



30 September 2015

Victoria's Renewable Energy Roadmap
Department of Economic Development, Jobs, Transport & Resources

E: renewable.energy@ecodev.vic.gov.au

Dear Sir/Madam,

Victoria's Renewable Energy Roadmap

Origin Energy Limited (Origin) welcomes the opportunity to make a submission to Victoria's Renewable Energy Roadmap.

Origin recognises that climate change is a global challenge and unequivocally supports measures to progressively reduce carbon emissions. With Australia's 2030 emission reduction target announced, the policy debate is now moving towards the practical measures required to meet this target. Australia's pledge of a minimum 26% reduction on 2005 levels is a significant one that will require tens of billions of dollars of investment in the energy sector.

In order to meet this challenge we support the Australian and Victorian Government encouraging a progressive de-carbonisation of the electricity mix. We believe that this should include:

- some form of market mechanism for the electricity sector;
- regulation which promotes the orderly retirement of old, highly emissions intensive generation; and
- the progressive deployment of renewable energy generation at significant scale.

Our preference is that such policies be national rather than state-based. With an interconnected electricity market, national schemes are more efficient than those at a state level, and will deliver outcomes at a lower cost and without unnecessary regulatory duplication.

Key points

Origin has the following key points to highlight:

- **Targets** - we generally support high level targets, such as for emission reductions or renewable energy, being made at the national level. Origin does not support a Victorian specific target for renewable energy that would mandate additional obligations to that of the national Renewable Energy Target (RET). If targets for renewable energy in Victoria are desired we suggest these be made aspirational and focus on how to secure the most suitable generation for Victoria and at least cost to Victorian consumers.
- **Promoting renewable energy** - whilst the RET is expected to drive investment in the period to 2020, we believe the new 2030 emission reduction target will require significant new investment in renewable energy over the longer term.
- **Standards for power stations** - the transition to lower emission generation would be accelerated if there was room in the market for this. As recommended in our recent submission to the review of the Victorian Climate Change Act, we suggest that standards be considered to progressively phase out brown coal-fired generation in Victoria.
- **Fair and reasonable rate for distributed generation** - Origin remains of the view that the Victorian electricity market is sufficiently mature not to require a regulated minimum feed-in-tariff, and that it would be better if a pricing guide was applied.

- **Planning regulation** - Origin welcomes recent reforms such as locating approval within the central authority of the Planning Minister and cutting the two kilometre landowner consent boundary to one kilometre but has some concerns with the definition of 'wind energy facility' in Amendment VC 125 of the Victorian Planning Provisions.
- **Greenpower** - should continue to be an important mechanism as it allows those customers who choose to make an additional contribution to renewable energy the opportunity to do so, without cross-subsidy.
- **Regulation of innovative energy models** - an exemption framework is an appropriate mechanism for regulating alternative energy sellers where consumers voluntarily choose to contract with them.

Targets

Origin supports the progressive decarbonisation of the electricity sector in Australia and views the increased deployment of solar and wind technologies as a key part of this transition. Our philosophy is that this deployment should be underpinned by sustainable policy that encourages the commercial uptake of renewable generation sources, without excessive cost subsidisation. We expect rooftop solar PV installations to continue growing strongly and have invested in expanding our solar and emerging technologies businesses. We also support the deployment of large-scale generation sources such as utility scale solar and wind.

Falling technology costs have created genuine opportunities for solar and emerging technologies businesses, as demonstrated by the substantial number of alternative energy sellers that have entered markets across Australia. Consumers stand to benefit more from businesses competing for market share to deliver these services at an affordable price than they will from Government interventions. Origin does not support a Victorian specific target for renewable energy that would mandate additional obligations to that of the RET. The cost curve for solar technologies continues to fall largely due to external factors, such as breakthroughs in research and development and improved economies of scale in manufacturing. Mandating additional targets may see the uptake of technology before they reach cost competitiveness, with the result that consumers will pay more for products than they would under a market led rollout.

State jurisdictions must be particularly sensitive to Federal energy and climate change policy and how proposed state policies may interact. Additional state policies can drive up costs for consumers and adversely impact on a state's relative economic competitiveness. We believe that delivering low cost renewable energy generation for Victoria generally requires a nationally consistent approach. Origin therefore encourages the Victorian Government to carefully consider the role its renewable energy initiatives play in the context of global and Australian carbon reduction targets and initiatives, and with consideration of the broader impact on an oversupplied National Energy Market (NEM).

If targets for renewable energy in Victoria are desired we suggest these be made aspirational and focus on how to secure the most suitable generation for Victoria and at least cost to Victorian consumers. Government tenders for renewable energy, as long as they are not additional to the LRET, may be one way to achieve this.

Promoting renewable energy

Origin is committed to meeting our obligation under the RET and can achieve this through various options including building projects directly, underwriting projects through power purchase agreements, or by purchasing certificates on market. We are currently considering the potential development of Stockyard Hill Wind Farm in Victoria, which has already received planning approval, and the potential for utility scale solar plants in Queensland, to help meet the target. Origin is also one of the largest installers of rooftop solar systems in Australia, having directly installed about 80,000 systems to date. In total, about 390,000 of Origin customers have solar systems. This year, Origin launched a new solar leasing product, which allows more customers to access the benefits of

solar without having to purchase the system. We are also exploring new battery technologies which are expected to be offered in the second half of the 2015 calendar year.

The Large-scale Renewable Energy Target (LRET) of 33 TWh by 2020 is a significant challenge for the energy industry which we estimate will require about 5,000 MW of new renewable capacity to be built over the next five years. To put this in context, we recently commenced receiving the full output of the 270 MW Snowtown II windfarm, the second largest in the country. To achieve the new build under the LRET target will require about another 18 large wind farms like Snowtown II to be built over the next few years. Victoria has a number of cost competitive sites that may attract investment.

As stated above, Origin does not support a Victorian specific target for renewable energy that would mandate additional obligations to that of the Renewable Energy Target (RET), especially in the period to 2020.

However, with Australia's 2030 emission reduction target now announced we believe a significant increase in renewable energy will be required in the period 2020 to 2030. As Origin's Managing Director, Grant King noted in a recent speech to CEDA,¹ a 50% renewable energy target by 2030 (equating to approximately 125 TWh of renewable energy) would deliver less than half of the announced carbon emissions reduction target.

With this in mind, we support the Victorian and Australian Governments encouraging a progressive de-carbonisation of the electricity mix. In recent submissions² we have stated that:

"In the long-term, Origin continues its support for a well-designed market mechanism of some form for the electricity generation sector - whether this is a baseline and credit scheme or some other form. This could be complemented by:

- *regulation which promotes the orderly retirement of old, highly emissions intensive plant;*
- *emissions performance standards for new plant; and*
- *sustainable policy which encourages the commercial deployment of renewable generation sources without excessive subsidy."*

Our preference is that the policies listed above be national rather than state-based. In the case of Victoria, there are unique circumstances in that the state is reliant on highly emissions intensive brown coal generation, and in combination with an oversupplied market, this can create a barrier for investment in new renewable energy sources. We suggest that policies should be examined to progressively phase out brown coal generation, as this will deliver the biggest impact on reducing emissions in Victoria and Australia. It is also in Victoria's interest to influence the design of such policy, to minimise the impacts of structural adjustment on jobs and the economy.

Standards for power stations

Whilst Victoria is part of the National Electricity Market (NEM) it stands out because of its reliance on old, highly emissions intensive brown coal-fired generation for the majority of its electricity. With electricity demand remaining relatively flat, a number of marginal coal-fired plants have been mothballed or retired in the NEM, but this has generally been in other states³. For a combination of reasons, including the very low marginal costs of existing local brown coal reserves and ownership structure, large brown coal fired generators in Victoria are still running at high capacity factors. Without policy intervention of some sort, this situation is not expected to change for a number of years. From a greenhouse gas perspective this is a perverse situation.

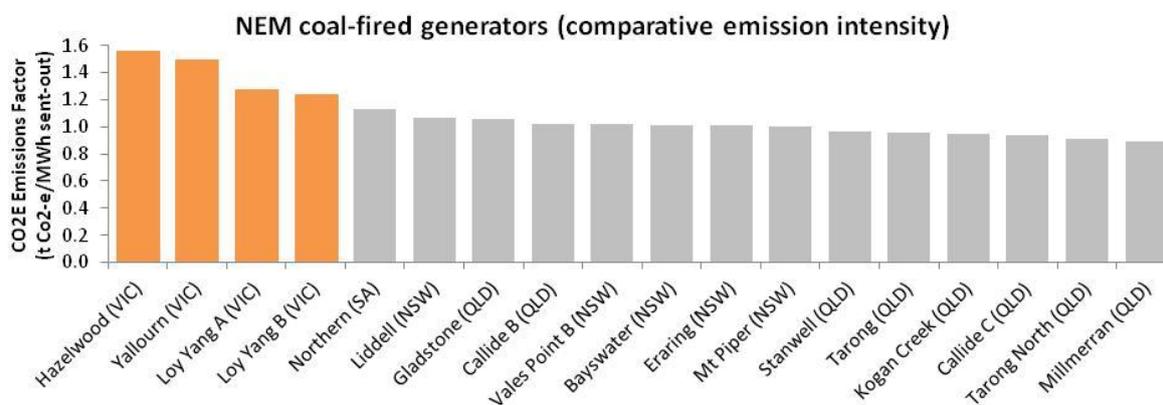
¹ "Paris and Beyond", Grant King, Managing Director Origin Energy, speech to the Committee for Economic Development of Australia, Brisbane, 9 September 2015.

² For example, see our submission to the Australian Government's consultation paper "Setting Australia's post-2020 target for greenhouse gas emissions", 27 April 2015 and our submission to the Review of the Victorian Climate Change Act 2010, 7 August 2015.

³ We note that some smaller power stations in Victoria such as Anglesea and Energy Brix have been retired/mothballed.

Whilst the Large-scale Renewable Energy Target (LRET) will underpin some new investment in renewable energy, the transition to lower emission generation would be accelerated if there was room in the market for this. As recommended in our recent submission to the review of the Victorian *Climate Change Act 2010*, we suggest that standards be considered to progressively phase out brown coal-fired generation in Victoria. Standards are currently being implemented in North America with the US basing theirs on emissions intensity and Canada on the age of its generators. Either policy could be applied in Victoria. In comparison to a carbon tax or emission trading scheme, standards are simple to communicate to the public and their results are more tangible. We note also that the four large Victorian brown-coal generators received the vast majority of compensation under the Carbon Pricing Mechanism (over \$1.5 billion), even though it was only in place for two years and has now been repealed.

The chart below lists the coal-fired generators in the NEM by carbon intensity (sent-out basis):



Source: AEMO

This phased closure would need to be accompanied by appropriate structural adjustment packages as well as environmental site remediation. Standards for new generation could also be considered at the national level to ensure that whatever replaces the existing brown coal power stations is of much lower carbon intensity.

Fair and reasonable rate for distributed generation

The Victorian Government has recently released its terms of reference for the Essential Services Commission of Victoria (ESCV) to investigate the true value of distributed energy. Presumably, this review will include an examination of the method presently used by the ESCV to calculate the mandated minimum feed-in-tariff for small renewable energy generators. Origin looks forward to contributing to this review in coming months. It is disappointing that the examination of the merits of deregulating the feed-in-tariff have been explicitly ruled out by the Government in this review. Origin remains of the view that the Victorian electricity market is sufficiently mature not to require a mandated minimum feed-in-tariff, and that it would be better if the ESCV simply published a pricing guide (as is the case in NSW) rather than mandating a minimum price. As the NSW Independent Pricing and Regulatory Tribunal (IPART) has stated in one of their solar feed-in-tariff determinations:

“In our view, a competitive market is the best way to provide the fair value for PV exports, and the market should determine the fair value of PV exports through competition. We consider that mandating minimum feed-in-tariffs will lead to fewer offers that consumers can choose from and less incentive for retailers to innovate....”

Mandating minimum feed-in tariffs will also not guarantee that PV customers will be better off ... because feed-in tariffs are only one component of a retailer's market offer.”⁴

Further, to the extent that a value of distributed generation to the electricity market may be found, it is most likely to be efficiently determined through an open and competitive market rather than a regulated determination. As IPART has acknowledged in a report investigating the true value of solar electricity, setting mandated minimum tariffs risks regulatory error whereby the regulator sets a tariff that is too high or too low to meet the efficient costs and to reflect its competitive value.⁵ Competition is also crucial because in a highly competitive retail market, such as Victoria, retailers can use feed-in-tariffs to compete for customers. Retailers risk losing a significant share of the market if they do not make available reasonable feed-in-tariffs; this incentive will only continue to rise along with the anticipated increase in PV installations.

To determine the true value of distributed energy, it is also worth recognising the existing subsidies that are already in place to assist residential solar customers with obtaining value from their systems. As part of the RET the Small-scale Renewable Energy Scheme (SRES) already provides an upfront subsidy that significantly reduces the cost associated with installing a distributed energy system. Distributed energy customers are therefore obtaining a benefit for their electricity before their system is installed. These subsidies ought to be accounted for in any estimate of the true value of solar electricity.

In terms of the value of distributed generation on the electricity network, and any social or environmental value that it may possess, Origin is of the view that this is best captured through national policies rather than state-based schemes. Any value to the electricity network that distributed energy may provide needs to be assessed in the context of nationally regulated network determinations; this value cannot be efficiently passed through by retailer feed-in-tariffs, which express the wholesale market value of that electricity. Similarly, the social and environmental cost of greenhouse gas emissions is best captured through a nationally administered carbon pricing mechanism of some form for the electricity sector. Applying feed-in-tariffs to capture this value will merely increase cross-subsidies between customers.

The Government has indicated a willingness to examine whether the processes for connecting distributed generation can be streamlined and simplified. Origin supports these moves. In our experience, grid connection of large scale solar installations can be challenging with respect to connection specifications and assessment as well as network tariff assignment. However, we also acknowledge that the increasing volume of solar systems being connected to the network will impact on the traditional operational voltage levels in areas of the distribution system. This outcome can generate higher levels of scrutiny and analysis by distribution businesses prior to approvals. In Origin's view, more transparent timeframes in connection processes could improve the efficiency of connections overall, but they should not be at the expense of properly considering the impact of distributed generation on the grid.

Reform of planning laws

In relation to planning laws, Origin welcomes efforts to “cut red tape” by locating approval within the central authority of the Planning Minister and cutting the two kilometre landowner consent boundary to one kilometre. These are reasonable changes that may assist to make large scale wind farm investment more attractive in Victoria. We are concerned, however, by changes to the definition of ‘wind energy facility’ to Amendment VC 125 of the Victorian Planning Provisions. In our view, the broadening of the definition of ‘wind energy facility’ may have the unintended consequence of increasing the regulatory burden for wind farm developers - particularly in relation to the approval of minor utility scale powerline infrastructure. Origin has detailed our concerns in writing with the Department of Environment, Land, Water and Planning. We refer the Department

⁴ Independent Pricing and Regulatory Tribunal, *Final report- Solar feed-in-tariffs- The subsidy free value of electricity from small scale solar PV units from 1 July 2014*, 16 June 2014, p. 9.

⁵ Independent Pricing and Regulatory Tribunal, *Final report- Setting a fair and reasonable value for electricity generated by small-scale solar PV units in NSW*, March 2012, p. 5.

of Economic Development, Jobs, Transport and Resources to this correspondence as part of their consideration for the Roadmap.

GreenPower

GreenPower is a voluntary, government accredited, program that supports the production of electricity from renewable sources over and above the mandatory targets set under the RET. GreenPower has proved to be a very popular scheme and Origin believes that GreenPower should continue to be an important mechanism as it allows those customers who choose to make an additional contribution the opportunity to do so. Importantly, it does not involve a cross subsidy and does not force other customers to pay for this additional support. In this way it is an equitable, market driven product.

Essentially, GreenPower involves retailers purchasing additional Large-scale Generation Certificates (LGCs) from accredited providers (such as wind and solar farms) for their GreenPower customers and then voluntarily surrendering these. The GreenPower program undertakes a rigorous audit of providers to ensure the correct amount of LGCs has been purchased and surrendered each year.

Regulation of innovative energy models

With respect to the regulation of innovative alternative energy models, Origin affirms the views in its recent submission to the Department on proposed amendments to the General Exemption Order. In essence, Origin believes an exemption framework is an appropriate mechanism for regulating alternative energy sellers where consumers voluntarily choose to contract with an alternative energy seller and supply is supplementary to consumer's grid supplied energy. Origin believes the alternative option of authorisation (i.e. licence) will impose regulatory costs with little benefit to customers. We also do not support the consumer protection framework being overly prescriptive as customers of energy sellers already have access to protections under the Australian Consumer Law and Competition and Consumer Act. However, we consider it appropriate for an alternative energy seller business to:

- make clear that a customer maintains the right to choose its own retailer;
- make clear that an alternative energy seller is not an authorised retailer and therefore what consumer protections apply to non-market consumers in its network;
- explain the applicable process for dispute resolution;
- set out the frequency of bills and terms for payments; and
- provide adequate information on the term and costs that apply to the agreement.

If you have any questions regarding this submission please contact Matthew Kaspura (Manager Carbon Policy) on +61 2 8345 5287. We look forward to further consultation as Victoria's climate change policy evolves.

Yours sincerely,



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About Origin

Origin is Australia's leading integrated energy company focused on gas exploration, production and export, power generation and energy retailing. A member of the S&P/ASX 20 index, the company has more than 6,000 employees and is a leading producer of gas in eastern Australia. Origin is Australia's largest energy retailer servicing 4.3 million electricity, natural gas and LPG customer accounts and has the country's largest and one of the most flexible generation portfolios with approximately 6,010 MW of capacity, through either owned generation or contracted rights. Origin is a significant investor in low emissions and renewable energy technologies and has diverse global renewable energy interests in geothermal, hydro, wind and solar technologies. Through Australia Pacific LNG, its incorporated joint venture with ConocoPhillips and Sinopec, Origin is developing one of Australia's largest CSG to LNG projects based on Australia's largest 2P CSG reserves base.

Origin is one of the largest installers of solar systems in Australia, having directly installed about 80,000 systems to date. In total, about 390,000 of our retail customers have solar products. This year, Origin launched a new solar leasing product, which allows more customers to access the benefits of solar without having to purchase the system. We are also exploring new battery technologies which are expected to be offered in the second half of the 2015 calendar year.