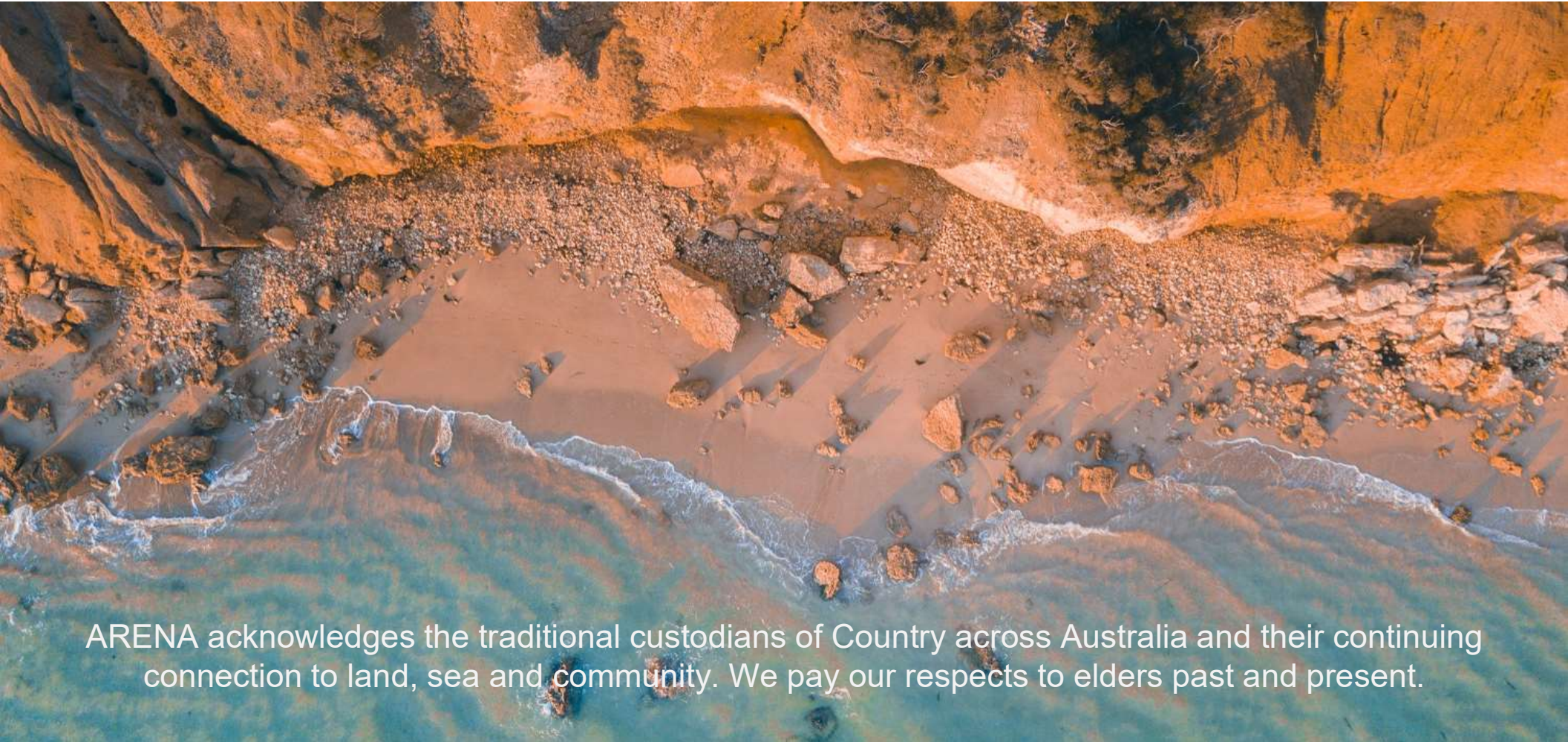


Webinar to start at 2:00pm AEST



Slido Q&A

Please enter your questions using Slido as we go, and we'll get to them at the end



ARENA acknowledges the traditional custodians of Country across Australia and their continuing connection to land, sea and community. We pay our respects to elders past and present.

Solar Sunshot

Program Launch Webinar
May 2024



Slido Q&A

Introductions

Darren Miller
CEO

Dan Sturrock
Director, Business Development and Transactions

Elicia Cantelo
Senior Strategy Manager

Tom Connell
Manager

Aidan McGregor
Analyst

Aiden Pang
Analyst

James Sinclair
Analyst

Mathew Knight
Analyst



Agenda

1. Welcome and Introduction to ARENA
2. Overview of Solar Sunshot
3. Proposed Program Structure
4. Round 1: Module Manufacturing
5. Further Rounds: Balance of PV Supply Chain
6. Key Design Questions
7. Links and Dates
8. Q&A

Consultation Information

The Solar Sunshot Consultation Paper sets out the proposed program structure and key questions that ARENA seeks stakeholder feedback on. Two response forms are available to submit feedback to ARENA:

- Consultation paper questions form
- Project details form

Access the Consultation Paper and forms at:
<https://arena.gov.au/funding/solar-sunshot>





1. Welcome and Introduction to ARENA

ARENA's Purpose

ARENA is the Australian Renewable Energy Agency.

The Agency was established by the Australian Government in July 2012.

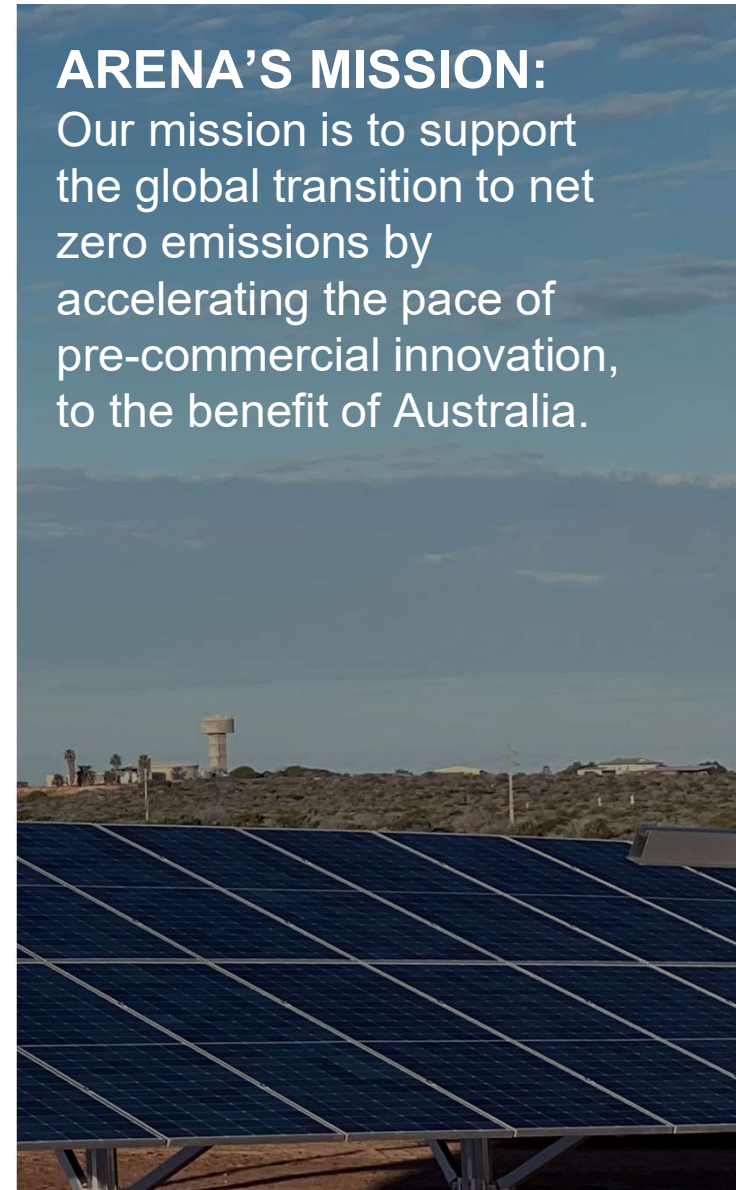
Our objectives are to:

- support improvements in the competitiveness of renewable energy and enabling technologies
- increase the supply of renewable energy in Australia, and
- facilitate the achievement of Australia's greenhouse gas emissions targets

by providing financial assistance and sharing knowledge to accelerate innovation that benefits all Australians.

ARENA'S MISSION:

Our mission is to support the global transition to net zero emissions by accelerating the pace of pre-commercial innovation, to the benefit of Australia.



AUSTRALIAN RENEWABLE ENERGY AGENCY

KEY STATISTICS 2012-2023

ARENA



INVESTED BY ARENA

\$2.43B



PROJECTS

687



TOTAL PROJECT VALUE

\$10.82B



INVESTMENT LEVERAGE

\$1:\$3.46



INVESTMENT BY TECHNOLOGY

BIOENERGY

\$131M



GEOTHERMAL

\$42M



GRID INTEGRATION

\$434M



HYBRID

\$110M



HYDROGEN

\$307M



OCEAN

\$44M



SOLAR PV

\$829M



SOLAR THERMAL

\$252M



STORAGE - BATTERIES/PHEs

\$277M



INVESTMENT BY STATE

NT PROJECTS
8
INVESTED
\$36M
VALUE
\$79M

WA PROJECTS
47
INVESTED
\$260M
VALUE
\$2.00B

SA PROJECTS
61
INVESTED
\$260M
VALUE
\$1.29B

TAS PROJECTS
21
INVESTED
\$40M
VALUE
\$99M

VIC PROJECTS
126
INVESTED
\$312M
VALUE
\$819M

QLD PROJECTS
72
INVESTED
\$359M
VALUE
\$2.57B

NSW PROJECTS
278
INVESTED
\$1.08B*
VALUE
\$3.73B

ACT PROJECTS
74
INVESTED
\$81M
VALUE
\$233M

INVESTMENT LEVERAGE ALONG THE INNOVATION CHAIN

STUDY

\$1:\$2.07



R&D

\$1:\$1.77



DEMONSTRATION

\$1:\$1.88



DEPLOYMENT

\$1:\$5.95



* Includes \$567 million contributed to projects inherited by ARENA in 2012.

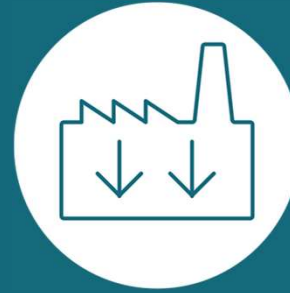
OUR STRATEGIC PRIORITIES



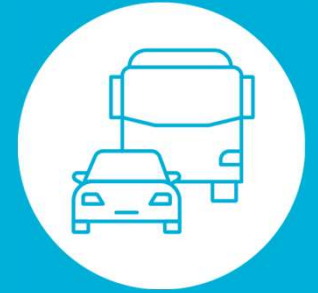
**OPTIMISE THE
TRANSITION TO
RENEWABLE
ELECTRICITY**



**COMMERCIALISE
RENEWABLE
HYDROGEN**



**SUPPORT THE
TRANSITION TO
LOW EMISSIONS
METALS**



**DECARBONISE
TRANSPORT**

Budget Measure Programs

Driving the Nation Program | National Industrial Transformation Program | Industrial Transformation Stream (Powering the Regions Fund)
Regional Australia Microgrid Program | Sustainable Aviation Fuel | Community Batteries | Hydrogen Headstart | HyGATE | Solar Sunshot Program

2. Overview of Solar Sunshot

Sunshot Overview

On 28 March 2024, the Australian Government announced up to \$1 billion funding for the Solar Sunshot program, to build Australia's solar photovoltaic (PV) manufacturing capabilities.

- The program aims to accelerate the development of Australia's solar PV manufacturing industry, catalyse clean energy industries, drive innovation, and help Australia connect to new global solar supply chains, to take advantage of the immense jobs and investment potential of solar PV.
- ARENA, in consultation with and the Department of Climate Change, Energy, the Environment and Water (DCCEEW) will design the Program, incorporating feedback from the consultation process.
- Consultation opened on **23 April 2024**, and will run until **31 May 2024**.
- ARENA has published a consultation paper seeking your feedback.

Industry Context

ARENA and APVI released the Silicon to Solar ('S2S') Study in January 2024, outlining the opportunities for Australia to play a role in solar PV manufacturing.



Silicon to Solar Study

- The report considered each step in the solar value chain and considered what support would be required for Australian manufacturing to be commercially viable
- The report included techno-economic analysis, considered potential policy drivers and key challenges to build a relevant, timely and viable solar PV manufacturing sector at each stage of the supply chain .
- The report included a range of recommendations to Government to establish solar manufacturing capability industry, including both financial incentives and other policy support ('policy, people and permits')
- A key conclusion from the report is that with c.\$3.2bn AUD of support, Australia could establish manufacturing of 10 GW of poly-silicon production and 1 GW of ingot and wafer, solar cell and solar module manufacturing

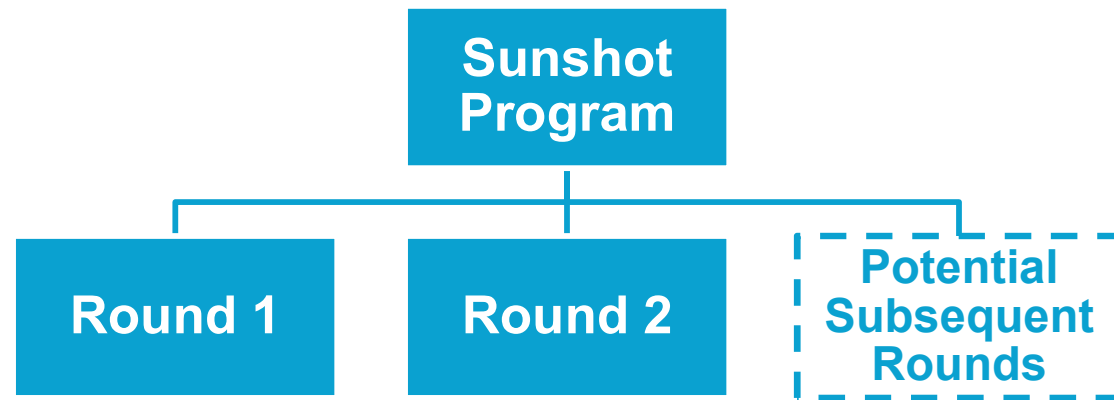
3. Proposed Program Structure

Refer to **Section 2. Program Structure** of the Consultation Paper for more information

Sunshot Program Structure

The Sunshot Program will be established to provide financial support across the solar PV supply chain. The Program will establish the overall objectives, guardrails, and mechanisms that will be used to allocate funding.

Funding Rounds announced under the Program will be used to call to market for specific proposals.

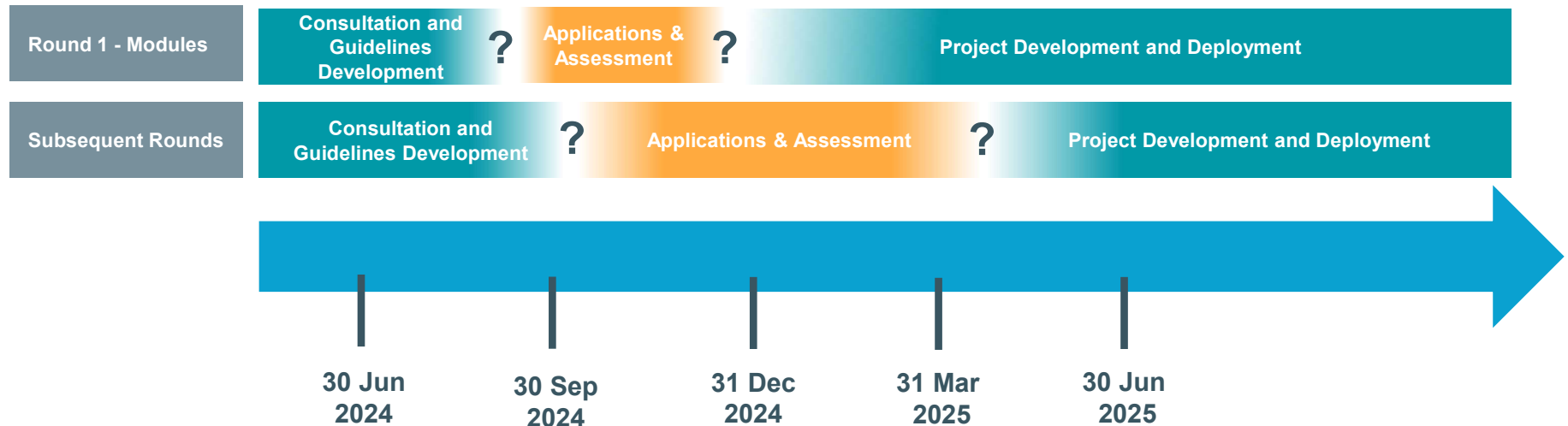


Refer to **Section 3. Indicative Timeline** of the Consultation Paper for more information

Funding Rounds

ARENA proposes that funding under the Sunshot Program will be delivered through **at least two Funding Rounds**. Round 1 will focus on **module manufacturing** and is expected to **open for applications in early August**.

Round 2 is proposed to be complementary to Round 1, open to the balance of the solar PV supply chain, with the need for any subsequent rounds determined through consultation.



Program Objectives

The following overarching Program Objectives are proposed to inform and guide the specific objectives of Funding Rounds.

Commercialise Australian solar PV innovations domestically to grow and diversify our economy

and

Enhance Australian solar manufacturing capacity to build sovereign capability over a critical supply chain in the long term

4. Round 1: Module Manufacturing

Round 1 Module Manufacturing Overview

Round 1 is proposed to support PV module manufacturing projects that contribute to the following objectives:

- Support a resilient and integrated domestic solar PV industry and build Australia's solar PV module manufacturing capability.
- Support innovation and use of advanced automation in PV module manufacturing.
- Reduce barriers to domestic solar PV module manufacturing.
- Enhance sustainable and competitive solar PV module manufacturing, having regard for long-term economic, social, and environmental sustainability

Modules Round 1 Overview

The Round 1 process is proposed to include the following features:

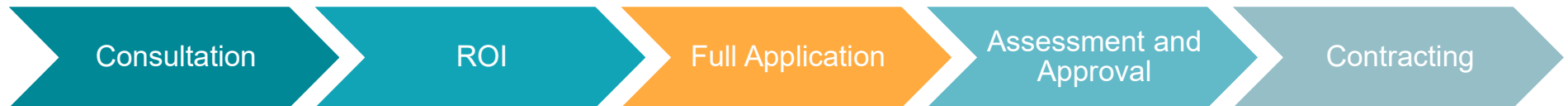
Eligibility	Applicants must hold an ABN	Applicants must be an Australian entity incorporated under the Corporations Act 2001	Projects must be located in Australia and must be new or expansions.	Modules must incorporate proven PV cell technologies
Application Process	A single stage assessment process to drive rapid outcomes	Competitive (ranked) process, in which applications are compared	Applicants will bid for a production credit price and volume	Projects that are awarded funding will be subject to Bid Bonds

Refer to **Section 8. Proposed Assessment Process** of the Consultation Paper for more information

Round 1 – Single-Stage Assessment

ARENA proposes a single-stage assessment process that includes a Registration of Interest, followed by a Full Application.

Registration of Interest (ROI)	Full Application
<ul style="list-style-type: none">• Program and Round 1 expected to open early August with ROIs due within 4 weeks.• Submission of the ROI will be a requirement to have the Full Application Assessed.• ARENA will provide a template for ROI.• The content of the ROI will not be merit assessed.	<ul style="list-style-type: none">• Full Applications are expected to be due in early November.• Applications will be assessed against Eligibility and Merit criteria



Refer to **Appendix B – Round 1 Eligibility and Merit Criteria** of the Consultation Paper for more information

Eligibility and Merit Criteria

The assessment process consists of two types of criteria: eligibility and merit.

Eligibility Criteria

Mandatory requirements for the application to be considered

Merit Criteria

Quantitative and qualitative aspects on which applications will be scored and competitively ranked

- A: Alignment to Round 1 Objectives
- B: Capability and Capacity
- C: Project Design, Methodology, Deliverability and Risk
- D: Financial Viability and Co-funding Commitment
- E: Knowledge Sharing

Refer to **Appendix B – Round 1 Eligibility and Merit Criteria** of the Consultation Paper for more information

Merit Criterion A - Alignment to Round 1 Objectives

This criterion assesses how well the project contributes to the Round 1 Objectives.

Support a resilient and integrated domestic solar PV industry and build Australia's solar manufacturing capability.

Support innovation and automation in PV module manufacturing.

Reduce barriers to domestic solar PV module manufacturing.

Enhance sustainable and competitive PV module manufacturing, having regard for long-term economic, social, and environmental sustainability.

Refer to **Appendix B – Round 1 Eligibility and Merit Criteria** of the Consultation Paper for more information

Merit Criterion B - E

Merit Criterion	Summary
B - Capability and Capacity	<ul style="list-style-type: none">This criterion assesses the capability and capacity of the Applicant and project partners to deliver the Project
C - Project Design, Methodology, Deliverability and Risk	<ul style="list-style-type: none">This criterion assesses how well designed and planned the project is, including objectives and methodology, technical design, risk management, development and permitting processes, schedule, project management, and community engagement and benefit sharing.
D - Financial Viability and Co-funding Commitment	<ul style="list-style-type: none">This criterion assesses whether the project is commercially viable without ARENA funding, whether the amount of funding and the total cost of the Activity is appropriate (value for money), the financial capacity to deliver the project.
E - Knowledge Sharing	<ul style="list-style-type: none">This criterion assesses the value of knowledge generated by the project in contributing to the objectives, how well that knowledge is targeted to specific audiences, and how the knowledge is captured, stored, disseminated.

Refer to **Appendix A – Information Requirements for Round 1 Applications** of the Consultation Paper for more information

ROI and Full Application

Registration of Interest (ROI)

Short form, limited length **ROI template document** detailing:

- Project description, size, and location
- Details of development status
- Expected credit support (a range), justification, and investment hurdle rate
- Outline of partners, joint venture, suppliers, access to IP, and relevant experience
- Capital structure and budget
- Community engagement and benefit
- Plans across supply chain/integration

Full Application

Minimum information required:

- Project Plan
- Dynamic Financial Model and Budget
- Risk Management Plan
- Community Engagement and Benefit Plan
- Resourcing and Recruitment Plan
- Funding Agreement Compliance Table
- Knowledge Sharing Plan compliance
- Letters of support
- Other documents for due diligence



5. Round 2 and Subsequent Rounds: Balance of PV Supply Chain

Round 2: Balance of Supply Chain

Round 2 and subsequent rounds are proposed to support projects across the balance of the solar PV supply chain which may include:

- **Polysilicon**, including quartz, metallurgical silicon, and polysilicon.
- **Ingots & Wafers**, including inputs, novel ingot pulling and wafering techniques and mass manufacture.
- **Solar cells**, including inputs such as pastes, manufacturing techniques, and mass manufacture.
- **Module glass and frames**, including innovations and sourcing of materials.
- **Broader solar innovation**, including inverters, deployment technologies, mounting structures, or other innovations which improve performance and reduce costs.
- **End-of-life treatment** of products, including recycling of solar modules and other components.

ARENA expects that the majority of funding would be delivered through production-linked payments, with some capital grants for feasibility/FEED studies and smaller-scale commercialisation projects



6. Key Design Questions

Resilient and Integrated Supply Chain

Opportunity: build a resilient, integrated solar PV manufacturing industry

ARENA recognises that the scope of the full supply chain is quite broad, and the funding will need to consider dependencies within the supply chain.

Key questions:

- What aspects of the solar PV supply chain should be supported?
- To what extent do certain stages of the supply chain need to be progressed in parallel or jointly in integrated projects to be successful?
- How can the Program design best support vertically integrated projects?
- Would the relative timing of Round 1 and Round 2 impact project sequencing for your project?

Market Readiness

Opportunity: accelerate advanced Projects, and ensure the right Projects are funded

ARENA wishes to understand the ambition and readiness of the market to develop solar PV manufacturing in Australia, particularly module manufacturing in the short term.

Key questions:

- What is your view of market readiness across different stages of the supply chain to deliver commercially viable manufacturing projects in Australia?
- Are there any crucial timeline requirements or key milestones for your project and how could the Program design best accommodate these?
- When would you anticipate commencing any feasibility studies or FEED work?

Sustainable and Competitive

Opportunity: Sustainable and competitive solar PV module manufacturing

ARENA wants to understand the requirements for competitive PV module manufacturing, having regard for long-term economic, social, and environmental sustainability.

Key questions:

- How can projects support community engagement and benefit, and improve life-cycle environmental impact?
- Should the Program focus on regions, in particular communities impacted by the energy transition?
- What other sustainability and community policies or support could Government consider that would complement the Program?

Refer to **Section 6. Proposed Funding Mechanism** of the Consultation Paper for more information

Proposed Funding Mechanism

Opportunity: derisk Projects for private sector and government and incentivise production

The proposed support mechanism for module manufacturing is a production-linked payment (per MW of panels produced).

Key questions:

- Where in the supply chain can production-linked payments be used to best deliver the Program Objectives? Where would capital grants be more suitable?
- What value of production credit do you think is required, and over how many years? What is the total amount of funding that should be allocated to Round 1 (module manufacturing)?
- Would you expect to access other forms of Government support for solar PV manufacturing? What forms of support are not needed under the Program, due to the availability of existing support by others?

Role of Australia Within Global Supply Chains

Opportunity: develop local innovation and manufacturing capabilities, drawing on international expertise and investment

ARENA recognises that Australia can benefit from strong trade relationships and collaboration with international companies who already have large-scale manufacturing capabilities.

Key questions:

- How might your project work with international partners? For example, might you explore supply, investment or contract manufacturing agreements and if so, what might be the nature of these partnerships?
- To what extent is your proposed project dependent on the policies of other international governments (e.g. access to export markets and incentives that exist in international markets)?

Other Opportunities?

What have you been thinking about that we haven't covered today?

ARENA would like to understand if the market thinks there are other key opportunities, challenges and design considerations in the establishment of a solar PV manufacturing industry.

7. Links and Dates

Links and Dates

ARENA

www.arena.gov.au

Sunshot Webpage

<https://arena.gov.au/funding/solar-sunshot/>



Context: Silicon To Solar (S2S) Report

<https://arena.gov.au/knowledge-bank/apvi-silicon-to-solar-detailed-and-overview-reports/>

Further Sunshot questions

solarsunshot@arena.gov.au

Consultation Period

Opened 23 April 2024

Closes 31 May 2024

Expected Program and Round 1 Timing

Launch early August

Registration of Interest due September

Full Applications due early November

General ARENA questions

proposals@arena.gov.au

8. Q&A



Slido Q&A
Please enter your questions using Slido

ARENA

End
