



2 September 2016

Department of Environment, Land, Water and Planning

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

Dear Sir/Madam,

### **Victorian Renewable Energy Auction Scheme Consultation Paper**

Origin Energy Limited (Origin) welcomes the opportunity to make a submission on the Victorian Renewable Energy Auction Scheme Consultation Paper.

Origin recognises that climate change is a global challenge and unequivocally supports measures to progressively reduce carbon emissions. We support the global target of no more than two degree temperature change and note the strong intention of the Paris Agreement to pursue efforts to a 1.5 degree scenario. We support Australia's announced 2030 target as a minimum goal for the nation and believe that greater ambition is possible over time. We support the progressive decarbonisation of the electricity sector in Australia and an eventual goal of net zero emissions for the electricity sector by 2050 or earlier.

Origin was the first energy company in the world to adopt all seven of the 'We Mean Business' coalition commitments on climate change, which includes specific aims to increase our investment in and own use of renewable energy as well as developing long-term emission reduction targets which are consistent with a two degree scenario.

Origin supports the Victorian Government encouraging the progressive de-carbonisation of the electricity mix, including by removing barriers to the deployment of renewable energy sources where economic to do so. In our view, it is critical that frameworks to address emissions reductions consider the interlinked issues of sustainability, affordability and reliability. Delivering low cost abatement and reliable energy for Australia requires a national approach. Origin therefore encourages the Victorian Government to carefully consider the role its climate change initiatives play in the context of global and Australian targets and initiatives and with consideration of the broader impact on the energy market.

We do not support the proposed contracts for difference (CfD) model as we believe it imposes a disproportionate risk on Victorian electricity consumers and electricity market participants. Rather, we recommend an alternate approach which seeks to better balance those risks whilst still achieving the Government's desired objective.

#### ***Key points***

Origin has the following key points to highlight:

- **Integrated climate and energy policy** – our strong preference is that energy and climate policy be made at the national level. This policy should consider the interaction between both climate and energy policy to achieve outcomes that balance reducing emissions, with retaining reliable energy supply at an affordable cost to consumers.
- **Interactions with the LRET** – the current policy proposal risks creating significant regulatory uncertainty in the LRET market, which may have the perverse outcome of delaying

investment in new renewable projects. We urge the Victorian Government to design the scheme in a manner which avoids interference with this market.

- **Costs to customers** - in addition to creating uncertainty, we are concerned the current proposal to use a contract for difference may impose a high degree of risk on the Victorian Government. This risk may end up being very costly for Victorian electricity consumers.
- **Alternative approach** –we support the alternative approach of a fixed price model. We believe this better balances the Government's aim of supporting renewable energy projects in Victoria whilst also reducing the risk of price increases to Victorian electricity consumers. This model could be based on similar funding provided by the Australian Renewable Energy Agency (ARENA) which essentially provides “top- up” funding to ensure that a project can secure financing. It would then be the project developer's responsibility to enter into contracts with market participants and would ensure that the Victorian Government is not an ongoing participant in the energy market. An auction or tender process could still be used to ensure only the most cost competitive projects receive assistance.
- **Cost recovery** – we believe that the scheme should be budget funded as this provides a simpler and fairer way to provide a subsidy than a levy on electricity consumers. If the Government is not willing to fund the scheme directly then we agree that a levy based at the distributor level is the most appropriate alternative.
- **Other design features** – we also provide comment on other specific design features including payment structure, contract counterparty, contract duration and transmission considerations.

### ***Integrated climate and energy policy***

Origin supports the progressive decarbonisation of the electricity sector in Australia and Victoria and an eventual goal of net zero emissions for the electricity sector by 2050 or earlier. At the highest level this involves the substitution of high emissions sources of electricity for lower ones. Whilst this sounds simple, we believe it involves three key and interlinked policy considerations:

- the promotion of renewable energy at significant scale;
- the orderly retirement of the most highly emission intensive generation plant; and
- an explicit cost of carbon abatement in some form, such as a baseline and credit scheme.

Our strong preference is that energy and climate policy be made at the national level but we recognise that there is an important role for the states to play, particularly in facilitating delivery of renewable energy projects that are most appropriate in their jurisdiction. This deployment should be underpinned by sustainable policy which encourages the commercial deployment of renewable generation sources, without excessive cost subsidisation. It is preferable that this policy be relatively stable in the medium term to encourage investment in new projects.

Whilst well intentioned, we do not regard state based renewable energy target schemes as efficient or effective policy to achieve Australia's 2030 emissions reduction goals. Rather, our strong preference is that energy and climate policy be made at the national level.

Further, the significant emissions reductions that are required from the electricity sector to achieve Australia's 2030 target are unlikely to be met by simply extending renewable energy targets. The Victorian market is already oversupplied, so policy reform must consider how to retire high emissions generation as well. To help achieve this, we suggest implementing a well-designed cost of carbon abatement, such as a baseline and credit scheme, as policy better suited to both supporting investment in renewable energy and reducing emissions from older thermal plant. Forcing renewable energy into an oversupplied market, without a clear policy to also retire older plant could have unpredictable effects. Recent events in South Australia have demonstrated the potential impacts on both reliability and affordability of electricity supply when plant retire. We note that the Victorian market is much larger than South Australia and could have far greater impacts on the NEM more generally.

For the above reasons we do not support the proposed scheme. Instead, we suggest an alternate design that is better placed to deliver the Government's objective whilst minimising risks and costs to other parties.

### ***Interactions with the Large-scale Renewable Energy Target***

#### *Market uncertainty*

Origin is committed to meeting our obligation under the Large-scale Renewable Energy Target (LRET) and can achieve this through various options including building projects directly, underwriting projects through power purchase agreements (PPAs), or by purchasing certificates on market.

The LRET market has recently emerged from a protracted period of uncertainty with new projects now being committed to. We have recently signed four PPAs with renewable energy projects (see page 7) and are currently negotiating for a number of further PPAs. Whilst the 2020 target is challenging, we are committed to investment in renewable energy in Australia as a key means to decarbonise the economy over the longer term.

Unfortunately, the proposed Victorian Renewable Energy Auction Scheme has had an unsettling effect on the market by introducing further regulatory uncertainty. This uncertainty may delay investment in renewable energy and risk the 2020 target being underachieved. We have already experienced some delays to negotiations with renewable energy project proponents as they consider how the proposed scheme may be designed and implemented.

Further, this uncertainty is likely to continue for some time. The Government has indicated that it will introduce legislation to implement the scheme in the autumn 2017 sitting of Parliament with the intention of holding the first auction in the second half of 2017. Assuming it will take about 2 years to construct a large wind farm then it will be late 2019 before any projects underpinned by the scheme are in operation.

#### *LGC market impacts*

We understand that the current preferred approach is to use a contract for difference, based on a similar scheme in the ACT. Under the ACT scheme, successful projects are considered "additional" to the legislated targets set under the LRET, and any LGCs created are surrendered voluntarily. In this way there is little impact on LGC market participants.

However, the proposed Victorian scheme is quite different to the ACT one. Firstly, it intends to treat the tranche of funding for projects commissioned by 2020 as inclusive of the LRET, meaning that projects will be eligible to create LGCs and sell them into the market. Secondly, the Government does not intend to purchase the electricity<sup>1</sup>. These features have important market considerations for all participants, both in the LGC market and broader NEM, which must be carefully examined.

There are two main ways that such a contract could be structured in the proposed Victorian scheme. The first would involve a strike price which combines both the wholesale price and LGC price being bid into the auction. The second would involve a strike price which only includes a wholesale price being bid. Under both situations we assume that the Government is not intending to contract for the energy supplied.

Our preferred CfD model would involve project proponents bidding the wholesale price only. This model would tend to reduce the price risk to the Victorian Government (and therefore consumers) and allow the project proponent to retain exposure to some of the useful signals provided in the market. We would assume that a successful proponent would then contract with the market to sell its LGCs.

In the alternative approach the LGCs would flow to the Government. As the Government is unlikely to require a significant proportion of these for its own use then they would then have to be on-sold to

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<sup>1</sup> In the ACT scheme ActewAGL holds the contract and purchases the electricity. The LGCs are voluntarily surrendered.

LRET liable parties. As a participant in the LRET market we would be concerned that this could impact the price of LGCs as it could create uncertainty as to when and how many LGCs would be added to the market over time. It would also involve considerable risk for the Victorian Government as they would be holding LGCs at an uncertain price. It is worth noting that whilst LGCs are currently trading above \$80, they have historically traded down to below \$20, with a long term average around \$30-40.

We do not believe it is appropriate for the Government to become involved in trading such a potentially volatile commodity.

### **Costs to customers**

The discussion above highlights the risk of the costs that could be borne by Victorian consumers under a CfD mechanism. Whilst in the short-term the CfD mechanism looks attractive as LGC prices are currently very high, we note that the term of the contract is potentially quite long at up to 20 years. Climate change policy in Australia has proven to be very unpredictable over the past decade and unfortunately this is not expected to change. Australia's 2030 emissions reduction targets, which have been committed to as part of the Paris Agreement, will require significant policy reform over the coming years.

A simple example illustrates the potential risk of the CfD approach. Consider a hypothetical 100 MW wind farm with a capacity factor of 40% and a contract term of 20 years. If an average CfD payment is only \$1 MWh then this would amount to an annual payment of \$350,000 and an overall scheme cost of \$7 million over the duration of the contract, in nominal terms. These numbers look fairly modest when spread over the tax/customer base.

However, consider the example when this payment increases to an average of \$10 MWh over the period. This would be \$3.5 million per annum and \$70 million in total. This would be for only one mid-sized wind farm, so multiply this by 10 again for a total of 1000 MW (for projects up to 2020) and the total scheme cost would be \$700 million in nominal terms. An average payment of \$10 MWh could be a plausible scenario over the duration of a contract when wholesale prices remain low because of a significantly oversupplied market.

Further, this is not even an extreme example. Consider a situation where:

- a further 1000MW of wind is added to the already oversupplied system, without any significant retirements;
- the majority of wind generation is highly correlated, and wind farms supported under the CfD scheme generate a high proportion of their output at low or very low wholesale prices; and
- demand is also reduced, for example by the closure of major industrial load such as a smelter.

In such a situation both wholesale and LGC prices could end up being very low, with Victorian consumers exposed to CfD payments in the range of \$20-30<sup>2</sup>, which would result in total scheme costs in the billions of dollars.

We simply do not believe it is prudent to force this sort of price risk onto Victorian consumers when alternative models are available.

### **Alternative approach**

We understand that the Victorian Government desires to promote renewable energy projects in Victoria, so we propose an alternative approach that we believe could be tailored to achieve this goal whilst also minimising impacts on electricity consumers and electricity market participants.

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<sup>2</sup> For example, assume; a strike price of \$90, 1000MW of wind at a capacity factor of 40%, wholesale prices remain at \$30 and LGC prices return to a more long term average of around \$30. This would leave consumers exposed to a \$30 MWh payment, which would total \$2.1 billion in nominal terms.

This would be based on similar funding provided by ARENA for other renewable energy projects, which is described as a “fixed payment” contract in the consultation paper. In simple terms this would provide a marginal “top-up” to ensure that a project can receive sufficient financing and progress to a final investment decision. We believe that such a model more directly addresses the perceived current market failures which are making it difficult for projects to secure financing. Renewable energy projects such as wind and solar farms have high up-front capital costs but very low ongoing costs, as their fuel is free and maintenance relatively low. If a Government program is tailored to assist with the up-front capital costs then this will help reduce the cost of capital involved. Such up-front funding could be provided in one amount, or could be spread over a short period (say 2-3 years). It could include relevant contractual terms on project progress, with funding tied to accomplishment of these stages. An auction or tender process could still be used to ensure only the most cost competitive projects receive assistance.

The major advantages of such an approach are:

- the amount of funding is known with certainty in advance, minimising the risk for the Government and consumers
- distortions to existing markets are minimised. It would be the project developer’s responsibility to enter into contracts with market participants and would ensure that the Victorian Government is not an ongoing participant in the energy market.
- is relatively simple and could be implemented faster than a CfD arrangement. We suggest that this type of funding be used for the tranche of projects commissioned by 2020; with possible consideration given to other policy support which is “additional” to the LRET in the period post 2020.

### **Cost recovery**

Our preference is that the scheme should be Budget funded as this is the simplest and most equitable means to support it. The simplicity of the mechanism means that costs to customers of administering the scheme can be minimised. This contrasts to a levy on distributors which will need to be passed through to retail customers and will involve costs for billing systems. Budget funding is also fairer as it will use the broad tax base, rather than being referenced to a customer’s electricity consumption. As less wealthy households tend to spend a higher percentage of their income on energy costs compared to more wealthy households, such a levy on electricity consumption can tend to be regressive in nature.

Our experience with numerous State based schemes over the past decade is that whilst levies are to some extent hidden from consumers, once they become large enough to become obvious to the public they can risk a backlash and undermine support for the policy intent. This situation applied to the numerous State based feed-in tariffs for small scale solar systems which were used in various forms over the past decade. Whilst these schemes are generally closed to new applicants, they involve legacy costs which will be borne by consumers for many years to come.

The most striking example is provided by the Queensland Solar Bonus Scheme, which will place a cost on consumers until the old scheme finally phases out in 2028. The scheme has resulted in increases in network costs of \$292 million in the 2010-15 regulatory period and is forecast to result in increased network costs of \$1,387 million in the 2015-20 regulatory period. For the current year (2016-17) we estimate an approximate average cost per household of \$280<sup>3</sup>.

If the Government is not willing to fund the scheme directly then we agree that a levy based at the distributor level is the most appropriate alternative. We generally agree with the issues raised in the table on page 11 of the consultation document.

Possible exemptions are also an important consideration. Whilst we do not have a preference for exemptions for certain industries or not, we note that the cost of any exemptions will need to be recovered from the remaining customer base. This can raise issues of fairness if some large

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<sup>3</sup> Based on data from the Energex Annual Pricing Proposal. This includes a catch up for under-recovery from the previous year.

companies are exempt but small business and households bear the cost. This is another reason why we would prefer the scheme to be funded on Budget.

### ***Other design features***

Other important design features are listed below. We note that some of these only apply to a CfD style mechanism but re-iterate that our preference is for direct project funding.

- **Payment structure:** we recommend payments which are referenced to half hourly prices (rather than some sort of average) with no floor price as this preserves important market signals about when energy is required. The effect of averaging prices and having a floor price under the CfD mechanism will result in higher strike prices as project proponents will need to add risk premiums to mitigate their exposure to the wholesale electricity price.
- **Counterparty:** we agree that contracts should be made with the Victorian Government as this will reduce counterparty risk and lower financing costs. It will also alleviate concerns about future change of law.
- **Contract term:** for a direct funding model we believe this should be relatively short at say 2-3 years. For a CfD contract we suggest it should end by 2030 as this is when the LRET is legislated to end.
- **Transmission considerations:** we agree that transmission network interactions are an important consideration when evaluating potential projects. The intermittent nature of current renewable energy technologies poses challenges in operating the power system, some of which are becoming increasingly evident in South Australia. The Victorian Government should support the Australian Energy Market Operator (AEMO) and industry in understanding the implications for power quality/security at higher levels of renewable penetration. It is important that market mechanisms remain capable of incentivising the delivery of the services required to maintain power quality and system security to avoid late and costly regulatory intervention.

Origin suggests that further targeted consultation on scheme design should be conducted once a preferred model is decided upon.

If you have any questions regarding this submission please contact [redacted]. We look forward to further consultation as Victoria's climate change and energy policy evolves.

Yours sincerely,



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## **About Origin**

Origin Energy (ASX: ORG) is the leading Australian integrated energy company with market leading positions in energy retailing (approximately 4.2 million customers), power generation (approximately 6,000 MW of capacity owned and contracted) and natural gas production (1,093 PJ of 2P reserves and annual production of 82 PJ). 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 also aspires to be the number one renewable and low carbon energy company in Australia. Origin is one of the largest installers of solar systems in Australia, having directly installed about 90,000 systems to date. In total, about 400,000 of our retail customers have solar products. In 2015, Origin launched a new solar leasing product, which allows more customers to access the benefits of solar without having to purchase the system. We believe that the market will continue to evolve and it is important that retail offerings are allowed to develop to serve consumer demand.

Origin is committed to meeting our obligation under the Large-scale Renewable Energy Target (LRET) and can achieve this through various options including building projects directly, underwriting projects through power purchase agreements (PPAs), or by purchasing certificates on market. For example, our proposed 106 MW solar farm at Darling Downs in Queensland was recently shortlisted for grant funding under ARENA's Large Scale Solar PV competitive funding round.

We have also recently entered into the following PPAs:

- a 15 year PPA with the 56 MW Moree solar farm in NSW;
- a 13 year PPA with the 100 MW Clare solar farm in Queensland;
- a 13 year PPA for the 10.8 MW Lakeland solar project in Queensland, which also incorporates 5.3 MWh of battery storage; and
- a 5.5 year PPA (LGC only) with the solar farm supplying the De Grussa copper and gold mine in Western Australia.

In October 2015 Origin adopted all seven of the 'We Mean Business' coalition commitments on climate change which includes specific aims to increase our investment in and own use of renewable energy as well as developing long-term emission reduction targets which are consistent with a two degree scenario.