



23 May 2022

Mr Daryl Quinlivan
NSW Agriculture Commissioner
By email c/- agcommissioner@dpi.nsw.gov.au

Dear Commissioner Quinlivan,

Renewable Energy & Agriculture in NSW Issues Paper

Cotton Australia is the peak industry body representing Australia's cotton industry, which includes approximately 1,500 cotton farming and cotton ginning businesses. Our members are situated across 152 regional communities, predominantly in NSW with Queensland and an increasing number in Victoria and Northern Australia.

Notably, 90% of cotton operations are family farms that also grow other crops like sorghum, soybeans, wheat, and have livestock. While cotton production does vary considerably from season to season the crop generates for the annual national economy between \$1.5 billion and \$2.5 billion.

NSW production is a significant contributor usually contributing two thirds of the production to this figure.

Introduction

Our members recognise the benefits of increasing the amount of energy generated from renewable and low carbon technologies to secure energy supply, reduce greenhouse emissions and stimulate investment in new jobs and business. They also farm and operate gins within two of NSW's Renewable Energy Zones.

Cotton Australia has previously made a number of submissions to NSW Government consultations about the state's planning framework, including its approach to large scale solar infrastructure. We begin this submission by reiterating our non-negotiable planning principle that should also be applied to Renewable Energy Zones:

it is Cotton Australia's view that high value agricultural land is protected from the installation of large-scale solar infrastructure period.

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Please refer to our 24 February 2022 submission to *Revised Large-Scale Solar Energy Guidelines* for specific comments regarding the regulatory and policy framework section of this Issues Paper. In doing so, we note with disappointment that the guidelines are still only that (a 'should') and not mandatory (a 'must') requirement for all projects and Renewable Energy Zone infrastructure.

Noting that other agricultural organisations are providing quite detailed submissions, we have restricted our comments to three sections of the Issues Paper:

- Agricultural growth and Regional Development
- Operation of renewable energy sites and infrastructure
- Compensation and Benefit Sharing.

SUBMISSION

AGRICULTURAL GROWTH AND REGIONAL DEVELOPMENT

- Cotton Australia reiterates, any loss of agricultural land for these developments should be avoided.
- Not just the direct loss of agricultural land but also land lost through the secondary impacts from the development on adjacent land. For example, the 'PV heat island effect' where there is a warming effect across the landscape, having the potential to influence biodiversity and wildlife habit, ecosystem functions and human health as well as agricultural land values of properties directly adjacent to these facilities.¹
- Large-scale solar infrastructure developments should only be approved on agricultural land if there are no alternative suitable locations on non-agricultural land and there is a clear over-riding need for the development in the proposed location.
- The loss of agricultural land or resulting loss of productivity or commodity adaptation as a result of impacts from large-scale solar infrastructure facilities, can also impact the viability of agri-processing facilities (e.g. animal processors and cotton gins), the efficient utilisation of assets, and ultimately the agricultural profitability of a region. Such infrastructure can also impact ongoing investment decisions and investment certainty; and investment security where land prices may be reassessed.

¹ Barron-Gafford, G. A. et al. (2016). The Photovoltaic Heat Island Effect: Larger solar power plants increase local temperatures. *Sci. Rep.* 6, 35070; doi: 10.1038/srep35070. This study determined that temperatures around a solar PV plant were regularly 3–4°C warmer. It went on to state:

"As with the Urban Heat Island (UHI) effect, large PV power plants induce a landscape change that reduces albedo so that the modified landscape is darker and, therefore, less reflective. Lowering the terrestrial albedo from ~20 per cent in natural deserts to ~5 per cent over PV panels alters the energy balance of absorption, storage, and release of short- and long-wave radiation".

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- Infrastructure to service large scale solar infrastructure, such as the transmission lines, may need to cross land held by different owners. As we are already seeing in NSW this can present a challenge to the existing landowners from mandatory easements amongst other issues. Location selection and the design of the facility must minimise these associated impacts.

OPERATION OF RENEWABLE ENERGY SITES AND INFRASTRUCTURE

We refer the reader to our 24 February 2022 submission to *Revised Large-Scale Solar Energy Guidelines*² and make the additional observations:

- As with any other resource development in New South Wales, a final restoration plan must be provided during the planning application phase.
- Where development on agricultural land cannot be avoided, large scale solar installations must be designed and constructed to be 'reversible', allowing the site to be easily restored to a more intensive agricultural use. Intrusive development, such as trenching and foundations, should therefore be minimised and the use of mass concrete should be avoided.
- Where possible, large-scale arrays should be installed using 'pile' driven or screw foundations or pre-moulded concrete blocks (shoes), and capable of easy removal.
- The use of shoes may also be required for land subject to native title or areas with biodiversity values. Where 'pile' driven foundations are proposed, impacts during construction on nearby sensitive receptors should be considered.
- Regarding decommissioning and rehabilitation, Cotton Australia recommends like resource extraction projects:
 - security deposits and bonds are used to secure decommissioning activities for large scale solar facilities;
 - the quantum of security held is adequate and it needs to be reassessed during the project's life, particularly in light of the risk of future insolvency of a company.

² Available at <https://cottonaustralia.com.au/assets/general/Publications/Submissions/2022/20220224-Cotton-Australia-SUB-Draft-Updated-Solar-Guidelines.pdf>

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COMPENSATION AND BENEFIT SHARING

It is Cotton Australia's view:

- Any impact intended or unintended must be fully compensated by the company constructing, operating and maintaining the large-scale solar infrastructure/active within the designated Renewable Energy Zone. Given it is the NSW Government that can decree the location of Renewable Energy Zones, Cotton Australia is of the view that these declarations are also supported by government guarantee.
- Grower rights must be respected during the land access negotiation process, with landholders receiving fair levels of compensation in recognition of the impacts of development from construction through to its ultimate decommissioning and site rehabilitation.
- As per arrangements already in place in NSW for coal seam gas exploration
 - minimum standards for negotiation protocols are set;
 - landholders are compensated for their time to be involved in these negotiations as well as the land hosting opportunity into the future;
 - compensation is set at a uniform rate, this is made public and subject to review in light of changes to CPI.

Adopting these measures, including uniform rules of engagement and information sharing, will avoid speculators capitalising on the knowledge gaps of landholders. It will also help to reinstate grower confidence that the establishment of Renewable Energy Zones can have positive benefits for the hosting community.

Conclusion

In recognition of the potential energy and economic benefits that large-scale solar projects and their associated 'zones' can provide, Cotton Australia has been participating in *NSW Roadmap Consumer Reference Group*, established by the NSW Government. While matters discussed are confidential, we have been advocating the utmost importance of both protecting high-value agricultural land and preserving the amenity of traditional cotton growing regions.

If you would like more information concerning the matters raised in this submission, please do not hesitate to contact me on 02 9669 5222 or jenniferb@cotton.org.au.

Yours sincerely,



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