AUSTRALIAN PV INSTITUTE

ANNUAL GENERAL MEETING
ASIA-PACIFIC SOLAR RESEARCH CONFERENCE
DECEMBER 3, 2024

AGENDA

1. Minutes of AGM 2023 (Last year's minutes can be found here.)
2. Chair's report
   - Strategic plan
   - IEA Tasks: PVPS / SHC
   - PV manufacturing / S2S
   - Sunspot
3. Treasurer's report & appointment of auditor
4. Election of Directors
5. AOB

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STRATEGIC ACTION PLAN 2023 (A REVIEW)

SCOPE

The principal purpose of the APVI is to support the development and uptake of solar photovoltaics and related technologies through research, analysis, information, data, collaborative activities, networks, guidelines, practices and submissions.

STRATEGIC OBJECTIVES

- Sustainable organisation: Maintain and increase APVI membership of researchers and innovators in solar and related technologies.
- Build a co-operative community: Increase opportunities for networking and sharing research.
- Industry and regional linkages: Build connections with related industries and across the Asia-Pacific region.

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INTERNATIONAL PROJECTS

International Technology Collaboration Programs under the auspices of the International Energy Agency.

PV Power Systems

- Focusses on the role of photovoltaic solar energy as a cornerstone in the transition to sustainable energy systems

Solar Heating and Cooling

- Focusses on using solar to supply heating, cooling and lighting for buildings and industry. (See more in this room after lunch tomorrow)

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PV POWER SYSTEMS (PVPS)

Task	Name	Australian Expert
ExCo	PVPS Executive Committee	Renate Egan, UNSW Olivia Coldrey, IIASA
Task 1	Strategic PV Analysis & Outreach	Linda Koschier, UNSW
Task 12	PV Sustainability	Rong Deng, UNSW
Task 13	Performance and Reliability of Photovoltaic Systems	David Parvevliet, Murdoch
Task 14	High Penetration of PV Systems in Electricity Grids	Iain Macgill, UNSW Niraj Lal, AEMO
Task 15	Enabling Framework for the Development of Building-Integrated PV	Rebecca Yang, RMIT, Sub Task Lead
Task 16	Solar Resource for High Penetration and Large Scale Applications	John Boland, UniSA
Task 17	PV and Transport	Nicholas Ekins-Daukes, UNSW
Task 18	Off Grid Access to Energy	Chris Martell, GSES, Operating Agent

SOLAR HEATING AND COOLING (SHC)

Task	Name	Australian Expert
ExCo:	SHC Executive Committee	Ken Guthrie, Sustainable Energy Trans. Prof Rob Taylor, UNSW
Task 63:	Solar Neighborhood Planning	Dr Mark Snow, APVI Completed
Task 64:	Solar Process Heat	- Completed
Task 65:	Solar Cooling for the Sunbelt Regions	Prof Lu Aye, Melbourne University
Task 66:	Solar Energy Buildings	Prof Rebecca Yang, RMIT
Task 67:	Compact Thermal Energy Storage Materials	-
Task 68:	Efficient Solar District Heating Systems	-
Task 69:	Solar Hot Water for 2030	Prof Robert Taylor, UNSW (Task Manager),
Task 70:	Low Carbon, High Comfort Integrated Lighting	Assoc Prof Veronica Garcia Hansen, and Dr Francisca Rodriguez, QUT
Task 71:	Life Cycle and Cost Assessment for Heating and Cooling Technologies	Dr Zhengen Ren, CSIRO
Task 72	Solar Photoreactors for the Production of Fuels and Chemicals	? TBD
Task 73	PVT Heating Systems - markets, trends and future potential	Doug Smith, Coolsheet, Possible Sub Task Leader?

PROPOSED AND POTENTIAL FUTURE TASKS

PV Power Systems

- Task 19 PV and Grid Integration (Prof Iain Macgill, UNSW)
- Task 20 Energy Hubs and Green Hydrogen (in discussion with Dr Raman Daiyan, UNSW)
- Action Group on Agri PV (pending – participant role open)

Solar Heating and Cooling

- Thermal Energy Storage Materials

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2024

Highlights

- Australia participating in 15 Tasks
  - all 9 PVPS Tasks and 6 of 9 SHC Tasks
- The work of APVI in both TCPs was presented at All Energy in October and at APSRC now
- SHC name has changed to “Solar Technologies and Sustainable Heating and Cooling” to better cover the scope of work done. SHC+

Funding

- DCEEW has provided a one-year support covering the annual fees and a small transport budget that will support some of the work until the end of 2025
- We currently don’t have any funding post 2025 and will need to give notice soon that we will withdraw at the end of 2025 if we don’t find support.

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SCOPE OF SHC+

The TCP focuses on cooperative research, development, demonstration, and information exchange to achieve:

1. ***Design of Renewable Heating and Cooling Systems.*** *Design renewable energy systems that provide heating and cooling for domestic, commercial, industrial, and agricultural applications by integrating a variety of complementary technologies.*
2. ***Advancement of Solar Technologies.*** *Develop and enhance devices, systems, and technologies that harness solar radiation for heating, cooling, lighting, fuel production and detoxification.*
3. ***Integration into Practical Applications.*** *Integrate these devices, systems and technologies into processes and applications to achieve practical outcomes.*

This Technology Collaboration Programme has a technology-neutral approach to support the transition towards zero-carbon integrated energy solutions. Its goal is to advance energy service delivery, fostering sustainable futures for heating, cooling, lighting, fuels, and other chemical commodities across the building, urban, industrial, agricultural, and water sectors.

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A PV Future Made in Australia

Outcomes of the APVI Silicon to Solar Study

PV INCLUDED UNDER THE GOVERNMENT'S FUTURE MADE IN AUSTRALIA

$22.7 billion for transition to net zero:

- Skills and training to build Australia's future workforce.
- Renewable energy.
- Supporting investment in Australia.
- Utilising natural resources and critical minerals.
- Industrial innovation and technology.

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PV RELATED PROGRAMS UNDER FUTURE MADE IN AUSTRALIA

Solar Sunshot
ARENA
Innovation Fund
Green Polysilicon

Trade Partnerships / Foreign investment

Energy Apprenticeships/Jobs Plan / TAFE
Workforce transition / STEM / Vocational training

Net Zero Economy Authority
Resourcing Australia's prosperity
Priority RE Projects and assessment support
Green Metals / Hydrogen Strategy

***MANY REFLECT THE KEY RECOMMENDATIONS MADE IN THE S2S REPORT**

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S2S RECOMMENDATIONS

BUILDING PV MANUFACTURING IN AUSTRALIA

Objectives:

(i) Mitigate supply risks (Risk)

(ii) Create a solar industry for domestic demand and export (Return)

(iii) Re-establish manufacturing in Australia (Return)

Immediately

- Declare PV manufacturing industry a strategic national priority -> *PV specifically included under Future Made in Australia*
- Set-up Solar Manufacturing Taskforce – *ARENA Sunshot Advisory Panel*

Next 12 months

- Facilitate enabling policies: people, permits and partners *Key support programs for skills, project support and foreign investment guidelines*
- Implement financial support mechanisms for PV manufacturing – *Sunshot Grants and Production Credits*
- Secure budget for the selected subsidies – *in 2024 budget*
- Strive for broad political support - *??*

Years 1-5

- Implement support for 10 years of facility operation – *Production credits under Sunshot*
- Introduce local content incentives and government procurement – *State and Federal government considerations*
- Continue R&D support – *ARENA, ACAP*
- Consider targeted support via electricity price guarantees – *State governments??*
- Consider additional up-front capital support – *included in Sunshot*

SOLAR SUNSHOT

$1B FOR PV MANUFACTURING AND RELATED PROJECTS

1A – Module focus ($500M)

- EOIs 10 Dec 24
- Full applications 30 Apr 25

S2S PERSONNEL INVOLVED IN PROJECTS AND/OR PROJECT ASSESSMENT

1B – Feasibility studies ($50M)

- Full applications 12 Nov 25

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SunSPOT

APVI | SOLAR POTENTIAL TOOL

- Sunspot now seeing ~5,000 visitors a week
- Featured on:
  - Federal gov's Solar Consumer Guide https://www.energy.gov.au/solar
  - Solar Victoria Website https://www.solar.vic.gov.au/solar-assessment-calculator
  - NSW Government – Energy site (coming soon)
- Development underway for implementation in Q2 of 2025:
  - users with existing PV systems
  - integration with consumer data right (CDR)

Australian Government
Department of Climate Change, Energy, the Environment and Water

- Future Development:
  - Future-proof solar and battery estimates (Electrification 1): add EV, HVAC, elect hot water, elec cooker to existing load profile Seed funding from NSW Decarb hub
  - Personalised user electrification roadmap (Electrification 2): cost benefit analysis for electric appliances
  - Exploring funding opportunities

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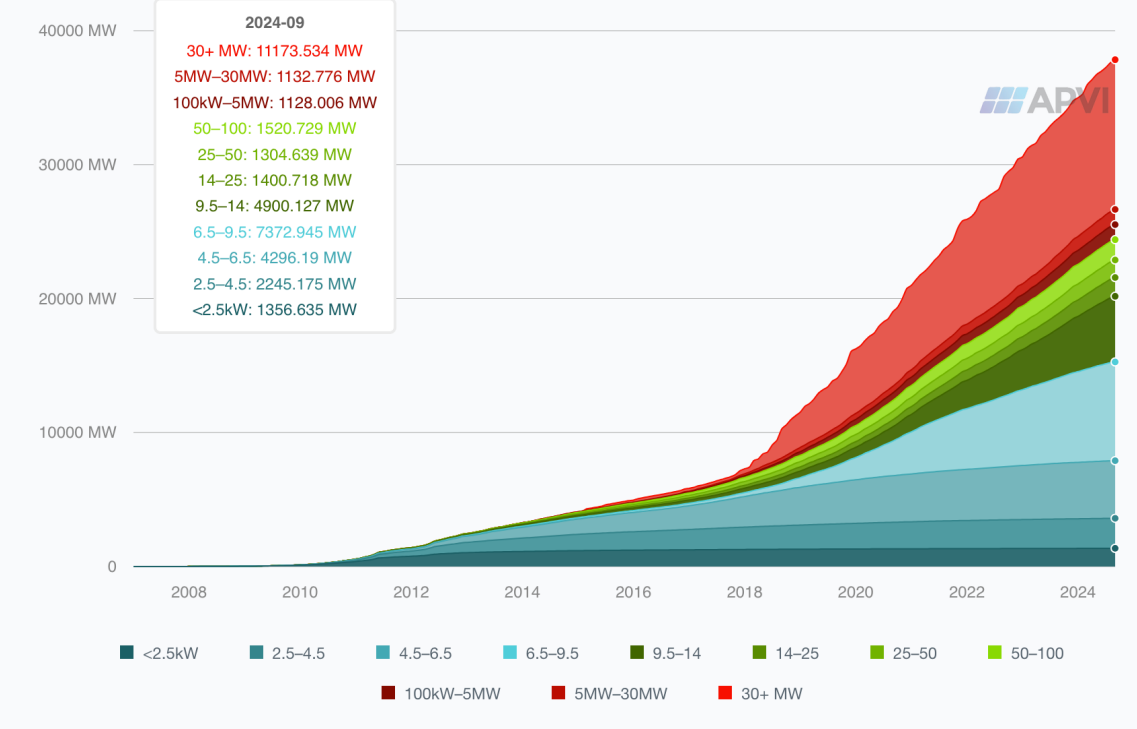
SOLAR MAPS



- 37.8GW rooftop PV
- 19.8GW residential
- 40% household penetration (revised methodology >15kW)
  - Likely overestimate (due to replacement systems)
  - Talking to ARENA / CER to access replacement data

https://pv-map.apvi.org.au/

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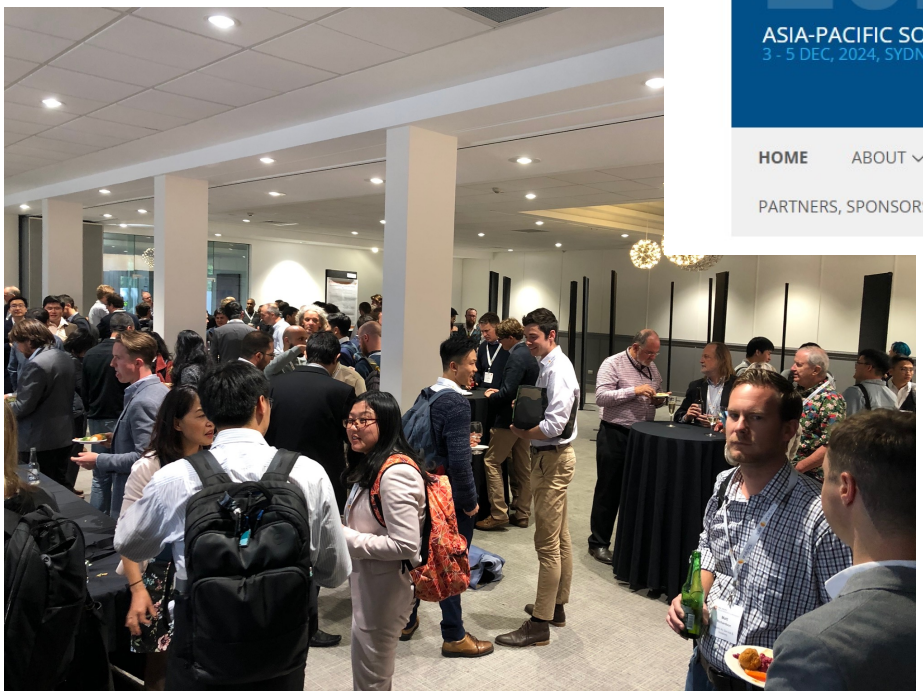
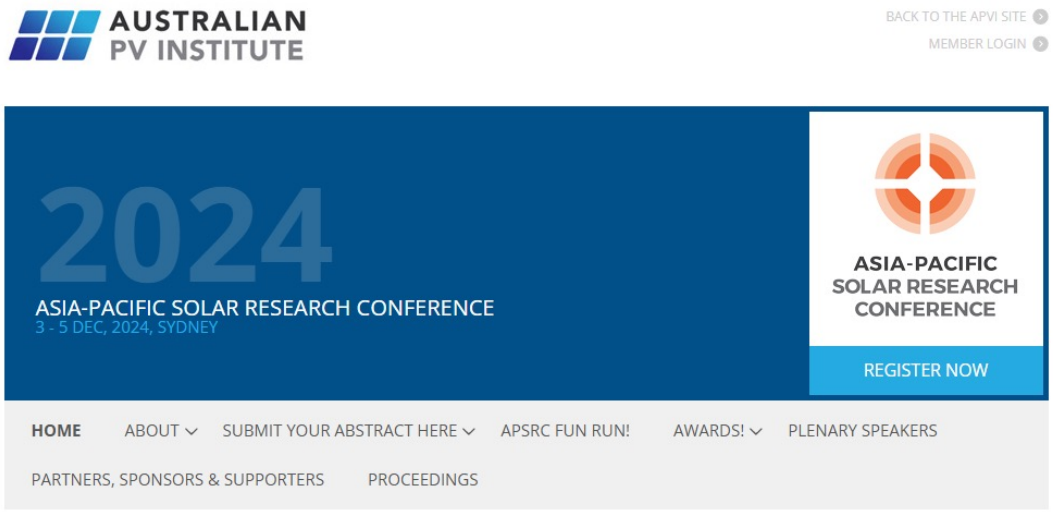
APSRC





2020 – Melb/Syd (hybrid) c/o Monash
2021 – Sydney (Hybrid) - c/o UNSW
2022 – Newcastle – c/o CSIRO
2023 – Melbourne – c/o RMIT
2024 – Sydney – c/o UNSW
2025 – Brisbane – c/o UQ

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TREASURER'S REPORT 2022/23

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Rob Passey
Treasurer APVI

APVI AGM

5 Dec 2023

DETAILED BREAKDOWN INCOMINGS/OUTGOINGS

APVI Operational Profit & Loss July 2014 to June 2023

Incomings (ex GST)	Jun-14	Jun-15	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23
Memberships	41,046	40,437	43,550	36,926	37,933	35,168	27,090	25,340	28,490	29,758
Interest	1,609	2,602	1,264	891	2,245	2,155	831	437	112	3,953
Other	9,535	1,400	-			1,818				
Projects (income generating)	4,000	46,270	73,806	-						
Total	56,190	90,709	118,620	37,817	40,178	39,142	27,921	25,777	28,602	33,712
Outgoings (ex GST)										
Workshops & meetings	5,117	2,895	552	-						
Website	16,070	998	505	602	301	489.78	3,770	9,945	1,184	689
Insurance	2,277	2,418	2,382	2,334	2,550	2761.54	3,484	3,863	4,190	5,041
Audit & tax return	3,800	3,200	4,930	4,190	3,650	5125	3,820	3,470	2,650	5,500
Bank fees	218	106	20	140	-	77	181	70	75	120
Chair's salary	2,083				-					
Accounting/bookkeeping		1,442	2,417	810	1,707	1324.55	1,529	1,289	1,592	946
Consultancy salary	7,750	2,583	4,527	14,582	10,417	17,904	15,500	4,167	5,083	3,760
Projects (income generating)	5,013	42,576	76,875	21,623	-					
Media/communications	20,873			-	-					150
Expenses	10,537	2,237	1,813	944	500	475	1,429	895	413	3,526
Miscellaneous	1,519	1,643	764	1,149	348				85	197
Total	75,257	60,098	94,785	46,375	19,473	28,157	29,712	23,699	15,273	19,929
Total each year (ex GST)	(19,067)	30,612	23,835	(8,558)	20,706	10,985	(1,791)	2,078	13,328	13,783

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PROFIT & LOSS

Australian PV Institute Limited

ABN: 91 006 005 190

Statement of Profit or Loss and Other Comprehensive Income

For the Year Ended 30 June 2023

	Note	2023 $	2022 $
Revenue	4	**1,502,561**	1,219,466
Other Expenses	5	**(1,242,134)**	(1,097,677)
Profit before income tax		**260,427**	121,789
Income tax (expense)/benefit		**(10,131)**	1,653
Profit for the year		**250,296**	123,442
Total comprehensive income for the year		**250,296**	123,442

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DIRECTORS & OFFICERS

- Ken Guthrie*
- Linda Koschier*
- Roger Dargaville*
- Rebecca Yang*
- Rong Deng^
- Marnie Shaw^
- Michelle Taylor*

- Renate Egan - Secretary
- Rob Passey – Treasurer
- Igor Skryabin – Public Officer

❖Note that all members of the board are in the middle of their two-year terms* or are renominating for another term^. Hence there are no vacancies, and no additional nominations have been received.

❖At next year's AGM Ken Guthrie and Linda Koschier will have reached the end of their third two-year term. Hence, two vacancies will arise.

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