



Consultation Summary

Network Capability Incentive Parameter Action Plan

27 March 2015



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1. Introduction

This document details the consumer consultation undertaken by ElectraNet in the development of the Network Capability Incentive Parameter Action Plan (NCIPAP or Plan) for the 2015-16 to 2017-18 period, in accordance with the requirements of Clause 11.77.3 (b) (4) of the National Electricity Rules (NER).

2. Consultation with Consumers

ElectraNet commenced initial consultation on its network capability proposals with consumers and interested stakeholders as part of its Transmission Annual Planning Report public forum held in September 2014. At that forum ElectraNet presented background information on the Network Capability Incentive and initial information on the proposed priority projects ElectraNet was investigating. A copy of this presentation together with an explanatory fact sheet was also made available on ElectraNet's website.

Following this initial information, ElectraNet consulted with consumers through the release of a draft NCIPAP and updated fact sheet for public comment in December 2014. As part of this consultation:

- The draft NCIPAP and fact sheet was sent to all ElectraNet directly connected customers and a range of wider stakeholders, including consumer representative organisations;
- An invitation for interested parties to attend a round table to discuss the draft Plan was issued to these stakeholders;
- ElectraNet issued a notice of the consultation via the weekly Australian Energy Market Operator (AEMO) Communication to NEM stakeholders;
- The NCIPAP consultation material was released on the ElectraNet website; and
- Written comments on the draft Plan were sought by 30 January 2015.

The round table for interested parties was held on 28 January 2015, attended by representatives of Major Energy Users Inc (MEU), SA Power Networks, the South Australian Department of State Development and AEMO. An overview presentation was provided at this round table, a copy of which was also released on ElectraNet's website.

Written submissions on the draft NCIPAP were received from the South Australian Council of Social Service (SACOSS), AEMO, MEU and BHP Billiton. In response to the feedback received through this consultation process, ElectraNet has modified the NCIPAP proposals in a number of areas to address the issues raised. Key changes include:

- Resolution of the status of the Lower South East uprating project, which is no longer dependent on works in the Victorian network and is proposed to be pursued as a stand-alone project.

- The removal of a proposed project to relieve forecast congestion in the mid-north. Whilst based on the best information available at the time, the drivers of this congestion remain subject to uncertainty over the timing of future generation developments. This project is more appropriately pursued in future once the status of these potential future developments is clearer.
- Further clarification has been presented as to the timing and nature of benefits to be delivered for consumers from the proposed priority projects.
- Confirmation that the improvements to be delivered by the proposed projects are in addition to all existing committed network developments, such as the Heywood Interconnect Upgrade. Two of the proposed priority projects will deliver additional benefits following the augmentation on the interconnector, and will further increase the capability of the interconnector under a range of operating conditions.
- Greater clarity on the key assumptions that underpin the assessed benefits from the proposed projects, including gas price projections and generation output patterns.
- Confirmation that the Plan can be amended on application to the Australian Energy Regulator (AER) if circumstances change.
- Confirmation that the total value of the projects proposed is a full one per cent of the average maximum allowed revenue for the relevant period.

A full listing of the issues identified in both public submissions and at the stakeholder round table and the manner which these have been addressed by ElectraNet in the finalised NCIPAP is provided in the following table.

For completeness, this listing includes the issues raised by AEMO in its submission on the draft NCIPAP proposals, all of which have been addressed in the finalised Plan, as confirmed in AEMO's letter of endorsement of 20 March 2015.

Responses to Issues Raised in Consultation – Round Table

Organisation	Issue	ElectraNet Response
Major Energy Users Inc	What is the technical reason why lifting the spans will allow higher current flows?	The heights of lines can vary according to the current being carried in the line and the temperature of the line. If the line heats up as a result of hot weather and/or the electrical current that is flowing through it, the line will have a tendency to physically sag. This sagging brings the line closer to the ground, which increases the potential to breach statutory clearance limits. By lifting the spans the lines can be rated for higher current flows without breaching statutory clearances. ElectraNet's Network Capability Proposal Fact Sheet contains an illustration of such a line uprating.
Major Energy Users Inc	Why wait until now to propose these projects?	<p>A number of projects were included in ElectraNet's 2012 Revenue Proposal but were removed by the Australian Energy Regulator (AER) in its Draft Decision, on the basis that the NCI was being separately introduced at that time.</p> <p>Consequently, these projects were not included in ElectraNet's Revised Proposal or the AER's final revenue determination of 2013, and ElectraNet indicated at this time that it would separately pursue such projects under the new NCI.</p> <p>Subsequent advice from the AER confirmed that a Rule change was required to enable it to formally assess the application of the NCI during a regulatory period.</p> <p>A Rule change to this effect was proposed, and ultimately approved in February 2015, now enabling ElectraNet to lodge its finalised ElectraNet's Network Capability Incentive Parameter Action Plan (NCIPAP) for formal assessment.</p>
Major Energy Users Inc	Why were the projects not done to get a reward under the Market Impact Component (MIC)?	<p>The MIC is based on rewarding Transmission Network Service Providers (TNSP) for improving outage performance by reducing the market impact of planned and unplanned transmission outages.</p> <p>The NCI is based on improving the underlying capability of the transmission network, particularly at times most needed and at locations most important.</p>
Major Energy Users Inc	While the NCI is capped at 1% of Maximum Allowed Revenue (MAR) what will be the cost for each of the different elements of the projects?	The cost of the proposed priority projects totals approximately \$10 million over 3 years. Details of individual project costs are provided in Table 3-1 of the NCIPAP.

Major Energy Users Inc	What is the Benefit of each project and on what basis is the benefit is costed?	<p>Benefits include reduction in dispatch costs by removing constraints that limit the dispatch of cheaper forms of generation (typically renewable generation output) to displace more expensive generation, putting downward pressure on wholesale energy costs.</p> <p>These benefits are estimated based on the duration of projected constraints, the estimated capacity improvement in each case and the value of the released capacity based on the value of those constraints in the market. These benefits are then compared with the costs of the works involved in reducing the constraint.</p> <p>Further analysis was also conducted to test the sensitivity of the estimated benefits to a range of alternative assumptions.</p> <p>The benefits of the individual projects are detailed in the NCIPAP. These range from payoff ratios of 3:1 to 12:1 with the benefit payback period ranging from less than a year to 5.7 years.</p> <p>The assessment methodology, inputs and assumptions were reviewed thoroughly by AEMO during its evaluation of the proposals.</p>
Major Energy Users Inc	Will the benefits from the interconnector related NCI project reduce when the augmentation is completed?	The Heywood interconnector upgrade is treated as a committed project in the analysis. The assessed benefits from the proposed NCI projects are therefore additional to those delivered through the Heywood upgrade.
Major Energy Users Inc	What does the Australian Energy Market Operator (AEMO) do in its review of the projects?	AEMO undertook an extensive review over a 12 month period which included reviewing all network limits identified by ElectraNet, exploring the potential for co-ordinated projects with other TNSPs, reviewing the assessment methodology, inputs and assumptions applied by ElectraNet, reviewing the proposed project improvement targets to ensure a material benefit will result, reviewing which projects should be classified as priority projects based on their likely benefit to consumers, and reviewing the ranking of the priority projects. ElectraNet explored a total of 17 potential projects with total costs estimated at \$32.6 million with AEMO. This review culminated in the 6 projects totalling \$10.05 million identified in the finalised NCIPAP which have been formally endorsed by AEMO.
Major Energy Users Inc	The timing of the benefits to be delivered to consumers is unclear in the draft plan.	This has been clarified in the final NCIPAP with the addition of summary Table 3-2.
Major Energy Users Inc	TransGrid's revised revenue proposal highlights an issue with line clearance safety and de-ratings. Does ElectraNet have this issue?	The AER's revenue determination for the current regulatory period included funding to rectify a number of the highest risk line clearance violations identified following a comprehensive Aerial Laser Survey (ALS) of the transmission network. These works are separate from the uprating projects proposed in the NCIPAP,

		and are needed to address public safety issues at current line ratings. In the interim, ElectraNet is managing these issues through operation measures such as fencing, warning signage and direct liaison with the landowner.
Major Energy Users Inc	It appears ElectraNet is pushing for projects to the maximum value of 1% of revenue, which is a concern.	Under the Scheme, a TNSP is entitled to an incentive payment of 1.5% of allowable revenue for delivery of an approved NCIPAP, regardless of the total value of the projects proposed (which must not exceed 1% of allowable revenue). AEMO has required ElectraNet to include projects up to the full amount of 1% of allowable revenue to ensure maximum benefits are delivered.
Major Energy Users Inc	Wind tends to be bid negative to the market. Has the modelling assumed actual bidding behaviour?	Market modelling for the purposes of market benefits assessment typically relies on standardised marginal cost assumptions for generation dispatch which can be readily verified, rather than observed historic bidding patterns which cannot be reliably predicted into the future.
Major Energy Users Inc	Some projects do not present immediate benefit and are based on forecasts with risks and sensitivities - this should be made clear in the Plan.	ElectraNet has clarified the nature of the benefits, risks and sensitivities associated with the finalised priority projects included in its Plan. AEMO has concluded in its assessment that all six priority projects proposed have positive net market benefits and will deliver value to customers.
Major Energy Users Inc	Which Value of Customer Reliability (VCR) has ElectraNet used for the modelling and outages?	ElectraNet has used the latest VCR values published by AEMO for the sensitivity testing it has undertaken. All of the 6 listed projects in the finalised NCIPAP are system normal limitations and do not require modelling of planned outages.
Department of State Development	Will the Heywood upgrade solve any of the constraints?	The assessed benefits from the proposed NCI projects are additional to those to be delivered through the Heywood Interconnect Upgrade.
Department of State Development	What date is Heywood due for completion?	The Heywood Interconnect Upgrade remains on track for delivery in mid-2016 as planned.
Department of State Development	Will these forecast constraints occur?	The limitations identified across the network included: <ul style="list-style-type: none"> • System Normal – constraints that currently bind • Outage – limits that bind during network outages • Future – limits expected to bind based on known developments • Future Uncertain – limits that may bind if future developments proceed Of the above limitations, the finalised NCIPAP projects primarily relieve System Normal and Future constraints that have a higher degree of certainty.
Department of State Development	Given the announced gas generation closures in SA, and low volumes being	ElectraNet has relied on the best information available in developing its Plan and has used the latest assumptions adopted in AEMO's 2014 National Transmission

	generated by these plants in the market currently, how does this effect modelling?	Network Development Plan (NTNDP) and the extensive RIT-T Market Modelling conducted by AEMO for the Heywood Interconnector Upgrade Project.
Department of State Development	Once the AER approves the Plan what happens if the future constraints do not occur?	ElectraNet is required to annually report to the AER on progress of the Plan. As part of this process projects can be amended with AER approval if circumstances materially change.
Department of State Development	The timeframe for the Rule Change and submission of the plan to the AER is tight. Can ElectraNet achieve this?	The approval and implementation of the Plan by 1 July 2015 remains fully achievable.
Department of State Development	The dollar values listed for the projects on the presentation slides and fact sheet are not the same.	The values presented on slide 12 of the round table presentation are in nominal terms, as they appear in the draft Plan. The Network Capability Proposal Fact issued in December quoted values in real (\$2014-15) terms. These values are quoted in consistent terms in the finalised NCIPAP and fact sheet to avoid confusion.
Department of State Development	The proposed priority project to remove plant limits relies on the addition of 700 to 800MW of wind generation in the Mid-North, as per the NTNDP. However, additional wind generation appears very uncertain given the status of the RET, raising questions over the benefits associated with this project.	ElectraNet has removed this priority project from its finalised NCIPAP, recognising the uncertainty over the timing of the future renewable generation developments, and has confirmed the status of the Lower South East Uprating in preference to this project.
SA Power Networks	Will the Riverland uprating project solve the Marginal Loss Factor (MLF) issues in the Riverland region.	The MLF is not expected to be impacted by the project.
AEMO	What stage is the Rule Change process at?	The enabling Rule Change was lodged in January 2014 and released in June 2014 for comment. A Draft Decision was released in November 2014 and submissions closed on 8 January 2015. A final decision approving the Rule Change was released on 19 February 2015 by the Australian Energy Market Commission (AEMC) which permits a transmission business such as ElectraNet to apply to the AER for the application of the network capability component during its current regulatory control period.
AEMO	What will happen if the Rule Change does	ElectraNet would not be in a position to lodge its proposed NCIPAP to the AER for

	not proceed?	approval, and consumers would be denied the benefit of these initiatives until at least 2018 in the absence of the approved Rule change.
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Responses to Issues Raised in Consultation – Submissions

Organisation	Issue	ElectraNet Response
AEMO	The market benefit expected to be delivered by implementing the Riverland Upgrading project cannot be delivered without upgrading the Robertstown-North West Bend line #1 upgrading.	<p>ElectraNet remains fully committed to this project, which is a requirement under the Electricity Transmission Code, and remains on schedule for delivery prior to the coming 2015-16 summer period.</p> <p>This removes any uncertainty over the market benefits to be delivered by the subsequent Riverland Upgrading NCIPAP project, as confirmed in AEMO's subsequent endorsement letter of 20 March 2015.</p>
AEMO	The Lower South East upgrading project requires a compatible project in Victoria on the lines between South East and Heywood in order for the identified benefits to be delivered, as a co-ordinated project, and the resolution of concerns associated with stability limitations.	<p>ElectraNet received subsequent advice from AusNet Services dated 24 February 2015 that the Victorian works would exceed the NCIPAP threshold and therefore would not qualify as a co-ordinated NCIPAP project.</p> <p>On closer inspection of the asset ratings applied in South Australia and Victoria, ElectraNet has established that those applied on the South Australian network have historically been more conservative, so that the priority project ElectraNet has proposed will still deliver the bulk of the original benefits identified independent of any upgrading in Victoria.</p> <p>The Lower South East upgrading project is therefore proposed as a stand-alone project rather than a coordinated project. Further analysis has been undertaken to confirm the validity of the net benefits in the presence of potential voltage stability limitations. It was determined that further investigation of the effects of potential stability limitations in both South Australia and Victoria are not warranted for the purposes of this project given the net benefits demonstrated, as confirmed in AEMO's subsequent endorsement letter of 20 March 2015.</p>
AEMO	The total value of projects falls below the maximum 1% cap of \$10.08 million.	Two additional planning studies have been identified, namely Project 6 - Load model enhancements at an estimated cost of \$100,000 and Project 7 - PV response to frequency disturbances at an estimated cost of \$60,000, achieving a total Plan value equal to the 1% cap. These projects have been assessed in qualitative terms and have been endorsed by AEMO in its letter of 20 March 2015.
SACOSS	Overall, benefits to consumers have not been robustly demonstrated and SACOSS does not accept the need for the projects to be addressed prior to the next revenue reset.	A rigorous assessment process has been undertaken in conjunction with AEMO to evaluate the likely benefits available from undertaking the proposed priority projects. This analysis demonstrates the substantial benefits available to consumers, as confirmed in AEMO's endorsement of the finalised projects. Further information has been included in the NCIPAP to explain the nature of

		these benefits and test their sensitivity to the key assumptions.
SACOSS	Project 1 - Riverland uprating. SACOSS questions whether the projected benefits are likely to accrue mainly to SA Water and to operators of windfarms in SA.	Increasing available capacity by removing constraints allows the lowest cost electricity to be dispatched. This is a benefit to the market and to consumers generally through downward pressure on wholesale energy costs. There is no specific benefit that will accrue to SA Water as a customer that is not shared by all consumers. This benefit includes the reduced likelihood of load shedding (loss of supply) due to the interaction of constraints in the Riverland and Victorian network.
SACOSS	Project 1 - Riverland uprating. Concern that the Heywood Interconnector upgrade will erode some of the project benefits.	The bulk of the benefits from this project come from alleviating constraints on the 132 kV network, which helps support the 220 kV network in Victoria. The Heywood interconnector is electrically remote from this part of the network. Increasing the capability of the Heywood interconnector will have no impact on the benefits through this part of the network.
SACOSS	Project 2 - Upper South East uprating. SACOSS is not convinced that this project is warranted prior to the next regulatory control period, and it is unclear how the benefits relate to the Heywood Interconnect Upgrade.	ElectraNet has provided greater clarity in the finalised NCIPAP on the drivers and timing of benefits of this project, which are additional to the Heywood Interconnect Upgrade.
SACOSS	Project 3 - Lower SE uprating. SACOSS is not convinced that this project is warranted prior to the next regulatory control period, and it is unclear how the benefits relate to the Heywood Interconnect Upgrade.	ElectraNet has also provided greater clarity in the finalised NCIPAP on the drivers and timing of benefits of this project, which are additional to the Heywood Interconnect Upgrade.
SACOSS	Project 4 - Robertstown - Waterloo East uprating. SACOSS encourages ElectraNet to seek payment from the wind farms for this project as the primary beneficiaries.	Increasing supply by removing constraints allows the lowest cost electricity to be dispatched, which delivers benefits across the market and to consumers generally. The market framework does not require generators to pay for the use of the shared network, nor does it guarantee their access to that network.
SACOSS	Project 5 - Plant limits between Robertstown – Davenport. SACOSS encourages ElectraNet to seek	ElectraNet has removed this priority project from its finalised NCIPAP, recognising the uncertainty over the timing of the future renewable generation developments, and has confirmed the status of the Lower South East Uprating in preference to

	payment from the wind farms for this project as the primary beneficiaries.	this project.
BHP Billiton	None of the projects are in the Upper North and do not appear to strengthen the network in a manner that supports BHP Billiton's demand or affect the high level of TUOS the BHP Billiton pays.	<p>ElectraNet examined limits across its network and explored a total of 17 potential projects to address the most material limitations. The final 6 projects included in the NCIPAP are those that provide the greatest net benefit to consumers by improving the capability of South Australia's transmission network in terms of both the elements most important to determining spot prices and the times when users place the greatest value on the reliability of the system. These projects were also independently reviewed and endorsed by AEMO.</p> <p>Along with other customers, BHP Billiton can expect to benefit from these projects through downward pressure on wholesale electricity costs.</p>
BHP Billiton	BHP Billiton requests that ElectraNet reconsider its capital spending plans, and re prioritise projects to better support its Olympic Dam operation to more appropriately reflect the level of TUOS charges it pays and the economic importance of this supply. BHP Billiton requests that the older relay units be replaced immediately, along with any other "old" equipment upon which it relies.	<p>The purpose of the Network Capability Component under the AER guideline is to improve the capability of transmission assets through operating expenditure and minor capital expenditure on a transmission network that results in:</p> <ol style="list-style-type: none"> 1. improved capability of those elements of the transmission system most important to determining spot prices, or 2. improved capability of the transmission system at times when Transmission Network Users place greatest value on the reliability of the transmission system. <p>The suggested projects highlighted by BHP Billiton do not meet these requirements under the Scheme, and are therefore not eligible for inclusion in the Plan.</p>