code requirements and that therefore it was unreasonable to now use these requirements to force the plant to close. The potential negative impact on system security was also highlighted.
- A related view expressed was that a Market incentive for a unit to run under the SEM would always outweigh a Grid Code incentive.
- Another participant said that the stick approach was not as effective as a carrot and stick. Incentives needed to be appropriate and the wider impact needed to be considered. In particular, imposing penalties would simply increase the investment risk (cost) and thereby reduce the likely appetite for new investment. Ultimately, this would put up costs overall and impose an additional burden on the end customer, which presumably wasn't the original intention. It would be important to guard against such a scenario. The TSOs response was that everyone had signed up to the Grid Code and the obligations/risks were therefore known. If the Grid Codes are perceived as being 'wrong', then concerned parties should use the defined process to seek to bring about change to the Grid Codes. The cost of failing to comply with the Grid Code is currently to overpay those poor performing generators for the service received and this imposes costs on everyone else including ultimately the end consumer.
- Another view expressed was the carrot and stick should equal out.

 

- There was considerable debate on whether non Grid Code compliant plant should continue to be allowed to be connected. The TSOs expressed a clear preference for all plant to be and remain Grid Code compliant, but said that if needs must then for a time limited period (e.g. over the next winter) it may be necessary to accept non compliance and continue to allow the unit to remain connected to the system. In this event it would be necessary to apply some combination of a time limited derogation, penalties and non-firm access to such non compliant plant. The counter argument expressed was that this condoned such behaviour, which went against a generator's licence which makes compliance with the Grid Code an absolute requirement. There was a concern that this sent the wrong signals and should therefore be discouraged. The message should be that you will not be connected unless you are Grid Code compliant or have a derogation.
- On a related point, if non-compliant plant is allowed to remain connected to the system at certain times, or is temporarily disconnected at others, it was questioned if this introduced uncertainty and open up a new legal issue due to the question of interpretation. Did such treatment imply that you were compliant and then not, or simply that the Grid Code was not being effectively enforced for periods of time when it suited the TSOs? The TSOs responded by saying that they remained committed to all plant being Grid Code compliant and that if non compliant plant was allowed to remain on the system it would only be allowed to do so for a time limited period and that it would not cycle on and off, say every winter/summer.
- The point was made that the Grid Codes are big and complex documents. Given this, it could be argued that there are many different levels of compliance some of which are more important to ensure and others of which are less important. An analogy to minor traffic/criminal offences was given relative to more serious crimes like murder. The penalty should fit the crime. Compliance should therefore be relative rather than absolute. Thus, it was argued that the penalty should be proportional to the offence of non-compliance. The counter argument was that all compliance was important and by not complying generators were putting the system at risk. Potentially, any deviation has a system impact. It would also be difficult and complex to assess each deviation on a case by case basis to treat according to its merits.
- A related debate considered the new development of generation and whether there was a case to be made for distinguishing between so called minor or major breaches of compliance with Grid Code?
- When developing any site, the TSOs requested developers to come and discuss the Grid Code requirements and any issues as early in the process as possible, so that manufacturers can find solutions to meet the requirements of the Grid Code.
- One participant queried whether a test of materiality was already in place – for example, in the SEM there is a requirement to follow dispatch instructions and if a unit fails to do so by more than its defined Tolerance Band then it will get an Uninstructed Imbalance Payment, which may be positive or negative. The TSOs said that they were looking at expanding and improving on such messages.
- A debate on how to treat existing plant said that a number of options may be considered for allocating the costs of deviations from Grid Code – for example, back to the individual units which are non-compliant on a per MW/MVar basis.
- A participant said that two principles should be applied, which he argued would produce the right incentives. First, that non-compliance is not an option and that derogations are required in all cases (which should be sought early). Second, derogations shouldn't provide a commercial advantage.

 

- The TSOs made the proposal that in future the costs of processing derogations should be charged to the party requesting them. It was questioned if this cost included the costs to the system of introducing the derogation and the answer was no, the cost was purely to cost of processing (i.e. Undertaking the impact assessment) and that any system cost imposed would be used as part of the cost/benefit performed in assessing the merits of the derogation and approving or rejecting as the case may be.
- The size of the likely fee was questioned – 10k or 100k? The answer was that among other factors it likely depended on the size of the plant, with larger plant requiring more involved studies and therefore costing more to perform. Such studies are time consuming and to date it has been TUoS customers who have been funding this cost.
- It was asked if derogation assessments would be made public, to which the TSOs responded that they would be happy to do so provided that the RAs determined this was appropriate.
- It was questioned whether derogation application fees would apply retrospectively? The TSOs reply was to answer "no", they would not be applied retrospectively.
- The TSOs asked if everyone was happy with the principle of "polluter pays" in relation to derogation costs. Given silence, the TSOs stated that they assumed this to be the case.
- It was argued that the time period for penalties charged on a €/£ per MW/MVar may vary by type of non-compliance – for example, per period, day, etc.
- A participant called for the cost of derogations to be known for each type together with the associated penalty.
- With regard to derogations and any associated penalties, it was argued that the key principle was that everyone should be treated equally.
- Concern was expressed that penalties make the island of Ireland less attractive for investment relative to other markets. This risk of non-compliance should not just be seen as a downside to potential investors – bringing us back to the issue of an appropriate mix of carrot and stick which takes into account the wider objectives.
- TSOs re-emphasized that they did not intend to pay for Grid Code compliance – they will instead seek to penalise non-compliance. However, it was a given that the TSOs would pay for ancillary services.
- The TSOs had presented a proposal that any revenue collected from imposing penalties on non-compliant generation should be distributed back to demand customers. An alternative was suggested that this income should be distributed across all Grid Code compliant generators in order to produce the appropriate mix of carrot and stick.
- It was argued that if a generator is doing more than the minimum required under the Grid Code then it should be rewarded with an additional payment.
- It was questioned if non Grid Code compliant would be ineligible to receive payments for ancillary services? The TSOs said that they were not currently proposing this, but that it was a possible option. If such a route were adopted it was questioned if this would be all ancillary services payments or just those ancillary services associated to the Grid Code breach?
- The TSOs confirmed that the future granting of derogations would be harmonised across the island.
- The relative size of the ancillary services, energy and capacity pots were considered. Overall, it was asked how much of the potential revenue was at stake for non-compliance?

 

- It was also questioned if ancillary services were seen as being relatively insignificant, given that the size of the ancillary services pot is dwarfed by the those for both capacity and energy. The TSOs responded by saying that ancillary services are absolutely vital, but that the TSOs can't question the relative payment pots nor the fundamental nature of the SEM. It may be that the ancillary services signal could be more significant in the future to meet the changing nature and needs of the system.
- A debate followed on the need for the ancillary services "pot" to ramp up as other changes impact, most notably the increase in wind generation.
- It was questioned whether the proposal to charge the costs of testing to the generator account should be applied to all generators regardless of test outcome, or only to those which fail?
- In response to a question about the future treatment of generation subject to PPB contracts, it was stated that these already have (more onerous) performance provisions in place which will need to be considered and how they relate to penalties for Grid Code compliance.
- It was suggested that further alignment of the Grid Codes was needed.
- It was questioned whether interconnectors would be treated similarly to a generator? The TSOs responded by answering that interconnectors would need to meet international standards and would then be treated similarly to generators wherever practical. It was also noted that Moyle doesn't currently receive payment for ancillary services – interconnectors are different and, for example, it is Great Britain and not Moyle which provides reserve. The Interconnector channels rather than provides reserve.
- It was queried how non compliance penalties could be successfully imposed on distribution connected plant, given the lack of a contractual framework between the TSOs and the distribution connected plant required to support the policing and imposition. Just how could the TSOs enforce any penalties? One possible suggestion was via Use of System Agreements.
- The treatment of Demand Side Units was questioned with respect to non-compliance with the Grid Code. It was also noted that the Winter Peak Reduction Scheme was outside the scope of this debate.

### *Additional Payments and Charges*

- A point was made that if security of supply is an important objective, then the cost of dual fuel should be paid for via Ancillary Services rather than through the SEM.
- It was questioned what is meant by an "environmental constraint" in the TSOs' presentation? The TSOs responded that this had been suggested at the previous workshop. It was to provide a possible means of taking into account environmental factors, such as the running of diesels. In response it was noted that there were already physical limits imposed on the numbers of hours running per year of certain types of plant (e.g. OCGTs in Northern Ireland) and that the Market should be left to sort out such environmental considerations, for example through the price of carbon included within bid prices.
- It was argued that there was a danger in incentivising flexible (multi-mode operation) plant to be compliant with the Grid Code that this may result in it actually being less flexible in order to ensure compliance rather than being prepared to push the envelope.

 

## Next Steps

EirGrid and SONI would like to thank all participants for their useful contributions at the two workshops and to encourage ongoing discussion on this important topic in order to properly inform the development of the TSOs' detailed proposals to implement the RAs' policy decisions.

All interested parties are kindly asked to send further thoughts, opinions, options or even worked up proposals to the TSOs for their consideration. In the first instance any correspondence should be addressed to leslie.burns@soni.ltd.uk and conor.kavanagh@eirgrid.com.

In order to meet the project timelines, it is requested that correspondence is provided by the end of May 2008. Thank you for your co-operation.