

29th August 2016

Department of Environment, Land, Water and Planning

PO Box 500

Melbourne, VIC 8002

By Email: Renewable.energy@delwp.vic.gov.au

Re: Victorian Renewable Energy Auction Scheme – Consultation Paper

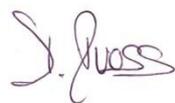
Canadian Solar (“CS”) welcomes the opportunity to participate in the consultation process on the development of a renewable energy (“RE”) strategy for Victoria.

Canadian Solar (www.canadiansolar.com) was founded in 2001 by our current CEO (Shawn Qu) and listed on the NASDAQ stock exchange (CSIQ) in 2006. We are the second largest solar module manufacturer in the world with more than 14GW of modules shipped cumulatively. We are also one of the leading global developers of solar energy projects with 1.8GW of solar power plants developed, built, and connected, and a pipeline of 13.5GW, including 2GW of contracted, late-stage projects. Further to this, Canadian Solar plans to build on their existing Australian pipeline that currently exceeds 1GW, with an initial target of building 400MW within Australia by 2020. We have currently 5MW under construction in Normanton, QLD and 107MW in ready-to-build stage in Oakey and Longreach, QLD. Both projects have been shortlisted under the ARENA LSSPV and the Solar120 program by DEWS. We have also one mid-stage development in Victoria and look forward to a successful implementation of RE Auction Scheme in Victoria.

Canadian Solar congratulates the Government of Victoria on this encouraging forward-looking initiative to adopt a target of 40% RE by 2025. RE is a proven technology with enormous benefits to the local economy and will spur and drive many new business opportunities in the State.

Please find our detailed submission in the following pages. Do not hesitate to contact us on XX for any queries regarding this submission.

Sincerely,



Daniel Ruoss

General Manager – Australia and SEA, Energy Group

Scheme Structure

How can the Department ensure that a pipeline of projects will be ready to meet the Government's targets for 2020 and 2025 while maintaining appropriate flexibility for the Government to adjust the scheme where required?

Putting an effective and long term offtake mechanism in place will provide much needed certainty for the developers to ensure a pipeline of projects will be developed, meeting the targets for 2020 and 2025.

In Victoria around 400MW of solar projects are already in late-stage development and can participate quickly in the first auction, thereby contributing to the target of 1,500MW (total RE) by 2020. If a carve-out of 20% (300MW) is envisioned for solar then we can assure the Government that this will be met by 2020. But the key now is to proceed with a well-designed and transparent program as quickly as possible, thereby providing confidence in the market to invest and prepare for the VRET scheme.

An adjustment to the scheme should only be considered in 2020, assessing the uptake and the benefits for Victoria.

How much notice should be provided to industry of upcoming auctions?

Much depends on what the implementing agency requires to receive as part of the submissions by industry. The level of details and evidence to be provided will govern the timing.

If the Government considers a two-stage process, i.e. EOI (for short-listing purpose) and RFP then the industry can plan accordingly. An EOI can be performed within a 2 month timeframe and a RFP should be announced at least 4 months before submissions are due.

Consider a registry that will capture the good project that didn't win the auction this time and automatically fall into the next round to save some replicated admin work. Bidder will be able to modify the bid in between auctions.

Should capacity be auctioned in consistent capacity tranches (e.g. 200MW, etc.)?

No, an auction should be open, driven by the competitiveness of the bids meeting the program requirements. The program targets are ambitious considering a first auction is not expected before mid-2017. Hence, maximum capacity needs to be assigned in the first auction to meet a 2020 commercial operation of 1,500MW.

At what frequency should auctions be held?

Twice a year is preferred and ensures the program momentum is maintained.

What proportion of scheme generation should be dedicated to solar projects?

The Government suggested a 20% carve-out, resulting in 300MW of solar by 2020. Considering the long lead time for wind energy to be deployed and the significant pipeline of late-stage solar projects in Victoria, we recommend a carve-out for solar photovoltaic of at least 40%.

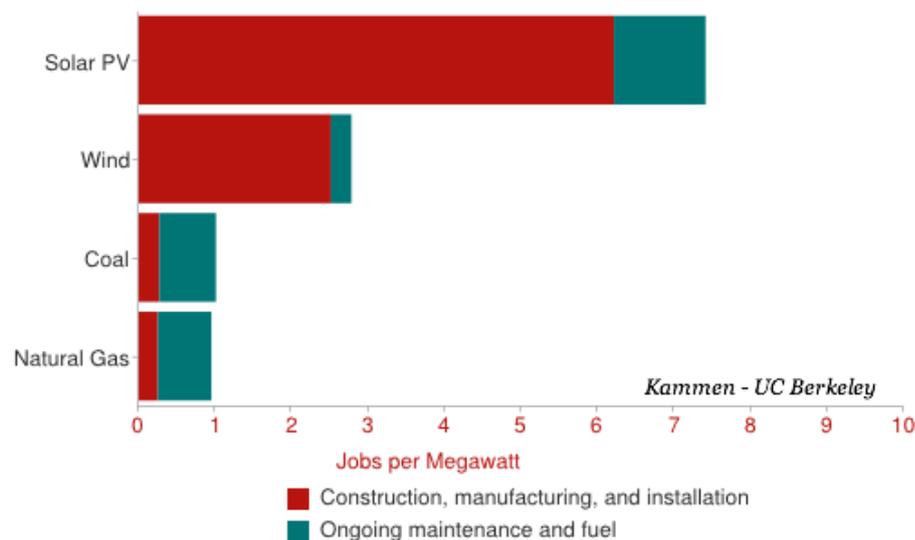
Should the proportion of solar be different pre and post 2020 to allow a solar pipeline to develop and technology costs to come down?

Solar is already highly competitive and can compete with Tier-2 wind farms. In 2017, solar can be deployed in Victoria under a 20 year Government-backed contract for less than \$80/MWh.

A 2020 review is recommended and may result in a stronger focus on solar in order to meet the target in 2025.

Are there any other matters the State should consider when setting the scheme's technology split?

The State should consider how best the targets can be met for 2020 and 2025 and define the appropriate requirements and drivers in a policy. Solar can be developed and deployed significantly faster than wind and will trigger more benefits for the local industry in manufacturing and services than wind. A recent study (2015) by the UC Berkeley demonstrates solar winning clearly on economic benefits against wind power.



Further, in our experience, there is a much higher level of local community acceptance of utility scale solar projects than wind projects. We expect a higher number of successful solar projects would result in increased community acceptance of the scheme.

The State should consider to incentivise a mix of RE generators capable to mimic the demand curve to avoid similar scenarios occurred in SA, or in other countries with high penetration of renewables, where a fast uptake of a specific technology has put pressure on electricity prices in certain time of day. Examples could be in recognising a higher tariff for shoulder production for solar PV.

What is the best way to treat LGCs under the scheme to enable successful proponents to secure project finance, ensure scheme costs are minimised and ensure adequate market interest from industry to participate in the auctions is attracted?

The key to success – i.e. securing project finance, ensuring adequate market interest, etc. – comes from a program offering a long-term, Government backed off-take mechanism, similar to the Solar 120 (DEWS in QLD) or the ACT Reverse Auctions.

What are stakeholders' thoughts about complementarity/additionality if the Federal RET were extended/expanded?

Any State RE Scheme should be a complementary mechanism to an extended or expanded Federal RET program. The Victorian Government could design a RE Scheme that absorbs LGCs (creating an additional market) and not selling under the Federal RET scheme and impacting the LGC price negatively.

Payment Structure

Do stakeholders agree with the proposed CfD payment structure approach?

A one-way CfD structure modelled on the Queensland Government's Solar 120 Support Deed would be preferable. The tenor for a CfD should be 20 years.

If a CfD payment structure is used, on what basis should a NEM reference price be set? (e.g. monthly average, half hourly NEM price)?

On a half-hourly basis.

What would be the impact of adding a floor price to cap the total payment applicable in any one period?

From a Generator's point of view this is not recommended but we understand this can protect the Government as it caps payments.

Do stakeholders agree that payments should be made under the scheme based on energy delivered as defined above?

Payments should be made under a fixed price (strike price) based on electricity delivered. A support payment (under a CfD) will be subject to the prevailing MLF and DLF as advised by the DNSP. A support payment is $[\text{MAX}(\text{CfDR} - \text{NEMR}), \$0]$.

As the following example shows in a generic half hour interval, generating 100 MWh:

| Scenario | Metered Energy | Strike Price | Pool Price | CfDR | NEM | NEMR | SP = CfDR - NEMR |
|---------------------------------------|----------------|--------------|------------|------|-------|------------|------------------|
| | MWh | \$/MWh | \$/MWh | \$ | \$ | | \$ |
| 1 | 100 | 85 | 40 | 8500 | 4000 | 3528 | 4972 |
| 2 | 100 | 85 | 90 | 8500 | 9000 | 7938 | 562 |
| 3 | 100 | 85 | 110 | 8500 | 11000 | 9702 | -1202 |
| 1 CfD Revenue ("CfDR") | | \$ 8,500.00 | | | | MLF = 0.98 | |
| NEM Revenue with DLF and MLF ("NEMR") | | \$ 3,528.00 | | | | DLF = 0.9 | |
| CfD Support Payment (SP) | | \$ 4,972.00 | | | | | |
| Total Revenue | | \$ 8,500.00 | | | | | |
| 2 CfD Revenue ("CfDR") | | \$ 8,500.00 | | | | | |
| NEM Revenue with DLF and MLF ("NEMR") | | \$ 7,938.00 | | | | | |
| CfD Support Payment (SP) | | \$ 562.00 | | | | | |
| Total Revenue | | \$ 8,500.00 | | | | | |
| 3 CfD Revenue ("CfDR") | | \$ 8,500.00 | | | | | |
| NEM Revenue with DLF and MLF ("NEMR") | | \$ 11,000.00 | | | | | |
| CfD Support Payment (SP) | | \$ - | | | | | |

Are there other ways that stakeholders consider are possible to provide locational signals to projects to ensure they are appropriately sighted on the network?

This should be left to the developers understanding best where to sight their projects to achieve the required returns.

An open dialogue with DNSP and TNSP is required to share network information and understand better constraint and weak grid points, where solar photovoltaic can be well placed to support the network and minimise or avoid costly augmentation work.

Do stakeholders consider that any alternative payment structures could be employed for the scheme, such as a fixed payment approach? If so, what are the relative advantages and disadvantages of these options?

A one-way CfD scheme with a tenor of 20 years is an appropriate mechanism to meet the RE targets.

Do stakeholders agree that a fixed payment approach would be less likely to address the barriers faced by project proponents in relation to attaining project finance, resulting in lower value for money bids?

That depends on the contract tenor for a fixed payment approach. The main barrier faced in recent years to secure an attractive project finance facility is the off-take tenor. Achieving lowest cost bids requires 20 year contracts. Partial PPA and merchant exposure has a significant impact on the debt sizing and cost of project finance.

Contracting Elements

Are the above contract elements broadly appropriate?

A one-way CfD under a Government-signed Deed would be appropriate. Change of control and the moratorium period needs to be discussed.

Within the contract range of 10 to 20 years, is there an ideal duration, particularly with the aim of minimising project financing costs?

Clearly a 20 years contract is preferred by lenders, investors and developers. This will minimise the project finance cost as evidenced in all markets with a longer term contract.

What would be an appropriate project delay threshold for contract termination clauses?

A requirement to reach commercial operation within one year of signing the contract is reasonable.

Would quarterly payments have a significant impact on financing costs compared to monthly payments?

Yes it will have an impact to the strike price. Monthly payments are requested by the lenders and debt gearing is sized accordingly. A quarterly payment can result in a lower gearing and in a higher fixed price / strike price.

What are the implications of a two-way CfD?

We recommend that the Victorian Government adopts a similar approach as Queensland's DEWS did with a one-way CfD. The Solar 120 scheme is a well-designed and transparent program and could be easily adopted for Victoria to drive growth and meet the targets set.

What do stakeholders think about the generation requirements being considered?

We do not recommend setting generation requirements with potential penalties assigned. The developers / investors are submitting their strike price bids on a P50 calculation and have a strongly vested interest to meet the targeted generation output otherwise they are already getting penalised by lower returns.

A generation requirement is a high risk for investors and financiers, because if the project is unable to generate (i.e. curtailment due to congestion or unforeseen weather impact), it will be still responsible for purchasing and delivering electricity at spot pricing to hold up its end of the contract. This can (and will) lead to large losses for the project if power prices are in this respective moment high. This risk component will increase the strike price.

Where maximum and minimum generation volumes are contained in scheme contracts and how should these be set?

In a performance-based scheme, such as a CfD, no minimum and maximum value need to be set. The Government as off-taker pays for the electricity delivered at the revenue meter.

Are there any other contract elements that should be considered?

- Contract counterparty to have an investment grade credit rating.
- The contract should allow for financiers to take security over the generator's rights under the contract and include tripartite arrangements with the generator's financier.
- The contract should provide the generator with adequate cure periods to remedy any breach.
- The contract should deal with change in law risk by allowing the generator to pass through increased costs due to changes in law.
- The contract term should be extended for force majeure events.

Are any of the elements likely to lead to perverse outcomes?

It is important that the Government designs this RE Auction Scheme as a complementing measure to the LRET.

Scheme Administration and Cost Recovery

Is there another mechanism for recovering scheme costs the Government should consider that would result in better outcomes?

A CfD is an appropriate mechanism with the least cost for the Government while ensuring a successful outcome for the scheme.

The Department's proposed position is currently to exempt emission intensive trade exposed companies (as defined under the Federal Government's RET scheme) from paying scheme costs. Do stakeholders agree with this approach?

Not agreed for emission intensive trade exposed companies but potentially for electricity intensive manufacturing, as it was done in Germany under their FiT regulation.

Are there any other parties Government should consider exempting from scheme costs? If so, how should this occur?

No.

Auction Evaluation Principles

What do stakeholders think of the proposed evaluation criteria set out above?

The Government should favour projects at ready to build stage as it will guarantee momentum in the local industry provide success stories so important for all stakeholders.

Do stakeholders have views on how evaluation criteria might be weighted?

The Government can benchmark and learn from a number of successful implemented RE programs in Australia; i.e. ACT Reverse Auction, Ergon's 150MW program, DEWS Solar 120 and ARENA's LSS Competitive Round. All these programs have well designed and weighted evaluation criteria and the Victorian Government should learn and incorporate lessons learnt from successfully run schemes in their program.

Are there other evaluation criteria/principles that the Government should consider to ensure the scheme meets its objectives?

Knowledge sharing is a valuable criterion that enables local industry to upskill more quickly and provides a stronger contribution to meeting the scheme objectives.

One of the emphases for the VIC reverse auction is to improve the overall economy in VIC such as employment. When driving toward to the VIC RET, government can also consider giving higher merit to the projects that has innovative approach in renewable energy generation and application to boost up the technology revolution in VIC.

Are the costs associated with developing a proposal to bid into the scheme based on addressing the above criteria effectively likely to be prohibitive?

We don't think so. However, unsuccessful bids in a first auction should be eligible to re-submit their improved project bid in a following auction.

What would be appropriate minimum project sizes (both in general and for large-scale solar)?

Community funded projects should be in a different stream and capped at 10MW. Large-scale solar should be 5MW capacity and above.

Would there be benefit in asking proponents to submit expressions of interest to participate in the auctions to ensure only more advanced projects proceed to the full evaluation round and that costs are minimised for project proponents where possible?

Yes, a two-stage approach is preferred and helps the implementing agency to identify the more advanced projects. Projects that are not short-listed can incorporate feedback received from the agency as part of the EOI assessment and improve their bid for the next auction call.