

23rd November 2015

Queensland Productivity Commission
PO Box 12112
George Street Qld 4003
Via email: www.qpc.qld.gov.au/get-involved/how-to-make-a-submission

Issues Paper – Solar Feed-In Pricing in Queensland

Dear Sir/Madam,

APA Group is pleased to have an opportunity to provide comments to the Queensland Productivity Commission, in relation to the "Issues Paper – Solar Feed-In Pricing in Queensland" (**the paper**) and commends the Queensland Productivity Commission for preparing the paper and inviting public comment.

About APA Group

APA Group (APA) is Australia's largest natural gas infrastructure business, owning and/or operating approximately \$19 billion of energy assets.

Its gas transmission pipelines span every state and territory in mainland Australia, delivering approximately half of the nation's gas usage. APA has direct management and operational control over its assets and investments.

APA also has an ownership interest in, and operates the Allgas gas distribution network as well as operating the Australian Gas Networks (formerly Envestra Limited). Together the two networks have approximately 27,000 kilometres of gas mains and approximately 1.3 million gas customers, with well over 180,000 customers in Queensland. APA also owns other energy infrastructure assets such as gas storage facilities and a wind farm.

In addition to the Allgas Distribution Network, APA also has equity interests in a number of energy infrastructure assets, including SEA Gas Pipeline, Energy Infrastructure Investments(EI12) and the Ethane Pipeline Income Fund. APA is listed on ASX and is included in the S&P ASX 50 Index.

Benefits of Natural Gas

Natural gas is a key fuel for the transition to a low emission economy.

Whilst natural gas is a fossil fuel, it is more greenhouse efficient than coal or oil, and indeed is only half as emission intensive as black coal and a third as intensive as brown coal. Natural gas is the cleanest burning of all fossil fuels. It is colourless, odourless, and non-toxic. Natural gas is currently the cleanest commercial form of reliable and scalable base-load generation.

Natural gas provides low emission energy for a wide range of applications including home appliances, vehicles, and commercial buildings through to large industrial processes.

As well as its traditional application for hot water, cooking and space heating, natural gas is also suitable for a range of distributed generation technologies including conventional engines, fuels cells, micro-turbines, co-generation and tri-generation.

Summary recommendations of APA's submission

- 1) Low emissions technologies such as natural gas technologies that provide benefits very similar to solar FIT technologies, should be also be eligible to be paid a FIT.
- 2) All low emissions technologies should be rewarded fairly for the benefits that they create – whether the benefits are direct or indirect benefits, to the extent that these benefits align with policy objectives.
- 3) Tariffs that better allocate costs created by solar users to those same users, and not as per present to electricity customers more generally.

Please contact either Josh Hankey (07 3215 6632) or myself ((08) 8113 9197), if you would like to discuss the matters raised, in this submission further.

Yours sincerely



for Peter Gayen
Manager – Networks Commercial - APA Group

Solar Feed-In Tariff Principles

APA supports the following principles for the development and implementation of Feed-In Tariffs (FIT), and believes that these principles should guide the development of FITs not only for solar, but also for other fuels or technologies that achieve the same policy objectives.

FIT policy should be developed:

- *In a fuel / technology neutral manner, with a focus on the provision of energy at the lowest cost per unit of emissions reduction*
- *Such that the FIT value is determined in a commercially quantifiable manner*
- *To put downward pressure on energy prices*
- *Preferably under a single national scheme , but failing that, on the basis that FIT schemes are harmonised across the states*

Each of the above points is discussed at length below.

In a fuel / technology neutral manner, with a focus on the provision of energy at the lowest cost per unit of emissions reduction

APA believes that FITs should be paid on a “technology neutral”¹ basis, as outlined in the Paper. The Paper states “The focus is on the long-term interests of consumers and not the industry or the development of a specific technology”².

“A number of objects of the Electricity Act 1994 are consistent with the idea that regulations should not distort competition between alternative solutions to supplying a service. In the context of solar exports, a technological neutrality principle would require that the regulated feed-in prices do not either advantage or disadvantage any particular suppliers based on the technologies used to generate energy.”³

The above comments support APA’s view. APA also believes that an alternative low emission fuel like natural gas, potentially generating low emission electricity via a residential fuel cell, gas turbine or similar, performs the same task as a solar appliance. Although both fuels/technologies are very low emission is nature, compared with alternatives like coal, the most significant difference is that low emission technologies other than solar, are not paid a FIT under the Queensland government FIT scheme.

This creates distortion in the appliance market where solar receives a benefit, and similar low emission outcome technologies do not. Ironically the paper mentions this issue i.e. “policy or regulatory attempts to ‘pick technological winners’” which in turn “risks damaging industry development, resulting in lower

¹ Issues Paper – Solar Feed-In Tariff Pricing in Queensland – 2.3.2 page (12)

² Issues Paper – Solar Feed-In Tariff Pricing in Queensland – 2.3.2 page (12)

³ Issues Paper – Solar Feed-In Tariff Pricing in Queensland – 2.3.2 page (12)

quality or higher priced services being offered to consumers"⁴. This is very much the situation in relation to low emission gas powered technologies that can perform same function as solar technologies.

Solar appliances also receive Federal Government rebates (STCs – Small Technology Certificates). These incentives are available to further encourage the uptake of solar units to reduce emissions and grow the industry in Australia – an incentive offered again, to solar appliances, but not for example to low emission gas appliances.

APA believes that policy that picks winners is poor policy – whether intentional or otherwise.

Such that the FIT value is determined in a commercially quantifiable manner

Recent history provides clear examples of overly generous FIT schemes that were presumably focused on matters other than commercial outcomes e.g. Queensland Government FIT of 44c/Kwh (net) and NSW government FIT of 60c/KWh (gross). These schemes proved, not surprisingly, overly successful, leaving the states with large, long term liabilities. These schemes are now closed.

Schemes currently being investigated or considered for introduction, are now far more modest. Indeed, schemes now generally offer FITs of approximately 5c/KWh – 10 c/KWh, and those levels are offered because these rates reflect wholesale prices, and are therefore a truer reflection of commercial reality than the older schemes.

Apart from the obvious variables relevant to the determination of any low emission FIT, such as: time of day generation; emissions reduction achieved, etc., other less obvious FIT variables also exist, but may not be recognized.

Considering the benefit of a FIT for natural gas powered generation, it is noteworthy that:

- Solar reduces electricity use from the grid, whereas gas can remove electricity usage from the grid, completely
- Solar, if the sun is shining, can reduce peak electricity peak demand – gas can reduce peak electricity demand 100% through 100% of the peak period
- Solar can have a downward impact on home electricity pricing when the sun is shining, gas can place downward pressure on electricity tariffs, constantly
- Gas can reduce the need for the growth in the electricity grid, whereas solar may trigger electricity network reinforcement to ensure grid stability and to cope with peak times of low sunlight, or at times outside of peak solar generation time.

To put downward pressure on energy prices

A sound FIT scheme should have as an objective, a goal to put downward pressure on electricity prices. Given the reliability of natural gas generation under a gas FIT, this objective may well be

⁴ Issues Paper – Solar Feed-In Tariff Pricing in Queensland – 2.3.2 page (12)

achieved more effectively, using gas technologies rather than solar largely due to intermittency of solar generation compared with natural gas. Natural gas will also reduce the need for electricity infrastructure investment given that natural gas can reduce peak electricity demand.

Preferably as a single national schemes basis, but failing that, on the basis that FIT schemes are harmonised across the states

APA would prefer to work with policy that is national, thus applying consistently across all states. A national approach would typically mean lower compliance costs and less risk for participating businesses, which in turn should logically mean fewer costs to be passed onto energy consumers.

APA therefore recommends that the states work towards a consistency if regard to FITs, given that APA is confident that this approach would be in the long term interest of consumers.

Benefits, Costs and Unrewarded benefits created by FIT schemes

A fairly valued FIT will encourage the Queensland government's objective of generating low emissions electricity in the state. On the other hand, a FIT value that is poorly determined, will act as a disincentive to potential FIT participants. A 'poorly' valued FIT would potentially mean overpayments for some parties, and underpayments for others. Regardless, overpayments or underpayments will result in Queensland energy users being the losers, as poor investment is effectively encouraged, whilst otherwise sound investment is discouraged.

In summary, a well designed FIT will support the below benefits and costs.

Benefits

- The income stream created for the owner when the electricity generation occurs
- The cost of solar power produced for own use, is typically lower than tariff (11)
- Low emission technology will help to reduce emissions as electricity is generated
- Reduced need for electricity network investment when power is generated in Peak Demand times
- Downward pressure on retail electricity prices will occur for all customers (including the solar unit owner) by providing extra electricity to the grid, and thus potentially reducing peak demand, when the electricity rewarded by the FIT is generated at peak demand times

Unrewarded benefits created

- The value of emissions reduced for the community by FIT activity
- The value of energy generated at the prevailing rate on a time of use basis i.e. currently there is no reflection of value at the time of generation.
- The value of avoided network investment achieved by generating in peak demand times
- Value reflecting the generation 'certainty' or availability firmness of the technology/fuel

The comments on *Unrewarded Benefits Created* flow from that section of the paper that raises the issue of environmental externalities. APA agrees with the paper when it highlights,

“For example, where solar PV displaces fossil fuel generation and this provides an environmental benefit, and the benefit is not compensated.”⁵

APA agrees that financial reward should be provided via a FIT that secures these benefits, provides an advantage, but on a technology neutral basis. This approach would ensure that policy consistency and equity would be achieved. A well designed FIT will also support the fair apportionment of costs.

Costs

- Installation and running costs should be incurred by the solar unit owner – including solar generating costs
- Cost of STC rebates to all customers for appliance purchases – spread across all network customers
- Network upgrade costs required to cope with investment in solar, are currently ‘smeared’ over all network customers, including non-solar customers – APA argues that these costs should in fact be allocated to those who cause the costs, and not those customers who don’t have solar installed

Solar FIT payments arguably come at a cost to all households, including homes without solar installations. This equity issue is significant. If by introducing a tariff structure that more fairly allocates the costs and revenues to current solar household and non-solar households, whilst also allowing more low emissions technologies access to similar FIT arrangements, Queensland customers would benefit more, than under the current system. As such, APA believes that the introduction of time of use tariffs, could improve the allocations of costs and revenues.

Importantly, if the FIT process was reviewed, and other low emission fuels/technologies were also to attract STC incentives, or similar reward, better outcomes could be achieved for all customers. By changing to Time of Use (ToU tariffs) and rewarding a range of low emission FIT technology types, we would potentially achieve a much better allocation of revenues and costs to all consumers.

Barriers to FITs

APA is very aware that barriers relating to potential connection to the electricity network, for appliance or equipment that can generate low emission electricity, still exist. This applies not only to solar equipment, but also for other potential low emission FIT technologies.

In 2012, for example, APA participated in consultative process with the Victorian Competition and Efficiency Commission (VCEC), in its “Inquiry into Feed-in tariff Arrangements and Barriers to Distributed Generation”, when some of the issues that APA had experienced over time, in relation to connection for co-generation and tri-generation units to the electricity network, were raised by the VCEC. Indeed, VCEC stated in their consultation paper, that “The process for connection of distributed generation to the grid is not transparent, consistent or customer-friendly.”⁶

⁵ Issues Paper – Solar Feed-In Tariff Pricing in Queensland – 2.1 page (8)

⁶ Victorian Competition and Efficiency Commission (VCEC), in its “Inquiry into Feed-in tariff Arrangements and Barriers to Distributed Generation” – page (14).

The paper's assessment of the grid connection process for customers with distributed generation projects was disappointing, but nevertheless consistent with APA's experience. Sadly, although some progress has been made in recent years, barriers still exist.

Typical issues in relation to barriers to connection are:

- an inability to gain easy connection to the electricity network;
- issues with obtaining planning permits to construct local infrastructure networks;
- issues that relate to information asymmetry

Asymmetric information issues, for example, impact grid connection. Asymmetric information occurs across the NEM jurisdictions and has done for some time. The issue is that information held by electricity network companies is often not available easily, or at all, to consumers or project developers.

APA knows from its own experience dealing with cogeneration and tri-generation projects of its customers, that information asymmetry is still an issue. Although this situation has improved slightly over the years, it is still a work in progress, with much room for improvement.

If these barriers or impediments are not resolved in conjunction with the electricity distribution networks, the long term interests of consumers will never be fully realised.

Close and recommendations

- 1) Low emissions technologies such as natural gas technologies that provide benefits very similar to solar FIT technologies, should be also be eligible to be paid a FIT.
- 2) All low emissions technologies should be financially rewarded for the benefits that they create – whether the benefits are direct or indirect benefits, to the extent that they align with policy objectives
- 3) Tariffs that better allocate costs created by solar users to those same users and not as per present to electricity customers more generally.