



Dear Sir or Madam, I thank you for the opportunity to comment on the current Parliamentary inquiry into the re-use and recycling of solar panels in Australia.

The observations that I would make are as follows.

The production of solar panels requires significant investment of energy and materials, including materials that are (depending on the formulation) quite rare and expensive. Therefore, it is imperative to get the best possible return on the energy and materials already invested. It is my understanding that the technology exists to allow individual cells in multi-cellular panels to be examined under a spectrum of light and electro-magnetic outputs, to establish the condition of the cell, its level of degradation, and suitability to potentially be incorporated into a new panel composed of checked and re-used cells. This, I believe, is the technology that should be concentrated upon in terms of Australia, backed up by technologies that allow the recovery of valuable elements from damaged and degraded cells. Given the high purity of silicon produced from the residual cell wafers, careful thought must be given to how this can be re-used or re-manufactured to its highest and best use. I know that crushed silicon cells have been used effectively in Victoria for bedding of stormwater pipes, and that is fine if it relay the best use that one can find for that material, but I strongly suspect that there must be an opportunity to use cell-grade silicon at the start of the new cell production process once again.

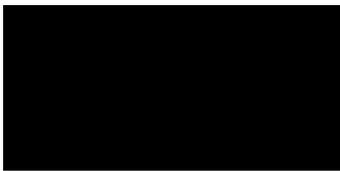
This described above, I believe would represent an ideal outcome, as it would allow cells that still have a decent output and shelf-life ahead of them producing energy to be re-aggregated and resold onto the market at an affordable price point, allowing people/societies who just require a source of affordable power, to access them. It also recognises that 're-use' is much higher on the waste hierarchy than recycling as far as efficiency and use of materials is concerned. Only the cells that are non-functioning or degraded would have to be broken down to raw materials and remade from scratch. This is the type of recycling that Australia should be prioritising, as the low cost 'remade' panels could be of great benefit to rural and indigenous communities to help provide 'energy equality', and could also be made available to our Pacific neighbours as well, to boost their uptake of clean renewable energy. If these types of initiatives require a certain amount of Government input to drive the industry in this way, then serious consideration should be given to that.

Thank you for this opportunity to comment, and my best wishes to all those involved in the inquiry with the hope that it will draw out some really effective and innovative solutions.

Kind regards, Karl.

Karl Adderley

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