I welcome the Victorian Government’s efforts to develop guidelines for Solar Projects in Victoria. However, sections of the guidelines fall short in the approval process and best practice criteria to be adopted by solar project proponents as well as providing due acknowledgement of the Goulburn Murray Irrigation District (GMID).

Firstly, I support appropriately located renewable energy facilities, yet remain opposed to the three large scale solar developments in the Shepparton region as all three are located on the modernized irrigation backbone in the GMID.

ISSUES NOT SUFICIENTLY ADDRESSED IN THE GUIDELINES:

1) Local Government Approval Process:

The draft solar guidelines are still proposing that Local Government provide approval for large scale solar developments. This is inconsistent with the Victorian Government’s approach to Wind Farm developments, where all have to be approved by the Victorian Planning Minister. Local Government has continued to raise concerns about their expertise in approving $100-200 million solar developments. I believe for consistency, the Victorian planning Minister should approve large scale solar developments just like wind turbines.

2) Amend Victorian Planning Provisions (VPP):

While Clause 14.01-1S outlines the protection of agricultural land, that is ‘strategically significant’, a further addition to the VPP’s should be made to identify the Goulburn Murray Irrigation District.

Section 14.01-1R of the VPP singles out the Macalister Irrigation District in Gippsland; stating: “protect productive land and irrigation assets, including the Macalister Irrigation District, that help grow the state as an important foodbowl for Australia and Asia”

For consistency between the two irrigation areas in Victoria, a similar clause needs to be added to the VPP to ensure sufficient protection of the Goulburn Murray Irrigation District, just like in Gippsland.

While the guidelines detail “attributes of strategically significant land” (Pg 12) a specific reference to the GMID in the VPP is needed.

3) Need for a State-wide Strategy:

The State Government is lacking an overall renewable energy strategy with appropriate mapping. At a state level farmers want to understand the areas that are strategic agricultural land and what allocation the Government is making for growth in agriculture.

While the Regional Growth Plan from 2015 provides some mapping, it falls short in identifying strategically significant agricultural land across the state.
With the development of a detailed map, Victoria could then adopt a best practice United Kingdom approach where they identify and grade all land. All land graded 1, 2 and 3a in the UK is considered agricultural and solar farms not to be developed in these locations. Land graded 3b, 4 and 5 are considered acceptable locations for solar developments.

The draft guidelines state that “most rural land is not considered to be strategically significant agricultural land” (pg 11). Such a sweeping statement needs to be supported by detailed map.

The Victorian Government needs to be very clear to farmers and solar developers on where appropriate locations for solar developments can occur. Detailed mapping and land grading would greatly assist.

4) **Heat Island Impact: (Pg 28)**

The draft guidelines conclude:

“while the heat island effect is known to exist in large urban areas, there is little evidence of impacts on other land uses such as orchards” (Pg 28).

This conclusion is based on two research reports that occurred in the Arizona desert and farmland in North America. The Arizona report concluded the heat island effect was negligible at 30 metres from the boundary. The second report concluded the temperature was approaching the ambient landscape level by 300 metres from the boundary.

The GMID is not in any way similar to the Arizona desert and clearly urgent research is required to understand the impacts of large scale solar in Northern Victoria.

The three solar developments on hold in Shepparton all have orchards on their boundaries, there is no research in the world exploring the impact of solar on horticulture and so the comment above should be removed.

5) **Heat Impact on Horticulture:**

The pests and diseases impacting horticulture are largely driven by heat. Deciduous tree fruit crops require a period of chilling below critical temperature thresholds to set fruit buds and then warm weather to break dormancy and grow. The growth rate of insects also depends on accumulation of heat units above minimum developmental thresholds.

For example, raising the minimum daily temperature from 6 degrees to 9 degrees and maximum daily temperatures from 15 degrees to 18 degrees would double the number of growing degree days experienced by lightbrown apple moth and theoretically halve its development time.

Northern Victorian Research Scientists are acknowledging that the heat impact on horticulture due to solar developments requires further research.

6) **Appropriate setbacks/ Amenity impacts/ Proximity to Dwellings/Screening:**

The guidelines provide no detail on setbacks; they are simply referred to as “appropriate setbacks”. These guidelines need to be much more explicit on setbacks. The Shepparton Council proposed setbacks of 50 metres in 2018.

The guidelines refer to noise, glint, light spill, emmissions to air, land or water, but again they are not explicit on what is an unacceptable level.
The guidelines are silent on the proximity to dwellings. Whereas wind energy guidelines state development cannot be built within one kilometre from a dwelling. This seems a logical approach for solar.

The guidelines refer to screening, but are not explicit on what the screening should be. The number of trees, shrubs and their height should be added to the guidelines.

7) Co-Location:
The guidelines state:
“Co-location of solar energy facilities with other rural land uses presents an opportunity to increase the productivity of a site by using it for more than one purpose” (Pg 28).

The guidelines go on to discuss the dual use of sheep grazing and cropping with solar panels are refers to Appendix C for more information. Yet, the Information in Appendix C does not refer to sheep grazing or cropping with solar panels it simply refers to a solar development in Mildura and references the number of construction jobs.

It does not make sense for the Victorian Government to reference the co location of agriculture and solar panels if the Government cannot provide a Victorian example to support this. I question whether such co location is at all possible for sheep in the GMID. While I have read reports of UK solar developments co-existing with sheep, I do not know of any such example in Victoria.

The Guidelines also state:
“co-locating solar energy facilities with agricultural production can also help stabilize farm incomes, which can fluctuate due to changing commodity prices and climatic patterns”. (Pg 6)

With no evidence to support this comment, it should be removed from the guidelines.

8) Moratorium
The Victorian Government should announce a moratorium on solar developments until a more robust set of guidelines are adopted.