



Committee Secretary
Public Works and Utilities Committee
Parliament House
Sent via email: PWUC@parliament.qld.gov.au

5 July 2017

Dear Committee Members,

**Submission: Electricity and Other Legislation (Batteries and Premium Feed-in Tariff)
Amendment Bill 2017**

Solar Citizens is an independent community organisation that aims to protect and grow solar in Australia. We work with our volunteers and supporters to stand up for over five million Australian solar voters and the millions more who want to go solar.

Thankyou for the opportunity to provide this submission. We have restricted our comments to the proposed changes to eligibility rules for the Solar Bonus Scheme (SBS).

Home owners who spent their own savings in installing rooftop solar systems under the Solar Bonus Scheme were early-adopters of this vital new technology and paid far higher prices for the equipment than what is available today. The SBS provided an incentive to offset this investment and was successful in kick-starting the domestic solar industry in Queensland which now provides hundreds of jobs¹.

Solar Citizens supports the intention of these amendments to prevent households on the Solar Bonus Scheme increasing their grid exports beyond the level made possible by their original SBS-qualifying solar PV system (or other generator). We agree this would go beyond what was originally intended by the Solar Bonus Scheme and impose unreasonable costs on the State.

However, we are concerned that, as currently drafted, the proposed amendments will have a number of additional consequences for SBS households that will unfairly limit their ability to do any of the following, for the purpose of providing renewable energy to their own home (i.e. not for export):

- expand their existing solar PV system;
- install an additional solar PV system;
- use a battery to provide clean energy to their home on cloudy days or whenever their own power needs exceed the supply from their solar system

¹ ABS Report 4631.0 - Employment in Renewable Energy Activities, Australia, 2015-16
<http://www.abs.gov.au/ausstats/abs@.nsf/mf/4631.0>

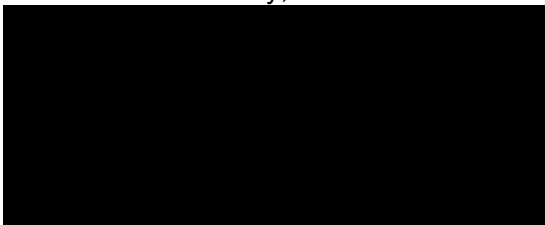


In addition, the restrictions on grid-connected battery systems will prevent SBS households from participating in 'virtual power plant' systems where the combined storage capacity of batteries in hundreds of homes can be drawn on to better manage and respond to spikes in network demand. A leading example of this technology is the South Australian Virtual Power Plant project launched recently by AGL, which will involve 1000 homes across Adelaide to create a total of 7MWh of storage capacity and 5MW peaking capacity.² The virtual power plant model offers great potential to benefit the State's power grid, reducing the risk of blackouts, and putting downward pressure on electricity prices. It would be a great shame if these laws undermined or delayed the deployment of such technology in Queensland.

We suggest that the intention of the laws could be better achieved by imposing a cap on the amount of energy for which a SBS household will be paid the premium tariff rate of 44c KWh. This would limit the financial liability of the State, but not interfere with the household's choices about how to operate their renewable energy system, or create a disincentive that would prevent them installing extra solar capacity or a battery system. A simple per-annum cap could be set at a fair level relative to the approved capacity of the household's qualifying SBS system, and available records of their past SBS exports. For more information on this alternative, we refer you to the submission provided by the Environmental Defenders Office (Qld).

Further details of Solar Citizens concerns are provided in the attached table.

Yours Sincerely,



Louise Matthiesson
Queensland Campaigner
Solar Citizens

² AGL goes live with virtual power plant linking household battery storage, Renew Economy March 2017 <http://reneweconomy.com.au/agl-goes-live-with-virtual-power-plant-linking-household-battery-storage-16810/>

Attachment – Solar Citizens Submission re Electricity and Other Legislation (Batteries and Premium Feed-in Tariff) Amendment Bill 2017

Issue #1 - Oversizing – expanding solar system beyond the size of the inverter		
Changes to Electricity Act	Explanatory notes	Solar Citizens – our concerns
<p><i>SBS customers will lose eligibility if:</i></p> <p>44A (1A)(a) the maximum output of the component of the customer's qualifying generator that generates electricity exceeds, in aggregate, the approved total rated inverter capacity of the generator; or</p>	<p>Under section 44A(1A)(a), Solar Bonus Scheme customers will lose eligibility if they add additional generation capacity (i.e. extra solar panels) to their existing Solar Bonus Scheme qualifying generator if the total peak combined output of the panels is greater than the rated output of their systems inverter as approved by their distributor. For example:</p> <ul style="list-style-type: none"> - a Solar Bonus Scheme customer has a solar power system with an inverter with a rated output of 2 kilowatts (kW), but has installed six panels each with a peak capacity of 250 watts (W): a total peak generation capacity of 1500W, or 1.5kW. The customer may add an additional 500W of generation capacity (i.e. 2 x 250W panels) and remain eligible for the Solar Bonus Scheme. However, if the customer adds more than 500W of extra capacity, (i.e. three or more panels) they would become ineligible for the Solar Bonus Scheme. - a Solar Bonus Scheme customer has a solar power system with an inverter with a rated output of 5 kW, but has installed 16 panels each with a peak capacity of 250W: a total peak generation capacity of 4000W, or 4kW. The customer may add an additional 1kW of generation capacity (i.e. 4 x 250W panels) and remain eligible for the Solar Bonus Scheme. However, if the customer adds more than 1kW of extra capacity, (i.e. more than 4 x 250W panels) they would become ineligible for the Solar Bonus Scheme. 	<p>If a SBS household's consumption (kWh) is greater than the capacity of their existing SBS-qualified solar PV/inverter system, they may wish to install extra solar panels to meet their own electricity needs (kWh) with clean renewable energy, at a cheaper price than grid power.</p> <p>However, under the proposed amendments the homeowner would have to choose between:</p> <ol style="list-style-type: none"> installing extra panels and losing access to the SBS premium tariff or paying for power from the grid. <p>A cap on SBS exports would limit the financial cost to state, but still allow SBS households to expand their solar system if they choose to.</p>

Issue #2 - Installing a BATTERY that can supply energy to the house during daytime or export energy to the grid

Changes to Electricity Act	Explanatory notes	Solar Citizens – our concerns
<p><i>SBS customers will lose eligibility if:</i></p> <p>44A (1A)(b) the customer installs an electricity storage device as part of the electrical installation supplied by the customer’s qualifying generator in a way that enables the device to supply electricity to—</p> <p>(i) the electrical installation at the same time as the qualifying generator, other than during a supply interruption; or</p> <p>(ii) the distribution entity’s supply network; or</p>	<p>Under section 44A(1A)(b), Solar Bonus Scheme customers will lose eligibility if they install a battery (or similar) on the same electrical installation as their qualifying generator, and the battery is installed in a way that allows it to: - supply electricity to the electrical installation at the same time as the qualifying generator, or - export electricity to the grid.</p> <p>However, the use of a battery to supply the home or business which is also supplied by the qualifying generator is permitted during interruptions to supply, such as blackouts.</p>	<p>Solar Citizens is concerned the proposed amendments would:</p> <ul style="list-style-type: none"> • Prevent SBS households from using even small amounts of energy from their battery during daytime hours (while their solar system is operating). In normal use, a battery would supplement the household’s power supply whenever demand (kW) exceeds the power output (kW) from the PV system (eg. passing clouds or spikes in demand kW). This enables the homeowner to use their own stored solar energy, instead of buying power from the grid. • For example, for an SBS household with a battery storage system, on a day of heavy cloud when the rooftop solar system can’t provide enough power, the household would not be allowed to access their own stored solar-power from their battery and would instead be forced to buy higher priced electricity from the grid. • Prevent SBS households from participating in ‘virtual power plant’ systems that contribute to grid stability and help manage spikes in network demand (kW). <p>As a result, these laws are likely to reduce uptake of battery systems among SBS households due to the restrictions, complexity and risk of losing the SBS tariff. This will disadvantage the battery industry in Queensland and slow down its growth.</p> <p>In addition, the restrictions on grid-connected battery systems will prevent SBS households from participating in ‘virtual power plant’ systems where the combined storage capacity of batteries in hundreds of homes can be drawn on to better manage and respond to spikes in network demand.</p> <p>A leading example of this technology is the South Australian Virtual Power Plant project launched recently by AGL, which will involve 1000 homes across Adelaide to create a total of 7MWh of storage capacity and 5MW peaking capacity.</p> <p>The virtual power plant model offers great potential to benefit the State’s power grid, reducing the risk of blackouts, and putting downward pressure on electricity prices. It would be an unintended negative consequence if these laws undermined or delayed the deployment of such technology in Queensland.</p>

Issue #3 - Installing an ADDITIONAL GENERATOR that can supply energy to the house during daytime or export energy to the grid		
Changes to Electricity Act	Explanatory notes	Solar Citizens – our concerns
<p><i>SBS customers will lose eligibility if:</i></p> <p>44A (1A)(c) the customer installs 1 or more generators (each an additional generator) as part of the electrical installation supplied by the customer's qualifying generator in a way that enables the additional generator to supply electricity to—</p> <p>(i) the electrical installation at the same time as the qualifying generator, other than during a supply interruption; or</p> <p>(ii) the distribution entity's supply network.</p>	<p>Under section 44A(1A)(c), Solar Bonus Scheme customers will lose eligibility if they install an additional generator, such as an additional solar PV system, a wind turbine, a liquid fuel generator (e.g. diesel) on the same electricity installation as their qualifying generator, and the additional generator is installed in a way that allows it to:</p> <ul style="list-style-type: none"> - supply electricity to the electrical installation at the same time as the qualifying generator, or - export electricity to the grid. <p>However, the use of an additional generator to supply the home or business which is also supplied by the qualifying generator is permitted during interruptions to supply, such as blackouts.</p> <p>These conditions in (b) and (c) apply regardless of whether or not electricity is being exported from the qualifying generator to the grid.</p>	<p>If a SBS household's consumption (kWh) is greater than the energy supplied by their existing SBS-qualified solar system, they may wish to install an additional system to meet their own energy needs with clean renewable energy, at a cheaper price than grid power.</p> <p>However, under the proposed amendments the homeowner would have to choose between:</p> <ul style="list-style-type: none"> c) installing an additional solar system and losing access to the SBS premium tariff or d) paying for power from the grid. <p>A cap on SBS exports would limit the financial cost to the State, but still allow SBS households to install an additional solar system for their own use if they choose to.</p>