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Dear South Australian Government,

RE: Consultation on Regulatory Changes for Smarter Homes in SA

Overall, NRG Solar is aware, understands and agrees the need for change to ensure the successful transition to 100% renewables, smart homes and shift growing demands on the grid. We have developed the below feedback which consists of our experience as a Solar Retailer in South Australia, Consumer values, feedback and understanding and Board Representation at the Smart Energy Council.

Please note that ongoing Covid-19 crisis continues to impact many Solar Retailers. The impact on consumer confidence is still greatly unknown with the continuing uncertainty.

Introduction

Renewable Energy is the future, it is the only way to create a more sustainable planet for generations to come. There are many players and factors that will either contribute to the success of this transition or will ensure that we will always be dependent on fossil fuels. The below proposals, despite the overall ambiguity, in our opinion fails to encompass the “big picture”.

In addition, the five (5) proposals (Papers) immediately create red flags around:

- transparency,
- focus on residential systems,
- data storage and control,
- third party control of systems,
- consideration of self-consumption
- the timelines seem rushed not thoroughly thought out of the implications this will have on many existing and new consumers to Solar and Battery systems.

The Papers focus on residential penetration and control of solar systems, however, there has been little (if any) discussion on how the grid is being impacted by large and utility sized solar. Many large and utility size solar systems are currently being approved, built and commissioned on our grid – as an investment for both Australians and International Investors. While there are provisions in place

for these systems, will they be held to the same standards as the Papers? As a consumer, it would seem extremely unfair that these systems remain on while their “savings” are dialled down.

In addition, the Papers do not consider self-consumption. Consumers invest in renewable technology for many reasons, the top two usually being financial and environmental. The average consumer believes they make money from their solar system exporting to the grid at a X cents per kWh more than they believe that self-consumption is key. Some systems are designed only to export (eg large and utility size systems) which does put strain on the grid as there is no load to “soak” it up.

While the HBS has increased the number of batteries which are being connected our grid. A review of systems show that a solar system will usually charge a battery in the morning and is reaching full state of charge by 12/1pm. This then causes solar system to export a mass of energy throughout the afternoon creating an oversupply of energy. Consumers need three times the amount of storage they are currently purchasing (assuming a medium energy user 20-25kWh per day). Until the storage sizes increase, they will not take the enough pressure of the grid during the afternoon peak period. Although, there may be merit in delaying a batteries charge depending on what region you are in to assist with keeping the grid controlled.

We believe it would be more practical to consider infrastructure changes with the resources. The Papers initiatives will need many resources to successfully implement. However, those resources could be used to invest in large scale storage for communities that have a high penetration of solar to be used in the night instead of coal or equip substations with batteries, hydro stations that could run during peak solar times and thermal energy. This would increase the load during the day and take pressure off the grid.

In addition, the time frames for all Paper prescribed are simply not workable. Two months is not enough time for all the parties involved to make the necessary changes, testings, process development and messaging. Further, the introduction of new initiatives and regulatory changes in Spring and Summer curtail and damage the Solar Industry.

Impacts:

- Consumers
    - Confusion and a rush to get installed before X date
    - Mixed messaging from different suppliers (not all keep up to date)
    - Customer putting off purchases as its all too hard

    - Advertising will be aimed at making consumers fearful of the regulations and will place their details into that system for more information and then that lead gets sold to industry.
    - Will see more "hard" sales techniques being used to make people rush into a decision they should be able to take time considering
    - More distrust in the renewable energy sector
- SA Retailers
    - Suppliers forward order and increase stock levels in this time to ensure stock availability for consumers
    - It causes and added barrier to selling solar system in the more profitable months
    - Have to use less reputable installers to meet customer deadlines/expectations which can mean less quality systems being installed
    - Staff are more stressed as they are dealing with demand and new regulations
    - Companies are also unlikely to spend the time needed to properly understand and implement the procedures needed to be compliant (as it's the busier months)

Please see below specific responses to each of the papers:

Paper One:

Consultation on the proposed remote disconnection and reconnection requirements for distributed solar generating plants in South Australia.

Summary: Proposes that all new and replacement solar PV systems in South Australia would be required to have a remote disconnect capability, from September 2020.

Timeframe: New suggested time frame: Mid 2021

Questions:

- How often will this occur for consumers?
- What impact will this achieve for the grid/consumers?
- Who covers the cost for the "agent"
- What would the financial reward

Feedback:

We mostly agree with this Initiative, however, this Paper is very ambiguous and gives the industry very little transparency on what is going on with the consumer data. This also creates another item (technology) the consumer will need to purchase in order to be compliant with the grid.

Replacement of Inverters

We strongly discourage the "trigger" for existing system owners to be when (if) they need to replace their inverter. A replacement for a faulty or broken inverter is usually "like for like" in order to protect legacy FiT (which does not end until 2028), however, this change triggers dynamic export it would mean the customer may be worse off financially due the size of their system (usually being 3kW and under) being limited further. This may create "unauthorised repair centres" to repair old inverters which is problematic.

It could also mean that the customers meter may need to be upgraded to a "Smart Meter" which adds costs to the consumer for meter box work(s).

We would request that the "trigger" is the same as the FiT scheme and that when a system is "upgraded" they should be a part of the new rules.

Paper Two

Consultation on the proposed export limit requirements for distributed solar generating systems in South Australia.

Summary**:** Proposes that all new and replacement solar PV systems in South Australia would be required to have a dynamic export limit capability, from January 2021.

Timeframe: New suggested time frame: Mid 202

Questions:

- Would this be in addition of systems being disconnected from the grid or instead of? It seems counter intuitive to have both.
- How would CEC Retailers be able to meet their obligations to give accurate production and return on investment data when they do not know what the system is going to being producing
    - It is likely the industry will come out with disclaimers that make giving this data to a customer redundant anyway and the purpose will be lost.

Feedback:

Implementation of this initiate would need be clear and concise with scenarios or case studies to ensure there is no confusion or mixed messaging. Items to include:

- How often this will happen
- What impact
- Create customer stories

Then you may be able to incentivise consumers to make a voluntary shift (hardware permitting). Consumers who already have systems installed should be able to opt into the program if they would like to. Those consumers may have strict export limiting on their site imposed on them by SAPN and would be a primary candidate if they could see a financial benefit or more freedom to export more on X% of days.

Internet

It is our understanding that this information will be used through the customers internet to interact with inverters on our grid. Currently, consumer connectivity to the internet has a range of challenges:

- Not every consumer has internet
- Some have Wi-Fi dongles which disconnect and turn off all the time
- NBN/internet upgrades
- Consumer change internet password
- Consumer sells the house – new consumer doesn't reconnect (or know much about the system)
- Internet security settings

We encourage all NRG system owners to keep their systems online, however, over time for various reasons the system becomes "offline" it is still working but you are no longer able to see the system on the portal.

We have started to recommend hardwiring systems to the internet routers to reduce the number of disconnections, but this is at an additional costs to consumers and the uptake has not been good.

When systems are disconnected to the interest approximately 20% of customers are usually good at reconnecting their system, however, the others request call outs and they usually do not want to pay for this service therefore at times the systems stay offline.

Replacement of Inverters

See Response for Paper One.

Paper Three

Consultation on the proposed new low voltage ride-through requirements for smart inverters in South Australia.

- Proposes that only inverters that have passed an improved undervoltage ride-through test would be able to be installed in South Australia after September 2020.

Timeframe: New suggested time – March 2021

Questions:

- Nil

Feedback:

We agree with this initiation and is fine to introduce, however, it would be imperative to give Inverter Manufacturers time to test. Solar Retailers can usually make the inverter compliant through a firmware update, however, is a physical change to the inverter needed to occur it would mean many solar companies would have stock they could not use.

Paper Four

Consultation on the proposed smart meter minimum technical standards in South Australia.

- Proposes that the minimum technical standard for smart meters in SA be amended to require the metering installation to have the capability to remotely disconnect the solar PV independent of household loads, and this should come into effect for all meter replacements from September 2020.

Timeframe: New suggested time frame: Never – this is not a workable solution

Questions:

- Nil

Feedback:

We do not agree with this initiative. Having the solar and battery on the same channel of the meter is necessary to keep batteries charging in a black out. Many customers want to have this protection and is a reason for purchasing a battery.

This also doesn't allow for self-consumption when the solar is disconnected, which means the customer would need to purchase energy to cover their load instead of using their own solar energy.

We understand that there may be times you would want to disconnect the solar and the only way to do that is to have it on a separate channel but it is not practicable and necessary when you have dynamic export.

Paper Five

Consultation on proposed tariffs to incentivise energy use in low demand periods in South Australia.

Summary**:** Proposes that all retailers in SA would be required to have a standing offer of a Time of Use tariff passing through SA Power Networks' ToU tariff structure (for customers with interval metering), by September 2020.

Timeframe: Time frame is ok if it is voluntary – suggest 1 year trial period.

Questions:

- Nil

Feedback:

We believe that a time of use tariff could be a great way to incentivise self-consumption. For this initiative to have the best implementation we believe the following should occur:

- One year trial period
- Voluntary opt in
- Case studies and analysis on those customers (are they better/worse off)
- Promote the incentives

Thank you for reading our submission and feedback.

We are eager to assist SA Government and SA Power Networks in this transition.

Eddy May

Managing Director NRG Solar | Solar Cutter Committee Member

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