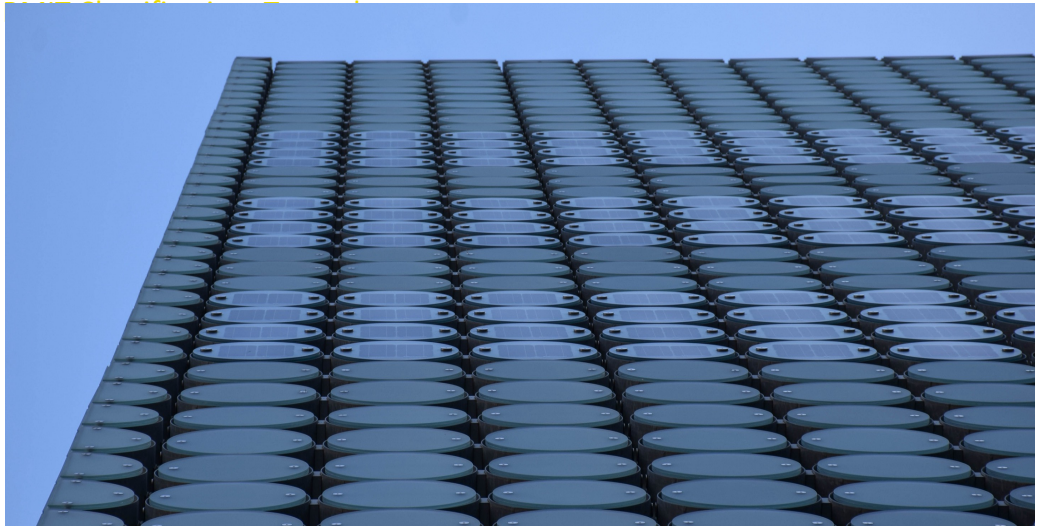

Analysis of the Technological Innovation System for BIPV in Australia 2024

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What is IEA PVPS?

- The International Energy Agency (IEA), founded in 1974, is an autonomous body within the framework of the Organization for Economic Cooperation and Development (OECD).
- The Technology Collaboration Programme was created with a belief that the future of energy security and sustainability starts with global collaboration. The programme is made up of thousands of experts across government, academia, and industry dedicated to advancing common research and the application of specific energy technologies.

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What is IEA PVPS?

- The IEA Photovoltaic Power Systems Programme (PVPS) is one of the Technology Collaboration Programme established within the International Energy Agency in 1993
- 32 members - 27 countries, European Commission, 4 associations
- *"To enhance the international collaborative efforts which facilitate the role of photovoltaic solar energy as a cornerstone in the transition to sustainable energy systems"*

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PVPS

Scope of this analysis

- The scope of the analysis is BIPV modules and systems, along with PV modules and systems for purely aesthetic integration.
  - A BIPV module is a PV module and a construction product designed to be a building component. A BIPV product is the smallest (electrically and mechanically) non-divisible PV unit in a BIPV system that retains building-related functionality. If the BIPV product is dismounted, it must be replaced by an appropriate construction product (IEA PVPS, 2023).
  - A BIPV system is a PV system in which the PV modules fulfil the above definition for BIPV products. It includes the electrical components that connect the PV modules to external AC or DC circuits and the mechanical mounting systems required to integrate the BIPV products into the building (IEA PVPS 2023).
- The study follows the required research process for TIS as guided by the IEA PVPS Task 15 report ‘Guide for Technological Innovation System Analysis for Building-Integrated Photovoltaics 2023’.

Summary of the Functional Analysis

- Knowledge development is weak. Although research units develop scientific knowledge in collaboration with relevant industries at a satisfactory level, the technical expertise transfer from and to practitioners is limited. A few actors participate in creating a knowledge pool in the industry.
- Poor knowledge diffusion is attributed to inaccessible information and limited sharing among a wider community. Knowledge is not distributed equally across the value chain.
- Entrepreneurial experimentation is weak because there are limited market entrances, and only a few demands of the adopters are addressed. Entrepreneurs have more opportunities to introduce various BIPV applications for different market segments.
- BIPV-related resource availability is weak because there are few experts, scarce resources, and fewer funding opportunities for upstream and downstream suppliers.
- Social capital is inadequate due to the discrete nature of the building and PV industries, lack of demonstration projects, misconceptions and limited awareness, which have hindered the development of trust and confidence in society.
- Legitimation is weak as positioning BIPV with the institutional framework is not visible. Regulations complying with building codes, especially those addressing fire safety and structural loads, are necessary.
- Guidance is weak as there is a lack of clear vision on the market. However, the government and relevant authorities aim to positively implement clean energy development and applicable policies and regulations.
- Market formation is weak as government, entrepreneurs and lead users do not contribute actively to the development of the BIPV.

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