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ADVOCACY CENTRE

Converting the ISP into action

28 June 2019

Joint submission from:

- Public Interest Advocacy Centre
- Consumer Action Law Centre
- Total Environment Centre
- NSW Farmers
- South Australian Council of Social Services
- Uniting Communities
- Renew

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About the Public Interest Advocacy Centre

The Public Interest Advocacy Centre (PIAC) is an independent, non-profit legal centre based in Sydney.

Established in 1982, PIAC tackles barriers to justice and fairness experienced by people who are vulnerable or facing disadvantage. We ensure basic rights are enjoyed across the community through legal assistance and strategic litigation, public policy development, communication and training.

Energy and Water Consumers' Advocacy Program

The Energy and Water Consumers' Advocacy Program (EWCAP) represents the interests of low-income and other residential consumers of electricity, gas and water in New South Wales. The program develops policy and advocates in the interests of low-income and other residential consumers in the NSW energy and water markets. PIAC receives input from a community-based reference group whose members include:

- NSW Council of Social Service;
- Combined Pensioners and Superannuants Association of NSW;
- Ethnic Communities Council NSW;
- Salvation Army;
- Physical Disability Council NSW;
- Anglicare;
- Good Shepherd Microfinance;
- Financial Rights Legal Centre;
- Affiliated Residential Park Residents Association NSW;
- Tenants Union;
- The Sydney Alliance; and
- Mission Australia.

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Public Interest Advocacy Centre

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The Public Interest Advocacy Centre office is located on the land of the Gadigal of the Eora Nation.

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Introduction and context

The Public Interest Advocacy Centre, Total Environment Centre, New South Wales Farmers, South Australian Council of Social Services, Uniting Communities, Renew, and Consumer Action Law Centre welcome the opportunity to jointly respond to the Energy Security Board's consultation paper on converting the Integrated System Plan into action.

Co-ordinating the energy transition in the NEM

The National Energy Market (NEM) is in a period of rapid transformation. At the same time, energy is increasingly unaffordable for many residential, commercial and industrial consumers.

If not planned for and managed correctly this transition may result in an inefficient and expensive electricity system and a needlessly slow and non-optimised emissions reduction pathway.

Planning and investment that considers the entire energy system is required, but the current industry structure, market design and regulatory framework makes efficient system-wide planning difficult. Vertically disaggregated ownership and operation across the supply chain makes optimisation unrealistic without some centralised planning.

At the inception of the NEM, system requirements were predicated on growing demand and increasing load connection points, Governments owned the entire energy supply and value chains, social outcomes were paramount in planning and investment decisions, and commercial issues such as funding, short-term profits and competition were not primary concerns.

Today's system planning and investment frameworks remain a legacy of those times, and are designed to support incremental investment to an established, centralised generation and transmission system. Under this framework, the costs and benefits of individual investments are assessed without full regard for their impact on the rest of the energy system. Planning is largely left to the market and monopoly businesses, guided by a combination of profit-motivated responses to price signals and regulatory oversight.

Lack of framework for whole-of-system outcomes

The current regulatory framework is designed to deliver efficiency of incremental investment to a centralised generation and transmission system which has already been 'built out'. However, the transformation the NEM is going through is not incremental – it is a step change.

The NEM needs a planning and investment framework that delivers efficiency for strategic, whole-of-system investments in order to ensure this transformation is delivered in a timely and cost-effective manner. This is the challenge we consider is central to the work the AEMC and ESB are doing through a number of work streams, including this consultation and the COGATI review.

Without such a framework, the cumulative impacts of individual generation and transmission investments diverging from the optimal system-wide outcome will be:

- Inefficient generation investment – in terms of the sizing of new generators; their location and impact on the network; the cost to connect each individual generator including those otherwise efficient investments which do not occur; and the geographic and fuel source diversity of the generation fleet as a whole.

- Inefficient network investment – in terms of the shallow connection assets to connect new generation; the deeper assets required to connect new generation to major load centres; the interconnection of major load and generation regions to make the most of fuel diversity and maintain reliability of supply; and the ability to maintain system security and stability.

- A lack of coordination between generation and network meaning consumers may have to pay twice for the same problem to be solved.

- Missed opportunities to exploit economies of scale and scope.

- A longer and more expensive transition to a low-emissions energy sector.

All of these would ultimately lead to increasing pressures on consumers through the wholesale and network components of their electricity bills, and through the impacts of climate change.

Objectives

The frameworks for centralised supply comprise policy and regulatory obligations as well as the practices of relevant businesses and market bodies in implementing them, to plan, deliver and pay for the large-scale generation[1] and transmission network.

We have identified three objectives that the regulatory framework for delivering centralised generation and transmission must deliver in the current context of the NEM's transformation and affordability challenges. We use this as a basis for assessing the need and priority of any reforms to the current framework and the merit of any solutions proposed. The framework must:

1. **IDENTIFY** the most efficient system-wide solution.

2. **DELIVER** the solution in a timely and efficient way.

3. **RECOVER COSTS** for the delivered solution in the fairest and most equitable way.

Developing the ISP

Goal of the ISP

We consider the goal of the ISP is to optimise whole-of-system outcomes, in the long term interests of energy users, with respect to the trilemma: price, reliability/security and emissions reduction.

[1] And, increasingly, the potential role for large-scale storage as well.

To achieve this, we consider the ISP should be used by market and regulatory bodies as a guide for policy and rulemaking, and that it should signal to market participants to respond in a way that promotes system-wide efficiency.

In addition to this, the ISP should be used to address the following gaps in the existing planning framework for the NEM:

- the lack of a mechanism to identify how different parts of the system can be co-ordinated and co-optimised;
- the lack of a mechanism to deliver on opportunities for co-optimisation once identified; and
- the lack of any process or institution taking on a planning role at a system-wide level.

Confirming the role and purpose of the ISP and its interaction with other instruments is essential to avoid the following sub-optimal outcomes as the ISP is developed and put into action:

- inefficient and costly duplication of functions between the ISP and other policy mechanisms; and
- inefficient 'siloing' in implementation of the ISP's planning and optimisation functions.

Evolution and recommended scope and purpose of the ISP

The stated and implicit goals of the ISP have evolved over time. This has created ambiguity as to its scope, purpose and mechanisms.

The concept of an ISP was introduced in the Finkel Review as the Integrated Grid Plan. The Plan's remit was to plan transmission infrastructure to facilitate development and connection of renewable energy zones. It was described as follows:

> By mid-2018, the Australian Energy Market Operator, supported by transmission network service providers and relevant stakeholders, should develop an integrated grid plan to facilitate the efficient development and connection of renewable energy zones across the National Electricity Market.[2]

When AEMO published the first iteration of the ISP in 2018, the concept had evolved to the following:

> This Integrated System Plan (ISP) is a cost-based engineering optimisation plan by the Australian Energy Market Operator (AEMO) that forecasts the overall transmission system requirements for the National Electricity Market (NEM) over the next 20 years.[3]

Given the evolution and different expectations of the ISP, we consider this consultation an opportunity to clarify what the ISP constitutes, what it seeks to achieve, and the scope which it covers. On these matters we make the following recommendations:

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2 Commonwealth of Australia, *Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future*, 2017, 24.

3 AEMO, *Integrated System Plan*, 2018, 3.

- The ISP should be used as an opportunity to fill the whole-of-system planning/optimisation role currently lacking in the NEM.

- The ISP should act as a guide, setting out infrastructure requirements for an optimal whole-of-system outcome for energy, particularly with respect to co-ordinating generation and transmission. The ISP should also be used by industry as a direct source of information about what an efficient future state of the physical system would look like, and should identify barriers to optimal whole-of-system outcomes, which in turn should inform market and regulatory bodies in policy and rulemaking.

- Where overlap exists between the ISP and other processes, rules, and policy mechanisms, AEMO and other market bodies should seek to avoid unnecessary and costly duplication. This should involve co-ordinating policy responses, for example, by changing the objectives of one or more processes to avoid inefficient overlap, establishing the primacy of one process, or overlaying a new framework to avoid duplication and optimise the relative strengths of each.

The ISP and emissions

Due to various drivers, including state government policy and price signals, we consider the continued rapid deployment of renewable energy is inevitable.

From a risk management perspective, an ISP that fails to account for and optimise growth in renewable generation leaves consumers vulnerable to sharp increases in cost.

Reflecting this, the ISP was conceived as part of the Finkel Review in part to support the efficient development of renewable energy zones[4] as a mechanism 'to help make the transition to an innovative, low emissions electricity system'.[5] This is also consistent with the objectives of a growing number of state and territory governments.

We recommend AEMO assume the energy system of the future is characterised by the rapid deployment of renewables, as a reflection of the ISP's original policy intent and as a method of managing risk for consumers. In practical terms, this means planning a system that assumes:

- uptake of renewable generation
- sources of firmness such as storage and demand response, and
- greater energy efficiency.

Mechanism of action – how the ISP should shape the NEM

The ISP should set out a guide for optimising the NEM with respect to the long term interests of all consumers and the energy trilemma. Consistent with this role:

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4 See Recommendation 5.1: "By mid-2018, the Australian Energy Market Operator, supported by transmission network service providers and relevant stakeholders, should develop an integrated grid plan to facilitate the efficient development and connection of renewable energy zones across the National Electricity Market.' Ibid, p. 264.

5 See 'System Planning: To help make the transition to an innovative, low emissions electricity system…', ibid, p. 7.

1. AEMO, in consultation with stakeholders, should use the ISP to set out a guide for what an optimal (or more optimal) state of the physical system would look like. This includes the location and capacity of physical infrastructure including transmission and generation.

2. The ISP should provide guidance for market and regulatory bodies when creating rules, and be an overarching framework for regulations that align private incentives with system-wide optimisation.

3. The ISP should function as a source of information for investors and other market participants, signalling commercial opportunities that support optimal whole-of-system outcomes.

4. The ISP should consider the impact of, and need for policy and regulatory reforms both at a whole-of-system and regional level, with a goal of informing the agenda of reforms needed to facilitate the future energy system.

Inputs and constraints to system optimisation

In developing the ISP, AEMO should consider the following:

- **Networks** – Given the ISP is focussed on centralised generation, AEMO should give primary consideration to the transmission and sub-transmission networks. The distribution network should be considered to the extent it informs the potential use of Distributed Energy Resources (DER) – both in terms of any necessary network upgrades required, and the potential benefits DER can provide by alleviating other constraints.

- **Generation and storage** – a range of generation and storage technologies and sizes must be considered, including DER at an aggregated level. However, only technologies that are technically and economically viable at the time of modelling should be considered so as to avoid speculative uncertainty. Where there are market barriers to deploying otherwise technically and economically viable generation and storage options, the ISP should identify what changes need to be made to remove these barriers.

- **Distributed Energy Resources** – the ISP must consider the role of DER alongside centralised generation and transmission investments. DER options considered must include Demand Response (DR) and Virtual Power Plants (VPP) and should be aggregated to a level practical for the scope and nature of ISP modelling. The assessment of DER options must reflect the limits of the distribution network and the potential benefits that can be provided by alleviating other constraints. Where there are market barriers to deploying otherwise technically and economically viable demand response options (such as the current inability for aggregators to access the energy market independently of retailers) the ISP should identify what changes are needed to remove these barriers.

Pathways to reform and changes to the regulatory framework

The ISP should set out a guide for optimising the NEM with respect to the energy trilemma. Consistent with this role, it should consider the impact of policy and regulatory reforms at a whole-of-system level, with the ultimate goal of setting out directions for reform that will maximise system-wide benefits.

One means of achieving this would be to conduct 'base' ISP modelling premised on what AEMO gauges as the most likely regulatory and policy environment. A range of potential reforms, decided by AEMO in consultation with the public, could be treated as sensitivities to this base case modelling.

If the modelling indicates these reforms, or combinations of reforms, are likely to result in some material increase in net benefits across the system, AEMO should set out the nature and magnitude of these benefits in the ISP. This should provide an impetus to investigate these reforms and potentially conduct more detailed modelling of their implications, which in turn can provide an impetus for regulatory and market bodies and other stakeholders to undertake beneficial changes to the framework. Examples of such reforms might include the transmission cost recovery and risk sharing arrangements, or a wholesale demand response mechanism.