

**29 March 2019**

Utilities Reform Unit  
Department of Treasury and Finance  
Darwin NT

By email [DTF.UtilitiesReform@nt.gov.au](mailto:DTF.UtilitiesReform@nt.gov.au)

Dear Department of Treasury and Finance (DTF),

### **NTEM Functional Spec draft submission**

I write in response to the call for submissions to the Northern Territory Electricity Market (NTEM) Functional Specification draft document released the 4<sup>th</sup> of February 2019 by the DTF and Oakley Greenwood.

The Functional Specification considers three key market mechanisms:

1. Capacity;
2. Energy, and;
3. Ancillary Services.

Epuron is the owner and operator of the 4MW Uterne solar power plant at Alice Springs, the 1.8MW solar power plant at Yulara and also the three integrated high penetration solar power stations at Ti Tree, Kalkarindji and Alpururulam (Lake Nash), known as TKLN Solar which total 1MW. Epuron also developed the 25MW Katherine solar power plant, which has recently been sold to ENI Australia Ltd and is now under construction. Katherine Solar is likely to be the first large solar generator connected through the new NT GPS.

The DKIS has some key differences to the NEM and WA WEM, notably the scale is a lot smaller, and the range of fuel sources for generators is much smaller. To allow the NT to meet the 50% renewable energy target, the NTEM must be structured to encourage the only renewable energy available within the NT, solar non-synchronous photovoltaic generation. Epuron notes that the NTEM Functional Specification draft document needs to be structured to allow and encourage solar generators to enter the market.

Regarding specific sections of the NTEM Functional Specification draft, Epuron notes:

- Section 3.6.1 states that “Generators when running... on AGC... and providing a frequency sensitive regulating response... [they] will be excluded from [Ancillary Service causer pays].” Can solar when providing a frequency sensitive regulating response via inverters and batteries be in this mode?
- Section 3.6.2 states that Contingency Services provided by batteries as part of PV facilities will only be required during daylight hours. Since these are provided by batteries which can run at any time, this may not need to be limited to daytime hours.

- Section 3.7.2 states that “A minimum amount of physical inertia is currently required...”. Epuron disagrees with the assumption that synthetic inertia cannot provide the same role, although Epuron notes it is a lot newer to the market.
- Section 4.1.5 states that “For customers... 5 percent of nameplate solar generation capacity [will be able to meet the Retailer’s Capacity Obligation]”. 5 percent is much too low. An unconstrained and un-forecast solar site is much higher than 5 percent even on even an extremely low solar irradiation day. As the NTEM has removed any reference to semi-scheduled generation, the solar generation capacity in question will forecast their generation and be penalised if they don’t meet that forecast. Therefore, the percentage of nameplate solar generation capacity able to meet the Retailer’s Capacity Obligation should be 100 percent of the forecast capacity.
- Section 4.2.2 Supplementary note states that “the contribution of solar generation to the Capacity Obligation will be small because peak requirements will coincide with heavy cloud cover...”. What is the basis behind this statement? In Epuron’s opinion, peak requirements will occur on the hottest days which are also likely to be days of high solar irradiation.
- The provision for payments for Ancillary Services and an Ancillary Services Market will allow generators to connect to the market with the purpose of providing these services.

We look forward to engaging further as progress is made towards introducing the NTEM.

Please do not hesitate to contact us if we can usefully provide any further information.

Yours sincerely,



**MARTIN POOLE**  
**EXECUTIVE DIRECTOR**  
**EPURON**