User Seminar Questions - Glasgow

Connections Update – Chris Sambridge/John Zammit-Haber

1. **Could you give a simple example of a pre fault constraint and a pre fault overload?**

Figure 1

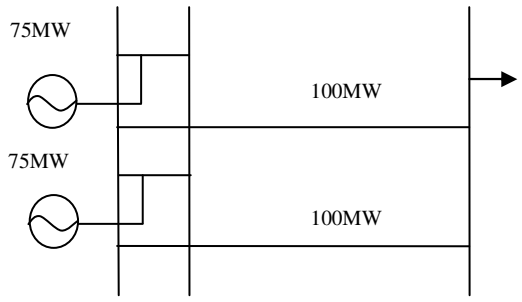

Figure 1 represents a situation where there is **no prefault overload**, but there is a need to **constrain** off 50MW prefault.

Assuming equal sharing between the circuits, the full 150MW of generation would result in 75MW flowing prefault on each circuit, i.e. within the 100MW rating: **no prefault overload**

However, a prefault constraint is required because the NETSSQSS states that "for the secured event of a fault outage… of a single transmission circuit… there shall not be …. unacceptable overloading"

If a fault occurs on either circuit, the remaining capacity on the alternate circuit is 100MW.
Thus, to prevent unacceptable overloading of this circuit in the event of a fault, the generation must be constrained **prefault** to 100MW (i.e 150-100 = 50MW constraint volume).

Figure 2

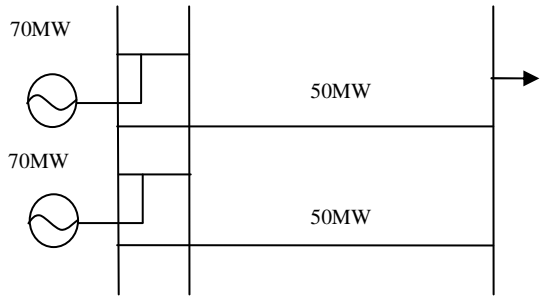

Figure 2 illustrates both a prefault overload and the need for a pre fault constraint.

With the capacity of the circuits smaller than figure 1, assuming that the output of thje generation shares equally between the two circuits, full generation output would result in flows of 75MW on both ciruits, such that both would be in excess of their rating (i.e. overloaded prefault.)

To preven them overloading prefault would require constraining 50MW of generation off, such that the maximum generation was 100MW which when evenly split between the two circuits results in flows equal to rating.

However, to meet the NETSSQSS*, the system must be operated securely to accommodate the secured event of a fault outage of either circuit. To this extent, the total generation output must be **constrained prefault** to a total of 50MW (i.e. a constraint volume of 100MW) so that, in the event of either circuit fault, the generation output is within the rating of the remaining circuit.

* NETSSQSS = National Electricity Transmission System Security and Quality of Supply Standard

2. **Is there a point at which constraints become unacceptable?**
   National Grid recognise that ICM will impact constraint costs and these will be monitored and regular updates will be provided to Ofgem.

Consenting Process – Steve Knight-Gregson

1. **Given the planning act only applies to England and Wales, how do you deal with planning for projects across a boundary?**
   Where there is a trans-boundary project with Scotland, National Grid can make a single application for a Development Consent Order to the IPC for the part of the overall works in England with separate and co-ordinated consent applications to the Scottish Executive and/or relevant local planning authorities under existing consent regimes, which for electricity projects would be applications made by the relevant Scottish transmission owner. This may include applications under Section 37 of the Electricity Act 1989 (as amended) for overhead lines and/or applications for planning permission for substations.

   Where there is a trans-boundary electricity transmission project with Wales, a single application for a Development Consent Order to the IPC covering England and Wales can be made by National Grid for a new overhead electricity transmission line. Any associated consents relating to elements of the project in England can be included in that application, but it will always be necessary to apply separately in Wales for associated consents under the existing consent regimes (e.g. to local planning authorities for planning permission for associated substations.

2. **What is the risk to the new planning regime?**
   The Planning Act 2008 introduces a new consent regime, including a 'single consent' approach in England, a new decision-making body and a responsibility to carry out fairly rigorous and mandatory pre-application requirements placed on project proponents, with a 'go-live' date for energy projects in March 2010. This is going to require some changes to ways of working, some earlier co-ordination of detailed engineering design, options evaluation, project consultation and communications activities. Nationally significant electricity and gas transmission projects already have quite lengthy lead times, 2-3 years and longer being normal to go through development/system options, routeing/siting studies and then detailed environmental impact assessment of a preferred option, before applications for consent are ready to be submitted. Whilst there are transitional arrangements designed to try to accommodate this, regulations and secondary legislation and guidance around the new Planning Act processes are only just starting to be issued by government and the IPC. For projects that are already in the planning stages and likely to be the subject of applications for Development Consent to the IPC, changing the timings around the development of aspects of projects and getting to grips with and ensuring the new processes are implemented as effectively as possible is a significant challenge.

3. **Would the TO be able to engage with a developer prior to an offer being accepted or application being sent?**
   Yes. As has always been the case, if a customer wishes to see consents and project development related activities commenced in advance of, or during consideration of, a connection application, those works could be commenced under an indemnity from the customer. Please contact your Customer Account Manager for further information in this regard.

Charging Update – Nigel Fox

1. **Will the offshore TNUoS charge affect the charges onshore?**
   Yes and as described in the slides the generation residual will reduce and the demand residual will increase. In the example and for the connection of one offshore 300MW power station, the magnitude is roughly £0.05/kW reduction for generation and £0.09k/W increase for demand.

2. **Will this charge change every year?**
   There should only be one mid-year charge change: at Go-Live scheduled in June 2010. The enduring regime will see future tariffs calculated as per the current arrangements ie using a model with all generation which is scheduled to connect prior to the winter peak. Any new offshore generation will affect the residual as described but this will not be effected mid-year.

3. **What is the size of the charge?**
   National Grid estimates that within about 4-5 years, the generation tariff could be reduced by approximately 80p/kW and the demand tariff increase by approximately £5/kW but these are very preliminary assessments and National Grid is obliged to keep the charging methodologies under review at all times to maintain amongst other things cost reflectivity.

Offshore Update – Julian Leslie

1. **How does the round 3 offshore figures line up with the 2020 gone green scenarios?**
   The gone green figures are not forecasts made by National Grid but a set of scenarios that has been modelled to achieve the 2020 targets.

Improving Grid Access – Mark Holden

1. **What happens in the time between the technical consultation and June 10th?**
   Following the close of the technical consultation, we will consider the responses and make any subsequent changes to the model and code and licence changes before implementation. The Secretary of State will then take up his powers and write to the code and licence owners to direct modifications. We have left time in the project plan to account for delays including the potential election period.

2. **What is the scope of the initial consultation?**
   The initial consultation seeks views on the potential models for grid access reform, and gives our initial view on the appropriate scope of the project and the proposals considered during the industry process. We have flagged that some issues, such as locational charging for balancing services, could form part of our solution and are therefore potentially within scope. We are seeking views on which elements are essential components of an enduring solution.

3. **With regards to enduring rights, will these be tackled for existing generation?**
   Our focus is on reforming transmission access for new generation, so we will only look at the arrangements for existing generation in so far as this is integral to the model for enduring grid access.

TAR/Access – Hedd Roberts

1. **With increasing charges, how can customers take advantage of signals to build south when there is little wind there?**
   Signalling transmission costs to generators allows these costs to be taken into account when generators are making siting decisions. Generators can weigh these costs up against other locationally varying costs and make an efficient siting decision. For coal fired power stations, these other locationally varying costs might include coal transportation costs, for windfarms they are likely to involve different potential load factors.

2. **If Users are behind a derogation, the potential cost of constraints will be really high – did this get included in the analysis with Ofgem?**

   The analysis that National Grid has completed most recently has been to directly address the questions raised in Ofgem's letter of 17 June 2009:

   http://www.ofgem.gov.uk/Networks/Trans/ElecTransPolicy/Charging/Documents1/090617%20Letter%20re%20analysis%20locational%20BSUoS%20final.pdf

   These questions related to the impact of locational BSUoS on different users and the wholesale price under scenarios of no behavioural change, behavioural change and market power. There is only currently one derogated main transmission system boundary, although the original consultation process included a process for the treatment of multiple derogated boundaries.

2. **With the introduction of locational BSUoS, how will this impact the costs of marginal plant in the wholesale market as the recovery of the marginal plant in Scotland will be higher?**
   National Grid's analysis shows a slight reduction in the wholesale price as a result of the introduction of locational BSUoS because although the locational BSUoS charge means that marginal thermal plant in Scotland becomes out of merit when there is a constraint, the price of marginal thermal plant in England that replaces it is reduced because it no longer faces the socialised cost of constraints. It must be stressed that this result is heavily sensitive to the assumptions that National Grid have made as part of the analysis, and we are not able to demonstrate that an increase in the wholesale price could not occur.

User Seminar Questions – London

Connections Update – Chris Sambridge/ John Zammit-Haber

1. **What type of consents will we consider for ICM?**

   All applications to National Grid will be considered for ICM regardless of consent status. The connection dates given in a connection offer will be the optimal completion date which will be subject to the local works being built which is dependent on achieving consents.

2. **How will we deal with infeed losses?**

   The current limit for infrequent infeed loss risk is 1320MW. Unless the User has requested a variation of design, local works will be included to ensure the loss of infeed is below this level. However this limit is currently being examined in the SQSS review conducted by National Grid.

3. **Is diversity the key for gaining a connection as National Grid decides what is local and wider based on this?**

   Diversity of generation in the area that you wish to connect is one of the elements that will be considered in determining which of the reinforcement works, driven by Chapter 2 of the SQSS, will be allocated as wider and local works. Each application will be assessed on a case by case basis.

4. **Is the definition of local works also key?**

   The intention of ICM is to allow the connection of projects where local works can be completed ahead of wider works. This will be defined on a case by case basis and is affected by the availability of diverse constraint management options.

5. **Will there be a way of letting customers know when the derogation has been approved?**

   National Grid will notify the relevant parties when decisions have been made on derogations. The approval of derogations will be a contractual milestone in the construction agreement.

6. **To clarify, is the offer based on local works then wider works subject to a derogation?**

   All works required for a fully compliant connection will be included in the offer. Those works defined as wider and from which a derogation can be sought will not be required to be completed before the connection of the generator. The wider works are still required for compliance with the SQSS.

7. **What are the three options for ICM connections?**

1. Where there are diverse constraint management options, the works required to maintain compliance in accordance with the SQSS will be reallocated as wider works. Therefore, the contractual date will be based on the connection of the local works.
2. Where there are no diverse constraint management options, commercial arrangements or a design variation may be used.
3. Finally an offer can be based on the local and wider works being completed before a generator can connect to the transmission system.

Consenting Process – Steve Knight-Gregson

1. **Are consents required for National Grid leased land?**
Under Section 16(3)(b) of the Planning Act 2008 Development Consent is not required in England and Wales for an overhead electric line to the extent that (when installed) the line will be within premises in the occupation or control of the person responsible for its installation. Such an exemption applies whether or not the land is leasehold or freehold. Similarly, substation or above ground installation works falling within the limits set out Schedule 2, Part 17 of the Town and Country Planning (General Permitted Development) Order 1995 (as amended) can also constitute 'permitted development' and do not require separate applications for planning permission providing the land in question is 'operational land', whether or not leased or freehold.

2. **Is the IPC process in place now? What are the timescales for this?**
From 1 October 2009 the IPC is a legally constituted body and from March 2010 applications the IPC will be taking applications for Development Consent for energy-related Nationally Significant Infrastructure Projects. The following link will take you to the IPC web-site http://infrastructure.independent.gov.uk/

Charging Update – Nigel Fox

1. **How are generators charged if they are offshore licence exempt?**
Offshore 132kV connected generators which are less than 100MW will qualify for the small gens discount. The latter is due to expire on 1 April 2011. It should be noted that Eon have recently presented to the Transmission Charging Methodology Forum (TCMF) on a proposal to extend embedded benefits to offshore connected generation. National Grid will be working with them to produce a consultation document over the coming months.

Improving Grid Access – Emily Bourne

1. **What is the risk to the process if a new government is elected?**
We are managing the risk to the timetable for implementing access reform of delays, for instance due to an election, and have left some contingency for an election period. Of course as with any policy area there is the potential that any incoming Government may have different views.

2. **What is the extent to which the consultation will touch upon User commitment in terms of providing security?**

Our initial view is that pre-connection user commitment is not within the scope of our project, however we will consider any evidence that the issue is integral to grid access reform. Our preference is for a relatively narrow, targeted and proportionate intervention, in line with better regulation principles.