

Karen Shiels
Utility Regulator, Belfast

Thomas Quinn
Commission for Energy Regulation, Dublin

Submitted by email

27 April 2016

Dear Ms Shiels & Mr Quinn,

Submission to the third consultation on the detailed design of the capacity remuneration mechanism (SEM-16-010)

EnerNOC is grateful for the opportunity to provide further input to this important design process.

In the bulk of this submission, we respond to those of the questions in the March consultation paper on which we have a useful view, but first we have a brief comment on the “minded to” position on contract lengths.

1 Comment on “minded to” position on contract lengths

We set out in detail in our submission dated 8 February 2016 why we believe that it is a bad idea to offer long-term contracts on a discriminatory basis only to certain favoured participants or technologies.

Ideally, a market should consider all offered resources to be fungible and treat all prospective suppliers equivalently, offering the same terms to all and simply seeking the lowest-cost combination of resources.

Comparing short-term and long-term contracts in the one auction breaks the principle of fungibility. Further, restricting the availability of long-term contracts to certain resources – e.g. those which involve spending more than some threshold amount – introduces deliberate discrimination.

To set up a deliberately sloping playing field – a market which is set up to discriminate in favour of higher-cost new entrant resources, and hence against lower-cost and existing resources – is, frankly, an extraordinary intervention. It should not be contemplated unless there is overwhelming evidence that such an intervention is necessary. No such evidence has yet been presented.

From discussions, it seems that the fact that the GB market has adopted this approach might have weighed heavily in deliberations. Note that the GB market

appears to be the **only** capacity market that has ever taken such an approach.¹ It may not be a good example to copy.

We urge the commission to reconsider their “minded to” position, and choose an approach which is non-discriminatory and avoids distorting the market.

2 Auction frequency and volumes

Q3.2.1 Do respondents agree with the proposed approach for transitional auctions, T-4 auctions and T-1 auctions? If not, please explain.

Yes, we agree with the proposed approach.

Q3.2.2 What is respondents view in relation to the flexibility around the timing of the T-1 and T-4 auctions?

The timing proposals seem reasonable.

3 Market power

Q4.8.2 Do respondents agree that market power is a material concern in the I-SEM CRM? If no, why not? Should the SEM committee be concerned with unilateral market power, the potential for collusion or both?

Yes. Both unilateral market power and the potential for collusion could be of concern.

Q4.8.3 Do respondents think that the overall market power control framework and package of mitigation measures set out in this section is comprehensive and proportionate?

Yes, the measures seem comprehensive and proportionate. Compared to other capacity markets, they are towards the more intrusive end of the scale, but this makes sense given the small size of the market and the relatively high level of concentration of ownership.

¹ The previous consultation paper mentioned that ISO-NE and PJM offered multi-year capacity contracts. Neither of them does so in the same unjustifiable way as the GB market. ISO-NE restricts their availability to new resources, but manages to be less discriminatory by allowing all new resources access to them, including new demand-side resources (ISO-NE market rule III.13.1.4.2.2.5). PJM does allow 3-year price certainty for new entrants, but this is only available to the marginal resource in an auction, and only if this produces much lower prices than not allowing that resource to clear (PJM Manual 18 section 5.3.3). It is thus an intervention targeted specifically at solving the lumpiness problem in small regions, and has had minimal take-up. This is a great contrast to the GB approach, under which all generators that can meet the investment threshold will tend to ask for long contracts, as there is no downside to doing so.

Q4.8.6 Do you agree that dominant / pivotal generators should be prohibited from acting as Capacity Aggregators? Should associated businesses of dominant / pivotal generators (e.g. their Supply arms) also be prohibited from acting as Capacity Aggregators too?

Such prohibitions seem sensible: allowing dominant players to gain pricing control over yet more capacity would needlessly broaden the scope for their exercise of market power. Hence we support this prohibition.

Q4.8.7 Should there be a prohibition on ESB and other dominant generators providing aggregation services?

The case for prohibiting the provision of aggregation services in general is not quite so clear as it is for prohibition of the Capacity Aggregator role, as there is more involved in aggregation than just the trading activities. However, we believe that such a prohibition would be likely to lead to aggregated resources being more effective at diluting market power, so we support it.

4 Auction design

Q5.9.2 Which auction format (simple sealed bid, multiple round descending clock, combinatorial format, i.e. Option 1 to 3 in Section 5.2) do you think is most appropriate for the transitional auctions, T-4 and T-1 auctions, and why?

Combinatorial auctions seem unnecessarily complex for this single-product market. Of the remaining options, we would prefer a multiple-round descending clock auction, as the additional transparency can be helpful. However, if market power concerns are overwhelming, then a simple sealed bid auction would suffice.

Q5.9.3 Do you have any preference for the structure of bids for the auctions? Explain your rationale.

The amount of capacity that a demand-side aggregator can procure in a given timeframe partly depends on the attractiveness of the prices that they can offer to customers. This effect can be represented straightforwardly as a supply curve (Option 2), so we favour this approach.²

It would also be helpful if parts of the offered supply curve could be labelled as “divisible bids”, as discussed in the response to the next question.

² For an aggregator to represent this under Option 1, they would have to split their prospective capacity between multiple DSUs at different prices, which causes needless administrative overhead both for the aggregator and for the market operator.

Q5.9.4 Do stakeholders agree with the proposed approach of adopting Option 3b to deal with the lumpiness/discrete bid problem? If not, please explain why not, and your preferred alternative approach.

Yes, we favour Option 3b – the use of out-of-merit bids where they maximise net consumer welfare.

The efficiency of outcomes under this approach can be further improved by allowing “divisible bids”.

Divisible bids would be particularly useful for new DSUs that are to be formed of aggregations of many small customers, as such DSUs can be built to whatever size the market needs. Unlike generating plant, they do not generally come in indivisible lumps. If this divisibility is indicated in the bid, it would allow the auctioneer (or, rather, the auctioneer’s optimisation algorithm), to cut down the size of an out-of-merit DSU to meet the capacity requirement precisely. This will often produce greater net consumer welfare than accepting an oversized bid.

Note that the divisibility of bids must be at the option of the capacity proponent, as some parts of a DSU may well be indivisible – e.g. where there is a single, large, firm customer, or where operating a portfolio below a certain size would not be commercially viable due to fixed overheads.

There is no need to restrict this divisibility to DSUs – some other forms of capacity may well be able to take advantage of it.

Q5.9.5 Do stakeholders agree with the approach of setting the clearing price based on the highest accepted in-merit winner, and paying any out-of-merit winners based on a pay-as-bid basis? If not, please explain why not, and your preferred alternative approach.

We agree with this approach.

Q5.9.6 Should the SEM Committee introduce a sloped demand curve, either as a market power control, or for other reasons?

Yes. As well as being useful for market power control, a sloped demand curve plays a vital role in reducing the volatility of capacity prices (and hence reducing the cost of capital for investors), and in improving reliability outcomes. To quote a report prepared by the Brattle Group – arguably the foremost experts on capacity market demand curves:

“... we caution that we do not recommend adopting a curve that is too steep or vertical. While several capacity markets including ISO-NE and PJM began with vertical curves, these markets have moved toward downward-sloping curves because of the problematic price volatility and reliability concerns that materialize with a vertical curve. These concerns arise because capacity market supply curves tend to be quite steep, with the majority of supply offering at a zero price consistent with their net going forward costs and only a portion of the fleet offering at higher prices. If combined with a very steep or vertical demand curve, realized market prices become extremely sensitive to small changes to supply or demand. This means that a small increase in load forecast, one unit retirement, or a small quantity of withholding could move prices from near zero to the cap. This is especially true in small markets ...

“The result is that a vertical demand curve will produce highly volatile, bimodal price outcomes with prices either near zero or at the cap with few years at more moderate price levels. ... a vertical curve can produce problematic lower reliability outcomes along with problematic high price volatility in both the near term and long term.”³

Q5.9.7 Winner determination. Do you agree with winners being determined purely on price offered for each Capacity Delivery Year?

No.

When a consumer is shopping for a mobile phone contract, they will often have the choice between 30 day, 12 month, and 24 month contracts. The longest contract will typically offer the lowest monthly price. And yet the consumer may not choose it. This may be because they anticipate that their needs might change over time, or simply that they consider entering into a long-term contract to be a risky endeavour. The consumer recognises that there are potential downsides to making a long-term commitment.

If consumers do not ignore contract lengths when choosing products, why would this be a reasonable approach for the market operator, who is acting as a proxy for all consumers?

As noted in paragraph 5.4.9 of the consultation paper, ignoring contract durations will only give you the most efficient procurement choice for the first year. It could lead to very inefficient outcomes in subsequent years, in which consumers are locked into paying for capacity that may no longer be needed, or lower-cost new entrants are prevented from entering the market.

Option 1 is simple, but it would also lead to a systematic, and unnecessary, transfer of risk to consumers from holders of long contracts. It should be rejected on that basis.

³ Spees & Newell, *Resource Adequacy in Western Australia*, August 2014, pp. 22-23.

The other options make some attempt to take this risk into account. While they may not be able to do so perfectly, they are still likely to produce a better outcome than pretending that the risk doesn't exist.

We favour a simple, relatively mild adjustment based on contract length. Either Option 3 or Option 2 could work.

The scaling factor given as an example of Option 3 seems excessive: if we have understood correctly, it would effectively be comparing the total payable under each contract, which is probably not how most consumers would compare contracts.

In our view, the precise value of the adjustment does not matter all that much – it just needs to be a representation of plausible consumer preferences, and fixed well in advance of the auction, so that there are no surprises for bidders. The aim should be that capacity proponents should only seek long-term contracts where they actually need them, and they shouldn't necessarily always seek the maximum available contract length.

Q5.9.8 Winner determination. Do you agree that the auctioneer should be able to accept "out-of-merit" bids to manage the lumpiness problem or should only in-merit bid be accepted? What rules should be used to determine whether the marginal bidder is accepted (if only in-merit bids can be accepted) or to determine which out-of-merit bid should be accepted?

Yes, we agree on Option 3b – optimisation to maximise net consumer welfare – with the addition of optional divisible bids, as discussed above.

Q5.9.9 Price determination. Do you agree that it appropriate to pay auction winners on a "pay-as-clear" basis, with this uniform clearing price being based on the highest accepted in-merit bid price? Should any out-of-merit winners be paid a different price to in-merit winners?

We agree that pricing in general should be on a "pay-as-clear" basis, as this produces more effective price discovery than "pay-as-bid", and avoids unnecessarily advantaging more sophisticated bidders. The different treatment of out-of-merit winners makes sense: all participants must be sure that they will be paid at least their bid price.

Q5.9.10 How do you think the lumpiness / discrete bid issue should be dealt with?

We favour Option 3b, with the addition of optional divisible bids, as discussed above.

5 Auction parameters

Q6.5.3 If a sloped demand curve is introduced, what principles should be used to determine the slope of the demand curve, and the range within which the demand curve is sloped?

To quote the Brattle Group again:

“A small market ... needs a more gently downward-sloping curve, when expressed in terms of price per reserve margin percent. For example, it is important to avoid defining a curve where adding a single generating unit could exceed the width of the curve and depress the price to zero, or where retiring or mothballing a single plant could drive the market into shortage and increase the price to the cap.”⁴

We find it helpful to parameterise demand curves not in terms of percentage deviation from the target capacity, but in terms of absolute MW deviation. This makes curves more comparable between markets of different sizes.

Q6.5.4 If introduced, should the sloped demand curve be different for the transitional period?

The effective demand curve faced by capacity providers under the current SEM arrangements is extremely shallow, so there may be some merit in transitioning to the target demand curve over several years so as to minimise shocks.

Q6.5.5 What impact do you think the sloped demand curve will have on competition?

A shallowly-sloped demand curve leads to less volatile pricing outcomes than a more steeply-sloped one. This reduces the risks faced by prospective investors, making financing cheaper and easier to obtain. In extremis, a vertical demand curve leads to extremely volatile pricing, deterring investment.

A sloped demand curve should hence increase the level of competition.

Q6.5.6 Do you agree with the requirement for an Auction Price Cap? What principles should be used to determine the level for the Auction Price Cap/what level should it be set at?

The Auction Price Cap is simply the highest point on the demand curve. It represents the most consumers would be willing to pay for any capacity, no matter how scarce it might be.

Setting the Auction Price Cap too low would have very serious consequences: if it was below investors' perceptions of Net CONE, it would prevent new entry, leading to poor reliability outcomes.

⁴ Spees & Newell, *op. cit.*, p. 23.

In contrast, setting the Auction Price Cap too high should have no effect, so long as no party has an unfettered ability to exercise significant market power, as competition between capacity providers will prevent the auction clearing price from rising to the cap.

Hence the Auction Price Cap simply acts as a backstop to other market power mitigation measures, and must be set high enough to avoid the risk of undermining reliability. Since there may be considerable uncertainty about the actual value of Net CONE as perceived by potential investors, setting the Auction Price Cap too close to the official estimate of Net CONE would be dangerous. The 2x Net CONE approach taken in ISO-NE seems safe.

Q6.5.9 Should the other Bid Limits be applicable to all bidders, or just dominant/ pivotal generators?

To minimise distortions, limits should be applied only when absolutely necessary. There should be no need to place limits on the bids of non-dominant participants.

I would be happy to provide further detail on these comments, if that would be helpful.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Paul Troughton', with a long horizontal flourish extending to the right.

Dr Paul Troughton
Senior Director of Regulatory Affairs