

# Urban Futures Symposium | 21 – 25 August 2023

**Candidate:** Alejandra Nunez Madrigal

**School:** School of Property, Construction and Project Management

**Presentation:** Third Milestone Review

**Title:** Circular economy pathways for PV waste management in Australia

**Abstract:**

Photovoltaic (PV) technologies are an emergent solution in the renewable energy space due to their low carbon emission benefits. PVs are evolving and are being installed at an increasing rate worldwide. However, if mismanaged, PVs that are decommissioned or at their end of life can represent a toxic hazard and a loss of valuable materials.

This study aims to build up on existent research on PV waste management through circular economy concepts. Hence, the ReSOLVE framework developed by Ellen MacArthur Foundation and the 10 R's for circularity developed by Professor Jacqueline Cramer are used to unveil potential pathways for a circular PV waste management in Australia.

The methodology followed qualitative methods and design thinking processes. Nineteen semi-structured interviews with stakeholders from the academic, government, PV organizations, Installers and retailers provided valuable insights that pinpointed the outcomes for the study. These insights were overlapped with desktop research which resulted in a system theory diagram and related actions per stakeholder to be proposed as suggestions for the creation of a circular PV waste management in Australia.

