



Submission in response to the Energy Security Target and Safeguard Consultation Paper

26 May 2020

Regarding - The NSW Government will expand fuel switching activities

Thank you for the opportunity to provide a submission to the Energy Security Target and Safeguard: Consultation Paper.

I live on a farm in Narromine NSW. The property “Waverleigh” is owned and operated by my partner Jon Elder, a fourth generation farmer and his parents. The farm is used for farming cotton and wheat. In a good season 550-570 hectares of cotton is produced via irrigation and up to recently diesel was the sole source of power for pumping groundwater. In winter, wheat or chickpeas is grown on dryland.

19. Which cleaner fuel switching activities should the scheme provide incentives for?

The Energy Security Safeguard (ESS) should include switching from diesel to solar, green hydrogen or bioenergy for powering farm operations.

Diesel costs were our highest operating cost on the farm. We were spending \$300,000 just to run our pumps each summer. In September 2018, ReAqua installed a 500kW solar diesel hybrid irrigation pump on our farm, the largest in the country. This innovative solution replaced one of three bores, while reducing the use of the other two diesel units.

The solar diesel pump has been saving us approximately \$170,000 a year in energy costs, is reducing CO2 emissions by 500 tonnes a year and is on track to pay for itself in five years.

Large scale solar pumping applications like ours, is a step change for irrigated agriculture, but high capital costs, a lack of knowledge and a lack of trust in suppliers is holding back investments. I run the National Renewables in Agriculture Conference and Expo to share our story and those of other farmers using renewables to increase understanding of on-farm renewables. We also connect farmers with credible suppliers through the Expo.

The Government has a role to incentivize innovation in areas like green hydrogen for agriculture and reward those taking those steps forward.

I therefore see it as critical that farmers can access incentives to facilitate them switching to solar energy or another clean fuel, to power their pumps and activities.

20. Should the scheme cover technologies that are being wound down under the SRES? If so, what is the best way to do this?

There is a huge amount of interest from farmers wanting to reduce diesel costs and reduce their exposure to fluctuations in diesel prices but apart from the LGCs and STCs there is not much of an incentive to do so. The value of LGCs (which we are eligible for on our farm) are declining now the target for 2020 has been met. Similar for STCs, so it is crucial to replace the scheme with a ramping up of the Energy Security Safeguard (ESS) to maintain the momentum. This will incentivize farmers and reward them for reducing on farm emissions - one of the objectives of the ESS.

21. How should energy savings be counted for these cleaner fuel switching activities?

I don't have the expertise to comment on this except to say this should be kept simple and low cost for participation. An idea would be that the farm wanting to apply to the ESS, could be required to provide a self-assessment plus estimation (with some evidence) of the amount of diesel use prior to switching to solar. It should then be a matter of calculating what amount of diesel has been replaced by solar energy (using meters), and certificates created to reflect this amount and emissions reduced. It is important that this incentive works even for smaller transformations, such as livestock pumps that were driven by diesel previously but the farmer has converted to solar. Many schemes such as the ERF require such large abatement, that most farmers don't qualify to participate.

The process needs to be simple and not have high costs associated with auditing and consultants. An issue with rural properties is the cost that accompanies paying people to travel to a farm to deliver services.

22. What would be the likely scale of uptake of cleaner fuel switching activities? Please consider the number, size, and cost of projects.

In NSW, 80% of energy used on farm is diesel. There is not a scheme that I am aware of that rewards farmers for reducing their diesel use. If the ESS were to include switching from

diesel to green hydrogen, solar or bioenergy, there would be significant uptake in the agricultural sector.

The National Farmers Federation has a target of 50% of energy on farms to be renewable by 2030, so this high level aspiration helps back the drive for agriculture to transition away from fossil fuels in the coming years.

The conversion from diesel to a solar/diesel hybrid cost our farm business approximately \$900K. There are many farmers with similar sized pumps to us, that would be looking for incentives to help subsidise this large outlay, particularly now the LGCs are not worth as much as a few years ago. The ESS could help push many farmers towards investing in solar.

23. Under what circumstances should the NSW Government consider extending scheme liability beyond the electricity sector?

Diesel is a source of greenhouse gases and farmers are large users of energy/diesel. They also use energy differently to many businesses and homes. There is a significant opportunity for the Government to help this sector to transition to clean energy, cut costs and build farm resilience.

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