
# Multiple risks for uncertain benefit:

## Submission to the Australian Energy Market Commission's First Interim Report on Optional Firm Access, Design and Testing

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**Dr Gabrielle Kuiper, Senior Policy Officer**
**Energy + Water Consumers' Advocacy Program**

Level 7, 173-175 Phillip Street, Sydney NSW 2000 • DX 643 Sydney
Phone: 61 2 8898 6500 • Fax: 61 2 8898 6555 • www.piac.asn.au

# 1. Introduction

## 1.1 The Public Interest Advocacy Centre

The Public Interest Advocacy Centre (PIAC) is an independent, non-profit law and policy organisation that works for a fair, just and democratic society, empowering citizens, consumers and communities by taking strategic action on public interest issues.

PIAC identifies public interest issues and, where possible and appropriate, works co-operatively with other organisations to advocate for individuals and groups affected. PIAC seeks to:

- expose and redress unjust or unsafe practices, deficient laws or policies;
- promote accountable, transparent and responsive government;
- encourage, influence and inform public debate on issues affecting legal and democratic rights;
- promote the development of law that reflects the public interest;
- develop and assist community organisations with a public interest focus to pursue the interests of the communities they represent;
- develop models to respond to unmet legal need; and
- maintain an effective and sustainable organisation.

Established in July 1982 as an initiative of the (then) Law Foundation of New South Wales, with support from the NSW Legal Aid Commission, PIAC was the first, and remains the only broadly based public interest legal centre in Australia. Financial support for PIAC comes primarily from the NSW Public Purpose Fund and the Commonwealth and State Community Legal Services Program. PIAC also receives funding from NSW Trade and Investment for its work on energy and water, and from Allens for its Indigenous Justice Program. PIAC also generates income from project and case grants, seminars, consultancy fees, donations and recovery of costs in legal actions.

## 1.2 Energy + Water Consumers' Advocacy Program

This program was established at PIAC as the Utilities Consumers' Advocacy Program in 1998 with NSW Government funding. The aim of the program is to develop policy and advocate in the interests of low-income and other residential consumers in the NSW energy and water markets. PIAC receives policy input to the program from a community-based reference group whose members include:

- Council of Social Service of NSW (NCOSS);
- Combined Pensioners and Superannuants Association of NSW;
- St Vincent de Paul (NSW);
- Ethnic Communities Council NSW;
- Tenants Union;
- Physical Disability Council NSW; and
- Salvation Army.

# 2. Coordinating generation and transmission investment

## 2.1 Is it an 'issue worth wrestling with'?

The Public Interest Advocacy Centre appreciates that the development of Optional Firm Access (OFA) has a long history and that the context in which the concept of OFA was first conceived was very different to that which in which it is now being developed. Given the NEM has changed significantly since OFA was conceived, PIAC is pleased to note that the Australian Energy Markets Commission (AEMC) is not committed to recommending that OFA be implemented, but is exploring the costs and benefits involved in the potential change.

There are sound principles behind the original intent of OFA, including better coordinating generation and transmission investment; providing financial certainty for generation and providing funding from generators direct to Transmission Network Service Providers (TNSPs). PIAC has no issues with the intent behind these principles and the AEMC's focus on minimising overall system costs for consumers. However, despite best intentions, PIAC is unconvinced that there is an affirmative answer to the question 'is this an issue worth wrestling with?'.[1]

## 2.2 Defining the issue being addressed

The significance of the issue OFA is addressing depends on to what extent transmission network congestion is regarded as an issue now and, more importantly, to what extent it is expected to be an issue from 2022 onwards (the suggested earliest date that OFA could be implemented[2]).

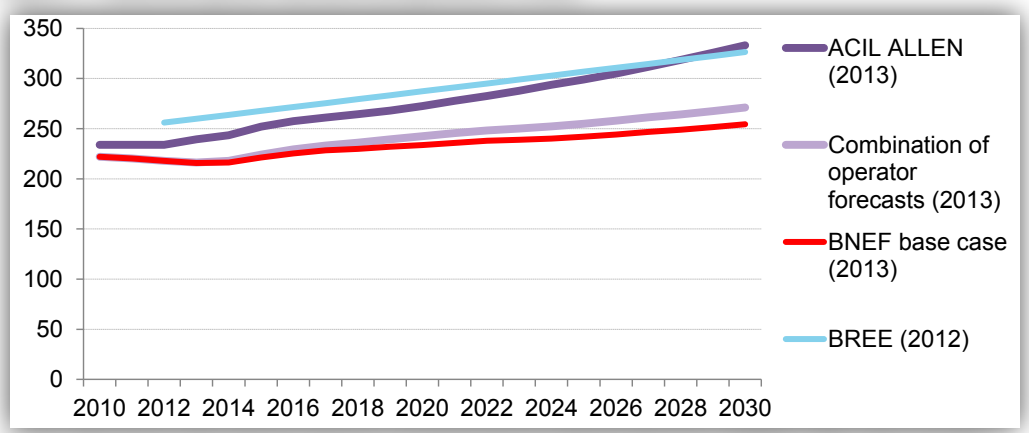
As has been well documented and endlessly discussed, overall demand from the grid has fallen substantially for the last five years. Hugh Saddler's analysis is that 'NEM demand in the financial year to 2013 was almost eight terawatt hours (TWh), or 4.3 per cent lower than in the peak year of 2009'.[3] AEMO's latest forecast is that 'no new capacity is required in any NEM region to maintain supply-adequacy over the next 10 years'.[4] The Bloomberg New Energy Finance (BNEF) graph below (Figure 1) illustrates a range of other projections of future demand. In parallel, distributed generation (connected to the distribution, rather than transmission network) is expected to increase significantly. In the short-term (2013-14 to 2016-17) AEMO is forecasting 24% average annual growth in rooftop PV installations, particularly in Queensland and Victoria.[5] Furthermore, within the next decade battery storage is likely to become economically viable; indeed it already is at fringe of grid.[6] It is therefore very unclear to what extent transmission congestion will be an issue in the coming decades. Current trends look to be ensuring any changes to the generation mix would occur later than in the previous modelling, which would tend to reduce the benefits of OFA.

Most importantly, where there are constraints now, it is in the vested interests of generators to try and solve this problem through negotiations with the relevant TNSP and subsequent network investment. It is not the case that congestion currently has no solution. The opportunity to build

1 Dr Brian Spalding, presentation to the Optional Firm Access, Design and Testing: First Interim Report Public Forum (14 August 2014, Sydney).
2 AEMC, *First Interim Report on Optional Firm Access, Design and Testing* (2014: Sydney), 126.
3 Hugh Saddler, *Power Down: Why is electricity consumption decreasing?* (2013: Australia Institute, Canberra), 4.
4 AEMO, *Electricity Statement of Opportunities* (August 2014: Melbourne), 1.
5 Ibid, 11.
6 Professor Tony Vassallo at AIE Sydney Evening Presentation, *Energy Storage: Disruption – Development – Deployment* (29 July 2014: Sydney).

out constraints is considered by generators; PIAC has not seen evidence of a constraint causing sufficient impact on a generator to warrant the investment by that generator.

**Figure 1: National gross demand projections (TWh)**




*Source: Bloomberg New Energy Finance, Australia Energy Market Operator (AEMO), IMO, ACIL ALLEN, Bureau of Resources and Energy Economics (BREE), ROAM Consulting Note: Combination of operator forecasts contains forecasts from AEMO, IMO and NT Power & Water Authority plus estimates for off grid. BNEF demand forecast is based on projections from the operators, with adjustments for higher uptake of PV, greater savings from energy efficiency, and lower load growth in Western Australia.*

### 2.2.1 Defining and quantifying the benefits for consumers

In terms of the financial benefits for consumers, ROAM modeling suggested the benefits could be of the order of $200m over 20 years.[7] This is a potential benefit of only $10m/year in the National Electricity Market (NEM), an $8 billion annual turnover market. This is not a material benefit for consumers, especially in comparison to addressing issues associated with distribution network costs.

Crucially, any benefits are highly conditional on the take up of OFA by generators. Given the uncertainty around future congestion, it is not known to what extent generators will choose to purchase Firm Access. To accurately model the dynamic benefits requires knowledge of the likely disaggregated decision-making by all participants. If take up is low, the 'market' signal is low and the difference from the current situation will be marginal.

This consideration is of key importance given the majority of future generation is likely to be wind (58% of 'proposed generation' in AEMO's August 2014 Electricity Statement of Opportunities is wind) where the wind resource is a significant locational determinant. These generators, which are generally remotely located due to wind resource characteristics, already face effective locational signals in higher congestion risk and lower loss factors. OFA is likely to impose significant additional costs on these generators, leading to increased wholesale prices in the long run.

Should work on OFA proceed, PIAC would like to see more data about how widespread the problem is, including case studies of where new power stations are planned for constrained parts of the network and how OFA would work there. Consumers need clear analyses to understand just how large the costs and benefits could be expected to be.

[7] ROAM Consulting, *Report to AEMC Modelling Transmission Frameworks Review* (2013: Brisbane)

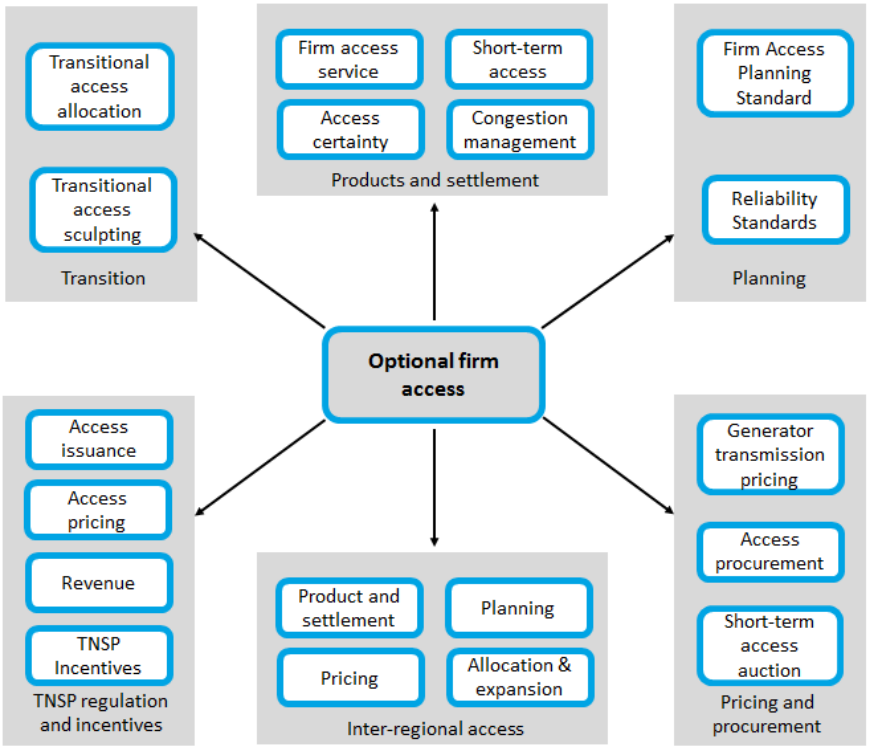
***Recommendation 1***

*That, should it continue work on Optional Firm Access, the AEMC collects and publishes data about how widespread the problem of transmission congestion is, including case studies of where new power stations are planned for constrained parts of the network and how OFA would work there.*

# 3. Risks inherent in the proposal

Having looked at what the in principle benefits of a new system for coordinating generation and transmission investment through OFA might be, this section looks, at a high level, at some of the risks in regard to what is currently known about how OFA might function.

**Figure 2 Key features of optional firm access**[8]




## 3.1 Highly complex system

OFA is a package of market arrangements that appears simple in principle ('a financial insurance product'), but is highly complex in practice (see Figure 2). It involves the creation of a new set of financial arrangements and the creation of a new 'firm access standard' that will require TNSPs to plan and operate the system to provide capacity to underpin firm rights. There will also be the creation of a new set of penalty payments if the TNSPs do not meet the firm access planning standard (probably capped per day/month/year).

## 3.2 Duplicate standard: risk of over-investment

Given that under OFA, TNSPs would be responsible for meeting both the existing jurisdictional reliability standard and the firm access standard, the question arises, in the case where reliability

8 AEMC, *First Interim Report on Optional Firm Access, Design and Testing* (2014: Sydney)

standard is greater than firm access standard, what would the benefit be? In the reverse case, where the firm access standard is larger, it would seem logical that investment in the network would be greater and therefore more expensive. Stanwell's view, expressed at the Public Forum, was that a bigger network would result in consumers paying more.[9] The cases of Victoria and New South Wales are particularly high risk given that they have a probabilistic reliability standard and firm access would be deterministic (n-1 redundancy).

## 3.3 Risk of imperfect information in calculating LRIC

The access price for a generator would be a regulated charge reflecting the long run incremental cost (LRIC). It is unclear to PIAC what would ensure that generators provided full and accurate information to the regulator (AER) in order for it determine the LRIC. Future demand, generation and transmission requirements are highly uncertain and so there are many resulting questions such as how long are the firm access contracts going to be sold for? Does that ensure full payback? If a transmission upgrade is sized in anticipation of future generation that doesn't eventuate, who will pay for the stranded assets?

There are also difficult questions about timing and planning. A generator won't be able to secure finance until they've secured firm access. But the firm access pricing is at risk of an alternative generator (including somewhere geographically different) eating away at that access. Who commits first – and, if it's the TNSP, what happens if the generator doesn't go through with the sale? Are firm access contracts binding even if the generator is sold or goes bankrupt?

In summary, what will happen to ensure efficient costs are reflected in the access price?

## 3.4 Implementation costs

It is not possible to quantify the costs of implementing OFA at present given the details are still being developed, but they are likely to be high. They involve new financial contractual arrangements, renegotiation of power purchase agreements, changes to AEMO's operations, an additional role for the AER (in regulating firm access as a prescribed service and determining an ex ante allowed revenue requirement based on the efficient cost of meeting both firm access and reliability standards and determining the relative payments of Transmission Use Of System (TUOS) charges (from users) and access payments (from generators)). It appears that there is a significant risk that costs of implementation alone will be greater than the estimated benefits of $10m/year.

## 3.5 Jurisdictional risk

The full benefits of OFA will only be achieved when all elements are implemented in all jurisdictions. Given that support for renewable energy generation varies considerably by jurisdiction (and given the transition arrangements discussed below), there is a risk that one or more jurisdictions may not commit to OFA. For example, if the NSW Government was of the view that OFA disadvantaged new renewable energy generation, it might not implement OFA, putting the NEM-wide scheme at risk.

[9] Jennifer Tarr, Stanwell presentation to the Optional Firm Access, Design and Testing: First Interim Report Public Forum (14 August 2014, Sydney)

## 3.6 Transition arrangements – grandfathering

What is proposed currently with the gifting of firm access to existing generators is a wealth transfer of new property rights from the public to incumbent generators. This will create a barrier to entry for new participants and, potentially, a market distortion if there is no change in generator expectations with new entrants. Given increased low emissions generation is in the long-term interests of consumers, PIAC does not support the proposed transition arrangements.

Firm access has never been a characteristic of the NEM. Generators currently in the market did not anticipate firm access when they made their investment. If OFA was to be implemented, the logical approach would be to auction firm access as auctioning would:

- define the value of firm access, as set by generators who are paying for it;
- allow individual generators to make informed decisions relative to their risk expectations;
- remove the competitive disadvantage for new entrants that grandfathering creates, and;
- avoid the unacceptable wealth transfer from customers to generators that grandfathering creates.

Furthermore, an auction process would create the clear test of the OFA reforms: the proposed benefits of OFA would be tested if generators were required to buy firm access from the outset. If the benefits do not result from an initial auction, then there would be insufficient basis for the reforms proceeding.

# 4. Summary

This submission has looked at both the potential benefits of OFA and some of the potential risks on the basis of what is currently known about the proposal. To PIAC, it appears that OFA is only beneficial if congestion is a material issue in the decades to come, if the proposed solution adequately addresses the issue and does not create additional risks or uncertainties. PIAC's view is that the benefits are marginal and highly conditional and as such PIAC concurs with the view expressed by Ross Edwards of Energy Australia that it is 'difficult to identify a material benefit in proceeding'.[10]

Furthermore, the additional complexity and overall costs and the range of risks suggests proceeding with OFA is not in the long-term interests of consumers. While PIAC recognises the intent of attempting to develop an additional means for generators to provide a financial signal to transmission networks, PIAC believes that the AEMC would be better to focus on incremental reforms to transmission planning which can be demonstrated to provide material benefits to consumers and in general, on issues which are likely to have significant cost benefits for consumers, such as the Demand Management & Embedded Generation Connection Incentive Scheme rule change.

***Recommendation 2***

*In PIAC's view, Optional Firm Access is not likely to contribute to the National Electricity Objective. PIAC therefore recommends AEMC and AEMO inform the COAG Energy Council at its next meeting that OFA is not worth pursing, rather than reporting this in mid-2015.*

[10] Edwards, presentation to the Optional Firm Access, Design and Testing: First Interim Report Public Forum (14 August 2014, Sydney)