
Wholesale Electricity Market Rule Change Proposal Submission Form

RC_2010_25 and RC_2010_37: Calculation of the Capacity Value of Intermittent Generation

Submitted by

Name:	Ken McAlpine
Phone:	(03) 8698 7300
Fax:	(03) 9645 0111
Email:	kenmc@vestas.com
Organisation:	Vestas Wind Systems A/S
Address:	Level 4, 312 St Kilda Road, Melbourne 3004
Date submitted:	21 October 2011

Submission

1. Please provide your views on the proposal, including any objections or suggested revisions.

Vestas welcomes the opportunity to make a further submission in response to the significantly amended Rule Change 25 of 2010, as well as confirm its support for RC 37 of 2010.

Vestas was opposed to the original RC 25 and supportive of RC 37. Our opposition to RC 25 remains, as does our support of RC 37. We have outlined the reasons for our support of RC 37 in our initial submission, so will spend most of this submission responding to the August 2011 changes to RC 25 and explaining why we cannot support this revised option.

As noted previously, both Rule Changes arose as a result of the work of the IMO's Renewable Energy Generation Working Group (REGWG), which spent much of 2010 considering how best to revise the incentives for renewable energy generation under the Reserve Capacity Mechanism (RCM).

As part of this process, the IMO appointed expert consultants, to evaluate proposals for valuing the capacity of intermittent generation in Western Australia's Wholesale Electricity Market (WEM) and examine the output of renewable energy generators in WA, relative to peak demand periods.

Importantly, it was found that wind energy generators in WA had an excellent track record of generating electricity at the times when it was most needed – during the morning and evening peaks.

Following adverse feedback from private sector investors on RC 25, the IMO Board subsequently appointed an additional consultant, Sapere Research Group (Sapere) to examine both RC 25 and RC 37. As it turned out, Sapere found that both RC 25 and RC 37 would facilitate the achievement of the Market Objectives.

However, Sapere also provided advice to the IMO Board that RC 25 should be revised to implement a different methodology, focusing on the Load for Scheduled Generation (LSG) methodology with the added twist of a so-called “U-factor” to factor in the risk of a 1-in-10 year temperature event.

Finally, while the process was running, the 206 MW Collgar wind farm was being constructed. When commissioned (very soon), Collgar will supply more than half of WA’s renewable energy. Yet the revised RC 25 will not take into account any of the contribution that Collgar will make to WA’s electricity supply, effectively making RC 25 out of date before it has even been implemented.

Vestas opposes the revised RC 2010 for both reasons of process and substance.

In terms of process, Vestas considers that RC 25 has been amended so substantially from its original wording that it should be withdrawn and re-submitted as a new Rule Change, and therefore be subject to a proper consultation process. While the IMO has extended submission times in recent weeks, the revised wording for RC 25 is so different from the original wording that it represents a separate proposal entirely.

If the IMO board wishes to retain the confidence of private sector investors then it should be clearer about the terms upon which it engages so-called expert consultants and it should reconsider the manner in which it advances Rule Changes where it is also the proponent.

In terms of substance, Vestas rejects the LSG approach and also the “U-factor” that has been introduced to RC 25.

The LSG approach, if it is ever likely to be appropriate, will only be so where a large number of trading intervals are considered, such as the options from the REGWG process where 250 and 750 of the top trading intervals were used.

The use of LSG also discriminates against intermittent generators because it is a different approach than that used for other kinds of generators such as gas and coal fired power stations, which under the Market Rules do not have their capacity value affected by the output of their competitors.

The “U-factor” used in the revised RC 25 is also inappropriate and should be removed. Aside from having no clear basis, the “U-factor” is also irrelevant to valuing capacity. Its most fatal flaw is that it is based on temperature. Temperature can be a good guide to when peak periods are likely to occur but it is not a reliable one. Hot days that occur on weekends do not correspond to ultra-peak trading intervals. High temperatures in one part of the SWIS do not necessarily correspond to high temperatures elsewhere in the SWIS.

Finally, the exclusion of the Collgar data from the Sapere methodology (and consequently for the purposes of the revised RC 25) is inappropriate.

Collgar is not just a big wind farm – it is a big wind farm in an area of the SWIS with no other wind farms. Collgar’s scale, together with its geographic location, means that the exclusion of its data from the RC 25 process is a significant oversight and should be corrected.

The IMO should consult further with Collgar to ensure that this data is considered if RC 25 is to be implemented in any form.

As noted in its original submission on this topic, Vestas understands the importance that the IMO, OOE and System Management places on the issue of security of supply. However, Vestas strongly disagrees that the RCM is the best measure to achieve this. Rather than damage the business case for renewable energy investors in WA by implementing RC 25, the goal of security of supply could be better met, for example, by revising WA’s system reserve margins or investing in wind forecasting software as has been done by the Australian Energy Market Operator (AEMO) with significant success.

2. Please provide an assessment whether the change will better facilitate the achievement of the Market Objectives.

Vestas has previously provided commentary regarding the ways in which RC 37 facilitates the Market Objectives, in most if not all cases far better than RC 25 would do. Below are further comments on the impact of the revised RC 25 on each of the objectives.

a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;

Due to the use of the “U-factor” and the LSG methodology with just 12 peak trading intervals considered, it is difficult to see how the revised RC 25 could assist with meeting the above objective.

RC 25 ignores strong evidence that WA’s intermittent resources in fact have a very good correlation with system peak demand. For example, WA’s best wind periods occur during summer mornings (easterly) and afternoons (sea breeze). These findings from studies done for the IMO by MMA and Senergy Econnect appear to have been ignored.

On the question of *economically efficient supply* of electricity, RC 25 is unquestionably poor. It reduces the capacity payments to intermittent generators from the status quo in the RCM. This in turn discourages new investments in renewable energy generation in the SWIS and improves the relative prospects of renewable energy projects in the National Electricity Market (NEM).

As explained in the original Vestas submission on RC 25 and 37, this in turn raises costs for Synergy. This in turn leads to a less economically efficient supply of electricity to WA consumers and businesses, who will face price rises if these additional costs to Synergy’s business are passed through to them.

b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors

As mentioned above, one of the biggest problems with the revised RC 25 is its likely impact of discouraging new renewable energy projects (and in many cases, new entrants) from connecting to the SWIS.

By reducing the levels of capacity values calculated for renewable energy generators, RC 25 makes future renewable energy investments in the SWIS far less attractive when compared to projects in the NEM.

Discouraging new entrants to the SWIS therefore discourages competition between generators, leading to less efficient outcomes and higher power prices. On that basis RC 25 fails to meet objective (b) of the WEM.

c) to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions

The revised RC 25 clearly is a form of discrimination against renewable energy generators, relative to the existing rules. Primarily it does this by reducing the valuation of their contribution to WA's needs for generation capacity at key times. Meanwhile, it does not alter the capacity payments for thermal generators.

d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system;

Cost arguments, particularly long-term costs, are addressed in response to consideration of the impact of the revised RC 25 upon objective (a) above.

This deterrence of investors will reduce competition over the long term in the WEM and would reduce the ability of Synergy to hedge its REC liability and wholesale power price risk through bundled electricity/REC deals in its home market.

e) to encourage the taking of measures to manage the amount of electricity used and when it is used.

This objective does not appear to be greatly advanced or adversely impacted by RC 25.

3. Please indicate if the proposed change will have any implications for your organisation (for example changes to your IT or business systems) and any costs involved in implementing these changes.

N/A

4. Please indicate the time required for your organisation to implement the change, should it be accepted as proposed.

N/A