

9 March 2009

Writers direct contact  
ksummers@pacifichydro.com.au  
0418 514 473

Mr Ian Woodward  
Commissioner  
Australian Energy Markets Commission  
PO Box A2449  
South Sydney NSW 1235

Dear Mr Woodward,

**Re: REL 00032 : Template for Generator Compliance Programs**

Pacific Hydro would like to thank the Reliability Panel for the opportunity to provide comments on the Issues Paper for the development of the template for generator compliance programs. In developing these comments Pacific Hydro has tried to focus on achieving a practical outcome given the various technologies in the NEM and the issues that could arise if a template that lacked flexibility was mandated.

In considering the questions of principles and guidelines, it would be worthwhile if some of these issues were framed up using the Australian Standard for Compliance Programs (AS 3806 -2006) as a starting point. The use of this standard, which describes the intention and foundation for compliance programs in general, may help remove a certain amount of work and effort from the industry trying to recreate what other industries have already had to develop. With this as a back drop, the industry should then concern itself with the technical compliance issues that are specific to the generation of electricity.

The compliance obligations of generators are growing. Many of the obligations require significant power system knowledge, constant monitoring of power system events and sufficient engineering expertise to analyse generating unit responses. The dynamic response of the generators in respect of the power system is no longer managed through dedicated departments of power system engineers in each region, but rather each generator themselves must employ or engage specialists to measure or test the units. This is one inefficiency that has been created by the demise of centralised power system planning. In considering how a generator should manage the measurement and assessment of their performance, consideration should be given to the size and influence of the generating units and the primary or secondary nature of each performance standard with respect to system security.

The requirement to develop and mandate a template, creates a significant challenge. Such a template must be broad enough to cover the various technologies; allow for different types of connection points; and avoid being overly prescriptive, as this in itself could design in compliance failure for generators. The nature and culture of compliance is outlined in the AS 3806 which illustrates that an effective compliance program is aligned within an organisations core values with commitment in the organisation from the top down. The size and volume of change that has been occurring in the electricity market since the introduction of version 1 of the NER in July 2004 indicates that even in the best organisation there is difficulty in communicating, educating, implementing and maintaining procedures that remain current and up to date. To this extent Pacific Hydro does not favour the mandating of an extremely detailed or complex template and considers that to do so could create difficulties and inadvertent barriers to implementation.

The rest of this submission focuses on the specific questions posed in the paper. Pacific Hydro looks forward to further development of this work.

## **Are there benefits in adopting a set of compliance principles and what are these benefits in terms of meeting the Rules requirements for the template for generator compliance programs?**

Firstly it should be established as to whether the principles are to do with the company's approach to its compliance obligations in general or whether the principles are focused on what the template is meant to achieve in terms of specific technical requirements. Australian Standard 3806 *Compliance Programs*, was developed following a request from the ACCC.

The Standard provides principles for the development, implementation and maintenance of effective compliance programs.... These principles are intended to help organizations identify and remedy any deficiencies in their compliance with laws, regulations and codes, and develop processes for continual improvement in this area.<sup>1</sup>

The Standard contains twelve principles in the four areas of commitment; implementation; monitoring and measuring; and continual improvement.

Any principles that are developed for generator performance standards compliance should not be contrary to, or over write, any of the principles contained in the AS Standard. It should be assumed that companies are already working within the framework of an overall compliance culture that is consistent with that AS Standard. To this extent, Pacific Hydro believes that the proposal to develop principles should focus on the technical issues associated with the management of the template and the implementation of the technical compliance obligations.

There are benefits in having principles for the development, amendment and management of the compliance template. There may also be a need to have principles concerning the technical approach for the performance standards compliance plans. These are two slightly different focuses, the first is about the management and framing of the template and how it can be reviewed or changed. The second has to do with the technical principles for the management of compliance plans. The principles proposed by the NGF are a bit mixed, with fundamental compliance principles such as continuous improvement (which is already adequately addressed through the AS Standard) and other areas, such as .... that do require a principles specific to the electricity generation/connection.

The development of specific industry principles should build on the general principles contained in AS 3806 to enhance the Standard and create what should become accepted as 'good compliance practise' in the electricity industry. AS3806, sets out the essential principles common to all effective compliance programs. Further research and work is required to establish complementary principles to underpin what the industry considers constitutes a good technical compliance program. The template should help all generators achieve that.

Aside from the obligation to 'meet or exceed' a registered performance standard, a Generator is fundamentally interested in maintaining the performance of its generating units. it is in its interest to do so. A good compliance plan should also align where possible with the routine maintenance and have that maintenance contribute to maintaining performance, to do otherwise would be to create an expensive compliance program.

We recommend that the working group consider two sets of principles – one for the development and management of the template through time, and the other based on AS 3806 (or as the technical extension to it), aimed at defining good compliance program principles for the electricity industry.

---

<sup>1</sup> AS 3806-2006 *Compliance Programs*, SAI Global, p. 2

### **If so, are the examples of compliance principles in Appendix A appropriate?**

Pacific Hydro considers that further work is needed to refine what the industry is trying to achieve. There is no point repeating in a principle something that is already required by law. There is benefit in clarifying, through principles, issues such as materiality, requirements for retesting after major changes – not after minor like for like replacements, issues concerning system events where input and information from an NSP is required but may not be forth coming.

Principles should not repeat the principles already contained in the AS 3806, so the development of the principles should be limited to purely electrical technical issues that require clear guidance or principle.

With respect to principle 4, a program using the compliance template goes part of the way towards achieving prima facie evidence, it would not fully represent good electricity industry practice, but it could become “good electricity industry compliance practice” along with the other parts of a company compliance program. Many facets of a generator’s operations would contribute to good electricity industry practise, such as electrical procedures, training, and qualifications of staff, OH&S, operations and maintenance practises as well as compliance monitoring and reporting.

### **Are there benefits in adopting compliance program categories and, if so, what are these benefits in terms of meeting the requirements in the Rules for the template for generator compliance programs?**

There would be some benefit in being able to describe the performance management in terms of a category. In terms of meeting the rules, a category may contribute to the template by associating each performance standard with a measure of ‘importance’ or ‘complexity’. The third principle proposed by the NGF is also trying to provide for this. In terms of power system security, there are performance standards that would fall into a primary category and others that would be considered as secondary. It does not remove the obligation to meet or exceed them, but it may allow for ‘testing’ to be met through straight forward integrated methods of maintenance, or logging rather than intrusive and costly dedicated testing.

Categories ought not to be fixed to particular standards as different technologies may have completely different levels of difficulties or complexities associated with a particular performance standard. For example, the reactive capability of a synchronous generator with an excitation system would be tested completely differently to a wind farm with asynchronous generators and switched capacitance, or / and a dynamic reactive device.

### **Is it necessary to draft guidelines for [the] template for generator compliance programs and, if so, are the example guidelines in Appendix B appropriate?**

The guidelines in Appendix B constitute information that Pacific Hydro would in general include as part of a compliance programme. If a template is to work through time, through version changes of performance standards and be amended or reviewed frequently – then some guidelines should be established to describe what the template is trying to achieve, if this has not already been done through the principles! The guidelines are there for those who need to amend or review the template in the future to avoid the same consultation being triggered again in three years time.

## **What should be covered in the scope of the template for generator compliance programs, how should it be structured and what should it contain?**

The template should contain:

- A reference to the performance standard number and title, and NER version (for the registered standard)
- Monitoring – whether at the connection point, at the unit terminals, or both, may reference a meter or SCADA or other forms of data collection.
- Testing – Initially at commissioning, and then following any major plant changes or when performance drift has been identified through monitoring. This should be applied to Category A Performance Standards. Other items, such as protection relays, would have periodic trip check tests as part of ongoing maintenance.
- References to internal test procedures where required – this should be done in lieu of requiring the template to include details on tests – as tests must be site specific.
- Comments on any routine maintenance contribution towards the standard, tests or logs maintained at the end of maintenance.
- Company Contact: responsible person/ department in a company for the management of the compliance plan. (to be kept up to date.)
- If categories included – a description of the categories used, which could be generic as part of the template.

## **How prescriptive should the template for generator compliance programs be for each performance standard e.g. should test methodologies be included?**

The template should not be prescriptive on test methodologies as there are numerous technologies that require different tests or methods. Test procedures where necessary should be referenced, but as tests are site specific, becoming prescriptive in the template will lead to numerous management issues. The performance standard is currently prescriptive with respect to the performance that is to be met, this is adequate for a generator to implement appropriate tests.

A prescribed methodology may restrict a generator from performing an optimal test for its specific technology. A prescriptive template may quickly become out of date. With the introduction of new technologies, test methods for assessing or measuring new technologies may not be well understood, or easily 'templated'. Therefore, a prescriptive methodology could inadvertently create unnecessary barriers to the entry of new technologies by increasing the time and costs associated with the development and delivery of its compliance plan.

## **How should the variation in individual performance standards and versions of the Rules be handled?**

The template should not be so prescriptive that it creates an issue if there is a technical standards review, or change. Perhaps the template should simply grow with versions and Rule numbers against the version and a generator uses the rule number and version that is applicable to its registered standards.

A carefully constructed template containing appropriate principles and guidelines should allow for the generators to progress from Connection Agreement, (establishment of performance standards), through construction, connection, and commissioning, secure in their knowledge of what needs to be done to deliver the compliance plan. Changes, reviews or amendments to the template should not impede a generator from meeting their fundamental obligation to have a compliance plan in place within the specified time after commissioning. The template review timeframe (currently set at three years) is likely to cause transitional problems for new projects unless the template is designed

to be used by any generator at any point in time. It should be possible to implement and use the template without delay due to a review. (This should be a principle associated with the management of the template.)

**Whether the examples for developing the template for generator compliance programs in appendices A, B, C and D are appropriate to be incorporated into the Panel's template or what modifications should be considered?**

Appendix A provides a suggested set of compliance principles. With regard to this appendix, as already covered above, Pacific Hydro is of the view that any set of principles developed for the template should not be contrary to, or overwrite principles contained in AS 3806 *Compliance Programs*.

Appendices B, C and D provide alternative models for a template. Pacific Hydro is concerned that the model provided in Appendix B is too prescriptive. It is suited to synchronous units. However, the proposed guidelines contained in Appendix B, include some information that we would support being included in the compliance plan.

A manageable compliance plan for a wind farm with multiple small units has to include more emphasis on monitoring and reporting to establish and maintain their performance. The model templates provided in appendices C and D allow for this, and are therefore more suitable in our view. While some modifications are necessary to have it fit a wind farm, the NEMMCO template (Appendix D) presents a good starting point. Appendix C and D are essentially complementary in the information that they contain.

Modern plant with digital control systems requires a different approach to compliance management than older plant with control systems using analogue circuitry. Pacific Hydro agrees that units with analogue circuits can suffer failures that affect performance, stemming from actual circuit failure. Likewise digital control systems require strict management of software upgrades or changes. All plant though, needs to ensure that periodic maintenance and testing is done on transducers and measuring devices that feed control systems.

**How can it be ensured that the template for generator compliance programs meets "good electricity industry practice" that would provide certainty for Generators as to what is required of their compliance programs?**

It is unclear as to whether this is achievable through a template, as good electricity industry practice is more detailed and would lie not just in compliance plans but also in electrical procedures, OH&S practices and a plethora of management and technical practices that contribute to the running of electrical plant. The template if correctly designed and thought through and followed should constitute 'good electricity compliance practice', and in this sense it would contribute to good electricity industry practice. On its own, it will not be sufficient to ensure good electricity practice.

The template submitted by Roaring 40's and Pacific Hydro (Appendix C) represents a reasonable template for the management of compliance for a generating system comprising of multiple small units.

**Having regard to the current processes for implementing the template for generator compliance programs already set in the Rules, what other implementation and transition issues may need to be addressed and how would these be put into effect?**

Rules changes and reviews have meant that compliance obligations have been in flux for a significant proportion of the last four years. A prescriptive template is likely to exacerbate this by falling out of date fairly quickly. It could also be difficult and time consuming to change if it contains errors. Appropriate consideration needs to be given to the

time lines for reviews and updates. The minimum period that a generator is likely to take for negotiating and establishing its access standards, through to completion and implementation of a compliance plan is around 3 years or more, depending on the complexity of the project. As such it would be important that the template once issued, should be able to be implemented at any point in time. To this extent, Pacific Hydro recommends that the template be kept relatively simple in its structure and grow over time with the NER versions and rule numbers. A generator's compliance plan will be based on its registered performance standard which remain relatively static for the life of the plant, hence the template needs to remain current for all performance standard clause numbers and versions. Generators would then use the relevant sections of the template applicable to their performance standards.

**Are there any other matters that should be considered important?**

Reviews of the template should not result in dramatic restructure as the obligation to align with the template is resident in the NER. Excessive changes to the template would cause generators additional costs to their compliance plan delivery, and as some tests are done on a three or four year period, reviews that result in significant changes are likely to cause uncertainty around compliance delivery. All reviews should be subject to a cost justification particularly if additional equipment or specialist involvement is requirement to meet the proposed changes. An untimely change in the template should not for example force a generator to repeat recently conducted tests.

Yours sincerely

***This letter has been prepared for electronic publication and consequently bears no signature.***

K P Summers  
Regulatory Compliance Manager