I support the Victorian Government’s efforts to develop draft solar guidelines, however believe much more detail is required to ensure the guidelines are effective.

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. The three projects all have orchards on their boundaries and two of the three projects also have dairy farms on their other boundaries.

**ISSUES WITH DRAFT GUIDELINES:**

1) **Local Government Approval Process:**

Local Government is not a suitable authority to approve large scale solar projects totalling $100-200 million. The guidelines should be amended to ensure the Planning Minister approves solar developments which is consistent with the Victorian Government’s position on Wind Farm Developments.

2) **Victorian Planning Provisions (VPP):**

While the Guidelines make efforts to acknowledge the GMID, this needs to be made more explicit by referencing the GMID in the Victorian Planning Provisions which is also consistent with the Macalister Irrigation District in Gippsland.

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”

A similar clause needs to be added to the VPP to ensure the GMID is adequately protected.

3) **Victorian Renewable Energy Plan:**

The Victorian Government is lacking an overall renewable energy plan with detailed 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.

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

The draft guidelines state:

“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 research that occurred in the Arizona desert. 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 from the draft guidelines.

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 light brown 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) **Setbacks/ Amenity impacts/ Proximity to Dwellings/Screening:**

The guidelines provide no detail on setbacks, amenity impacts, proximity to dwellings and screening, they are simply referred to as being “acceptable”.

“Acceptable” is a very subjective term and much more detail is required on all these points, the guidelines must establish key criteria, as detailed below.

- Setbacks must be defined to 50 metres for example;
- Acceptable Noise, glint and light spill must be defined;
- Proximity to dwellings set to one kilometre, for example — which is consistent with wind energy.
- Screening of trees and shrubs defined. How many rows of certain plants and plant heights and maturity.

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).

There is little evidence to support this comment and 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.