

QPC Solar Feed-In Pricing in Queensland Inquiry

Issues Paper Questions

My name is David Warner and I am putting forward this submission as a private citizen. I currently do not have solar PV installed.

I have read the QPC Issues Paper on this subject and have also had the opportunity to participate in the current Energex Tariff Reform Program dealing with the probable introduction of a demand tariff. Through this process I have had the opportunity to learn a lot about how the distribution and retail electricity system works as well as the costs and benefits of solar PV.

My main interest lies in protecting the interests of consumers, particularly vulnerable, older Queenslanders who are on fixed or low incomes or are otherwise disadvantaged through illness, old age, ethnic background or other special needs.

I believe that, irrespective of changes made by this Inquiry, there will always be a need for government protection of vulnerable consumers through concession payments and a robust safety net. I further believe that electricity is an essential service and that all consumers must have access to this service regardless of their capacity to pay.

I now submit my answers to the following questions in the Solar Feed-In Pricing Inquiry Issues Paper:

2.1 Is there evidence of significant and enduring market failures in the solar export market in Queensland? The obvious answer to this question is Yes. Not only is there a monopoly distributor/retailer situation in regional Queensland but there is not a transparent, fair and balanced market where all players, including consumers, are in possession of all the relevant information required to make properly informed decisions. In SEQ we also have a range of FIT's but consumers do not know what a reasonable FIT should be so, rather than make properly informed decisions based on all the relevant information, they tend to make their decision based on price alone which may not be in their overall, long term best interests.

The major failure in my view however relates to the way FIT's are being funded. The cost of the original SBS FIT is being largely funded by non-solar consumers who, in the main, are people who are low income/low use consumers. Even under the current feed-in arrangements which are paid for by retailers, the costs are being recovered from all customers, once again to the detriment of non-solar consumers. In addition to this, solar exporters are not paying an adequate amount for their use of the network due to the way the charges are calculated.

The subsidies being provided by the most vulnerable electricity consumers to the least vulnerable consumers results from a long term market failure which, whilst being recognised, has no end in sight. I sincerely hope this inquiry will bring about urgent change to correct this market failure.

2.2 Where market failures are present, how are they best addressed? The market failures described above can only be rectified through:

- Appropriate regulation to control and monitor the operation of the monopoly operating throughout regional Queensland, assuming of course that it is not possible to open this market up to competition
- Providing a properly informed and balanced market where no single participant has market power over other market participants. The only way a long term, properly informed and balanced market can be achieved is through conducting ongoing, effective education campaigns backed up with frequent, transparent market research and analysis. For example, the QCA could be charged with the responsibility of ascertaining and advertising a fair FIT which consumers could then use as a benchmark in their negotiations with the retailers. Why, for example, do the current FIT's range by up to nearly 50%? If an 11c/kwh is available from one retailer, why can't the rest of the retailers provide this rate? Why should retailers be allowed to have minimum contract periods which limit consumer's ability to chase the best FIT at any time?
- Making alternative arrangements to fund the solar FIT's. The SBS costs should be moved to a more appropriate government funding source such as the Renewable Energy Fund and the retailer provided FIT's should also be recovered from this Fund. These changes would reduce electricity costs to consumers in Queensland by over \$320m per year and would be of great assistance to those on fixed and low incomes.
- Introducing a new tariff for solar PV exporters which recognises and charges for the use these exporters make of the electricity network. This would return equity to the charging of network costs and would further reduce the electricity costs for non-solar consumers.

2.3 Do solar PV exports produce positive environmental and social impacts that are currently not paid for through existing programs and rebates? Solar PV exports obviously reduce the volume of electricity that needs to be produced by traditional generation and, in so doing, reduces the amount of fossil fuels required to be used in generating electricity. This should have a positive impact on our environment and should assist business and government to achieve their targeted CO₂ reductions and renewable energy targets. As far as I am aware, the current FIT's do not factor in any positive environmental or social impacts from solar PV exports.

2.4 If so, is the investment in solar PV suboptimal (from a societal point of view)? Consumers do not generally have sufficient information to allow them to properly understand the positive environmental and social impacts their investment in solar PV is producing. They have generally based their decision to invest in solar PV on pure economics, i.e. purchase and installation price versus expected savings from reduced power consumption from the network plus credits received from their solar exports. The consumers' assessment is then based on whether they believe the pay-back period is reasonable and their assessment of reduced electricity costs when their investment in solar PV is paid off.

I believe that if an environmental and social pay-back was calculated and added to the current FIT structure, we would see the investment in solar PV increase significantly.

2.5 Would a regulated solar feed - in tariff be an effective and efficient tool to address environmental externalities? I assume this question refers to a regulated solar feed-in tariff related to environmental and social benefits rather than the whole FIT. As renewable energy targets and CO₂ gas emission reductions are predominantly government driven initiatives, they are probably the best authority to assess what the appropriate feed-in tariff should be for those contributing to the success of these initiatives. The advantage of a regulated feed-in tariff covering environmental benefits which is mandated to be passed on in full to the consumers is that it avoids any opportunity to profiteer by the retailers with consumers receiving the full benefit of their investment.

2.6 What are the objectives of a solar export pricing policy? Perhaps this question should be looked at from the angle of what we **do not** want. We do not want a policy which continues to compel consumers to pay the ever increasing costs of meeting our growing electricity needs by generating and distributing increasing amounts of electricity using fossil fuels which are non-renewable and produce high levels of CO₂ gases and which cause damage to our environment. From this statement we can see we do not want to continue to increase the cost of electricity for consumers, we do not want to continue to use non-renewable sources of energy to generate our electricity and we do not want to continue to damage our environment.

Leaving aside the other available sources of renewable energy (such as wave and wind) as we are focusing on solar, given that the sun is a renewable and free source of energy which does not produce damaging emissions to damage our environment, capturing and using solar energy appears to answer the policy challenges set out above.

The objective of a solar export pricing policy should therefore incorporate an acknowledgement of what it is trying to achieve which would include:

- To replace fossil fuel electricity generation with solar as quickly as possible.
- To encourage innovation and the development of new technologies which improves efficiency and reduces complexity and cost in the collection, storage and distribution of solar power.
- To encourage the installation of roof top solar PV and other associated new technologies as rapidly as possible.
- To achieve continuing reductions in the cost of solar installations generated by increased volumes.
- To ensure that solar export pricing is transparent and fair.
- To ensure the market for solar exports is transparent, fair and balanced with consumers receiving sufficient education and information to allow them to negotiate solar export contracts in a properly informed way.
- To ensure there is no cross subsidisation of solar consumers by non-solar consumers.
- To ensure that the reduced costs of solar imported electricity paid by retailers is passed onto to the consumers who buy it, i.e. retailers separate the electricity they supply between non-renewable and renewable and price it accordingly.
- To ensure that any monopoly, should it continue to exist, be appropriately regulated with strong penalties for any misuse of market power.

- To ensure the future planned capital investment in electricity generation and distribution recognises the uptake in solar exports and is reduced accordingly with reduced costs being passed onto electricity consumers.
- To ensure solar exporters pay an appropriate share of network costs given they require the network to transport their exports.

I believe that issues such as employment are secondary to the key objectives and they will be resolved as the solar export industry develops. These secondary issues should not be allowed to drive the policy.

2.7 Where objectives are in conflict, which objectives take priority and why?

Provided the progressive conversion from non-renewable to renewable sources of electricity generation is managed properly, I do not see where there should be any significant conflict in the policy objectives. There will no doubt be protests from those parties who perceive they may be disadvantaged in some way by this change but this is just part of the process of change that needs to be managed.

2.8 What principles should be used to guide solar export pricing policy and any regulation of feed-in tariffs?

Specific regulations relating to solar export pricing should only be required where there is a monopoly and to provide expert analysis or opinion in terms of complex pricing decisions that are beyond the capability of individual exporters to prepare, i.e. government may appoint a body to conduct research and calculate a fair average (or indicative) export price which exporters could then use in their negotiations with solar importers (retailers). Where there is a competitive market, existing consumer and fair trading legislation should be sufficient to ensure a properly informed and balanced market.

Key principles for solar export pricing should include:

- Fairness – all parties share equally in the costs and the benefits.
- Equity – properly balanced market with no subsidies from non-solar consumers.
- Access – open to all who wish to participate.
- Affordability – must stand on its own, including exporters paying their proper share of network costs, without the need for cross subsidies from non-solar consumers.
- Efficiency – must improve upon current conditions and result in reducing overall electricity costs for all consumers. Savings from solar PV electricity generation must be passed on to consumers, not kept by retailers to enhance their profits.
- Education – a fairly balanced market will only be achieved when all parties have the knowledge required to negotiate appropriate export contract pricing
- Contracts – there should be a standard basic export contract over which retailers may offer additional benefits but they should not be permitted to take away any basic contract benefits.

2.9 How should fairness be defined? In its most basic form, fairness could be defined as treating everyone in a way that does not favour some over others. Fairness is therefore free of bias, dishonesty or injustice. Fairness is delivered with honesty and in a way that is just and straightforward. I would also argue that fairness includes a social requirement to protect the vulnerable and disadvantaged, i.e. those who are generally not able to protect themselves.

3.1 What are the costs and benefits of exported solar electricity?

Costs:

- Solar PV system purchase, installation and maintenance.
- Metering costs to measure solar exports
- Network costs to transport and re-distribute solar exports
- Cost of feed-in tariff
- Cost of subsidies
- Additional electricity costs for non-solar consumers to fund network costs no longer funded by solar consumers
- Possible future costs related to surplus generation and distribution infrastructure as the need for traditional electricity generation decreases.

Benefits:

- Less fossil fuelled electricity generation required
- Less CO₂ gas emissions – better for our environment
- Less capital investment in new generation and distribution infrastructure required
- Cost of electricity reduces over time
- Reduced electricity costs for solar consumers – including receipt of FIT's

3.2 Who incurs the costs and accrues the benefits from exported solar electricity? How will future market developments impact on costs and benefits?

Costs:

- Solar PV system purchase, installation and maintenance – Paid for by the solar consumer. No future market development impact foreseen.
- Metering costs to measure solar exports – Paid for by the solar consumer. No future market development impact foreseen.
- Network costs to transport and re-distribute solar exports – Paid for by all the network consumers but effectively subsidised by non-solar consumers who are charged more for their greater use of the network due to solar export network use not being charged for. I hope that changes will be made to ensure solar exporters pay their fair share of network capital and operating costs in the future.
- Cost of feed-in tariff – The 44c FIT paid for by all consumers but effectively subsidised by non-solar consumers who pay but receive no benefit. The current FIT is paid for by retailers but no doubt passed on to their clients so once again the non-solar clients end up subsidising the solar consumers. I hope that the government will realise how unfair the current funding arrangements for the 44c FIT are and shift the cost to a more appropriate funding source, e.g. the Renewable Energy Fund, where it will be paid for by ALL Queenslanders. I also hope another more equitable source of funding the current retailer provided FIT which avoids the current subsidisation by non-solar clients. This could/should also be funded from the Renewable Energy Fund.
- Cost of subsidies – Paid for by the government (taxpayer). No future market development impact foreseen.

- Additional electricity costs for non-solar consumers to fund network costs no longer funded by solar consumers – Paid for by non-solar consumers, effectively subsidising the network use by solar exporters. I hope that changes will be made to ensure solar exporters pay their fair share of network capital and operating costs in the future.
- Possible future costs related to surplus generation and distribution infrastructure as the need for traditional electricity generation decreases – Unless changes are made, this will also be paid for by non-solar consumers. No future market development impact foreseen.

I note and endorse The COAG National Principles for Feed-in Tariffs (2008) which states that governments should: “avoid policies resulting in cross-subsidies between consumer groups. Where governments wish to subsidise a particular group, subsidies should be provided directly through government expenditures.”

Benefits:

- Less fossil fuelled electricity generation required – Will benefit the whole community. No future market development impact foreseen.
- Less CO₂ gas emissions – better for our environment – Will benefit the whole community. I hope that some form of CO₂ Reduction Incentive will be provided in the future which will increase the ability for those on low and fixed incomes to participate.
- Less capital investment in new generation and distribution infrastructure required – Should end up benefiting all electricity consumers if the reduced costs are passed on. No future market development impact foreseen.
- Cost of electricity reduces over time - Should end up benefiting all electricity consumers if the reduced costs are passed on.
- Reduced electricity costs for solar consumers – including receipt of FIT’s – Benefits received by solar consumers/exporters. No future market development impact foreseen.

3.3 Where there is a case to regulate feed-in tariffs, is the existing approach to pricing solar exports appropriate? If not, what alternative approach would be the most effective and efficient way to price solar exports? I only foresee a need to regulate feed-in tariffs where there is a monopoly operator. I do not have sufficient knowledge to comment on whether the existing approach to pricing FIT’s is appropriate. In general terms I believe that feed-in tariffs should be fair and reasonable to all parties, there should be no profiteering permitted by the solar importer when they re-sell the solar electricity and the consumers should benefit from any price reductions available from solar exports versus traditionally generated electricity.

3.4 How should the price be structured and paid? Should feed-in tariffs account for variations in value due to location and time? Solar exporters should be required to pay their fair share of all costs incurred to allow them to generate and export surplus solar energy. I do not have sufficient knowledge of all the component parts of the generation and export of solar energy to comment on establishing a fair and reasonable pricing structure.

3.5 Would market regulatory or policy changes be required to implement feed-in tariffs? If so, what changes would be required? This is beyond my competence to comment on

3.6 When should the feed-in tariff be reviewed or updated? I believe an annual review should be conducted to ensure changes introduced as a result of new or amended regulations, market changes and new technologies etc are included. The current situation, where the SBS FIT of 44c will continue until 2028 which is well past the point of solar PV owners recovering the cost of their installation and will allow them to earn substantial profits at the expense of all other electricity consumers in Queensland, must never be allowed to reoccur.

3.7 How should the feed-in tariff be reviewed or updated? A competent body should be tasked with this responsibility.

4.1 What are the main barriers to pricing solar exports? How significant are these barriers? The only significant barrier to pricing solar exports would be the reluctance of organisations with a vested interest to make available all the information required to establish a fair and reasonable export price. Any such reluctance would need to be dealt with by government regulation. Of course there may also be volume issues that will change as solar PV take up increases that may impact solar export pricing but I am unable to say what these issues and their consequential impacts may be.

4.2 How may broader market changes (e.g. metering) impact barriers? I am unable to comment on this question.

4.3 Can these barriers be overcome in an effective and efficient way? I am unable to comment on this question.

4.4 Are there other barriers to a well-functioning solar export market? A well functioning market requires that all participants should have access to the market and the market power should be equally balanced between the participants. There are various reason why some consumers are not able to install solar PV systems and these people are excluded from the market. Others may be excluded because they are unable to afford or access the required meters. There are probably other groups who may also be excluded. I do not know how many people are currently excluded for these reasons but understand the take up of solar PV is still below 30% of potential households so this would indicate 70% of households are currently excluded. I believe there would need to be at least 80% of potential households participating before any claim to a well functioning market could be claimed. There would also need to be an effective education campaign to ensure that all market participants were in possession of all the knowledge required to make fully informed decisions.

4.5 Are there examples where efficient investments in solar did not proceed because of technical, market or regulatory barriers? I am not aware of any barriers other than market forces that apply as incentives and subsidies rise and fall. For example, I believe the number of solar PV installations fell dramatically when the SBS was terminated but have started to increase again as the cost of solar PV has reduced, the replacement retailer funded FIT scheme commenced and the cost of traditional electricity has continued to increase.

4.6 Are there cost-effective ways to remove or address those barriers? From a technical perspective I believe there will be an increase in solar PV installations when consumers become comfortable with integrated solar generation and storage system capabilities. The market driven economics will always drive activity as consumers decide at what price points they are prepared to invest in solar. I am not aware of any regulatory barriers to efficient investments in solar.

Thank you for permitting me the opportunity to provide this submission. I would be pleased to answer any questions that may arise from this submission.

David Warner
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