



Fact Sheet

This fact sheet explains the operational processes of AEMO and TasNetworks to assess Tasmanian security service gaps and enable security services on a real time basis.

This fact sheet should be read in conjunction with AEMO's Security Enablement Procedures¹. It is intended to provide an overview of how the Security Enablement Procedures and the Improving Security Frameworks Rule is being met in Tasmania².



Figure 1: Illustration of the transmission system in Tasmania

Frequently asked questions

Why is the Tasmanian approach to system security services different?

Tasmania is unique in the NEM for system security services because:

- it is connected to the mainland regions via a DC interconnector. System strength and inertia are only transferred across AC interconnectors, meaning that Tasmania effectively operates as an 'islanded' region from the perspective of these services.
- Tasmania's single largest credible contingency is loss of the DC interconnector. This also means that Tasmania must be able to operate in islanded mode.
- Under the Electricity Supply Industry Act 1995 (Tasmania), it is a condition of a licence authorising an entity to operate a transmission system that the authorised entity has the capability to maintain the security of the system on mainland Tasmania. To do this, TasNetworks has proven existing systems and processes to monitor for and rectify inertia and system strength issues.

For system security services Tasmania effectively operates in isolation of other regions in the NEM.

¹ <https://aemo.com.au/consultations/current-and-closed-consultations/security-enablement-procedures>

² <https://www.aemc.gov.au/rule-changes/improving-security-frameworks-energy-transition>

How are Tasmania's system security needs identified?

Consistent with all other regions, Tasmania's system security needs are identified by AEMO in the following documents³:

- Inertia Report
- System Strength Report
- Network Support and Control Ancillary Services Report
- Statement of security needs for transitional services.

These are the requirements that TasNetworks or AEMO must meet through procurement of services.

How are Tasmania's inertia needs identified in the operational timeframe?

TasNetworks has established a series of alarms that are initiated by monitoring real time inertia levels in their network and comparing them to the levels required at any given time⁴. The alarms trigger if the system is not in a secure operating state or not in a satisfactory operating state, which can be dependent on the number of synchronous units currently online.

If a scenario occurs that reduces calculated inertia levels below the secure operating state the alarm will sound and security service enablement is required.

How are Tasmania's system strength needs identified in the operational timeframe?

TasNetworks has established a series of alarms that are triggered by monitoring real time fault level at four fault level nodes in their network⁵. The alarms indicate if the system is not in a secure operating state or not in a satisfactory operating state.

If the calculated fault level at a fault level node is below a secure operating state the alarm will sound and security service enablement is required.

Does Tasmania provide limits advice to AEMO for AEMO to identify system security gaps to meet the minimum system security requirements⁶?

No. TasNetworks and AEMO will work to adopt a limits advice based process, and enable system security services in a consistent process to the mainland regions in the future, if and when this is deemed to be more efficient for Tasmania.

How is AEMO informed of a Tasmanian system security need.

AEMO can become aware of a system security need in Tasmania in the following ways:

- AEMO's monitoring and assessment of conditions in TasNetwork's network
- telemetered information on system alarms from TasNetworks
- the manual provision of information to AEMO by TasNetworks.

How is the lowest cost security service enablement identified for Tasmania?

TasNetworks have contracted a range of services from different plant to meet the system security needs of Tasmania. These are grouped in priority order reflecting cost, speed to market and service. AEMO has visibility of all the contracted services and their prioritisation.

AEMO, in consultation with TasNetworks, will determine which service to bring on line to achieve the lowest cost solution when a security service need arises. AEMO will take into account factors such as the likely length of service provision duration and avoidance of unnecessary, high cost activations.

³ See Security Enablement Procedures or AEMO website for further information.

⁴ TasNetworks calculates inertia levels every 30 seconds and telemeters them to AEMO.

⁵ TasNetworks calculates fault levels every 30 seconds and telemeters them to AEMO. AEMO also has desktop tools to assess Tasmanian fault levels.

⁶ The Tasmanian minimum system strength requirements and efficient stable voltage waveform requirements are currently equivalent.



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A similar process will be followed when deciding the end time for a service. This decision must balance the risks of ending and subsequently bearing the cost of restarting a service against the risk of paying for a longer service duration without a further need arising.

Who sends enablement instructions to security service providers in Tasmania?

AEMO, in consultation with TasNetworks, decides if an enablement instruction is required. AEMO can enable inertia and system strength services either manually

or via SCADA interfaces with the providers in Tasmania.

What further steps might be taken for system security in Tasmania?

Once all available system security services have been exhausted and system security concerns persist action may be taken in accordance with AEMO's power system operating procedures, for example, directions or instructions.

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Where can I find more information?

See AEMO's website for the Security Enablement Procedures.

See the AEMC's website for a copy of the National Electricity Rules.

For any further enquiries, please contact AEMO's Information and Support Hub via

- supporthub@aemo.com.au or
- call 1300 236 600

This fact sheet is only a summary of the Tasmanian system security enablement arrangements to illustrate their alignment with the Security Enablement Procedures.