

National Transmission Network Development Plan – Technical Working group

Terms of Reference

BACKGROUND

The National Transmission Network Development Plan (NTNDP) provides an independent, strategic view of the long-term development of the national transmission grid over a 20 year planning horizon under a range of credible scenarios.

This assessment combines two key modelling outlooks:

- The generation outlook, which projects the location and timing of new generation additions and withdrawals. This outlook focuses on efficient development to meet forecast demand, minimising the total generation and transmission grid investment costs over the next 20 years.
- The transmission outlook, which analyses likely constraints and congestion points in the transmission grid under the assumed load growth and generation outlook results. It also identifies technically feasible network and non-network options to maintain reliability of supply and power system security.

The generation and transmission outlooks are co-optimised in order to minimise overall costs. In doing so, new generation is assumed to be located efficiently, considering spare network capacity, network connection costs and the quality of local wind and solar resources (or availability of fuel sources for thermal plants).

Both outlooks utilise a range of data inputs and modelling assumptions. AEMO sees great benefit in engaging with a range of stakeholders with expertise in modelling such outlooks in practice to ensure that the final inputs and assumptions used in the NTNDP are well-reasoned and appropriate.

AEMO has established the NTNDP Technical Working Group to facilitate this engagement.

OBJECTIVES & SCOPE

The objective of this working group is to facilitate discussion on technical matters, such as:

- Credible scenarios that will test the development requirements of the transmission network to efficiently maintain system security and reliability.
- Market simulations for co-optimisation of generation, network and non-network investment.
- Long term power system planning studies to understand the strategic development of both network and non-network infrastructure.
- Co-ordination between national and local network issues.

Outcomes from these discussions will help AEMO develop the NTNDP publications to ensure they deliver as much value as possible to all stakeholders.

In Scope

The Technical Working Group will seek to:

- Leverage market modelling and network planning experience from a variety of sources to continually develop our collective expertise in these areas.

- Discuss the merits of input data and assumptions used for market modelling and power system planning purposes.
- Share specific domain knowledge – for example: local knowledge and insights from generators, network service providers and other sources.

Out of scope

- The Technical Working Group is not a decision making body, however AEMO is committed to ensuring that our NTNDP delivers value to our stakeholders. AEMO understands the importance of stakeholder engagement and knowledge sharing to achieve this.

PROCESS AND TIMETABLE

It is anticipated that the Technical Working Group would meet 2-3 times before the publication of the NTNDP by the end of each year. Meetings will be held via video conference and telephone dial in.

For 2016 the proposed timetable of engagement is as follows:

- **27 April**, meeting #1: discussion of proposed scenarios, scope, objectives and key input assumptions.
- **June/July**, meeting #2 – discussion of key modelling methodology considerations.
- **August**, meeting #3: discussion of preliminary results from the generation outlook.
- **August/September**, one to one engagement with transmission network service providers: discussion of preliminary results from the transmission outlook.
- **November**: publication of the 2016 NTNDP.

MEMBERSHIP

The Technical Working Group will be convened and chaired by AEMO, and will include representatives from across the energy industry.

AEMO welcomes participation from a range of stakeholders, but for all parties to gain maximum benefit from this working group, it is recommended that members should have expertise in either market modelling or strategic network planning.

Members with such expertise may represent organisations such as:

- Network Service Providers.
- Generators and emerging technology proponents.
- Regulatory bodies, Federal or State Government departments.

AEMO will continue to conduct annual NTNDP workshops in which all stakeholders are encouraged to attend, whatever their level of expertise.

GOVERNANCE

The Technical Working Group will operate under the guidance of this Terms of Reference document. AEMO will provide secretariat support for the Technical Working Group, including provision of meeting minutes, action items, and a register of key documents if appropriate.

EXPENSES

Any expenses incurred as a result of attending meetings or activities associated with the Technical Working Group are at the expense of the individual business that the person represents.