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## **Review of Essential System Services Consultation Submission**

Eni Australia Limited (EAL) makes this submission to the Design Development Team of the Northern Territory (NT) Department of Innovation, Tourism and Trade (DITT) for the “Review of Essential System Services (ESS) Draft Position Paper” (Position Paper).

### **1. Background**

The Eni group has been present in Australia through its subsidiaries since year 2000. Eni Australia BV is the operator and 100% owner of the Blacktip Gas Project which has supplied domestic gas to the NT since 2009. In January 2019, EAL completed the acquisition of a construction-ready solar photovoltaic (PV) project near Katherine, from Katherine Solar Pty Ltd, a joint venture between Australia’s Epuron and the UK-based Island Green Power. This project is about to commence compliance testing. In October 2019, EAL completed the acquisition of two further construction-ready PV projects at Batchelor and Manton Dam, from NT Solar Investments Pty Ltd, a wholly owned subsidiary of Australia’s Tetris Energy. These projects are currently under construction.

### **2. Previous Consultation Submission**

EAL reiterates its positions from previous consultation submissions on ESS and forecasting and will not repeat them all here, other than to stress the need for:

- Review / repeal of the intent of the capacity forecasting provisions of the Network Technical Code as they represent an exceptionally expensive form of ESS.
- Recognition that the cost of regulating reserve for aggregated solar forecast error across the DKIS is far lower than the cost of these capacity forecasting provisions and therefore a review of capacity forecasting obligations must be included in this process.

### **3. Issues in this Position Paper – Security Constraints**

EAL believes the following issues in the Position Paper need additional focus:

- In a “security constrained, economic dispatch” environment, almost all the focus of the Position Paper and accompanying consultants’ reports has been on economic dispatch, rather than the security constraints;
- However, in a market as small as the DKIS, security constraints from the System Controller have dominated and are likely to continue to dominate market outcomes for some time to come. While the focus on economic dispatch is intended to provide investment certainty, the experience of generators in the market, such as EAL, has been the opposite due in part to the imposition of these security constraints on what often appears to be an arbitrary basis.
- These security constraints include, among others:



- A very high number of “must run” generators at all times;
- A requirement to run Frame 6 gas turbines together with aero-derivative units at all times, when other power systems do not have this requirement;
- Very high minimum stable load levels for many incumbent generators;
- Dispatching generators for network voltage control services, at their minimum stable loads, when much cheaper solutions could provide this service;
- Many of these security constraints do not reflect common practice in other markets and their technical justification does not appear to be well understood by stakeholders. Their imposition appears to be a “knee-jerk” reaction to issues that have arisen on the DKIS, without the cause of these issues being properly modelled and identified. It is highly likely that low cost solutions are readily available for these issues but it is only through proper power system modelling that they can be found.
- While the position of the System Controller to manage risks using available measures in the short term is understandable, an urgent priority is to relieve these constraints through proper modelling and identification of appropriate solutions, such as improved governor tuning on existing generators. The main beneficiary of this would be the NT Government through much more efficient operation of Territory Generation’s fleet.
- The Position Paper therefore needs to explicitly consider the technical reality of the security constraints of the DKIS and map out a plan for how they can be removed, to the maximum extent possible, in order to allow the proposed ESS market to work.
- In addition, a “whole of government” approach is required, so that one arm of government, or government owned entities, do not punish private participants in the market for the decisions of another arm of government / entity. This can occur during periods of change as individual actors protect their own priorities in isolation when an integrated plan is lacking.
- EAL therefore endorses calls for a System Plan to bring together the economic drivers outlined in the position paper, with the technical reality of operating the DKIS over the short, medium and long term, in order to ensure new generation sources will be accommodated alongside incumbent generators and not left stranded due to security constraints. Noting the requirement for generators in the NEM to forecast their retirement dates, a similar obligation should apply in the DKIS so as to help all stakeholders with their investment decisions. This issue is even more important on smaller power systems.

While the Position Paper refers to a desire on the part of government for this market reform process to facilitate new renewable energy investment, it is difficult to identify how this outcome has been pursued. References to how specific policy actions will facilitate new renewable energy investment would be appreciated for stakeholders to identify where this occurs. While a focus on reliability and cost drivers is understandable, a successful “energy trifecta”, combining reliable, affordable and sustainable outcomes, relies on explicit measures that will also facilitate renewable energy investment.

#### **4. Other Issues in the Position Paper**

With reference to the Draft Position taken on each element of the ESS document, EAL wishes to make the following points:

- The Position Paper states that generators will never be dispatched above their forecasts; this is the first time this it has been stated and comes as a great surprise to EAL. The intent of the regulations is to have generators forecast conservatively,



with maximum confidence in being able to reliably export at that capacity level thorough the relevant 5 minute interval. Therefore, there is the expectation that generators would generally be able to provide more capacity, albeit not at the same confidence level. Given the potentially very harsh consequences of missing a forecast, one would expect that the gap between reasonably expected output level and actual forecast is significant, i.e. there is a significant portion of the plant not being utilised. By never dispatching above forecast, and with specific reference to lower marginal cost generators, the system will miss out on cheaper power, and again the end consumer will pay the price. Furthermore, in some circumstances such limitation on dispatching will result in System Control prioritising load shedding instead of increasing production from available generators, another very negative outcome for the system.

- We re-iterate that the use of complex “causer pays” methodologies should be moderated by the very small size of the DKIS and the reality that, in many cases, a “causer” cannot change its behaviour in order to reduce the requirement for the particular ESS it is paying for. Likewise, in many cases (such as ROCOF, System Strength and Regulation FCAS), identification of the causer in any given year is both very difficult and of little value.
- The small scale of the DKIS would also appear to justify simpler payment arrangements for ESS, where additional margins are not added before the costs reach the end consumer.
- There appears to be a potential overlap between government tariff policy and the ability of retailers to pass on any reform costs introduced through these arrangements for some customers. For the stability of the market, it would be good to check that the financial viability of key customers and other stakeholders is not threatened by these reforms, or these arrangements are altered concurrently with this reform process.
- There is significant reliance on the System Controller to identify the requirements for each component of ESS using an “evidence based approach”. Due to previous uncertainty on this issue, more detail on this approach is needed to prevent arbitrary interpretation of this requirement. If a reliability standard is to be used for this work, for example, the studies that will be conducted should be specified at commencement of the market in order to enable the industry to conduct its own studies and form its own view. This will enable some level of prediction of possible outcomes in order to facilitate future investment decisions, as well as a level of due diligence that will assist the regulator to review decisions made by the System Controller which may otherwise impose excessive costs on power system stakeholders.

### **5. Channel Island to Katherine Line Contingency**

The introduction of two regional reference nodes in the DKIS has the potential to introduce a default constraint on zero marginal cost solar generation south of Channel Island, to the preference of high marginal cost gas generation, to cover for the loss of this line on the Darwin region. In EAL’s view, it is clear that the cost of providing additional ESS north of Channel Island to cover the contingency of the loss of the CI-KAT line is much lower than the cost of curtailing solar output in favour of the much higher marginal cost of gas generation. Such an outcome would increase the overall cost of supply to consumers and should be avoided.



## 6. Conclusion

For investment certainty, ESS and capacity forecasting arrangements for the DKIS should reflect electricity industry practice in other markets as much as reasonably possible. To this end, EAL would support the implementation of the AEMO methodology for forecasting renewable energy production, as a “fit for purpose” and well understood solution that does not require unreasonable additional ESS to support. While the small scale of the DKIS does justify simpler ESS arrangements that are easier to administer, it does not justify unprecedented forecasting obligations, with no grand-fathering arrangements for those who have already made investment decisions.

In terms of the intent of the capacity forecasting provisions of the NTC, it has been stated that it was known that reform of this area was taking place when EAL made its decisions to invest in the Northern Territory. Of course, what EAL could not know or take into account was that there would be a globally unprecedented requirement to provide completely firm half hour ahead forecasts of solar farm capacity. For the same reasons that conventional generators are never asked to provide their own spinning reserve / C-FCAS, EAL could not have anticipated such a requirement would ever be implemented in the DKIS.

Therefore, we restate our position that solar variability should be dealt with through the ESS regime at a much overall lower cost to consumers, with no impact on power system security and reliability above that which already exists.

If you have any questions about this correspondence, please don't hesitate to contact Antony Piccinini on +61 400 345 455.

Yours sincerely,

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