



14 November 2012

Anthea Harris  
Chief Executive Officer  
Climate Change Authority  
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Dear Ms Harris,

### Renewable Energy Target (RET) Review - Discussion Paper

Origin Energy Limited (Origin) is the leading Australian integrated energy company focused on energy retailing, power generation and gas exploration, production and export. Origin is, and has been over more than a decade, a significant investor in low emissions and renewable energy technologies, with diverse global renewable energy interests in wind, geothermal, hydro and solar, including an 805 MW Australian wind portfolio<sup>1</sup>. Origin supports the RET within the context of broader energy policy and climate change policy.

Origin offers the following comments on the RET Review Discussion Paper:

#### *Observations*

- **Targets** - the Discussion Paper acknowledges that, without change, the RET volume and percentage targets are increased. With no changes to the fixed LRET volume target, the RET is now expected to deliver 67 TWh (compared to the original intent of 60 TWh) and the combined LRET/SRES new renewables target will be 52 TWh (compared to the original intent of 45 TWh).
- **Technology** - the Discussion Paper acknowledges that the LRET will be met largely by wind power, which doesn't encourage diversity of renewable technology. Draft Recommendation 29 states that no changes should be made to encourage diversity, despite recognition of the potential for the intermittency of wind and solar technologies to impose costs in terms of network stability, reliability and security.
- **Impact on electricity prices**- the Discussion Paper does not comprehensively assess all consequential electricity costs, including the additional transmission costs and energy wholesale costs of "firming" intermittent wind to ensure deliverability and reliability.
- **Direct cost to consumers** - the Discussion Paper acknowledges that the RET is a direct cost burden to Australian families and businesses, in fact it states that the RET "can be considered as equivalent to a tax on electricity consumption levied to promote the development of the renewable energy industry", but the costs are understated.
- **Risk** - the Discussion Paper does not appropriately consider the reduced confidence in the market settings of the National Electricity Market (NEM) as a whole, and its participants.
- **Practical considerations** - the Discussion Paper contains no meaningful analysis of whether the target can be met in 2020. Further consideration is required of publicly announced projects, and the extent to which they can and will be built.

These observations are detailed in Attachment 1.

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<sup>1</sup> Owned and contracted generation. Includes the 270 MW Snowtown II project which is currently under construction. Does not include the Stockyard Hill project which is approved, and would add a further 400 MW to this portfolio.

### *Decision Making Process*

The Discussion Paper reaches the conclusion that the need for policy certainty for lenders and investors in renewable energy outweighs the additional costs of an expanded target to Australian families and businesses.

After reviewing the Discussion Paper, and having made the observations listed above, it is not clear that sufficient analysis has been conducted to confidently arrive at this conclusion:

- **The cost to residential customers has been understated;** the substantial financial impact on business customers has not been adequately addressed; and a key element of the target (the SRES) remains uncapped.
- **The investigation of costs and benefits is incomplete and insufficient;** the Discussion Paper doesn't adequately address the uncertainty and risk across the entire NEM, and does not adequately address system impacts and full lifecycle costs of current RET policy settings.
- **The policy uncertainty impact for renewable investors is defined as potentially increased financing costs, but is not quantified or balanced against broader costs.**

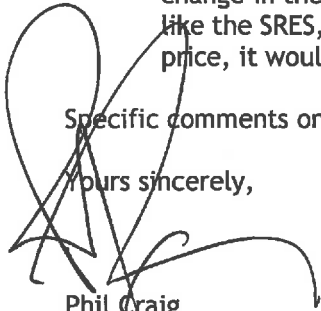
Given the assessment and modelling conducted, and the Draft Recommendations drawn out in the Discussion Paper, Origin makes the following three recommendations:

#### *Recommendations:*

1. **At a minimum, the uncontrolled growth in the SRES should be addressed immediately, and the intended new-renewables combined LRET and SRES target of 45 TWh maintained:**
  - a. The solar multiplier should be removed immediately, and potentially discounted below 1 as recommended.
  - b. The Discussion Paper rejects arguments to alter the LRET target to reflect updated modelling with respect to total electricity demand by 2020. At the very least,, the SRES expansion should be reflected in adjusted LRET targets. **The combined LRET/SRES target of 45 TWh should be maintained - with an adjustment of the LRET component from 41 TWh to 34 TWh to adjust for the over-achievement of the SRES (to the Authority's forecast of 11 TWh by 2020 against the implicit target by 2020 of 4TWh).**
2. **A referral should be made to the Productivity Commission to undertake a full review of the merits, costs and impacts of the RET scheme.** Decisions on appropriate policy settings going forward require full consideration of all costs and risks, and all consequential impacts on the NEM, within the context of broader energy policy.
3. **A further review of the scheme, with the benefit of the Productivity Commission analysis or similar, must occur as legislated in 2014.** Given the rapid change in the current market, the current unpredictability of uncapped schemes like the SRES, and political uncertainty over key policy settings such as the carbon price, it would be irresponsible to not conduct a further review before 2016.

Specific comments on selected Draft Recommendations are contained in Attachment 2.

Yours sincerely,



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## Attachment 1: Comments on analysis of RET costs and benefits

### *Assumptions*

Origin's analysis and that used by SKM MMA for the Authority are similar in some respects. This includes assumptions around:

- Estimated energy demand in 2020;
- Volume of small-scale renewable generation in 2020;
- Partial exemption levels;
- Estimation of a true 20% target (about 27 TWh in 2020);
- Amount of wind generation avoided under this lower target; and
- Carbon price assumptions (at least until about 2020).

However, we note that key assumptions and market impacts vary significantly in Origin's analysis compared with SMA MMA's analysis, leading to divergent results.

These include differences with regard to:

- Wholesale price impacts and retail costs to hedge unfirm generation; and
- Carbon price assumptions.

### *Wholesale price impacts and retail costs to hedge unfirm generation*

One assumption crucial to SKM MMA's conclusion that there is little cost difference between a 41 TWh and a true 20% RET is that lower wholesale prices are directly passed through to retail prices, offsetting the higher scheme cost. The wholesale cost of energy that is incorporated into retail prices reflects retailer's cost of hedging rather than the spot price. Due to their non-firm nature, wind farms are unable to write firm swap contracts against their capacity, and hence retailers are still required to source contracts written against firm thermal power stations. As thermal power stations will generally require some component of capital return in addition to fuel costs from the contract price, it is unlikely that retail contracts will incorporate the lower pool outcome, consequently the cost to households is understated in the SKM MMA modelling.

Additionally, the costs to retailers of firming up intermittent wind generation in their hedge book do not appear to be taken into account. Although wind farms provide energy, their intermittent nature means they cannot be relied on for capacity during periods of price volatility. That is to say that whilst over a year wind farms provide volume, they do not provide protection against price risk. The cost of hedging the unfirm load is estimated at about \$5 billion, based on the cost of acquiring long term peak or cap contracts, across the projected difference between a 41 and a 27 TWh target.

### *Carbon price assumptions*

Whilst broadly similar in the early period, we note that from 2023 the carbon price reverts to the Treasury assumptions which are generally regarded as being at the higher end of estimates (about \$35 in 2023 increasing to over \$50 by 2030). This has the effect of greatly reducing the required RET price from this point in time, reducing the costs attributed to the RET in the back-end of the modelled period. Whilst a sensitivity was conducted on using a higher carbon price again, a lower carbon price path should also be published to provide a more reasonable representation of possible future outcomes.

### *Presentation of results*

Various assumptions are used in the presentation of the results which when taken by themselves may appear reasonable but when considered as a whole understate the cost impacts. For example, costs are brought back to a net present value with a discount rate of 7%. Whilst there is no "perfect" discount

rate to use, 7% appears high when trying to consider the opportunity costs involved to society (as opposed to an investor).

#### *Impacts on other customer groups*

We also note that retail costs are presented as the impacts on an average household only. However, all energy consumers (who do not receive assistance) bear the RET costs. Our analysis indicates that many medium to large commercial and industrial users (most of which receive no assistance under the PEC arrangements) currently face RET costs in the order of 5-10% of their total electricity bill. This percentage is likely to increase as LRET targets increase in the period to 2020. Such customers would also face additional costs under the carbon pricing mechanism and various state energy efficiency schemes.

#### *Perceptions of increased risk premiums*

We understand that the Authority has made a judgement call on whether the 2020 targets should be reduced. On one hand this involves balancing the advantages of the change such as the cost savings of reducing the target, against potential disadvantages such as perceptions of increased risk in renewable energy projects. Whilst the Authority has made an attempt to quantify the former, we are disappointed that no attempt has been made to quantify the latter.

Indeed, sweeping statements have been made about potential increases in financing costs without looking at actual market examples. In our view the real costs of such perceptions of risk are grossly overstated. We made the point in our original submission that the contracts which underpin an investment in a wind farm are usually structured so that it is the purchaser of the energy (usually an electricity retailer) who bears the majority of risk associated with regulatory change. If the scheme was to change materially, the wind farm owner would still be paid the same stream of income, through a bundled price (LGCs and wholesale electricity price). We are disappointed that the Authority has not investigated such real-world examples.

Further, if such perceptions do exist, little attempt has been made to analyse ways to mitigate such impacts. In our submission we suggested ways to do this such as keeping the target as a fixed GWh target and making a clear statement that this was a one-off change due to a material change in circumstances. It could also be made clear that future changes to the target would only be considered on certain clearly defined criteria. Further, we indicated that a reduced target could be designed as to have minimal impact on existing projects. In our view, reducing the target to the levels contemplated would not impact any projects which are currently approved or under construction.

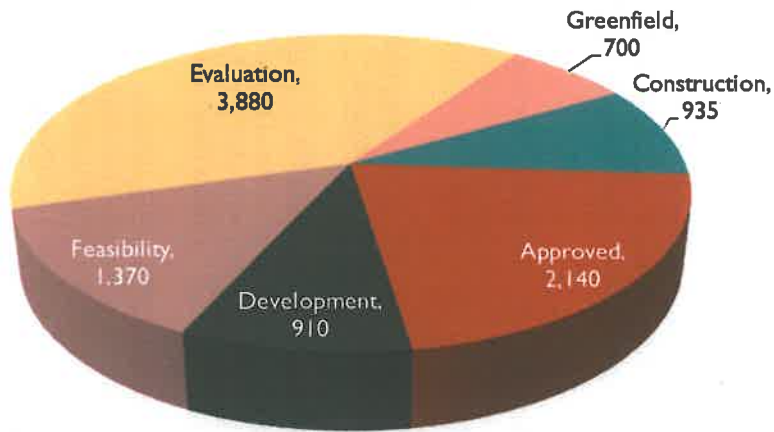
#### *Practical considerations*

Irrespective of costs, the existing 2020 targets are very ambitious and it will be difficult to approve and construct the required new generation in the allowed timeframes. The analysis contained in the Discussion Paper (see p 48) which merely references publicly announced projects is inadequate. Further consideration should be given to the status and location of these projects and the transmission required to connect them to the market. A simple analysis of current projects would reveal that only about a third of the required new generation to meet the 41,000 GWh target (about 3000 MW of the required approximately 9000 MW) is currently in the "Under Construction" or "Approved" phase.

By way of comparison, AEMO currently lists about 16,000 MW of publically announced non-renewable projects, but only a fraction of these will likely be constructed by 2020.

We also note the considerable public concern with large wind farms and that another proposal, this time in Victoria, has recently been rejected.

**Development Status of Proposed Wind  
Current Target  
(Capacity MW)**



Source: Origin analysis based on publically available data.

Attachment 2: Response to specific Draft Recommendations

No	Topic	Response
<i>Frequency of future reviews</i>		
1	Reviews	<p>Origin supports retaining the next review in 2014. Given the rapid change in the current market, the current unpredictability of uncapped schemes like the SRES, and political uncertainty over key policy settings such as the carbon price, <b>it would be irresponsible to not conduct a proper review before 2016.</b></p> <p>Origin notes that the RET has undergone review on previous occasions before a formal legislated review process existed. Further, we note the Minister retains the power to request the Authority to undertake a review at any time under Section 59 of the <i>Climate Change Authority Act 2011</i>. We do not view the formal process as adding to any regulatory risk that is not already inherent in the scheme.</p>
<i>Large-scale Renewable Energy Scheme</i>		
2	Fixed target	We agree that the target should continue to be expressed in legislation in terms of a fixed GWh level.
3	Annual targets	<p>Origin does not support the Authority's findings that the risks of changing the target outweigh the benefits of the costs reduced. An adequate assessment of the costs and benefits has not been undertaken. We continue to caution that the costs of the scheme are not well understood. Our further comments on the costs of the RET can be found at Attachment 1.</p> <p><b>We recommend that the Productivity Commission should be directed to undertake a full review of the merits, costs and impacts of the RET scheme.</b> An informed decision on an appropriate target requires full consideration of all costs and risks, and all consequential impacts on the NEM. The Australian Energy Market Operator (AEMO) and the Australian Energy Market Commission (AEMC) should support this review.</p> <p>Origin would caution against increasing the shortfall charge beyond \$65 (\$93 tax adjusted). If this level of subsidy is insufficient to bring on the desired targets then it is suggestive of broader problems.</p>
4	Targets beyond 2020	
<i>Small-scale Renewable Energy Scheme</i>		
6	Thresholds	<p>We support reducing the threshold for small-scale solar PV systems and suggest that this could actually be lower than the 10 kW example given. We also suggest that aggregation of sites should be allowed in order to meet this threshold. This would give greater opportunity for new product offerings to develop in the small to medium scale market.</p>
8	Discounting	<p>Origin strongly supports measures to mitigate the costs of the SRES. "Discounting" the solar credits multiplier is a pragmatic measure which is supported.</p> <p>However, Origin remains concerned that this proposal will take time to implement. In the meantime, we highlight that the SRES liability for 2013 has recently been revised upwards significantly, to about 35 million certificates (or a \$1.4 billion subsidy in 2013). This is part of a continued trend in the SRES where volumes have been grossly underestimated. In fact, this will bring the total SRES subsidy for 2012 and 2013 to over \$3 billion.</p> <p><b>With these cost pressures mounting, Origin recommends that the Minister use his existing powers to immediately reduce the solar multiplier to 1.</b></p>

9	Criteria for discounting <i>Liability and exemption framework</i>	The criteria of net system costs, electricity prices and payback period are reasonable.
12	Opt-in arrangements	Such arrangements appear reasonable. Origin would welcome further engagement on the design of the opt-in arrangements to ensure that they are efficient for all parties involved. From a retailer's perspective, one of the key considerations is the notice period given regarding changes of retailer. We note that large-user provisions in NSW GGAS have worked reasonably well.
14	RPP and SST setting	Origin strongly supports the proposal to set these percentages before the start of the compliance year to which they apply.
16	Shortfall charge	Origin believes that the current shortfall charge of \$93 (tax-adjusted) is more than adequate to drive investment in renewable technology. We do not support proposals to consider increasing this shortfall charge in the future.
18	Tradeable PECs	Whilst Origin would consider provisions to allow large-users to opt-in and assume liability directly as reasonable we are unconvinced that PECs are an appropriate instrument to be made tradable. We note that the Discussion Paper is unclear as to what model of trading is contemplated. We also note that PECs differ from certificates so that direct comparison with other similar schemes (such as the Carbon Pricing Mechanism, where assistance is given in the form of permits) is not necessarily appropriate. We believe this proposal requires further refinement.
<i>Small-scale scheme administrative issues</i>		
33	Thresholds and deeming	As stated at Draft Recommendation 6 above, Origin supports reducing the threshold for solar PV systems in the SRES. This may require reducing the deeming arrangements for larger systems.
34, 35	Administration	Origin supports the streamlining of these administrative requirements.  We have also experienced problems in the administration of the SRES regarding large one-off changes to customer load. The current rules have not been flexible enough to account for these situations. Origin would be pleased to discuss these matters directly with the Authority.
<i>Other issues</i>		
	GreenPower	We suggest that the Authority make a specific recommendation about the ongoing role for GreenPower and the continued need for Government accreditation of this successful product.  GreenPower empowers customers to contribute to more ambitious goals for renewable energy <b>if they so choose and does this in a way that does not force additional costs onto other consumers.</b>