CS Energy response to OFA Design and Testing

September 2014
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Optional Firm Access, Design and Testing

Summary and key points

CS Energy thanks the Australian Energy Market Commission (AEMC) for consulting on the development of Optional Firm Access, Design and Testing. In particular we wish to thank the AEMC staff for holding a forum and consulting CS Energy in person. We hope the AEMC find this response helpful in finishing the design of Optional Firm Access (OFA) and in considering the implications of the design choices on generators, monopolies, regulators and the consumer.

Our response is structured in the format of the consultation paper. We make comment on the assessment framework and, as requested, provide suggestions for further investigation by the AEMC. The structure follows each chapter of the First Interim Report and answers each question posed by the AEMC.

We have considered the proposed design features of OFA and where appropriate have put forward recommendations for further investigation in the development OFA.

Primarily, CS Energy's recommendations relate to removing some of the complexities relating to the involvement of the regulator and monopolies through the monopoly incentive schemes, short term access, inter-regional access and the sculpting back of Transitional Access (which requires relying on the Long Run Incremental Cost (LRIC) pricing model to then charge generators at a regulated rate).

We recommend the AEMC investigate whether the generator can become more involved and the monopoly and the regulator less so in the OFA design. This recommendation is the key theme of this response.

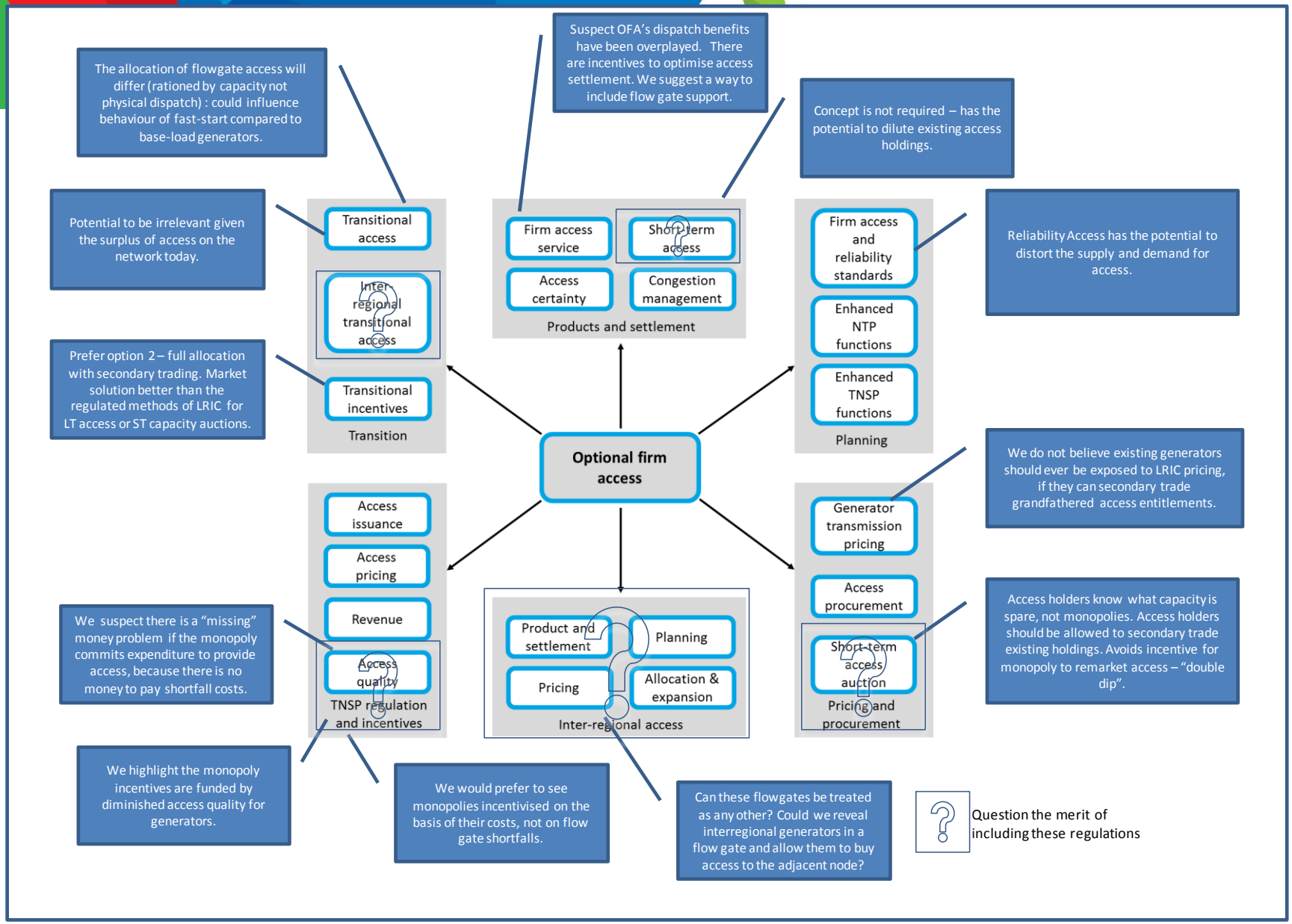
We believe the proposals for inter-regional access and auctions may be unnecessary. We recommend the AEMC investigate if these inter-regional constraints can be treated in another way in the OFA design.

The proposals for short term access and the incentives for network monopolies to provide this access may also be unnecessary. There are opportunities for existing access holdings to be diluted by short term access. Short term access could be traded by the access holders who are the only parties that really know if there is 'spare' capacity.

We recommend the AEMC investigate whether an incentive scheme should be based on the costs the network monopoly is likely to incur, not on shortfall costs which in our view, would properly 'power' the incentive scheme.

Incentives remain for generators to optimise access and energy settlement in dispatch. A solution needs to be found to reward flowgate support generators. An investigation into the sale of negative flowgate quantities to flowgate support generators where generators are also paid LRIC costs may be of benefit in this regard.

The following diagram outlines CS Energy's views on the design of optional firm access.


The allocation of flowgate access will differ (rationed by capacity not physical dispatch) : could influence behaviour of fast-start compared to base-load generators.
Suspect OFA's dispatch benefits have been overplayed. There are incentives to optimise access settlement. We suggest a way to include flow gate support.
Concept is not required – has the potential to dilute existing access holdings.
Potential to be irrelevant given the surplus of access on the network today.
Transitional access
Inter-regional transitional access
Transitional incentives
Transition
Firm access service
Short-term access
Access certainty
Congestion management
Products and settlement
Firm access and reliability standards
Enhanced NTP functions
Enhanced TNSP functions
Planning
Reliability Access has the potential to distort the supply and demand for access.
Prefer option 2 – full allocation with secondary trading. Market solution better than the regulated methods of LRIC for LT access or ST capacity auctions.
Optional firm access
We do not believe existing generators should ever be exposed to LRIC pricing, if they can secondary trade grandfathered access entitlements.
Access issuance
Access pricing
Revenue
Access quality
TNSP regulation and incentives
We suspect there is a "missing" money problem if the monopoly commits expenditure to provide access, because there is no money to pay shortfall costs.
Product and settlement
Planning
Pricing
Allocation & expansion
Inter-regional access
Generator transmission pricing
Access procurement
Short-term access auction
Pricing and procurement
Access holders know what capacity is spare, not monopolies. Access holders should be allowed to secondary trade existing holdings. Avoids incentive for monopoly to remarket access – "double dip".
We highlight the monopoly incentives are funded by diminished access quality for generators.
We would prefer to see monopolies incentivised on the basis of their costs, not on flow gate shortfalls.
Can these flowgates be treated as any other? Could we reveal interregional generators in a flow gate and allow them to buy access to the adjacent node?
Question the merit of including these regulations

Assessment Framework

CS Energy believes there are features of the OFA design that should be investigated further prior to AEMC's final report. We have highlighted these matters under each heading of the assessment framework.

Financial certainty for generation

The AEMC has persistently considered that congestion risk is a major inhibitor to generators contracting their capacity. CS Energy has provided comment to the AEMC (as has the National Generators Forum) explaining that this is already accounted for in forced outage risk and therefore is not additive. Constraints do not set CS Energy's maximum hedge level. They may affect our short term expectations of dispatch outcomes, but are typically transient in nature and short lived. The analysis of the potential levels of Transitional Access, provided by AEMO, indicates constraints should not inhibit generators' ability to sell derivatives.

With regards to financial certainty we make the following comment: What concerns power generators is their ability to fund the debt repayments and to make adequate returns to equity holders associated with the level of capital invested in the business. The concern comes from variable cash flow from pool revenues, a result of supply and demand in the National Electricity Market (NEM). This is why generators hedge cash flow by using electricity derivatives. It is not the variable cash flow from the pool that is the issue; it is the regular debt repayments that must be made to creditors. Imposing another fixed cost on these businesses increases the risk that they will be unable to make their payments should they suffer forced outages, poor trading conditions (e.g. a wet summer) or missed opportunities. The benefit of paying the fixed cost for access is that it is supposed to alleviate the potential loss of revenue at times of transmission constraint, however at all other times the additional fixed cost access charge just makes funding operations more difficult. Given OFA does not fully compensate generators if there is a transmission constraint, the proposed benefit is questionable.

CS Energy believes the AEMC should investigate whether financial certainty under OFA would really be more certain than today.

Effective inter-regional hedging

CS Energy believes that further consideration is required with regard to interregional hedging. The proposals are lacking in detail and the way they are described in the consultation paper appears incomplete. We suspect, as described, the inter-regional access product will not provide access to both regions' prices as they need access to and from each node. We also do not understand how inter-regional access provides firm capacity "(largely) independent of interconnector flow"[1]. CS Energy considers that this is unlikely (if not impossible) given the payments in settlement are related to the flowgate quantity, which relates to the physical limitations of the circuits as constrained by the flowgates.

[1] AEMC, Interim Report OFA Design and Testing p25

CS Energy recommends that the AEMC investigate an alternate approach, revealing generators within constraint coefficients in the adjacent region in hybrid flowgates, rather than pricing them by proxy as an interconnector. In those circumstances, participants can then buy access through the flowgate to receive access settlement in lieu of the interconnector. CS Energy recommends that further investigation be performed in relation to the potential effectiveness of this alternate approach.

CS Energy considers that the proposals for inter-regional access and auctions may not be necessary. We suggest the AEMC investigate if these inter-regional constraints can be treated as any other flowgate in the OFA design.

Incentives on monopolies to operate the network effectively

CS Energy does not agree with the premise that the incentive scheme is 'low-powered'. The AEMC uses the example of the present Market Impact Component (MIC) of the Service Target Performance Incentive Scheme (STPIS). This scheme compensates the monopoly as a share of allowed revenue and is not related to the costs the monopoly incurs in changing outages. This misalignment means that Powerlink Queensland is paid approx $12,000 per five minute period. As a result, there is an opportunity for a monopoly to earn profits in excess of costs, providing incentive to change outages. On that basis, CS Energy cannot agree, on the face of it, that this incentive has been successful. The AEMC appears to view the OFA incentives outlined for long term and short term access are similar to the MIC, and have been described as "low powered". We believe this may be based on a false premise that the MIC is a "low powered" incentive on the network monopoly.

CS Energy also does not agree that there is spare capacity that can be made available by the monopolies through operational activities. We consider this is re-marketing capacity procured by access holders.

CS Energy recommends the AEMC investigate whether the incentive scheme should be based on the costs the network monopoly is likely to incur, not on shortfall costs. This could properly incentivise the network monopoly.

Efficient dispatch of generation

OFA may not guarantee efficient dispatch of generation. Upon transmission constraints OFA creates a discretionary, rather than uniform, auction that could incentivise inefficient behaviour. Access settlement may be affected by parties being paid as bid, either making a constraint bind if they are access 'long' or not if they are access 'short'.

AEMO has highlighted in its Interim Report that OFA will not necessarily result in more efficient dispatch. Important considerations, such as generators' access holdings, flowgate support generators and portfolio generators also affect dispatch outcomes. There is also the problem of demand response on the 'wrong' side of the constraint, responding to the 'wrong' price.

We note however that under the current arrangements with hybrid flowgates, flowgate support offers can sometimes affect price if the interconnectors and other options for supply are also constrained, and this

can happen frequently. Under such occasions, which were termed "constrained pricing[2]" the Regional Reference Price (RRP) is a function change in dispatch of generators in the flowgate that produces 1MW at the regional reference node, but still satisfies the constraint. These prices are paid to all generators and the price can include offers near the price cap and floor. Under OFA this 'price signal' of fully constrained pricing may change, because the theory is that generators in the constraint will offer prices closer to marginal cost (although this is not guaranteed).

As AEMO points out in its interim report on OFA Design and Testing, the *"dis-benefit of a negative local price can be overwhelmed by the very high prices received in other parts of the loop"*. CS Energy expects generators will, if they are forced to subsidise the constraint, try to ensure the local prices in the loop affect the regional reference price so that access settlement is profitable.

The benefits of OFA are often ascribed to resolving a simplistic example of dispatch in the NEM: OFA is expected to result in generators not being able to offer prices to the floor price (-$1,000/MWh) in order to displace interconnectors and cause negative settlement residues. The reality is more complex: The ability for a generator to be dispatched ahead of other participants in a looped constraint relates to their offer, the coefficient in the constraint and other generators' offers. There are many occasions whereby the offering of prices at -$1,000/MWh is not enough to ensure dispatch and the generator is constrained off anyway (given the ramp rate submitted) within the loop.

Within the NEM today, the management of constraints whereby generators can rebid prices and ramp rates ameliorates the affect of the reduction in flowgate quantity by rationing the flowgate quantity between participants and sometimes in lieu of interconnectors (to a certain extent). This change in dispatch of numerous generators means the change in flowgate quantity is not concentrated on one participant and so risks are shared. However the changing of dispatch of numerous generators results in some more volatile pricing outcomes, especially when 'disorderly' prices are included in the RRP calculation. It also leads to cycles of congestion, where increasing volumes of 'disorderly' prices depress prices. This was explained by the NGF in response to the Ramp Rate Rule change proposal.

If we consider the design of the OFA, it is supposed to concentrate the change in dispatch on a few generators and then compensate them. In practice, this has the effect of increasing the change in dispatch for some participants, possibly in exchange for less volatile pricing. The less volatile pricing is not guaranteed and so if we are concentrating the risk on those participants closest to the constraint (in volume terms) the effectiveness of the compensation arrangements is crucial to providing the financial certainty which should be the primary objective of the OFA. CS Energy's view is that the more stable pricing outcomes under OFA could result in generators being more able to optimise access and energy settlement. In particular the removal of offers priced at the floor will create more stable local prices on the sending end of the constraint and reduce the chance of low or negative prices at the node, yet on the receiving end generators may still offer prices that could result in high flowgate costs under fully constrained pricing.

In order to improve dispatch and access settlement, CS Energy recommends the AEMC investigate the sale of negative flowgate quantities to flowgate support generators where generators are also paid LRIC costs.

[2]National Generators Forum, response to the, AEMC's consultation on the AER's ramp rate and FSIP rule change

A similar approach could be used for frequency response contingency constraints whereby generators could sell enablement for Frequency Control Ancillary Services (FCAS) in advance to increase access through the flowgate. This may be more useful than relying on network support arrangements as per the present NEM design.

Efficient incentives on monopolies to manage trade off between operation and investment

Under incentive-based regulation the network monopoly should be incentivised to expend the least capital and operating expenditure it can in order to meet its obligations to provide a reliable and secure level of service. The modification of the STPIS, to provide another potential revenue stream to encourage the monopolies reveal efficient costs, could suggest there are defects in the present way the Australian Energy Regulator (AER) investigates the capital plans of the monopolies during each revenue reset. CS Energy does not support the payment of another 1.5% of allowable revenue by the AER to the monopoly when the revenue incentive regulation should ensure an efficient outcome. Similar to the MIC of the STPIS we also believe it may be inefficient for the rewards to be based on an arbitrary percentage of allowed revenue rather than related to the costs incurred.

The AEMC suggests that OFA would solicit more efficient operation of the network in order to provide more access to participants to meet the firm access operating standard and planning standard. CS Energy does not consider that paying the monopoly for target shortfall (T-Factor) will result in them efficiently trading off operation and investment given shortfall costs do not relate to either capital or operating costs.

Efficient investment in new transmission capacity

The AEMC has a view that the existing arrangements leave the potential for investment in generation and transmission assets to be poorly coordinated and that OFA will more effectively coordinate transmission investment with generation because generators will provide a signal where and when to invest by underwriting the investment in new firm capacity.

This sounds sensible, but there is circularity with the roles of the monopoly and the generators, whereby the monopoly's price schedules may lead the generator's decisions. In particular, the role of the network monopoly is pivotal in setting the price and volume signals for the generator; it will also be heavily involved in assuming future usage of the network in setting LRIC prices; and also provision of and resale of Reliability Access. Notwithstanding this, the monopoly can be expected to extract as much money as possible from the incentive schemes it has negotiated with the Regulator (without the involvement of the generator).

On that basis, CS Energy does not consider that it is correct to say that OFA is market-led as it does not really involve the generators.

CS Energy recommends the AEMC investigate whether the generator can become more involved in the OFA design along with the monopoly and the regulator.

Efficient investment in new generation capacity, including locational signals on where to build power stations

CS Energy believes the existing arrangements allow for an efficient outcome – generators appraise congestion risk, losses and access to a chosen regional reference node when they invest in a generating plant. OFA is intended to sharpen these incentives by creating an LRIC pricing schedule for access across flowgates and through access settlement which reveals local prices for generators that are constrained off (not constrained on) in a flowgate. We remain concerned that OFA may retain dispatch risk on generators should the access not be available, just as today, but also require generators to fund operational incentives to the monopoly and to pay a fixed cost for the asset underpinning access.

In simple terms we believe there is the potential, under some circumstances, for the generator to pay multiple times for congestion.

In particular we believe generators could end up paying inefficient costs if the:

- operational performance of the network is not as expected when they bought firm access; or
- the LRIC price was inefficiently high (maybe because of the assumed reliability baseline pushing up the price); or
- there are errors in setting the monopoly incentive scheme.

Any of these factors could diminish the efficiency of the locational signal to generators.

Concerns arise that the firm access will not be provided under circumstances such as where the flowgate support generator is not available, if demand changes behind constraint, or if the network monopoly is allowed to double dip and remarket access across the flowgate as short-term access.

CS Energy believes the AEMC should investigate options whereby the access holders have the ability to sell 'spare' access bilaterally to other participants instead of the network monopoly.

We will explain this recommendation further in the response in the section on Transitional Access and Short Term Access. This logic also encourages CS Energy to regard the better option for dealing with Transitional Access parameters is to rely on option 2 (which is grandfathering access with secondary trading).

It is CS Energy's view that involving the generators more and the regulator or network monopoly less should be an underlying principle of the design of OFA.

Instead, the AEMC appears to be suggesting that the proposals are 'market-led', but then leaves the most important elements down to the regulator and network monopoly. The AEMC could reconsider whether the involvement of the monopoly and regulator is necessary.

Efficient allocation of risk

The AEMC proposals appear to place risks of network stranding on generators. We shall discuss in the response to the Firm Access Standard (FAS) and monopoly incentive schemes that the original goal of the Transmission Frameworks Review was to improve the 'financial certainty' for generators for a perceived risk associated with transmission congestion. CS Energy is not concerned about the level of congestion risk in the NEM today. However we are concerned about the risks presented by the OFA model.

We are concerned about the risk of the:

- LRIC pricing schedule setting inefficient prices;
- incentives of the monopoly (and the potential for rents to be obtained by the monopoly);
- additional cash flow risks from fixed charges; and
- potential cliff-edge associated with the regulator's granting of Transitional Access.

In order to ameliorate these risks, CS Energy recommends the AEMC investigate whether the generator can become more involved in the proposed design of OFA, and the monopoly and regulator less involved.

Level of transaction costs

CS Energy does not believe the transaction costs are particularly onerous for OFA. The NEM is a simple electricity market design and moving to a more complex design would not, in itself, be considered improper. Even so, CS Energy recommends some methods of simplifying the regulations, and suggests the AEMC investigate these.

The majority of CS Energy's recommendations relate to investigating the removal of some of the complexities relating to the unnecessary involvement of the Regulator and monopolies through the monopoly incentive schemes, short term access, inter-regional access and the sculpting back of Transitional Access (which requires relying on the LRIC pricing model to then charge generators at a regulated rate).

Rather than transaction cost, CS Energy believes OFA presents transaction risk that we believe could be moderated through the allocation of Transitional Access and secondary trading as recommended as option 2 in the consultation paper.

Firm Access Standard and Transition Network Service Provider Incentives

It is CS Energy's view that the objectives of the proposed reforms have gradually evolved from improving the financial certainty for generators to improving the performance of the network monopolies in planning and operating the system. We have noticed a shift in emphasis from 'Firm Access' to 'Transition Network Service Provider (TNSP) Incentives'.

This shift of emphasis was highlighted in the commission's view[3]: "*there is some merit in examining models that would provide a greater degree of certainty to generator seeking to invest in the NEM*".

In the 2011 report there were a number of options discussed including: Generator Reliability Standards; Regional OFA where firm generators would be compensated by others; and Locational Marginal Pricing. The concepts were based on making a generator financially firm (at a charge) by either building extra capacity or compensating them when there was no capacity.

> OFA does not seem to be focused on providing a greater degree of financial certainty to generators.

In particular there was discussion put forward by the NGF as to whether the access model would go into deficit to ensure financial certainty for generators. These are sometimes called 'uplift' payments by electricity consumers. The AEMC determined a self funding option would be most efficient and so chose a model that is not fully firm. At the time the NGF disagreed. It recommended a full Locational Marginal Pricing – Financial Transmission Rights (LMP-FTR) model that could go into deficit, with uplift payments from consumers, should be considered rather than OFA. CS Energy agrees with the position of the NGF.

In response to the 2012 FTR Second Interim report and Technical Report, the NGF and other participants criticised the reference to access scaling under tiers of normal operating conditions (NOCs). CS Energy is pleased these NOCs have been removed, as they were unduly complicated. We do however note that the new Firm Access Planning Standard and Firm Access Operating Standards provide no more flowgate capability or flowgate residues than would have been expressed under the NOCs. Removing these has the effect of reducing red tape under the regulations but does not improve the utility of the product.

Instead of specifying the conditions of constrained flowgates, the AEMC's new proposal is to create a standard in the planning domain and in the operating domain, which will apply under all conditions (with the exception of those expressed in the planning domain, which restricts requirements for the network monopoly to build under some conditions).

Consistent with the NGF's position in 2012 we recommend that, in some instances where to increase the amount of flowgate capacity is unreasonably expensive but there remains risk of lower capability, such as under double circuit outage conditions, the flowgate access may not be limited to the physical amount, but greater than this, funded through uplift payments on consumers via the network monopoly. This could be specified by the Regulator in Transmission Use of Services (TUoS) to deal with instances

[3] Section 5.4 of the First Interim Report of the TFR in November 2011

where the network is operating with a single circuit outage. We believe the Regulator would be better placed to allow compensation payments to generators (on behalf of consumers) rather than network monopolies which (if allowed) could only be looking at optimising the expense of compensation payments or investing in assets, otherwise there is no money to compensate generators under OFA. This suggestion would work particularly well with 'probabilistic planning standards'.

By contrast the Regulator could make a consideration of the appropriate allocation of congestion risk between producer and consumer and if the level of congestion risk is unmanageable under some conditions, allocate it to the consumer. These could be non-credible (N-2) conditions on the network or contingencies that have not been deemed economic under the probabilistic standards.

CS Energy still believes it may be efficient for the consumer to bear some transmission risk through uplift payments, related to particular contingencies.

The treatment of flowgate support generators (constrained on) is very important. These participants effectively subsidise the constraint by being dispatched at a price they are unhappy to receive. In being dispatched they allow cheaper offers that are constrained off to be dispatched. The problem that arises today and under OFA is that these generators are not rewarded for this, but punished.

CS Energy notes comments made by the NGF in 2012 regarding flowgate support generators. The NGF, in its critique of the AEMC's OFA Technical Report highlighted that an *efficient* outcome, which may increase productive efficiency, would be to pay a higher price for generators on one side of a constraint to allow the flowgate quantity to increase for cheaper generators on the other side of the constraint (those constrained off). The AEMO Interim Report, published concurrently with this consultation, has highlighted the importance of flowgate support generators (those constrained on) in the formulation of constraints by AEMO. CS Energy believes OFA needs to find a solution to allow flowgate support generators to be dispatched to support access across the flowgate.

The problems that arise (in dealing with constrained on generators) are that solutions can provide local market power for flowgate support generators and if load is only paying the regional price and not the local price, settlement will be in deficit when the flowgate (constrained on) generator is paid a higher price than the regional price.

The AEMC has considered the option of assigning flowgate support access, where the generator will receive a share of the residues, but elected not to implement this feature of OFA as these generators can affect residues through the local price they offer.

Given these two constraints, CS Energy considers that the only option is to pay LRIC to generators with negative access quantities in access settlement. CS Energy is not aware that this option has been considered by the AEMC since being proposed by the NGF in 2012.

Flowgate support generators: We suggest assigning *negative* access quantities to these participants (should they wish to receive it) and *paying* them LRIC access charges across the flowgate.

This option means that flowgate support generators would be incentivised to be dispatched as otherwise they have to pay into access settlement. The current proposal relies on the existing network support and AEMO directions to ensure dispatch of generation on the receiving end of the flowgate. CS Energy believes that these measures are not market related, in that they only are implemented in most cases for reliability or security issues, not economic issues. Paying LRIC charges to the flowgate support generators, but getting them to be dispatched to offset negative access quantities, will ensure that the flowgate support will be provided when it is economic to do so.

The implications of the FAS applying at all times

It is sensible that the FAS should apply at all times, however its value to generators is solely the financial certainty it provides. Clearly, whether the FAS applies at all times will be largely irrelevant if there are known conditions such as non-credible contingencies; probabilistic events; flowgate support; demand, or concurrent outages whereby the flow gate quantity is reduced.

CS Energy recommends that conditions be placed on access to diminish its utility to participants. These conditions are simply 'carve outs' whereby the generator assumes all of the risk of the asset being unavailable. The similarities with the original NOCs should be noted. Please note our previous recommendation that in some instances the consumer should bear this risk through uplift payments.

The nature and enforcement of the firm access planning standard

We understand that it is sensible that the monopoly is forced to commit expenditure as otherwise they can potentially alter prices or quantities of firm access to their own advantage, especially if they are exposed to the shortfall of a flowgate. These issues have been highlighted to the AEMC in the NGF's previous responses to the consultations on the OFA model.

CS Energy considers that the enforcement of the Firm Access planning Standard (FAPS) is inconsistent with the concept of an incentive scheme. We shall discuss that the network monopoly is 'missing money' to pay out to participants in an incentive scheme if it is forced to invest in the assets or undertake other expenditure. This directly undermines the incentive scheme design because there is no money to support generators – the residues to avoid shortfall costs must come from the flowgate quantity, even if it would be more efficient for the network monopoly to pay out these residues, or for consumers to do so under certain circumstances through uplift charges (as recommended by CS Energy on page 10 of this response).

The obligation to commit expenditure means the incentive scheme is unfunded, "missing money", because network monopoly cannot incur investment costs *or* flowgate costs

TNSP Incentives

In 2011/12, OFA developed a concept of TNSP Support as penalties paid by the network monopoly to compensate the generator for being paid the local price or being constrained off. TNSP Support was expressed as a megawatt quantity that would supplement the flowgate quantity.

At the time, the NGF expressed doubts on the efficiency of this TNSP Support with the following comments:

1. The NGF doubts the efficiency of exposing the network monopoly to congestion compensation payments. It is suggested that this could be provided through "*TNSP support*" MWs which top-up the aggregate access entitlements above the *flowgate* capacity.

2. Firstly, we believe it is impossible for a network monopoly to provide the Firm Access Standard (FAS) through assets and then provide *TNSP Support* access. There is no funding from avoided costs (in assets) to pay for TNSP support MWs (they are locked into building the asset, so cannot fund compensation unless they explicitly price it in at the outset as a risk premium – which is not intended in the revenue regulation).

3. The network monopoly can only provide TNSP support if it does not build the asset with the cost of the asset included in the AARR – it would act as a fixed insurance premium paid by the generators with the insurance payout made through the provision of TNSP Support.

The concept of TNSP Support no longer exists. The OFA proposal still requires the monopoly to build assets (or procure a service) to provide access to the generators.

We are thankful the AEMC has recognised the 'missing money' problem this creates. However we note the monopoly incentive scheme has had to find money from elsewhere to top-up the flowgate residues. This is done by the T-Factor, where the generators must pay LRIC charges for 100% of access, but the monopoly is only targeted to provide a 90% target. In doing so generators are effectively paying for the capacity in the fixed charge, having this volume discounted or scaled and then paying an incentive for the provision of the discounted or scaled volume.

"*Missing money*" is found by reducing access quantity held by the generator and granting it back to the monopoly to fund the incentive scheme.

The 'missing money' as we call it, is found by charging generators more through degradation in the service expectations by the T-Factor. This is option 1 under the network incentive options explained in the AEMC's Interim report and discussed further below.

We recognise an argument for this incentive would be that LRIC is associated with the return on and return of capital costs, but there must be a payment or incentive regarding efficient allocation of operational costs by the TNSP. This idea has merit, but if the incentive is only to reward the network monopoly for managing operational costs effectively then we believe incentive should be linked to these costs and not flowgate shortfall costs. This is important in considering whether the scheme is 'low' or 'high' powered.

AEMC has presented two options for Incentive Schemes:

Option 1 – Target Shortfall Factor, where penalties and rewards reflect actual shortfall costs in each Trading Interval – up to the relevant cap. The T-Factor described above.

Option 2 – Annual Shortfall Target, where penalties and rewards accumulate over the whole year – subject to relevant caps. Option 2 is considered similar to existing STPIS, with annual settlement of penalty where payments can be distributed across all generators.

If incentive scheme is to ensure efficient allocation of operational costs, then it should not be linked to market flow-gate costs, but linked to the operational costs themselves

Neither of these options fully satisfies the objective of making generators financially firm. Whilst the shortfall costs are recognised, both options fail to compensate the generators for any shortfall of settlement across the flowgate. In particular Option 2 ensures a generator exposed to a shortfall is not compensated in the settlement timetable, therefore guaranteeing it is exposed to cash flow issues in funding its hedge positions settled at the regional price.

It appears the argument is the network monopoly only needs to be exposed to a proportion of the costs in order for them to make an efficient decision. The AEMC has called it 'low-powered' incentive scheme, in that the incentive is subject to caps reducing the exposure from its true level.

It is CS Energy's view that calling them low powered is inaccurate. A comparison has been made to the existing incentive scheme, which is the MIC of the STPIS.

Consumers have paid $103 million under the MIC over three years. During this period, profits from producers have been extremely low. In theory the MIC is supposed to reduce the impact of outages on the pool and reduce prices paid by consumers and therefore may decrease returns to producers on the whole. It is argued that the scheme reduces the risks of congestion on participants, giving them a benefit, although CS Energy is not necessarily convinced of this.

We would find it surprising that the impact of the incremental change in the cost of outage constraints solely due to the MIC, given participants' hedge positions, would have resulted in a reduction in producers' profits of $103 million.

MIC	2013	2012	2011
TGRID	$14.2	$13.0	$10.7
PLINK	$16.0	$16.5	$15.2
SPAUSNET	$7.0	$6.0	$0.0
MLINK	$0.8		
ELECTRANET	$3.0	$0.0	$1.5
Total	**$41.0**	**$35.5**	**$27.4**

Source: AER, Service standards compliance reports; May 2014 for 2013

In particular we question if rewards are commensurate to the costs monopolies face. The MIC is simply a percentage of allowed revenue, rather than the cost incurred in managing the outages. It does not

appear to be 'low-powered': for instance Powerlink receives approximately $12,000 per five minute dispatch interval.

The MIC encourages the monopoly to assess the supply curve against expected demand and then impose constraints that change with the supply curve. The monopoly, rather than setting the outages well in advance to allow the market participants time to trade, commit assets, etc. (i.e. respond efficiently through competing with each other), may instead change outage timings, revise timings at short notice, or cancel outages. The MIC may directly incentivise the monopolies *not* to do what they planned to do and for a monopoly advantage. CS Energy notes this behaviour is in not regulated in the same manner as scheduled generators' offers. There should still be a 'good faith' obligation. We question whether this is efficient.

CS Energy would be more supportive of the MIC if the rewards were more associated to the costs involved. However, they appear too high. Also the cost of the constraint is not, due to the pricing affects of the NEM, always reflective of costs, hence the monopolies are not responding to changes in generator costs and may affect wealth transfers, caused by changing prices.

The NGF has previously put ideas forward in the TFR. They included locational hedge trades with affected parties by the network company; possible auctions for network support to ensure no constraint arises. CS Energy believes there are numerous options to consider.

In summary, the AEMC should further investigate whether it is efficient imposing a network monopoly incentive scheme based on the supply, demand and price of transmission capacity for which it has complete control. As a producer, CS Energy is concerned about the pivotal role of the network monopoly under OFA and believes consumers should also be.

The AEMC should consider the impact of the AER in protecting consumers and producers from the network monopoly under OFA. The OFA proposals are sometimes portrayed as resolving dispatch issues that producers "exploit[4]", forgetting that such producers are tightly constrained by a highly competitive wholesale market. The same cannot be said of the network monopolies who are constrained by the AER's enforcement of the National Electricity Rules (the Rules). Given the $104M spent on the MIC of the STPIS (to date), the AEMC needs to consider the impact of these incentives on monopoly behaviour.

Questions:

Is the proposed definition of the incentive schemes where network monopolies are subject to both rewards and penalties appropriate?

CS Energy is concerned that generators will have to fund the rewards in the incentive scheme. We are concerned that the access paid or through the LRIC charge is degraded to allow the network to receive some incentive. This reduces the amount of firm access that is granted to the generator from building the asset and grants it to the network monopoly to fund their incentive scheme. This reduces the financial certainty to the generator of buying firm access.

[4] AEMC, Interim Report: OFA Design and Testing p29

Would generators value firm access differently when there is a surplus and a shortfall?
There is only a surplus because a share of the access 'owned' by the generator has been appropriated by the regulator to fund an incentive scheme for the monopoly. Depending on the incentive scheme, as to whether the rewards and penalties are symmetric, will influence whether access holders ascribe the value to either a surplus or shortfall.

From CS Energy's perspective we have argued that shortfalls in access settlement could be funded by consumers under some circumstances, (for instance under N-2 conditions), if the transmission risks are too great. We are not sure it is efficient for network businesses to fund shortfall costs if they are obligated to commit expenditure. This could create a missing money problem for the incentive scheme.

CS Energy would prefer an incentive scheme that is more focused on the costs incurred by the monopoly in providing and operating the network efficiently, rather than flowgate residues otherwise it becomes somewhat of a zero-sum game regulated by the AER

Because of the missing money in the monopoly incentive scheme, if access provides for significant compensation for shortfalls, it would need to have a low T-Factor and also high rewards. This is because the incentive scheme is self-funding.

The only way the monopoly would sign up to the scheme would be if it could negotiate a favourable agreement through asymmetry of penalties and rewards, or a low T-Factor. This tension between the access holder (producer) and the network monopoly is a concern to CS Energy. It may be a zero sum game against network monopolies, which generators participate in by proxy through the AER.

How should the nested caps and collars be structured? For example, is it necessary to define these caps down to the trading interval?
The nested caps and collars are a process by which the network monopoly manages to avoid the risk of a flowgate being significantly in shortfall. The risk of shortfall resides with the participants that have procured the access across the flowgate.

CS Energy believes it is inconsistent to have an incentive scheme based on shortfall costs, albeit capped and collared, when the goal is to incentivise the network monopoly to make efficient decisions in expending operational budgets. We believe it may be more efficient to link the incentive to the costs themselves – the cost of overtime, changing the outage, etc, rather than the market shortfall costs. Otherwise the scheme may run the risk of the network monopoly obtaining rents from the generators or from consumers, depending on the success of the regulator. To stress this concern we note the existing MIC was voluntarily adopted by the network monopolies and is a one-sided scheme.

Do stakeholders consider that the better structure for the incentive scheme is around a T-Factor (option 1) or an annual target (option 2)? With supporting arguments presented.
CS Energy would prefer the access settlement for participants and the network monopoly to be concurrent, in line with the NEM settlement timetable. We do not support the annual target for this reason.

Whether stakeholders consider that the options for the incentive scheme provide certainty (or not) for generators in terms of both the product and also the payments they would be expected to make

These concepts are far from the original goal of providing financially firm transmission access to generators. As such, CS Energy believes both fail to provide anything more useful to generators than the present arrangements.

Issuance of the long term inter-regional access product

The consultation paper asks whether stakeholders are interested in purchasing inter-regional access. CS Energy is interested in transmission access, but cannot particularly see the relevance of different inter and intra definitions.

It is efficient that OFA retains the de facto priority of regional generators in the present arrangements and expects to allocate flowgate capacity primarily to regional generators on the LHS of hybrid flowgates. We believe the majority of interconnector flow limits are controlled by hybrid flowgates therefore to allocate the access rights to the Regional Reference Node (RRN) to the interconnectors would be an arbitrary wealth transfer to Inter-regional settlement unit holders and consumers in the importing region where the costs of negative inter-regional settlement residues are currently passed through by TNSPs.

An example is CS Energy's Kogan Creek Power Station and the NSW-QLD interconnectors. All that would happen is that Kogan Creek would be exposed to a local price in the equation N^^Q_NIL_B1[5] and would be encouraged to price up to the prevailing price in NSW (to reduce compensation payments to the interconnector access holders). It would be akin to moving a share of Kogan Creek's capacity into the NSW region when the export limit is reached and price separation occurs. Given Kogan Creek was built with the expectation of receiving the QLD RRP, it would be poor Regulatory practice to allocate the access to the interconnector.

The consultation paper and the AEMO Transitional Access Allocation Project published in June 2014 stated that after allocation of access to existing generator terms in the hybrid flowgates there was no residual available except on interconnectors into Victoria. We are surprised by this because N^^Q_NIL_B1 is quite firm into QLD, approximate 200-300 MW depending on constraints across Directlink (which can affect the balance of flows across the interconnectors which have different flowgate coefficients).

The AEMC consultation paper explains that inter-regional access is different to intra-regional access. Importantly the inter-regional access provides the owner with payments of the two regions' prices, not the local process at each end of the flowgate.

CS Energy understands that this could work for a flowgate that is related to a thermal limit or stability limit on an interconnector, (where the flowgate quantity is not affected by a generator's dispatch but by the trip of demand), but we cannot see it working whereby the limit on the interconnector is set by a hybrid flowgate, which includes both generators and interconnectors on the LHS of the equation.

It is our preliminary view that inter-regional access (as described by the AEMC) is the ownership of a share of the residues of a flowgate between two points. If the local price at each end of the flowgate is the RRP of each region then it provides a hedge for trading electricity derivatives between the two regions. If the local price at either end of the flowgate is not the RRP, i.e. another hybrid constraint is limiting the flow of the interconnector and the share of the residues will be valued at the difference between the local prices (whatever they may be). The interconnector will then be granted a share of the residues across the hybrid flowgate that is constraining the interconnector, which will be determined by

[5] N^^Q_NIL_B1, LHS <= RHS, Out= Nil, avoid Voltage Collapse on loss of Kogan Creek, Interconnectors and Kogan Creek terms in equation

the local prices at either end of the flowgate, the flowgate quantity that prevails and the potential for compensation to be paid under the monopoly incentive scheme.

If we continue with the example of hybrid flowgate N^^Q_NIL_B1, with Kogan Creek and the two NSW-QLD interconnectors on the LHS the local price will be reflective of the payment on the Firm Interconnector Right (FIR), not the RRP. The local price will be that offered by the NSW RRP or Kogan Creek. In order for the FIR to be firm to the importing region RRN the flowgate capacity of N^^Q_NIL_B1 would need to be expanded by upgrading voltage compensation in NSW. It would then be a FIR and carry an access charge.

This appears to have been discussed in section 6.5.3 of the consultation paper and remains an issue that has not been resolved.

In addition the consultation paper explains that stability limits are an LRIC pricing issue 6.5.1, although we consider this is only for stability limits caused by loss of load that is not associated with the flowgate – for example the Boyne Island Smelter on QNI or the potential for non-credible contingency under some weather or system conditions. The LRIC pricing will not be able to resolve stability limits that are caused by the loss of load of generators that are included in hybrid flowgates, such as N^^Q_NIL_B1, B2, etc.

It is CS Energy's view that the concept of "inter-regional access" may be unnecessary. The concept of this inter-regional access is premised on there being discreet thermal limitations on the interconnector assets themselves that can be subject to incremental increases in capacity. Is this true? Most of the potential increases in capacity are often related to upgrades to existing constraining plant that provide voltage support and assist with transient stability faults. These assets are often not part of the "interconnector" circuits themselves.

> We ask whether it would be sensible to remove inter-regional access from OFA and instead allocate the interconnector's access to generators in the exporting (and importing region if you want to include flowgate support generators)

A fundamental premise of OFA is that it is supposed to improve the dispatch of generators and creates the correct incentives to offer prices, based on cost because of the local price. This has been described as removing the regional pricing anomaly. It is because of this it may be sensible to remove interconnectors as a concept and instead allocate the interconnector's access to the generators in the exporting region (and importing region if you want to have negative coefficient or flowgate support generators).

This would be helpful because it would stop interconnectors pricing generators by proxy within a flowgate. For example, the access in constraint N^^Q_NIL_B1 could instead of being allocated to the two interconnectors, QNI and Directlink, be allocated to the NSW generators with coefficients or "shares" in the flowgate of greater than 0.07 – this may be Bayswater, Liddell, etc. This would create a local price at Bayswater and Liddell and Kogan Creek and then access settlement would need to compensate these participants to the QLD RRP. Please note however, for this example, we would not recommend allocating transitional access to the NSW participants from QLD participants as this would be contrary to CS Energy's previous comments on page 18.

The benefit in doing this is that there is no longer a difference in the treatment of flowgates, access prices between regions – it would also deal with the difficulties in managing the integration of intra and inter-regional access as they would effectively be the same.

The immediate obstacle in doing this is the present allocation or inter-regional settlement units (IRSU) that are held by parties. This could be overcome by delaying the implementation of OFA until these contracts have ended.

The AEMC asks for views on the allocation of inter-regional access. The AEMC is proposing an auction.

At the August 2014 forum, Grid Australia commented that they thought the auction may not solicit enough interest from participants. Effectively they suggested that the bids would not be for long enough to underwrite the investment.

In previous discussions the AEMC has suggested that firm interconnector rights will be priced as bid (including bids from network monopolies on behalf of consumers) and if the bids exceed the cost then it will be built. CS Energy believes the participation of the network monopoly is a distortion that should not be allowed, due to the asymmetry of information that the different participants will hold. The only way we consider this could be managed is for the cost of the incremental assets to be known to the bidder beforehand otherwise the auction is skewed. It appears the AEMC moved on to a joint investment test / auction model in light of these concerns, but now has reverted solely to an auction model. Therefore our concerns remain valid.

CS Energy has the view that these auctions will occur only in few instances. We have already explained that access across interconnectors is limited most often by hybrid flowgates such as N^^Q_NIL_B1. These are hybrid flowgates as overseen in the normal process for allocating and charging for access. CS Energy expects auctions for FIRs should be for increases to the technical limits of the interconnector assets themselves, should they be the limiting factor, such as increasing the thermal ratings of the circuits or duplication of circuits.

We therefore consider it is sensible for the flowgate to be treated as any other, rather than an inter-regional auction. In particular we believe any participant should have the right to purchase interconnector capacity through a flowgate at any time – why should a NSW generator be prevented from supplying QLD and vice versa because they have to wait for an auction across the interconnector – why can't they just pay the LRIC price for upgrading a hybrid flowgate?

This would leave no auction surplus to be paid to customers as proposed by 6.5.4, which does not need to be paid. In any case any surplus may be a wealth transfer between participants who value the access across the interconnector on an inefficient basis.

Short term firm access

CS Energy is not supportive of the proposals relating to short term access. CS Energy believes there are opportunities for the network monopoly to remarket access paid for by those paying LRIC charges. We have already noted that the access holders are expected to have their access scaled back (such as the T-Factor) in order to allow for the network monopoly to have some incentive to expend their operating budget efficiently.

It is our view that there is no more capacity to be released by operational activities of the network monopoly. This additional capacity (which constitutes part of the original capacity) should remain with firm access holders, not resold for the profit of the monopoly.

Short term firm access only arises if you believe there is valid 'spare' capacity in the network. If there is "spare" capacity then the selling of this capacity will not affect other access holders. If there is not, then the selling of short term access has the potential to diminish access of other generators. The way to ensure the access is spare is to change the party that is selling it. The AEMC believes the monopoly should be the party to sell the access. CS Energy disagrees with this principle.

Instead, we would suggest the only party that understands whether there is spare capacity through a flowgate is the generator that holds the access to that flowgate. The generator will not hold onto "spare" access because there is an opportunity cost of doing so – they could sell it to another. The generator is also unlikely to game the arrangements as it faces no short or long term incentive schemes that are likely to give it incentives to withhold or remarket flowgate capacity (depending on demand and supply) . It also has no ability to affect the LRIC pricing schedule nor does it have asymmetry of information with another participant that it can sell spare capacity to.

The AEMC in 7.3.1 explains the spare capacity may be from reducing Transitional Access, lumpy expansions where there is greater network capacity than required, and monopoly activities, such as building a bit more than is required. CS Energy believes if new assets provide more capacity (across flowgates) than originally specified in access agreements then the access holder should be given the right to remarket the flowgate capacity, effectively discounting the firm generator's access charges. Under this model the original charge for access should reflect the capacity 'lump' that is triggered by the user, closer to a 'deep' charge. This places the stranding risk on the generator triggering the investment, rather than on consumers.

We ask whether the access allocations and sale of spare capacity could be performed by generators selling existing access holdings rather than the monopoly. This would place stranding risk on the user that triggered the investment, not on consumers.

We suspect the short-term access proposals (to allocate via auction) arise as a result of the AEMC's view that 'Transitional Access' may be of a short duration – the existing generators will have existing network capacity, comprising sunk investments by the monopoly, auctioned to them via this mechanism. CS Energy suspects this could be a wealth transfer from producers to consumers for no economic benefit. If the network monopoly manages to extract some of the revenues as profits, and need not discount the charges it levies on consumers, then it will be a transfer from generator participants to the

network monopoly. We do not want a design that has the potential for such transfers, given they constitute nothing to improving economic efficiency.

With regard to secondary trading or an auction platform, CS Energy believes the network monopoly or AEMO should provide a transfer model that transcribes one users access into another's in MW flowgate quantities at the different nodes. The parties will then be free to discuss prices and make an effective trade at a time of their own convenience. There is no need for complex auction mechanisms run by AEMO.

The AEMC discusses in 7.4.5 that there may be a need for the network monopoly to bid for access on behalf of inter-regional participants. Apart from the obvious problem of the network monopoly potentially bidding up the price of access for its advantage (should the AEMC deign it efficient for the revenue to go to the monopoly) it is unlikely the network monopoly would be able to efficiently bid on behalf of a group of disparate participants from an adjacent region.

The AEMC is interested in understanding whether CS Energy considers:

The short term access product to be attractive in that it covers shorter timescales < 3 years?

CS Energy believes the AEMC should investigate whether short term access needs to exist as a concept. To us there is only access, held by generators that can be traded bilaterally between parties in the long and short term.

Whether it is appropriate that the ST access is treated identically to long term access?

No. It may not be appropriate for short term access to exist at all given: the potential for the short term access to affect the firmness of existing access rights; and be affected by monopoly behaviour and incentive schemes. The concept of short term access could create more problems than it solves (given there is no problem that requires short term access).

Whether an auction with no reserve price is the most efficient means of allocating short term access based on existing spare capacity

No. Participants should trade access bilaterally. There is a role for AEMO or the network monopoly to convert the flowgate quantities in the trade (acting as an exchange or broker of access volumes).

Whether the proposed process provides the right incentives and obligations on network monopolies, including:

- The allocation of sales revenue from the auction.

This is problematic. The network monopoly can directly affect a wealth transfer from producers by re-marketing existing access – the 'double dip'.

Whether the TNSP should be obligated, or heavily incentivised, to release short term access?

The asymmetry of information on the network, between the monopoly, generators and or regulator, means this obligation could be weak. However under the AEMC's proposals we believe it is required.

The comments "*we note that if all the auction revenue flows to the TNSP, then there is unlikely to be a need for strong governance of the release of short term access*" on page 90 of the consultation paper are concerning. The OFA proposal sets the monopoly up in a pivotal role where it can affect the supply of access both in the long term and short term. CS Energy does not recommend the AEMC pursue such regulation of the monopoly.

We believe it is better for the network monopoly to be removed from the process of allocating access between participants. Instead, the AEMC should investigate allowing the access holders to determine whether there is spare access that they can trade across a flowgate. They can face the risk and reward of trading it in energy and access settlement.

In summary, CS Energy believes the short term access proposals may be flawed by involving the network monopoly. CS Energy requests the AEMC go back to the original concepts of firm access, which was to provide generators financial certainty. Financial certainty comes from the ability to hedge cash flows to some extent in the near term. The best way of doing this is to allow the participants that have access rights to trade these accordingly and avoid the participation of the network monopoly.

Access settlement parameters

The consultation paper explains the choice of parameters for calculating access settlement. In previous consultations CS Energy had misgivings in using availability to determine the quantity of access that should be settled. However we see no reason why generating capacity or any value at all needs to be used. This appears to be linked to the granting of Transitional Access which appears to be on the basis of generating capacity, rather than for any efficiency reason.

CS Energy recognised the design of OFA only aimed to compensate generators for congestion risk and not forced outage (dispatch) risk. This was enacted by capping access entitlement at generator availability. But we believed, as did the NGF, there remains some clear drawbacks in this approach that should be investigated by the AEMC and AEMO prior to developing the proposed Rules. At first, not capping at availability appeared to be a poor option because the generator would be paying an LRIC access charge to compensate for dispatch *and* forced outage risk. However we believed forced outage risk is only compensated for by access payments **coincident** with a constrained *flowgate*. This is unlikely and these instances may be inversely correlated, given that if a generator reduces availability there is less utilisation of the flowgate.

We are supportive that generating capacity is being used instead of availability in access settlement. However we consider the allocation of access, especially when scaled, if done so on the basis of generating capacity may be an inefficient allocation, adversely discriminating against base-load generators. We shall discuss this in the section on Transitional Access.

The consultation paper explains in 8.8 that half hourly settlement is most likely for access settlement. This is going to result in difficulties related to flowgate quantities, prices and resultant settlement. In particular the implications of a constraint binding for one or two dispatch intervals of the six would present a problem. From CS Energy's perspective, we would have thought that access settlement using dispatch SCADA data would be more sensible as the flowgate quantities are rationed on the basis of dispatch targets, which are SCADA values. The adjustment to the flowgates for feed-back constraints is also on the basis of SCADA data. We also note that station auxiliary load is included in the RHS of the constraint, prior to allocating the flowgate quantity to generators included in the constraint.

Section 8.8 also explains that access quantities should be scaled by marginal loss factors. The reason for doing this is that dispatch figures are presently adjusted to account for marginal loss factors. CS Energy is unsure as to what the AEMC means by this statement. Marginal Loss Factors (MLFs) are applied to prices, not volumes. MLFs are not real volumes in any way and should not be applied so. Given generators are required by the Rules to offer prices that, when adjusted by the MLF, are no greater than the cap of the floor prices specified in the Rules the local offers for generators already consider MLFs. The AEMC should elaborate on the need to include MLFs in access settlement. It is CS Energy's preliminary view that losses will already be incorporated in the difference in price and flowgate residues.

Transitional Access

The AEMC cannot 'please everybody' in the granting of Transitional Access to generators.

From a **generator's perspective** the proposals create the opportunity for a transfer of wealth from existing producers to consumers for no benefit. The proposals create opportunity for existing producers to pay for access to the network (if and when access expires) because the AEMC assumes there is some incremental cost to the network from phantom 'reliability' generators.

We believe the AEMC will find, given the forecast level of demand, that the network is not constrained both now and into the future. CS Energy expects the LRIC prices should be extremely low (if they are calculated as described) because they should reflect the fact that we have an overcapitalised electricity system that is underutilised without need of capital investment. We do not need a model to assess the incremental cost that should be ascribed to sunk assets – the value is zero.

From a **consumer's perspective**, there is the potential for it to be viewed as a transfer of wealth to producers, because if transitional access is granted to existing producers, these producers may have the right to sell it to other users and other users may have a barrier to entry for the access to be built. Some of the arguments put forward by Dr J Riesz from the University of New South Wales suggest the allocation of transitional access is a wealth transfer from consumers to producers.

> The volume of transmission access is so high that the *price* of it could show it is worthless, whoever 'owns' it.

The real risk is in getting the allocation and pricing wrong, as it appears, may occur with the 'reliability baseline' and LRIC method, that ascribes value to sunk assets.

It is for this reason that CS Energy does not support Option 1 in the consultation paper, whereby the Transitional Access is scaled back very quickly and then generators have to pay LRIC access charges. Instead we believe it is probably sensible for the AEMC to pursue Option 2, which includes full grandfathering and secondary trading. CS Energy believes this is sensible because access will be valued by users that benefit from the trade and not priced by regulation. It is more likely the traded price will be efficient and reflect the underlying supply and demand for access (not so if it is priced by regulation). Please note that this is consistent with CS Energy's view on the concept of 'spare' capacity and short term access – the best parties to decide whether the access is spare and carries an opportunity cost of selling it to someone other, is an access holder, not a regulated monopoly or market operator through the LRIC pricing schedule.

Another option which CS Energy would be amenable to is to set a period for 'X', (which is the learning period) and then auction existing capacity with a reserve of zero. Such an auction would need to include numerous rounds to reduce transaction risk and to increase transparency.

CS Energy has never requested the AEMC change the transmission and dispatch arrangements. These proposals have come about because a number of stakeholders, such as the AEMC itself, AEMO, AER and a few market participants believed there to be a problem with the present NEM design. The number

of market participants advocating change has diminished over time with notable exclusions from those that used to support such measures, such as Energy Australia. The majority of generators have not been arguing for grandfathering in order to obtain barriers to entry and a transfer of wealth from consumers. In some respects the wealth transfer argument has been put forward to discredit the motives behind our recommendations. Instead, generators have argued that the arrangements today are efficient and need not change significantly. The current arrangements allow entrants to compete with incumbents. Entrants have to take due care not to locate in constrained sections of the grid if they can avoid it as it will diminish their revenues.

CS Energy concludes that the main problem with the allocation of Transitional Access is not the granting of it per se but the potential for a significant wealth transfer if it is sculpted back too quickly and producers are forced to contribute for sunk network assets. This is a risk under option 1.

On the other hand we see little risk arising from granting transitional access and allowing secondary trading, under option 2, given that no demand is expected for access from new entrants for the foreseeable future – it is expected generators will exit the market before more are required.

Staged implementation

CS Energy would recommend caution with respect to the implementation of incentives for the network monopoly. Poor regulation of monopolies could result in unnecessary profits for the monopolies or distortions to the wholesale market.

Due to this, CS Energy asks the AEMC to consider temporal staging.

As our comments on the treatment of inter-regional access suggest, we do not advocate geographic staging for implementation.

Reliability access

CS Energy is pleased the AEMC considered in this consultation the implications of the network monopoly and the generators both determining when and how much transmission is built. The NGF previously explained, as did its consultant Frontier Economics, that the network monopoly will have different drivers than generators in triggering expansions of the network.

CS Energy believes the network monopoly has a greater capacity to pay for expansions due to the reliability requirements and the need to cover an expected peak demand, rather than actual peak demand. There is also potential for the network monopoly to lead generators as to where and when to invest through the reliability baseline, LRIC pricing schedules and now the Reliability Access Regulatory Investment Test Transmission (RIT-T) process. In addition, the network monopoly incentive scheme could also affect generator decisions on access. We believe the more regulatory mechanisms that are overlaid on a generator's decision to buy access; the less OFA becomes a market-led transmission planning model.

It may be worth investigating whether the proposed 'reliability access' process (whereby the RIT-T is modified to include expressions of interest and bids from generators for a share of the reliability expansion) can subvert the intent of the optional firm access, which was to provide generators financially firm access and for transmission planning to become more market led, rather than monopoly led (centrally planned).

Reliability Access has the potential to distort the supply and demand for access.

CS Energy believes it would be better for this distortion in the supply of transmission access to be removed and for the network to be based solely on the demand from generators for access.

CS Energy considers that electricity generators and retailers are prudent operators that do not expose themselves to improper risks. Because of this, we would expect the generators would procure access sufficient to provide a suitable level of reliability to consumers. To give an example the supply of reliable generation has been well in excess of that required to meet the Reliability Standard since the inception of the NEM. This is due to the incentive for participants to increase supply to manage risks. It may be that participants would make conservative decisions regarding the purchase of network access and purchase a quantity that should ensure a reliable supply.

Reliability Access therefore could be considered a "safety-net" rather than a concurrent approach to transmission planning.

In any case, the electricity system is over-capitalised. Because there is plenty of network access it is unlikely that we will test whether participants purchase more or less access than the network monopolies. Neither may need to purchase incremental access for the foreseeable future.

Initial transitional access allocation

The initial transitional access allocations appear to confirm CS Energy's view that the electricity system is overcapitalised. The AEMO work for the AEMC effectively states that the major flowgates have enough capacity to dispatch generators near to, or in many cases greater than, their full capacity simultaneously. This is an interesting finding in itself, in that we consider the network could have a level of access that is well in excess of the discounting in capacity a generator performs in setting maximum hedge limits for forced outage risk. It concurs with previous statements by CS Energy to the AEMC and the Productivity Commission that congestion risk is already accounted for in forced outage risk and should not be double counted.

It should be noted that upon outage conditions the access across the flowgates will reduce, however it is unlikely that the full capacity of generators will be required. Also it may not be the case that the outage on the flowgate is concurrent with high demand conditions.

CS Energy would like AEMO and the AEMC to provide more information on the access entitlements. For instance we would like to know what the access entitlements would be upon an outage of a circuit across a major flowgate. We also want to know the names of the limiting constraints in each region – what flowgate are allocations based on?

CS Energy has provided analysis of a flowgate in Queensland that was constrained in 2013 in its response to the AEMO Interim Report on OFA, published concurrently with the AEMC consultation paper.

We have suggested that outage constraints may represent an opportunity for peaking generators with significant available capacity the opportunity to exploit a position of being access long. It is likely that base load generators may be access short when an outage constraint binds if access entitlements are scaled. This is because the access allocation is based on capacity and base load generators operate far closer to their overall capacity, far more frequently and at far lower prices. Hence in the example given to AEMO, Millmerran and Kogan Creek power station, upon access scaling, could have been access short and need to pay into access settlement.

> The allocation of flowgate access will differ to today (rationed by generating capacity not physical dispatch) which could influence the behaviour of fast start generators compared to base load generators.

We have recommended AEMO investigate the incentives on fast start plant under OFA to constrain flowgates in order to receive payments through access settlement. CS Energy considers the allocation of flowgate access could be significantly different than today (which is rationed by physical dispatch through the flowgate, not by generating capacity) which could lead to unexpected outcomes or perverse behaviour. For example, peaking generators (in being access long) may have incentive to constrain a flowgate under access scaling when they would have had no incentive to do so prior to being granted Transitional Access. In particular they may be incentivised to offer prices well below cost to constrain a flowgate to create a low local price and high access settlement. It may be worth investigating whether to assign a higher transitional access quantity to base-load generators, rather than peaking generators.

CS Energy response to OFA Design and Testing

September 2014
CS Energy reference: B/D/14/24688
AEMO reference: AEMO FIRST INTERIM REPORT

Optional Firm Access, Design and Testing

CS Energy thanks AEMO for the opportunity to respond to the consultation on Optional Firm Access (OFA) – AEMO First Interim Report. We understand the task of AEMO is to work on the functional design of OFA and modelling of access settlements. We also understand AEMO's task is complicated by a requirement for AEMO to estimate the likely benefits of implementing OFA by testing market outcomes that would have occurred for a past period of time.

From reading the Interim Report we understand AEMO has taken this brief to be that it should consider past dispatch outcomes, then overlay the incentives under OFA and recalculate access settlement and determine the productive efficiency gains. It could then be possible to extrapolate these benefits over a longer term and then posit some dynamic or allocative efficiency that could ensue. CS Energy considers this approach to be sensible.

The problem as highlighted by AEMO is that it is improbable to assume dispatch outcomes will be guaranteed to be more efficient under OFA. CS Energy believes under OFA there may be incentives in dispatch for participants to optimise access and energy settlements. This will depend on the position of the generator, as to whether they are 'access long' (sufficient or greater access than they desire) or 'access short'. This will depend on the expected prices within a looped constraint, relative the Regional Reference Price (RRP) and whether the prices within a looped constraint are included in the setting of the RRP.

> Under OFA there may be incentives in dispatch for participants to optimise access and energy settlements.

Even under simple conditions, such as with a radial constraint, generators may offer volumes below cost to constrain the flowgate, generate returns under access settlement and benefit from a higher price of another generator not included in the flowgate setting the RRP. This is a clear behaviour that could arise under OFA.

> Example A: optimise access settlement by offering volumes away from marginal cost, constraining the flowgate and creating residues.

CS Energy notes that under the current arrangements, with hybrid flowgates, flowgate support offers can sometimes affect price if the interconnectors and other options for supply are also constrained, which can happen quite frequently if there are other constraints. Under such occasions, which were termed "constrained pricing" by the NGF[1], the RRP is a function of a change in dispatch of generators in the flowgate that produces 1MW at the regional reference node, but

[1]National Generators Forum, response to the, AEMC's consultation on the AER's ramp rate and FSIP rule change

zero across the flowgate. This RRP is paid to all generators and the price can include offers near the price cap and floor. Under OFA this “price signal” of fully constrained pricing may change, because the theory is that generators in the constraint will offer prices closer to marginal cost (although this is not guaranteed).

Within the NEM today the management of constraints, whereby generators can rebid prices and ramp rates, ameliorates the affect of the reduction in flowgate quantity, by rationing the flowgate quantity between participants and sometimes in lieu of interconnectors (to a certain extent). This change in dispatch of numerous generators means the change in flowgate quantity is not concentrated on one participant and risks are reduced. However the changing of dispatch of numerous generators results in some more volatile pricing outcomes, especially when ’disorderly’ prices are included in the RRP calculation under constrained pricing. CS Energy believes the current arrangement leads to cycles of congestion, where increasing volumes of “disorderly” low prices depress prices after an initial higher price until eventually the constraint no longer binds. This was explained by the NGF in response to the Ramp Rate Rule change proposal whereby examples were given for January 2011 and 2013, where much evidence was provided on the effect of fully constrained pricing.

As AEMO points out in its interim report, the “disbenefit of a negative local price can be overwhelmed by the very high prices received in other parts of the loop”. Because of this CS Energy expects generators will, if they are forced to subsidise the constraint, try to ensure the local prices in the loop affect the regional reference price so that access settlement is profitable.

If OFA stops generators pricing at the floor, CS Energy expects more stable pricing outcomes will accrue under constrained conditions and the cyclic nature of constrained pricing and dispatch may change. CS Energy suspects that the more stable pricing outcomes under OFA will result in generators being more able to optimise access settlement and energy settlement. In particular the removal of offers priced at the floor will create more stable local prices on the sending end of the constraint, reduce the chance of low or negative prices at the mode, and on the receiving end generators may still offer prices that result in high flowgate costs and a high RRP under fully constrained pricing.

In particular we believe the way AEMO formulates constraints, with most constraint equations including numerous terms that have negative coefficients[2], may lead to instances where these generators may reduce supply, pricing very high and increasing access settlement. These ‘flowgate support’ generators’ offer prices can be included in the RRP under fully constrained pricing, even though these generators constrained on are not paid their local price. We suspect this may degrade flowgate volumes and increase access settlement.

[2] Where an increase in dispatch can alleviate the constraint, (in OFA language flowgate support generators)

We can imagine a dispatch scenario, rather than the congestion 'cycles' we have today, where a stable equilibrium emerges:

- flowgate support generators pricing high;
- flowgate volumes reducing, and
- RRP being set by an increase in supply of a flowgate support generator (pricing very high) and a reduction in supply by a constrained off generator (no longer pricing at the floor price of -$1,000/MWh).

Example B: flowgate support generators optimise access settlement in fully constrained pricing by maximising flowgate costs that affect the RRP. The flowgate costs may no longer be depressed by the offers at the floor price.

This would be when there is one more megawatt at the node to set the RRP but no change in the flow across the flowgate. The removal of the floor price offers could result in these no longer depressing flowgate costs and result in higher prices at the node.

It is for this reason that we recommended to the AEMC that the OFA design consider a way to include flowgate support generators. We have suggested that these are paid Long Run Incremental Costing (LRIC) prices and have negative access quantities in access settlement.

As requested by AEMO, CS Energy has considered a couple of examples to discuss the implications of OFA. We found a week that was heavily affected by constraints. The week of 17/06/2013 saw numerous outages in QLD. These constraints are good examples because they are real, short-lived events and included changes to the Left Hand Side (LHS) allocation and terms included in them as the network changed. They present some of the difficulties associated with the OFA model, yet should include the benefits in dispatch.

Example A: Incentives to maximise access settlement in a radial constraint

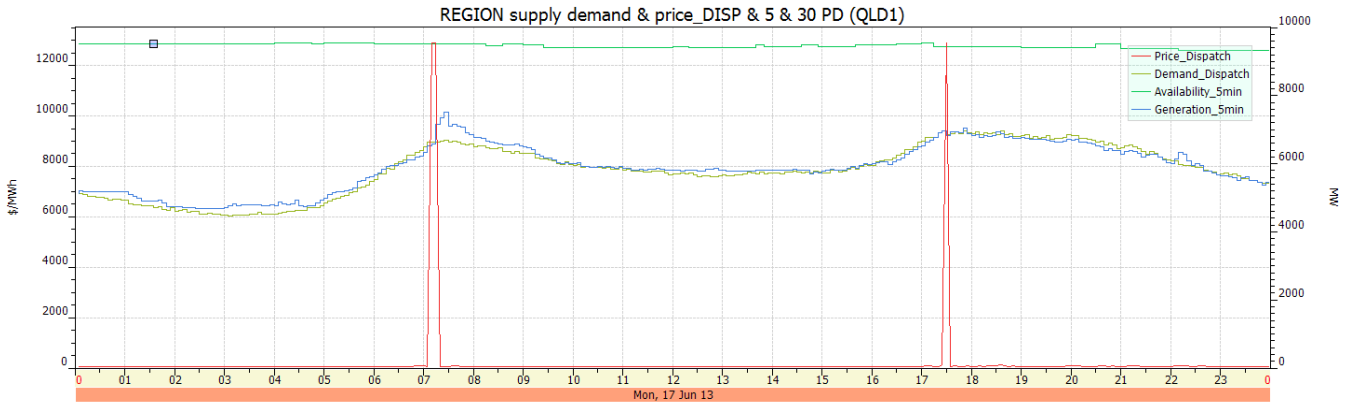
In this response we present a number of figures using the NEO 4.4 tool from Intelligent Energy Systems. The reports presented in each figure use data provided by AEMO.

In this example we consider constraint set Q-BRTR_8814_8815 in SWQ.

The system normal constraint, Q>>NIL_MRTX5_MRTX4[3], sometimes appears close to binding in the high demand summer period, but then Oakey or Swanbank E, (flowgate support generators) come on to relieve it. Q>>BRTR_MRTX5_MRTX4[4], is similar outage version. There are numerous generators not included in this flowgate that can set the price.

On the 17 June 2013 we had high prices when this constraint bound as shown in Figure 1.

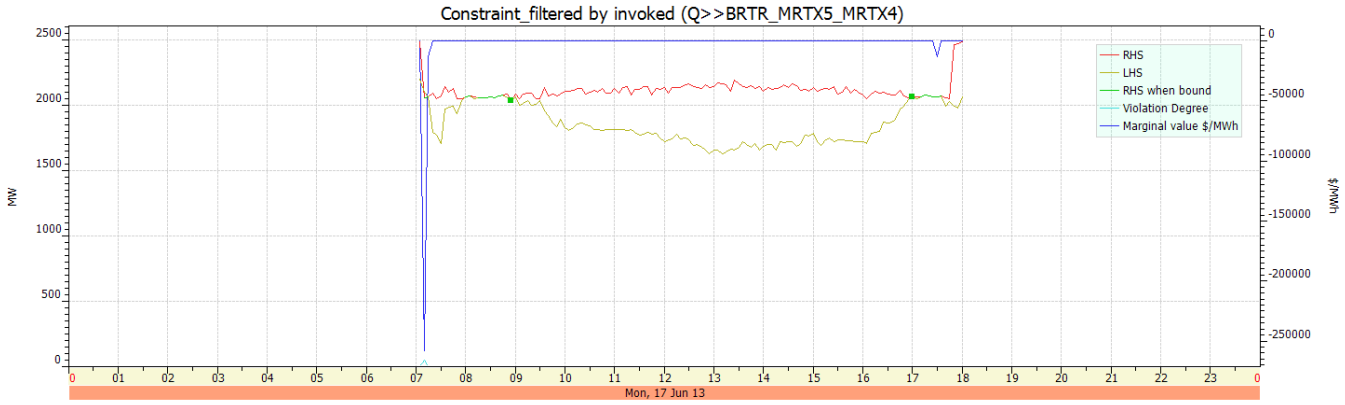
Figure 1: Region supply, demand and price, 17 June 2013



The high prices were reflected in the marginal values of the constraint equation, which were exacerbated because, when the outage was taken, AEMO introduced a constraint equation that could not be satisfied and therefore “violated”. This can be seen in Figure 2.

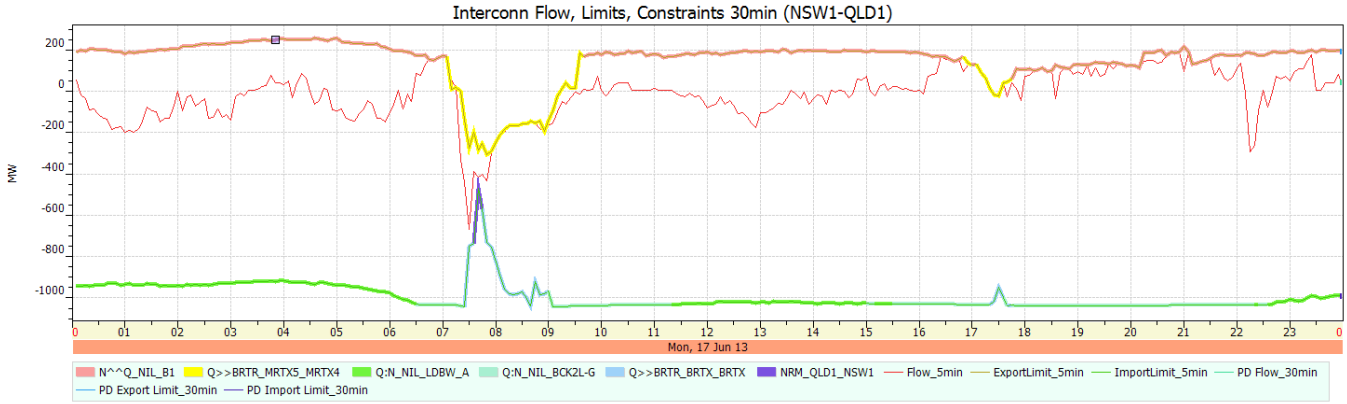
[3] Q>>NIL_MRTX5_MRTX4: Out= Nil, avoid thermal O/L on remaining Middle Ridge 330/275 kV Tx #4, on trip of Middle Ridge 330/275 kV Tx #5, (or 9907 Millmerran to Middle Ridge 330kV line)
[4] Q>>BRTR_MRTX5_MRTX4: Out= 8814 or 8815 R2 Braemar to H18 Tarong 275kV line, avoid O/L on Middle Ridge 330/275 kV Tx #4, on trip of Middle Ridge 330/275 kV Tx #5 (or 9907)

Figure 2: Constraint Q>>BRTR_MRTX5_MRTX4: RHS, LHS, marginal value and violation degree



The period that is most interesting is the period leading up to 5pm. In this period the outage resulted in SWQ generation being constrained off as Braemar increased dispatch (Braemar adds to the flow through the flowgate), and displaced the QNI interconnector, resulting in SWQ generators and the interconnector no longer being able to set the RRP and the price plant not in the flowgate. This is shown in figure 3.

Figure 3: Interconnector flow, limits and constraints – Queensland-NSW interconnector



This example shows potential inefficient behaviour under OFA as generators in SWQ increased dispatch, constrained the flowgate and allowed others to set the RRP high. In effect Braemar and Darling Downs may have created congestion rents in access settlement by offering volumes away from marginal cost, constraining the line and creating residues. Under OFA, they could have the same incentive to do this; a difference could be that they may have been constrained off instead of the interconnector and saved the fuel cost of generating. Importantly the returns from doing this would depend on the access entitlements of the different participants in the flowgate and their electricity derivatives or retail load which are priced at the RRN.

In this flowgate example the generators would appear to have reasonable access entitlements because the rationing across the flowgate was not very aggressive, although we should note that only three of the six Braemar units were running therefore we would expect these participants to be access long, even after scaling back of access to the flowgate quantities.

Outage constraints may therefore represent an opportunity for peaking generators with significant available capacity (and therefore Transitional Access) to exploit their position of being access long even after access being scaled back to the flowgate volume. Therefore base-load generators may be access short when an outage constraint binds: as these generate far closer to their overall availability, far more frequently and at far lower prices. Hence in the example above Millmerran and Kogan Creek, upon *access scaling* could be access short and need to pay into access settlement.

We recommend AEMO investigate the incentives on fast-start plant, or other participants, under OFA to constrain flowgates in order to receive payments through access settlement. CS Energy considers the allocation of flowgate access could be significantly different than today (which is rationed by physical dispatch through the flowgate) and could lead to unexpected outcomes and or perverse behaviour.

Example B: Incentives to maximise settlement in a looped constraint

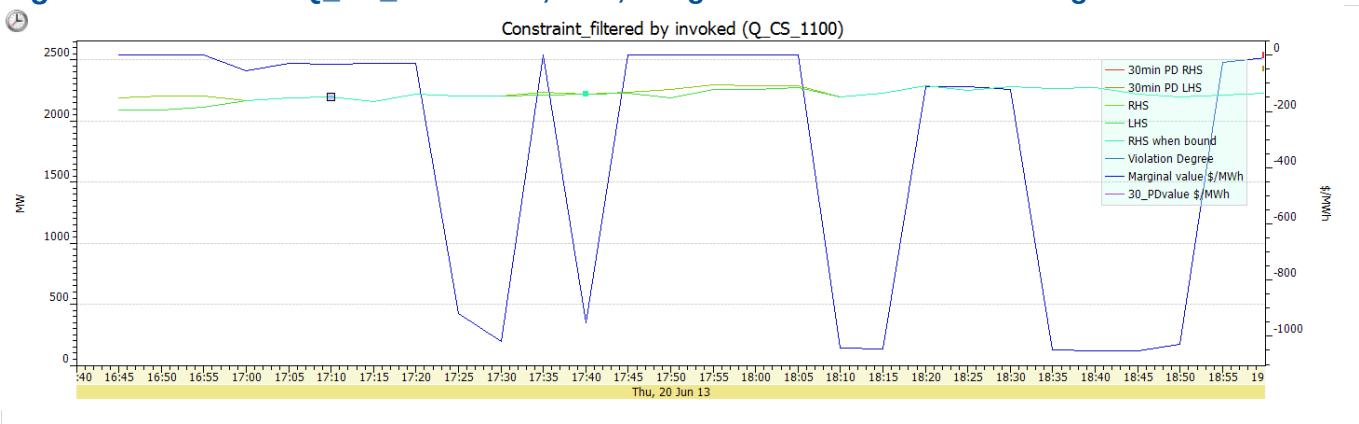
This example considers constraint Q_CS_1100 in CQ-SQ.

Q_CS_1100 was a radial constraint, which used to constrain off generators north of Tarong, limiting central to south intra-region power transfers. It has been reformulated after the reconfiguration of the system around Halys to include SWQ and the interconnectors, resulting in other terms with negative coefficients being included in the equation. It is now a 'looped' constraint.

On 20 June 2013, Q_CS_1100 required all generation north of Halys to be constrained off in QLD and below to be constrained up. In the morning, Millmerran repriced volume to the cap and this, coupled with an FCAS constraint due to an outage in northern NSW, affected the price (interconnector flows were made more costly by FCAS raise) creating a spike at the price cap.

Figure 4 shows the constraint equation Q_CS_1100's effect of constraining off generators that had priced to the market price floor of -$1,000/MWh. It was restricting supply of these offers through the flowgate and therefore ameliorating the constraint by 1MW would have reduced costs by -$1,000/MWh plus the RRP (to approximate).

Figure 4: Constraint Q_CS_1100: RHS, LHS, marginal value and violation degree



In order not to be constrained off those north on the sending end of the looped constraint could price down to -$1,000/MWh to maintain dispatch (see below), but this was complicated by a 'Feeder Bushing' constraint which principally constrains off Gladstone, but under the outage conditions of Calvale-Halys included all generation in Central-North QLD (as these generators had less flow allowed through the other flowgate and therefore had more flow through another flowgate).

Generators and the QNI on the receiving end (south) of Q_CS_1100 were in a position whereby they would be constrained up. The QNI was quite expensive and with a low value coefficient, resulted in it outpricing some of the units constrained off – units 3 and 4 at Gladstone. Gladstone units were constrained off anyway, even if they priced down to -$1,000/MWh because of this.

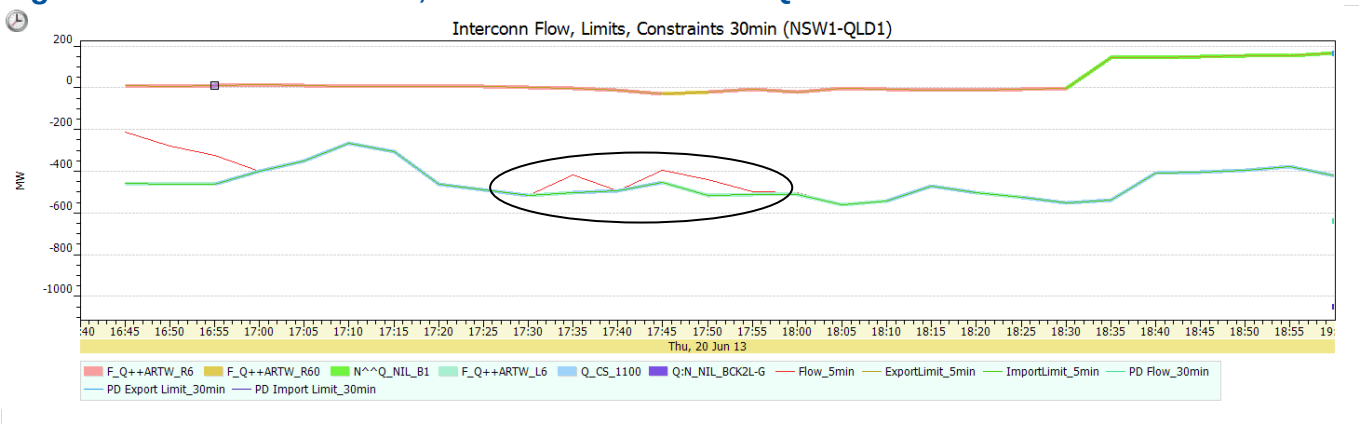
Other suppliers were not caught out by Millmerran in the afternoon (as they were in the morning) because there was more supply from the Braemars, Oakey and Swan_E, which kept the price lower. The supply north of the Q-CS_1100 was, in time, able to set the price low as 'disorderly bids' affected

the price, with negative values. This is under fully constrained pricing whereby the NEM Dispatch Engine (NEMDE) must resolve a looped constraint (usually only these result in fully constrained pricing) and calculate the RRP.

In this example an increment of a high priced offer (from a flowgate support generator) allowed some negatively priced offers to be dispatched across the flowgate. The RRP was a function of a change in dispatch of generators in the flowgate that produces 1MW at the regional reference node, but zero across the flowgate. This was only when we had NSW offers that were low enough to 'open the flowgate' for the constrained off generators.

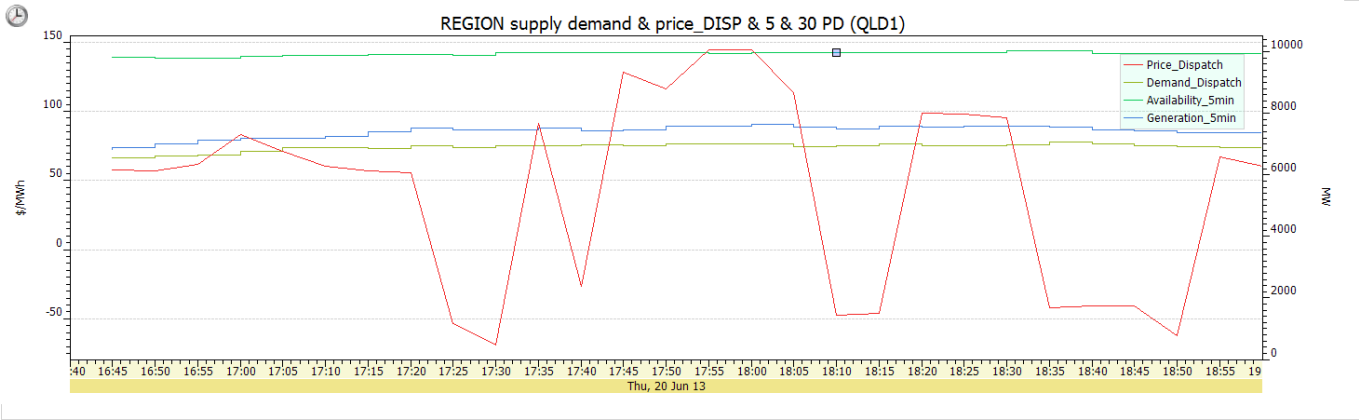
Figures 5 and 6 shows the instances whereby the interconnector was not constrained up (as it was too expensive) and the RRP in QLD was high.

Figure 5: Interconnector flow, limits and constraints – Queensland-NSW interconnector



The RRP in QLD cycled between low and high prices as the negative prices from the loop were included in the price, or whether the price was set with offers not in the loop.

Figure 6: Region supply, demand and price, 20th June 2013



The local prices for the constrained generators in Q_CS_1100 are shown in figure 7 below. Importantly the price for Gladstone is below the floor and so it was constrained off anyway. This allowed an increment of -$1,000/MWh offers within the loop to set the price.

Figure 7: Constraint equation Q_CS_1100 local price adjustment

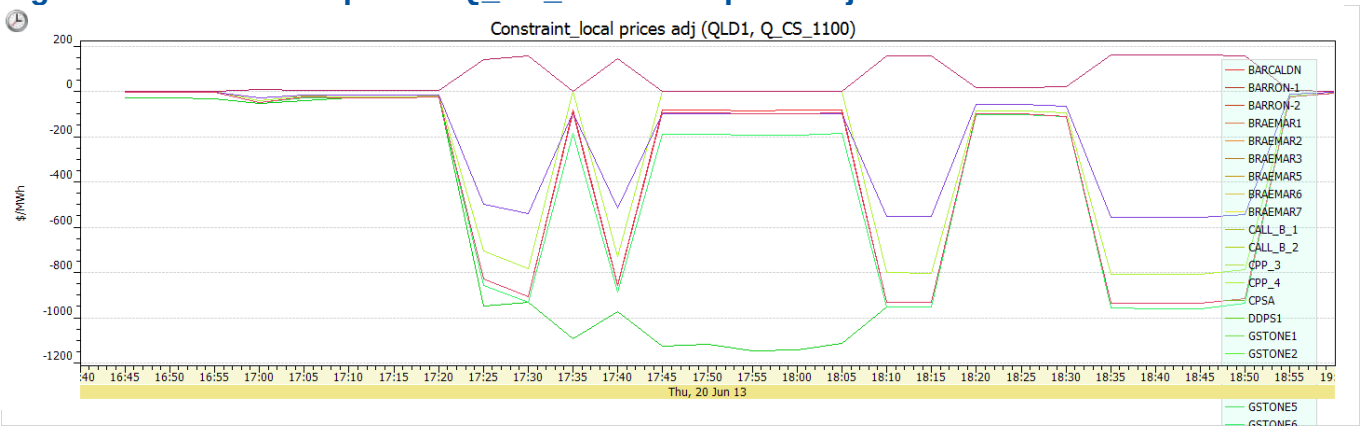
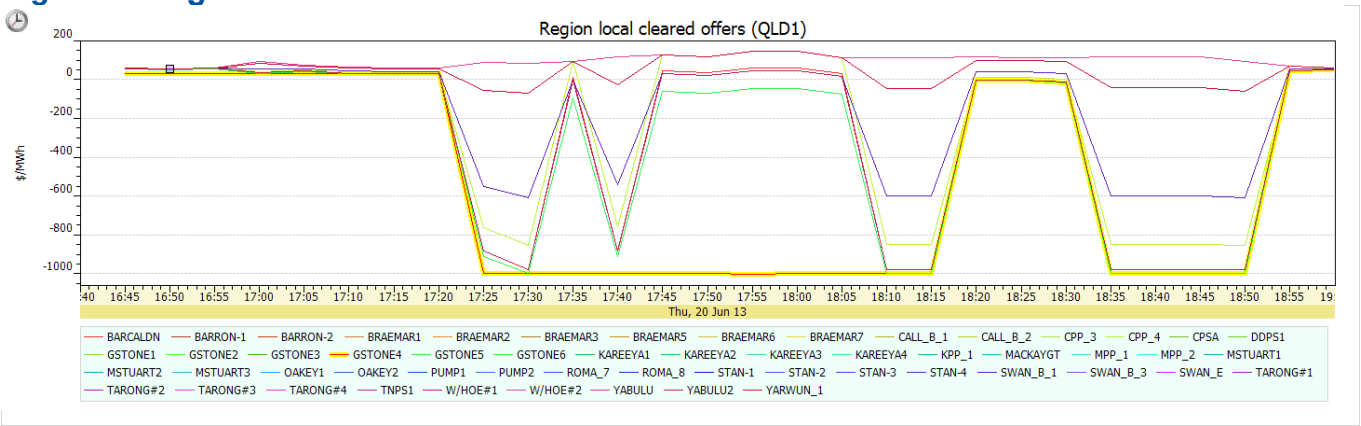


Figure 8 indicates where the constrained -$1,000/MWh offers of Gladstone affected price. This was when the QNI interconnector was constrained up (effectively a flowgate support offer) and the resultant RRP affected by the looped constraint is marginally negative. Figure 7 shows if a generator has set the price: this is done by calculating the locally cleared offer for that unit – by adding back the RRP. If, after doing this, the price is the floor or the cap (or in the case of your own plant your own offer price) you know that generator had this offer included in the RRP calculation.

Figure 8: Region "local cleared offers" 20th June 2013



It is our view that these outcomes are a result of the way the constraints are formulated and AEMO calculates price. Effectively the price in NSW was too high in some instances and the negatively priced offers, when accounting for the constraint coefficients, had to be constrained off (the flowgate closed). When the NSW price eased somewhat, it allowed the negatively priced generation to be dispatched at Gladstone. When the NSW RRP was too high, 15:45 to 18:05 at $120-$150/MWh the -$1,000/MWh offers from Gladstone could not compete, because the coefficient between the QNI and Gladstone units 3 and 4 were too great. However when the NSW price dropped, so QNI could compete, the negative offers form Gladstone could also be dispatched and affect the price as shown in Figure 9.

Figure 9: Example of fully constrained pricing with floor price under existing Rules

Q_CS_1100	Coeff	LHS change	Energy change	Affect on RRP QLD	Offered price
Flowgate support	-0.152	0.868	0.868	$98.09	$113
Gladstone	1	0.132	0.132	-$131.94	-$1,000
		0.000	1.000	-$33.85	
GLAD/QNI	-6.58				
Flowgate cost	$152.00		Actual RRP in QLD	-$47.00	

In Figure 9 the ratio between supply at Gladstone and supply on the interconnector is -6.58. This means that if Gladstone prices at -$1,000/MWh then supply from the interconnector can be dispatched if the price is lower than $152/MWh (-$1,000/MWh / -6.58). If the price at QNI in the looped constraint is below -$152/MWh (ignoring MLFs and interconnector losses) then the flowgate opens and Gladstone can be dispatched.

In Figure 9 an increment of a high priced offer (from a flowgate support generator) at $113/MWh allowed some negatively priced offers -$1,000/MWh to be dispatched across the flowgate. The RRP was a function of a change in dispatch of generators in the flowgate that produces 1MW at the regional reference node, but zero across the flowgate. This results in a price of -$33.58/MWh. This compares to the actual RRP for that interval which was -$47/MWh, which would have included losses, etc.

Figure 9 shows how 'disorderly' bids affect the price when the flowgate is subsidised by a constrained on offer (which is priced quite low and therefore constrained on). This is why negatively priced generation sometimes comes through a flowgate and we have cycles of high and then low prices. Typically the first high price is caused by a negative price being constrained down, or a high price being constrained up, and then other participants rebid offers to the floor price. Eventually prices in the other part of the loop increase until NEMDE constrains off -$1,000/MWh offers and these can affect the RRP. This can be expedited by AEMO imposing a negative residue 'clamp' on the interconnector. Eventually the change in dispatch and prices (which are now low or negative) resolves the constraint and dispatch settles, only for the next cycle to begin.

So far this example does not paint the current rules as efficient – it appears an inefficient process for setting dispatch volumes and prices. But this is not the point: what is important is <u>whether OFA is more efficient than the current rules?</u>

We believe there is the potential under fully constrained pricing, typically with lopped constraint equations that OFA would lead to more stable outcomes. This suggests OFA may be more efficient. However the more stable conditions will also allow for a stable dispatch equilibrium to emerge across the flowgate, rather than the 'cycles' of congestion caused by the way AEMO calculates the price under looped constraints.

We could imagine an equilibrium whereby the flowgate support generators have more control over flowgate residues and therefore the RRP under fully constrained pricing. Figure 10 uses the same example as in Figure 9, but the offer price of the flowgate support generator is changed to $1,000/MWh. The constrained off plant, Gladstone no longer prices to the floor under OFA and they are pricing at

$25/MWh. This is more of a stable equilibrium than under the existing arrangements and the price is high at $871.35/MWh.

Figure 10: Example of fully constrained pricing under OFA incentives

Q_CS_1100	Coeff	LHS change	Energy change	Affect on RRP QLD	Offered price
Flowgate support	-0.152	0.868	0.868	$868.06	$1,000
Gladstone	1	0.132	0.132	$3.30	$25
		0.000	1.000	$871.35	
GLAD/QNI	-6.58				
Flowgate cost	$152.00		Actual RRP in QLD	-$47.00	

It is obvious from this example that the RRP would not 'jump' to over $800/MWh because the interconnector could have increased its supply by 300MW, although with it already priced at over $113/MWh the price would probably have been higher under this scenario. In addition, the FCAS constraint limiting flows into QLD still sets the export limit on the interconnectors and would therefore have hampered it supplying more in NEMDE (this can be seen in figure 5 and was the cause of the price cap spike in the morning).

This example is quite a 'passive' example of fully constrained pricing in looped constraints. Due to the large number of -$1,000/MWh offers and relatively low demand conditions, CS Energy might have expected more orderly dispatch to identify the productive efficiency that OFA is expected to provide where the interconnector flows may well have been 'firmed' in dispatch under OFA.

This example shows the potential for generators within looped constraints to increase prices across the flowgate to a more stable equilibrium than today.

In our view, if more stable pricing outcomes had arisen in January 2013, particularly 9-14 January 2013, when dealing with congestion in central Queensland relating to constraints on circuits 855-871 and 855-871[5], (between Callide, Gladstone and Stanwell), the pricing outcomes could have been more reflective of the underlying supply competitive conditions at the time. Instead, under the current dispatch rules, the NGF noted: "*The price volatility under category C (fully constrained pricing) was the result of the price being set by "disorderly" rebids. This volatility served to* ***depress*** *prices over the period*[6]*"*.

[5] These transmission constraints are no longer relevant as Powerlink has augmented the network between Calvale and Stanwell
[6] NGF, Response to the AEMC's consultation on the AER's Ramp Rate and FSIP Rule Change, March 2014

Other matters:

Access settlement using dispatch SCADA data

We understand that half hourly settlement is most likely for access settlement. This is going to result in difficulties related to flowgate quantities, prices and resultant settlement. In particular the implications of a constraint binding for one or two intervals of the six would present a problem. From CS Energy's perspective, access settlement using dispatch SCADA data would be more sensible as the flowgate quantities are rationed on the basis of dispatch targets, which are SCADA values. The adjustment to the flowgates for feed-back constraints is also on the basis of SCADA data. We also note that station auxiliary load is included in the RHS of the constraint, prior to allocating the flowgate quantity to generators included in the constraint.

Treatment of marginal loss factors

The consultation paper explains that access quantities should be scaled by marginal loss factors (MLFs). The reason for doing this is that dispatch figures are presently adjusted to account for marginal loss factors. CS Energy is unsure as to what the AEMC means by this statement. MLFs are applied to prices, not volumes. MLFs are not real volumes in any way and should not be applied so. Given generators are required by the Rules to offer prices that, when adjusted by the MLF, are no greater than the cap of the floor prices specified in the Rules the local offers for generators already consider MLFs. The AEMC and AEMO should elaborate on the need to include MLFs in access settlement. It is CS Energy's preliminary view, absent further information about the treatment of MLFs, that losses will already be incorporated in the difference in price and flowgate residues.