

Dr Ashok Manglick
Manager - Network Support and Consultations
TransGrid

26 November 2012

Dear Ashok,

Submission to Project Specification Consultation Report Summary - Development of Queensland to NSW Interconnector

The Private Generators listed in the sidebar appreciate the opportunity to comment on the Queensland-New South Wales interconnector (QNI) project specification consultation report (consultation report) prepared by TransGrid and Powerlink.

The responsibilities and mechanisms for the development of interconnectors in the NEM have been difficult and somewhat unclear in the past. Private Generators therefore look forward to the new RIT-T process leading to greater transparency and economically efficient outcomes.

The private generators are large businesses engaged in the design, construction and operation of some of Australia's largest infrastructure projects that provide vital electricity supply services to Australian business and domestic consumers.

This submissions deals with the following issues:

- assessment of past power flows and demand forecasts;
- economic sensitivities;
- treatment of intra-regional constraints; and
- low-cost, no regrets options.

Assessment of past power flows and demand forecasts

In assessing the potential market benefits that might result from augmentation of the QNI, a number of variables need to be taken into account. Whilst it is important to review previous QNI power flows and constraint performance, the extent to which historical performance is a predictor of the future needs to be carefully assessed.

The consultation report has noted that the capacity of QNI is frequently fully utilised for power flow in the southerly direction (QLD to NSW). The consultation report includes a diagram of flow duration curves¹ which has been reproduced in figure 1 of this submission for ease of reference. The curves indicate that the power flow on QNI has predominately been in the southerly direction since 2004.

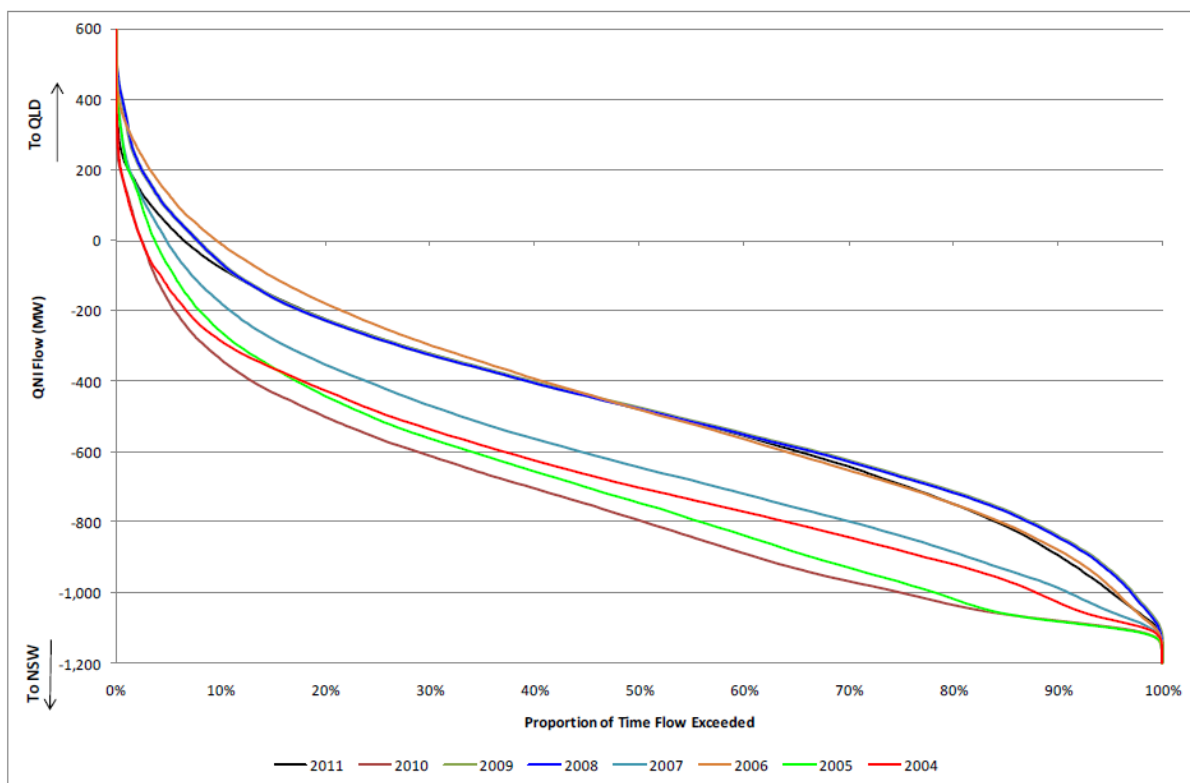
The duration curves for each year show that the power flow patterns have varied quite substantially from year to year. During the years 2005 and 2010, the QNI southerly flow was greater than 1000 MW for approximately 20% of the time.

¹ See Project Specification Consultation Report Development Of The Queensland - NSW Interconnector report: figure 2.2 – QNI Power Flow Duration Curves

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Figure 1: QNI Power Flow Duration Curves (reproduced from consultation report)



However in 2011, the southerly flow was above 1000 MW for less than 5% of the time. Recent history therefore may not provide a clear signal as to probable QNI flows in the coming years².

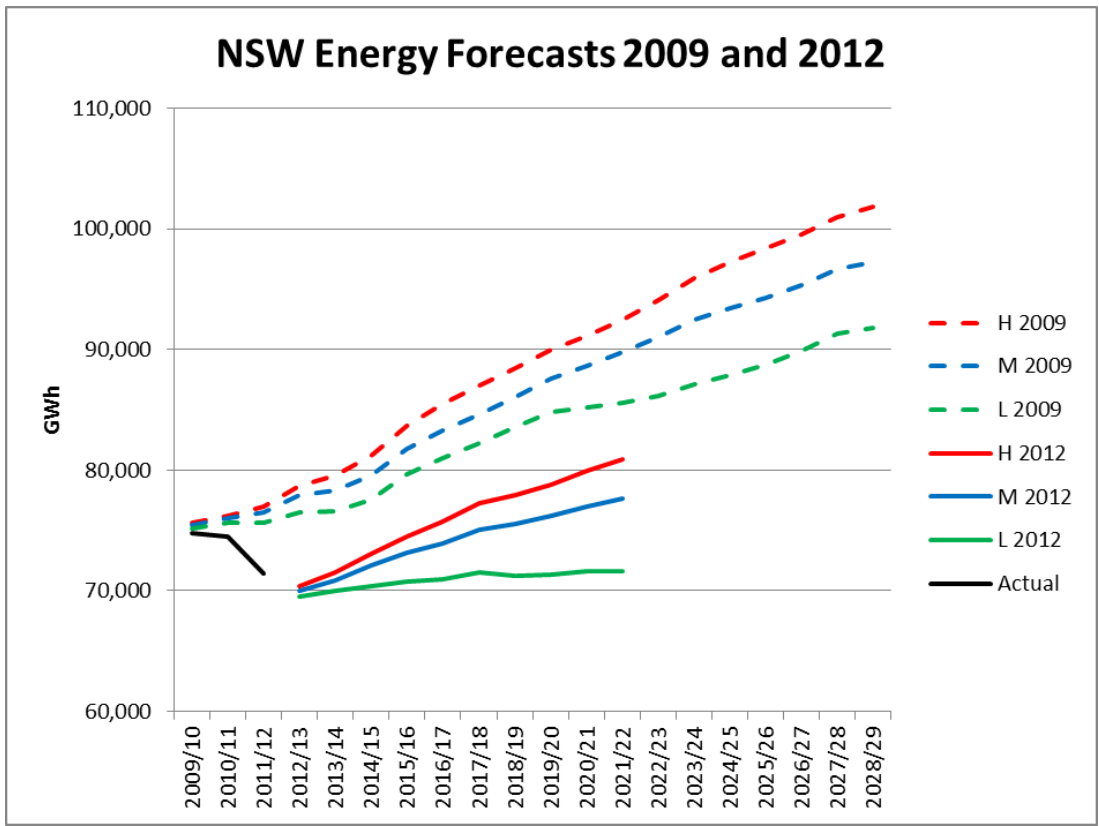
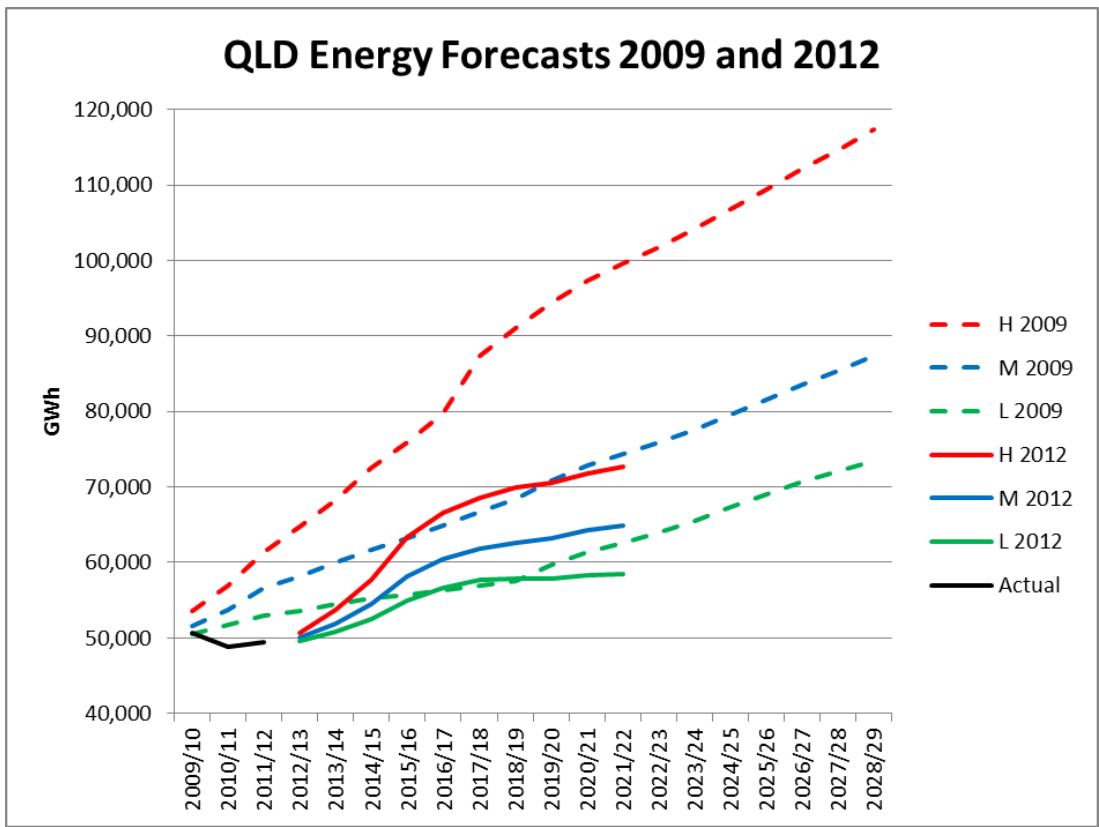
The consultation report refers to the 2010 and 2011 National Transmission Network Development Plan (NTNDP) documents, which indicate that increasing QNI capacity leads to improved net market benefits in some of the scenarios considered.

Private Generators also note that in the 2010 NTNDP, for all scenarios in which a QNI upgrade was endorsed, AEMO made the statement “. . . utilisation of QNI in the southerly direction progressively decreases, with New South Wales less reliant on imports from Queensland”. If QNI southerly flows are predicted to fall in the coming years as suggested by AEMO, there is some doubt about whether now is the right time to invest in increased QNI capacity.

The identified need for increased QNI capacity as described in the consultation report is based on the 2010 NTNDP scenarios and demand forecasts. The 2010 NTNDP used demand forecast information from the National Transmission Statement 2009 (Volume 2 Modelling and Analysis).

Since the time that the 2009 demand forecasts were produced, there has been a significant decline in demand across the NEM, and substantially revised forecasts have been prepared by AEMO. To highlight the degree to which demand forecasts have changed since 2009, the following diagrams compare the 2009 and 2012 energy forecasts for NSW and QLD.

² Key driver of inter-regional power flow is the price differences between regions and this will be heavily influenced by gas, coal and carbon prices in addition to the prevailing supply/demand balance.



The above two graphs are based on National Transmission Statement 2009 and National Electricity Forecasting Report 2012.

Given the substantial reduction in actual demand and forecast demand since 2009, it is important that any analysis of potential market benefits from increasing QNI capacity use the most recent forecast data.

Economic sensitivities

Further to the demand reductions highlighted above, it is feasible that the economy and therefore the market could be moving into a period of low demand, low growth and low carbon prices. The sensitivities around these economic parameters are further likely to suggest that a large-scale upgrade is not warranted at this point in time.

Intra-regional constraints

As indicated in the consultation report³, the number of hours that constraints have bound for QNI southerly flows has varied considerably during recent years. The number of constrained hours in 2010 was 2,135, which was the highest number of constrained hours recorded. However, the constrained hours for 2011 fell back to 900 hours, which is closer to the average of the past 8 years. A gain, it is difficult to ascertain whether 2010 represents an indicator of future constraint outcomes, or whether this was an unusual outcome unlikely to be repeated.

Furthermore, in looking at the schedule of dominant constraints for southerly power flow on QNI in 2011⁴, it is apparent that the two most dominant causes of binding constraints were transient stability (58% of the time), followed by FCAS (30%). It is understood that most, if not all of the options discussed in the consultancy report would alleviate the stability constraints. However, it is not at all clear that any of the options would alleviate the FCAS constraints. If this is the case, then it would appear that even if QNI were upgraded, a substantial amount of constrained operation may remain due to FCAS constraints.

This suggests that further consideration needs to be given to the source and form of intra-regional constraints. Additionally, there is a general view that given the uncertainty regarding demand and the need for a large scale upgrade of the interconnector, a more substantive review of intra-regional constraints would be more beneficial at this point in time.

For instance, ongoing uncertainty around the 855/871 constraint, and ongoing congestion arising from Calvale/Wurdong in Queensland and Armidale/Tamworth in New South Wales should be considered ahead of any large scale interconnector upgrade.

Low-cost, no regrets interconnector options

While it appears unlikely that any large-scale upgrade is required at this point in time, the consultation report suggests that at least one low-cost no-regrets option should proceed regardless of the study outcomes. At a cost of \$5 million, with a two year payback, option 3 appears to be an initiative that can be initiated without recourse to a RIT-T process.

³ See Project Specification Consultation Report Development Of The Queensland - NSW Interconnector report: Table 2.8 – Historical QNI Constraint Times (Hours)

⁴ See Project Specification Consultation Report Development Of The Queensland - NSW Interconnector report: Table 2.9

Conclusion

To conclude, the listed generators are, in general, supportive of upgrading interconnector capacity where there is a clear reliability and/or market benefit. It is appropriate that Powerlink and TransGrid have investigated the options for upgrading QNI. However, for the reasons outlined above, the listed generators are not yet convinced that a clear business case has been made and would urge the proponents to consider these points in your further considerations on this matter.

Should you have any enquiries regarding this matter please do not hesitate to contact either myself or Chris Deague on 03 9617 8331.

Yours sincerely,

A handwritten signature in black ink that reads "Harry A. Schaap". The signature is written in a cursive style with a large initial 'H'.

Dr Harry Schaap
(on behalf of the listed generators)