

APPENDIX 1: FINANCIAL ASSISTANCE AGREEMENTS AND PROGRESS

ARENA is required under the ARENA Act to publish details of financial assistance agreements and an assessment of the extent to which these agreements have progressed, or are expected to progress, the principal objectives and priorities as stated in the general funding strategy in force for the year.

The *Australian Renewable Energy Agency (Consequential Amendments and Transitional Provisions) Act 2011* also requires ARENA to report details of people to whom financial assistance is provided under a transferred Australian Government funding agreement or Australian Solar Institute agreement.

During the reporting period, 211 projects were actively managed by ARENA. Seven of those projects were terminated during the course of the year, two of which received no funding prior to the closure of the projects.

ARENA contractually committed funds to 83 new projects in 2017-18 (Table 8). The Board and CEO also approved funds for 39 projects that were subject to commercial negotiations on 30 June 2018, and are likely to lead to contractual commitments in 2018-19. As with previous years, some of the projects contractually committed during 2017-18 were approved by the Board in the previous financial year, while other projects approved by the Board during 2017-18 will be contractually committed in 2018-19. This is reflective of ARENA's approval processes.

Details of the 128 ongoing projects during 2017-18 are provided in Table 9.

TABLE 8: ARENA FUNDS CONTRACTUALLY COMMITTED TO NEW PROJECTS IN 2017-18

Proponent name	Project status*	Project description	Financial assistance committed 2017-18 (ex. GST)	Location	Investment priority	Primary technology	Innovation
AGL Energy Services Pty Limited	Active	AGL Energy demand response NSW	\$2,624,019	NSW	Delivering secure and reliable electricity	Enabling	Demonstration
Allen Taylor and Co	Active	Hardwood residue bio-refinery feasibility study	\$500,000	NSW	Improving energy productivity	Bioenergy	Study
Aquahdrex Pty Limited	Terminated	Connecting the power and gas grids - High-efficiency, low-cost hydrogen production as a means of decarbonising natural gas pipelines and enabling greater deployment of renewables	\$5,000,000	SA	Exporting renewable energy	Hydrogen	Demonstration
ATCO Gas Australia Pty Ltd	Active	ATCO H2 Microgrid Project	\$1,530,000	WA	Delivering secure and reliable electricity	Hydrogen	Demonstration
Australian Association for Hydrogen Energy	Active	Promoting hydrogen implementation and utilisation in Australia through international collaboration	\$494,000	QLD	Exporting renewable energy	Hydrogen	Study
Australian National University	Active	Next generation industrial bifacial silicon solar cells	\$1,977,845	ACT	Accelerating solar PV innovation	Solar PV	R&D

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Proponent name	Project status*	Project description	Financial assistance committed 2017-18 (ex. GST)	Location	Investment priority	Primary technology	Innovation
Australian National University	Active	Driving increased efficiency and reliability in silicon photovoltaics - from ingots to modules	\$2,399,392	ACT	Accelerating solar PV innovation	Solar PV	R&D
Australian National University	Active	Monolithic perovskite - silicon tandem cells: towards commercial reality	\$672,841	ACT	Accelerating solar PV innovation	Solar PV	R&D
Australian National University	Active	Advanced silicon solar cells by DESIJN (Deposited silicon junctions)	\$1,116,142	ACT	Accelerating solar PV innovation	Solar PV	R&D
Australian National University	Active	Development of stable electrodes for perovskite solar cells	\$936,732	ACT	Accelerating solar PV innovation	Solar PV	R&D
Australian National University	Active	Tandem PV micro concentrator	\$788,515	ACT	Accelerating solar PV innovation	Solar PV	R&D
Australian PV Institute	Active	IEA PV Power Systems Technical Collaborative Program: Increasing the uptake of solar PV through the delivery of quality research, data and information	\$668,000	NSW	Accelerating solar PV innovation	Solar PV	Study
Australian PV Institute	Active	IEA Solar Heating and Cooling Technology Collaboration Program: Promoting the use of all aspects of solar thermal energy	\$383,500	NSW	Improving energy productivity	Solar thermal	Study

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Proponent name	Project status*	Project description	Financial assistance committed 2017-18 (ex. GST)	Location	Investment priority	Primary technology	Innovation
Bioenergy Australia	Active	Driving growth of reliable bioenergy and biofuels in Australia	\$885,733	NSW	Exporting renewable energy	Bioenergy	Study
CSIRO	Active	Manufacturing of printed perovskite PV modules	\$3,310,248	VIC	Accelerating solar PV innovation	Solar PV	R&D
CSIRO	Active	Participation in IEA Solar Power and Chemical Energy Systems (SolarPACES) Technology Collaboration Program	\$434,000	NSW	Delivering secure and reliable electricity	Solar thermal	Study
CSIRO	Active	Smart Grids Innovation Challenge: Participation in international events and knowledge sharing	\$113,750	NSW	Delivering secure and reliable electricity	Enabling	Study
CSIRO	Active	Challenge Affordable Heating and Cooling of Buildings, participation in international conferences and knowledge sharing	\$37,000	NSW	Improving energy productivity	Enabling	Study
CSIRO	Active	IEA Ocean Energy Systems, Technology Collaboration Program	\$283,500	TAS	Other	Marine	Study

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Proponent name	Project status*	Project description	Financial assistance committed 2017-18 (ex. GST)	Location	Investment priority	Primary technology	Innovation
CSIRO	Active	Feasibility study into dispatchable, cost effective power from forest and mill waste using the direct injection carbon engine (bioDICE)	\$432,000	NSW	Delivering secure and reliable electricity	Bioenergy	Study
DCP Company Pty Ltd	Active	Rooftop solar electricity retailer	\$1,000,000	VIC	Accelerating solar PV innovation	Enabling	Study
DNV GL Australia Pty Ltd	Active	Gap analysis and development of a performance standard for battery storage employed in a domestic/ commercial solar-battery application	\$1,400,000	VIC	Delivering secure and reliable electricity	Enabling	Study
ElectraNet Pty Limited	Active	ElectraNet Energy Storage for Commercial Renewable Integration (ESCRI) Phase 2	\$12,000,000	SA	Delivering secure and reliable electricity	Storage	Deployment
EnergyAustralia Development Pty Ltd	Active	EnergyAustralia demand response NSW	\$1,435,500	NSW	Delivering secure and reliable electricity	Enabling	Demonstration
EnergyAustralia Development Pty Ltd	Active	EnergyAustralia demand response VIC and SA	\$6,929,000	VIC	Delivering secure and reliable electricity	Enabling	Demonstration

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EnergyAustralia Development Pty Ltd	Active	Cultana Pumped Hydro Energy Storage Project - Phase 2	\$500,000	SA	Delivering secure and reliable electricity	Enabling	Study
EnerNOC Pty Ltd	Active	EnerNOC demand response NSW	\$1,800,000	NSW	Delivering secure and reliable electricity	Enabling	Demonstration
EnerNOC Pty Ltd	Active	EnerNOC demand response VIC	\$5,400,000	VIC	Delivering secure and reliable electricity	Enabling	Demonstration
EPC Technologies	Active	Demonstration of medium-scale solar on industrial rooftops can be effectively integrated into the distribution network	\$225,000	QLD	Delivering secure and reliable electricity	Enabling	Study
ERM Power	Active	NSW Schools Energy Productivity Program (SEPP)	\$500,000	NSW	Improving energy productivity	Solar PV	Demonstration
Everengi Pty Ltd	Active	South Australian strategic regional electric vehicle adoption program	\$172,215	SA	Accelerating solar PV innovation	Electric vehicles	Demonstration
Flow Power	Active	Flow Power demand response NSW	\$1,318,250	NSW	Delivering secure and reliable electricity	Enabling	Demonstration

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Proponent name	Project status*	Project description	Financial assistance committed 2017-18 (ex. GST)	Location	Investment priority	Primary technology	Innovation
Genex Power	Active	Project development activities for the Kidston Stage Two Hydro-Solar Project	\$5,000,000	QLD	Delivering secure and reliable electricity	Enabling	Study
GESS Devco Pty Ltd	Active	Gannawarra Energy Storage System (GESS)	\$22,735,000	VIC	Delivering secure and reliable electricity	Storage	Demonstration
Greatcell Solar Limited	Active	Perovskite solar cell technology - large area module development	\$6,000,000	NSW	Accelerating solar PV innovation	Solar PV	Demonstration
Hivve	Active	Hivve modular sustainable classrooms	\$368,115	NSW	Improving energy productivity	Enabling	Demonstration
HWF 2 PTY LTD	Active	Hornsedale Wind Farm Stage 2 (HWF2) FCAS Trial	\$299,550	SA	Delivering secure and reliable electricity	Wind	Demonstration
Hydro Tasmania	Closed	Concept study of pumped-hydro opportunities in Tasmania, including conversion of existing hydro generators and new installations	\$300,000	TAS	Delivering secure and reliable electricity	Storage	Study
Hydro Tasmania	Closed	Establishing an expanded role for Tasmania in the future NEM as the 'Battery of the Nation'	\$500,000	TAS	Delivering secure and reliable electricity	Enabling	Study
Hydro Tasmania	Active	Fish Migration Roadmap	\$280,000	TAS	Delivering secure and reliable electricity	Enabling	Study

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Hydro Tasmania	Active	Repurposing the Tarraleah hydropower scheme for the future electricity market - Feasibility study	\$2,500,000	TAS	Delivering secure and reliable electricity	Storage	Study
Institute for Sustainable Futures, University of Technology Sydney	Active	Renewable Energy and Load Management (REALM) Stage 1 - Study	\$293,578	NSW	Improving energy productivity	Enabling	Study
Intercast & Forge Pty Ltd	Active	Intercast & Forge demand response SA	\$323,654	SA	Delivering secure and reliable electricity	Enabling	Demonstration
IT Power (Australia) Pty Limited	Active	Open-source grid integration model for the National Electricity Market	\$476,844	ACT	Delivering secure and reliable electricity	Enabling	Study
Jeanes Holland and Associates	Active	Roadmap for concentrated solar thermal (CST) power generation in Australia	\$407,592	TAS	Delivering secure and reliable electricity	Solar thermal	Study
L03 Energy Pty Ltd	Active	Latrobe Valley Microgrid - Feasibility assessment	\$370,000	VIC	Delivering secure and reliable electricity	Enabling	Study
Microbiogen Pty Ltd	Active	Microbiogen biocatalyst optimisation and deployment project for efficient production of biofuels	\$4,029,467	NSW	Improving energy productivity	Bioenergy	Demonstration

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Proponent name	Project status*	Project description	Financial assistance committed 2017-18 (ex. GST)	Location	Investment priority	Primary technology	Innovation
Monash University	Active	Developing a new type of high-efficiency building-integrated PV cell	\$744,661	VIC	Accelerating solar PV innovation	Solar PV	R&D
Monash University	Active	Bringing all-polymer solar cells closer to commercialisation	\$840,000	VIC	Accelerating solar PV innovation	Solar PV	R&D
Monash University	Active	Leveraging Monash Smart City platform to create a centre of knowledge excellence for DSM	\$500,500	VIC	Delivering secure and reliable electricity	Enabling	Study
MSM Milling	Active	MSM Milling Biomass Fuel Switch Project	\$2,000,000	NSW	Improving energy productivity	Bioenergy	Deployment
Musselroe Wind Farm	Active	Enablement of FCAS at Musselroe Wind Farm	\$499,120	TAS	Delivering secure and reliable electricity	Wind	Study
NOJA Power Switchgear Pty Ltd	Active	NOJA Power Intelligent Switchgear Project	\$5,000,000	QLD	Delivering secure and reliable electricity	Enabling	Demonstration
Planet Innovation Pty Ltd	Active	ZenHQ Virtual Power Plant	\$1,963,500	VIC	Delivering secure and reliable electricity	Enabling	Demonstration
Plumbing Industry Climate Action Centre (PICAC)	Active	Net Zero Energy Facility	\$500,000	VIC	Improving energy productivity	Geothermal	Deployment
Pooled Energy Pty Ltd	Active	Pooled Energy demand management and modulation	\$2,500,000	NSW	Improving energy productivity	Enabling	Demonstration

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Powershop Australia	Active	Powershop demand response Vic	\$995,237	VIC	Delivering secure and reliable electricity	Enabling	Demonstration
Regional Power Corporation	Active	Horizon Power Business Model Pilot Project - Phase 1 (Highgarden)	\$1,920,000	WA	Delivering secure and reliable electricity	Enabling	Deployment
Restech Pty Limited	Active	The Enerverter (Project Aztec)	\$700,000	NSW	Delivering secure and reliable electricity	Enabling	Deployment
Sea Box International Pty Ltd	Active	Design, manufacture and test of a factory assembled and relocatable Container Roll Out Warehousing System - Photovoltaic (CROWS-PV)	\$289,725	ACT	Improving energy productivity	Enabling	Demonstration
Simply Energy Solutions	Active	Simply Energy VPPX	\$7,700,000	SA	Accelerating solar PV innovation	Enabling	Deployment
Snowy Hydro Limited	Active	Feasibility study: New pumped hydroelectric energy storage (PHES) in the Snowy Hydro scheme	\$8,000,000	NSW	Delivering secure and reliable electricity	Storage	Study
SPARK Infrastructure SA (No 1) Pty Limited	Terminated	SAPN Fort Largs Community Microgrid	\$2,623,500	SA	Delivering secure and reliable electricity	Enabling	Demonstration

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Proponent name	Project status*	Project description	Financial assistance committed 2017-18 (ex. GST)	Location	Investment priority	Primary technology	Innovation
Spotless Sustainability Services	Active	Ballarat Terminal Station Battery Energy Storage System (BESS)	\$2,265,000	VIC	Delivering secure and reliable electricity	Storage	Demonstration
United Energy Distribution Pty Ltd	Active	Peak demand reduction using solar and storage	\$450,000	VIC	Delivering secure and reliable electricity	Enabling	Demonstration
United Energy Distribution Pty Ltd	Active	United Energy dynamic voltage management demand response (Product 2)	\$5,762,000	VIC	Delivering secure and reliable electricity	Enabling	Demonstration
University of Adelaide	Active	Converting Sunlight Innovation Challenge: Building Australia's international partnerships in solar fuels research and innovation	\$494,000	SA	Exporting renewable energy	Enabling	Study
University of New South Wales	Active	Accelerating industrial solar cells efficiency by development of PECVD-based metal oxides / Increasing efficiency of silicon solar cells by novel passivated contact structures	\$503,389	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Investigate metallised encapsulant for silicon PV modules: A path to reduced LCOE for PV	\$1,160,000	NSW	Accelerating solar PV innovation	Solar PV	R&D

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University of New South Wales	Active	Hydrogenated bifacial PERL silicon PV cells with laser doping and plated contacts	\$1,100,000	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Improving world-record commercial high-efficiency n-type solar cells through recombination analysis	\$1,785,000	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Hydrogenated and hybrid heterojunction p-type silicon PV cells	\$1,735,000	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Development of beyond 20% efficiency kesterite (CZTSSe) solar cells: Win the PV race with sustainable low-cost, low-toxic and stable materials	\$1,331,098	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Advanced high-efficiency silicon solar cells employing innovative atomic scale engineered surface and contact passivation layers	\$2,019,456	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Next Generation III-V/Si multi-junction solar cells using GaP buffers and novel silicon sub-cells	\$1,144,628	NSW	Accelerating solar PV innovation	Solar PV	R&D

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University of New South Wales	Active	Integrating industrial black silicon with high efficiency multicrystalline solar cells	\$500,000	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Development of novel hydrogen trapping techniques for breakthrough Si casting and wafering technologies	\$1,968,000	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Efficient adamantine thin-film on silicon tandem cells: The next step in commercial cell evolution	\$3,184,166	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Developing systems that enable off-grid households and communities to access affordable and reliable renewable electricity	\$228,000	NSW	Delivering secure and reliable electricity	Enabling	Study
University of Queensland	Active	PV penetration project	\$1,190,000	QLD	Delivering secure and reliable electricity	Enabling	Study
University of Technology, Sydney	Active	Social Access Solar Gardens	\$239,930	NSW	Delivering secure and reliable electricity	Enabling	Study

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University of the Sunshine Coast	Active	Control and manage the moisture content of woody biomass to create certainty in the quality and supply for bioenergy	\$300,000	QLD	Improving energy productivity	Bioenergy	Study
Zero Mass Water (Australia) Pty Ltd	Active	SOURCE drinking water solar panel demonstration project	\$420,000	SA	Improving energy productivity	Solar PV	Demonstration
Total		83	\$165,706,892				

TABLE 9: OTHER PROJECTS ACTIVELY MANAGED BY ARENA IN 2017-18

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
AGL Energy Limited	Closed	P2P-DLT: A virtual trial of peer-to-peer energy trading including an assessment of the applicability of distributed ledger technology	\$120,000	VIC	Delivering secure and reliable electricity	Enabling	Study
AGL Energy Services Pty Limited	Active	5 MW Virtual Power Plant	\$5,000,000	SA	Delivering secure and reliable electricity	Enabling	Deployment
AGL Pty Ltd	Active	AGL Solar PV project	\$166,700,000	NSW	Delivering secure and reliable electricity	Solar PV	Deployment
APT Pipelines Limited	Active	Emu Downs Solar Farm Project	\$5,500,000	WA	Delivering secure and reliable electricity	Solar PV	Deployment
APT Pipelines Limited	Active	Darling Downs Solar Farm	\$20,000,000	QLD	Accelerating solar PV innovation	Solar PV	Deployment
Australian National University	Active	Katherine Booker: Metal-assisted chemical etching of Sliver solar cells	\$356,749	ACT	Accelerating solar PV innovation	Solar PV	Fellowship
Australian National University	Active	Advanced surface and contact technologies for industrial silicon photovoltaics	\$3,962,616	ACT	Accelerating solar PV innovation	Solar PV	R&D

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Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
Australian National University	Active	High-temperature solar thermal energy storage via manganese-oxide based redox cycling	\$1,193,534	ACT	Delivering secure and reliable electricity	Solar thermal	R&D
Australian National University	Active	PV Modules for the Australian environment (PV-MATE)	\$502,977	ACT	Accelerating solar PV innovation	Solar PV	R&D
Australian National University	Active	Eliminating material quality barriers to low cost, very high efficiency silicon solar cells and modules	\$2,023,407	ACT	Accelerating solar PV innovation	Solar PV	R&D
Australian National University	Active	Bladed receivers with active airflow control	\$1,361,327	ACT	Other	Solar thermal	R&D
Australian National University	Active	An atlas of pumped hydro energy storage	\$609,000	ACT	Delivering secure and reliable electricity	Enabling	Demonstration
Australian National University	Active	A robotic vision system for automatic inspection and evaluation of solar plant infrastructure	\$876,183	ACT	Other	Solar thermal	R&D
Australian National University	Active	Real-time operational distributed PV simulations for distribution network service providers	\$1,198,359	ACT	Delivering secure and reliable electricity	Solar PV	R&D

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Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
Australian National University	Active	CONSORT: Consumer energy systems providing cost-effective grid support	\$2,895,951	TAS	Delivering secure and reliable electricity	Enabling	R&D
Australian National University	Closed	Jose Zapata: Model predictive control of thermal components in point focus solar thermal systems	\$359,654	ACT	Other	Solar thermal	Fellowship
Australian National University	Closed	Thomas Allen: Negatively-charged dielectric films for surface passivation of silicon solar cells	\$124,324	ACT	Accelerating solar PV innovation	Solar PV	Scholarship
Australian National University	Terminated	Qunyu Bi: Nanostructures design for light trapping in silicon wafer and chalcogenide thin-film solar cells	\$242,728	ACT	Accelerating solar PV innovation	Solar PV	Fellowship
Australian PV Institute	Active	Australian involvement in the IEA PV power systems, and solar heating and cooling implementing agreements	\$440,500	NSW	Improving energy productivity	Solar PV	Demonstration
Barcaldine Remote Community Solar Farm Pty Ltd	Active	Barcaldine 25 MW Remote Community Solar Project	\$22,800,000	QLD	Delivering secure and reliable electricity	Solar PV	Demonstration
Bioenergy Australia	Active	Enhanced Australian participation in IEA Bioenergy tasks and activities	\$707,667	NSW	Improving energy productivity	Bioenergy	Demonstration

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Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
BioPower Systems Pty Ltd	Active	bioWAVE ocean pilot at Port Fairy	\$11,960,000	VIC	Other	Marine	Demonstration
Bundaberg Regional Irrigators Group Ltd	Active	Adapting renewable energy concepts to irrigated sugarcane production at Bundaberg	\$446,011	QLD	Improving energy productivity	Enabling	Demonstration
Canadian Solar (Australia) Pty Limited	Active	Longreach Solar Farm	\$1,300,000	QLD	Delivering secure and reliable electricity	Solar PV	Deployment
Canadian Solar (Australia) Pty Limited	Active	Oakey Solar Farm	\$2,162,000	QLD	Delivering secure and reliable electricity	Solar PV	Deployment
Carnegie Wave Energy Limited	Active	Perth Wave Energy Project	\$13,095,381	WA	Other	Marine	Demonstration
Carnegie Wave Energy Limited	Active	CETO 6 Project	\$13,000,000	WA	Other	Marine	Demonstration
Carnegie Wave Energy Limited	Active	Garden Island Microgrid Project: Development and demonstration of the integration of CETO 6 wave energy technology with solar PV, energy storage system and a desalination plant	\$2,500,000	WA	Delivering secure and reliable electricity	Enabling	Demonstration
CSIRO	Closed	The Australian Wave Energy Atlas	\$1,329,900	TAS	Other	Marine	Study

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CSIRO	Active	AIRAH PUSCH Australia - Promoting the use of solar cooling and heating in Australia	\$399,436	NSW	Improving energy productivity	Solar thermal	Demonstration
CSIRO	Active	Novel concepts for low-cost small heliostats in remote installations	\$1,000,000	NSW	Other	Solar thermal	R&D
CSIRO	Active	Specifying guidelines for assessing perovskite solar cells	\$892,000	NSW	Accelerating solar PV innovation	Solar PV	Demonstration
CSIRO	Active	Australian Solar Thermal Research Initiative (ASTRI)	\$35,208,747	NSW	Delivering secure and reliable electricity	Solar thermal	R&D
CSIRO	Closed	Solar-driven supercritical CO2 Brayton Cycle	\$2,496,835	NSW	Other	Solar thermal	R&D
CSIRO	Closed	Optimisation of central receivers for advanced power cycles	\$1,150,879	NSW	Other	Solar thermal	R&D
CSIRO	Closed	Kallista Sears: ITO free, efficient organic solar cells based on textured graphene electrodes	\$320,811	VIC	Accelerating solar PV innovation	Solar PV	Fellowship
CSIRO	Closed	Virtual Power Station 2	\$850,000	NSW	Delivering secure and reliable electricity	Enabling	R&D
CSIRO	Terminated	High efficiency solar Allam cycle	\$428,928	NSW	Other	Solar thermal	R&D

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Curtin University	Active	Increasing the uptake of solar PV using energy storage, monitoring and grid-connected micro-grids within strata	\$900,375	WA	Delivering secure and reliable electricity	Enabling	R&D
DeGrussa Solar Project Pty Ltd	Active	DeGrussa 10.56 MW off-grid solar PV/ storage project	\$20,900,000	WA	Improving energy productivity	Solar PV	Demonstration
Echuca Regional Health	Closed	Case study and implementation of solar field chilling and heating opportunities in a hospital environment	\$147,500	VIC	Improving energy productivity	Enabling	Deployment
EDL Group Operations Pty Ltd	Active	Cooper Pedy Renewable Diesel Hybrid	\$18,410,879	SA	Delivering secure and reliable electricity	Hybrid	Demonstration
Electricity Generation and Retail Corporation	Active	Alkimos Beach Energy Storage Project	\$3,310,000	WA	Delivering secure and reliable electricity	Enabling	Demonstration
Energy Storage Council, Australia Solar Council	Closed	Australian Energy Storage Council research and report	\$45,000	ACT	Delivering secure and reliable electricity	Storage	Study
EnergyAustralia Development Pty Ltd	Closed	EnergyAustralia South Australian Pumped Hydro Energy Storage (PHES) Feasibility Study	\$453,000	SA	Delivering secure and reliable electricity	Enabling	Study
Ergon Energy Corporation Limited	Terminated	Doomadgee Solar Farm	\$145,084	QLD	Delivering secure and reliable electricity	Hybrid	Demonstration

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Ergon Energy Queensland Pty Ltd	Active	Pilot a commercial and operational model for integrating solar and storage to provide energy services to residential customers	\$400,000	QLD	Delivering secure and reliable electricity	Enabling	Demonstration
Frontier Carbon Pty Ltd	Active	Toolkit for renewable energy financing	\$467,717	VIC	Delivering secure and reliable electricity	Enabling	Demonstration
Genex Power	Active	Feasibility study to validate the construction of a large-scale pumped storage hydroelectric energy storage facility at a remote disused mine site in Northern Queensland	\$4,000,000	QLD	Delivering secure and reliable electricity	Enabling	Demonstration
Genex Power	Active	Kidston Solar Project	\$8,850,000	QLD	Delivering secure and reliable electricity	Solar PV	Deployment
Goldwind Australia Pty Ltd	Active	White Rock Solar Farm, co-located with White Rock Wind Farm	\$5,400,000	NSW	Delivering secure and reliable electricity	Solar PV	Deployment
GreenSync	Closed	Distributed Energy ExchanOge (deX) - design and pilot a prototype digital exchange for trading DER to support integrating renewables and grids	\$450,000	VIC	Delivering secure and reliable electricity	Enabling	Demonstration

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Gullen Solar Pty Ltd	Active	Gullen Range Solar Farm, co-located with Gullen Range Wind Farm	\$9,900,000	NSW	Delivering secure and reliable electricity	Solar PV	Deployment
Hydro Tasmania	Active	Flinders Island Renewable Energy Project	\$5,500,000	TAS	Delivering secure and reliable electricity	Hybrid	Demonstration
Hydro Tasmania	Active	Rottneest Island: Addressing the energy and water nexus	\$3,758,010	WA	Delivering secure and reliable electricity	Hybrid	Demonstration
Hydro Tasmania	Closed	Augmenting the Tasmanian hydropower system - feasibility studies	\$500,000	TAS	Delivering secure and reliable electricity	Enabling	Study
Indigenous Essential Services Pty Ltd	Active	Northern Territory Solar Energy Transformation Program (SETuP)	\$35,000,000	NT	Delivering secure and reliable electricity	Hybrid	Demonstration
IT Power (Australia) Pty Limited	Active	Testing the performance of lithium-ion batteries	\$870,000	ACT	Delivering secure and reliable electricity	Enabling	R&D
Karratha Solar Power No 1 Pty Ltd	Active	Karratha Airport Solar Project	\$2,300,000	WA	Delivering secure and reliable electricity	Solar PV	Demonstration
Kennedy Energy Park Pty Ltd	Active	Kennedy Energy Park	\$18,000,000	QLD	Delivering secure and reliable electricity	Hybrid	Demonstration

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Laing O'Rourke Australia Pty Ltd	Active	SunSHIFT pre-commercial deployment	\$2,100,396	QLD	Exporting renewable energy	Solar PV	Deployment
Lakeland Solar & Storage Pty Limited	Active	Lakeland Solar & Storage Project	\$17,419,000	QLD	Delivering secure and reliable electricity	Solar PV	Demonstration
LMS Energy Pty Ltd	Active	Joule Energy - Pilot Landfill Solar Project, Phase 1	\$100,000	VIC	Delivering secure and reliable electricity	Solar PV	Demonstration
Lord Howe Island Board	Active	Lord Howe Island Hybrid Renewable Project	\$4,500,000	NSW	Delivering secure and reliable electricity	Hybrid	Demonstration
Manildra Solar Farm Pty Ltd	Active	Manildra Solar Farm	\$9,810,000	NSW	Delivering secure and reliable electricity	Solar PV	Deployment
MASG Renewables P1 Operations Pty Ltd	Active	Feasibility study for integrated community waste-to-energy project for Mt Alexander Shire	\$146,468	VIC	Improving energy productivity	Bioenergy	Demonstration
Monash University	Active	Accelerating community and business support for a low carbon future	\$390,000	VIC	Delivering secure and reliable electricity	Enabling	Demonstration
Moree Solar Farm Pty Ltd	Active	Moree Solar Farm	\$101,700,000	NSW	Delivering secure and reliable electricity	Solar PV	Deployment

APPENDIX 1: FINANCIAL ASSISTANCE AGREEMENTS AND PROGRESS

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
Moreland Energy Foundation Limited (MEFL)	Closed	Feasibility and product design for inner city brown fields off-grid solar (Here Comes The Sun)	\$112,400	VIC	Delivering secure and reliable electricity	Solar PV	Study
National ICT Australia Limited	Active	Australian Renewable Energy Mapping Infrastructure (AREMI)	\$2,197,150	NSW	Delivering secure and reliable electricity	Enabling	Demonstration
NEOEN Australia Pty Ltd	Active	Griffith Solar Farm	\$4,500,000	NSW	Delivering secure and reliable electricity	Solar PV	Deployment
NEOEN Australia Pty Ltd	Active	Dubbo Solar Hub	\$4,950,000	NSW	Delivering secure and reliable electricity	Solar PV	Deployment
NEOEN Australia Pty Ltd	Active	Parkes Solar Farm	\$6,750,000	NSW	Delivering secure and reliable electricity	Solar PV	Deployment
NEV Power Pty Ltd	Active	Narara Ecovillage smart grid	\$1,158,660	NSW	Delivering secure and reliable electricity	Hybrid	Deployment
Northern SEQ Distributor - Retailer Authority	Active	Feasibility study to undertake an assessment of the commercial viability of a waste-to-energy project at Unity Water's sewerage treatment plant	\$695,143	QLD	Improving energy productivity	Bioenergy	Demonstration

APPENDICES AND GLOSSARY

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
Queensland University of Technology	Active	Integration of biogas from sugarcane residues in sugarcane transport and milling to reduce fossil fuel usage	\$2,239,100	QLD	Improving energy productivity	Bioenergy	R&D
RATCH - Australia Corporation Limited	Active	Collinsville Solar PV Power Station Stage 1	\$9,500,000	QLD	Delivering secure and reliable electricity	Solar PV	Deployment
RayGen Resources	Active	RayGen PV Ultra Series B equity investment opportunity	\$4,800,000	VIC	Exporting renewable energy	Solar PV	Deployment
Re.Group Pty Ltd	Active	Feasibility Study into Mt Piper hybrid EfW project	\$400,000	NSW	Improving energy productivity	Bioenergy	Demonstration
Regional Development Australia ACT Incorporated	Closed	Establish the SERREE (South East Region of Renewable Energy Excellence) Industry Cluster - build and demonstrate a renewable energy region of collaborative industry/research excellence	\$488,870	ACT	Delivering secure and reliable electricity	Enabling	Study
Renergi Pty Ltd	Active	Advanced biomass gasification technology	\$4,160,542	WA	Delivering secure and reliable electricity	Bioenergy	Demonstration
Renergi Pty Ltd	Active	A low emission biofuel technology	\$5,473,000	WA	Improving energy productivity	Bioenergy	Demonstration

APPENDIX 1: FINANCIAL ASSISTANCE AGREEMENTS AND PROGRESS

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
Renewable Developments Australia Pty Ltd	Active	Feasibility study for Stage 1 of the Pentland Bioenergy Project	\$3,000,000	QLD	Improving energy productivity	Bioenergy	Demonstration
Royal Melbourne Institute of Technology	Active	MUSIC: Micro-urban solar integrated concentrators	\$4,921,191	VIC	Improving energy productivity	Solar thermal	R&D
Rural Industries Research & Development Corporation (RIRDC)	Active	Australian biomass for bioenergy assessment	\$3,160,669	ACT	Delivering secure and reliable electricity	Bioenergy	Demonstration
Scouller Energy Pty Ltd	Active	Normanton Solar Farm	\$8,380,000	QLD	Delivering secure and reliable electricity	Solar PV	Demonstration
SM Project Company Pty Ltd	Active	Goulburn Bioenergy Project	\$2,100,000	NSW	Improving energy productivity	Bioenergy	Deployment
Smart Storage (Ecoult)	Active	Commercialisation of partial state of charge management and control systems for UltraBattery	\$4,100,000	NSW	Delivering secure and reliable electricity	Enabling	R&D
Solar Analytics Pty Ltd	Active	Solar monitoring for better energy outcomes for residential solar PV	\$2,144,000	NSW	Accelerating solar PV innovation	Enabling	Deployment
Southern Oil Refining Pty Ltd	Active	Australian Biofuels from Australian Resources	\$3,188,630	QLD	Improving energy productivity	Bioenergy	Demonstration

APPENDICES AND GLOSSARY

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
Sustainable Melbourne Fund	Active	Expansion of the Environmental Upgrade Agreement market in Victoria	\$821,369	VIC	Delivering secure and reliable electricity	Solar PV	Demonstration
Swinburne University of Technology	Active	Towards an Australian capability in arrays of ocean wave-power machines	\$770,728	VIC	Other	Marine	Demonstration
The Trustee for Biosystems Engineering Trust	Terminated	Final development of a full-scale woody crop harvester prototype and commercial biomass supply chain demonstration	\$463,417	NSW	Improving energy productivity	Bioenergy	Demonstration
The Trustee for the NSW Electricity Networks Operations Trust	Closed	New England Renewable Hub (Feasibility Study)	\$450,000	NSW	Delivering secure and reliable electricity	Enabling	Study
University of Adelaide	Active	Establishing the Australian Energy Storage Knowledge Bank	\$1,441,811	SA	Delivering secure and reliable electricity	Enabling	Demonstration
University of Adelaide	Active	AusPERM - Structural permeability mapping in Australia	\$450,000	SA	Other	Geothermal	Demonstration
University of Adelaide	Active	Integrating concentrating solar thermal energy into the Bayer Alumina Process	\$4,490,752	SA	Improving energy productivity	Solar thermal	R&D
University of New South Wales	Active	Development and commercialisation of high-efficiency silicon solar cell technology	\$6,472,980	NSW	Accelerating solar PV innovation	Solar PV	R&D

APPENDIX 1: FINANCIAL ASSISTANCE AGREEMENTS AND PROGRESS

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
University of New South Wales	Active	Multi-junction c-Si solar cells based on virtual Ge substrates	\$1,455,000	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	40% efficient photovoltaic "Power Cube" power tower receiver	\$1,400,000	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Adrian Shi: Stability of perovskite solar cells and modules	\$46,041	NSW	Accelerating solar PV innovation	Solar PV	Scholarship
University of New South Wales	Active	Australia-US Institute for Advanced Photovoltaics (AUSIAPV)	\$45,999,005	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Low-cost, high-efficiency copper-zinc-tin-sulphide (CZTS) on silicon multi-junction solar cells	\$2,612,358	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Towards ultimate performance commercial silicon solar cells	\$2,970,702	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	High-efficiency silicon/perovskite tandem cells and modules: Demonstration and commercial evaluation	\$3,599,459	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Active	Addressing barriers to efficient renewable integration	\$982,000	NSW	Delivering secure and reliable electricity	Enabling	Demonstration

APPENDICES AND GLOSSARY

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
University of New South Wales	Closed	Cost-effective GaAsP top solar cell grown on a high-performance, low-cost silicon solar cell	\$2,616,463	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Closed	Clare Disney: Plasmonic light trapping for solar cells	\$109,944	NSW	Accelerating solar PV innovation	Solar PV	Scholarship
University of New South Wales	Closed	Andrew Danos: The role of spin in triplet-triplet annihilation upconversion	\$70,000	NSW	Accelerating solar PV innovation	Solar PV	Scholarship
University of New South Wales	Closed	Tools for design and scale-up of solar thermochemical reactors	\$1,083,320	NSW	Other	Solar thermal	R&D
University of New South Wales	Closed	Bernard Mitchell: Advanced and industry-ready photoluminescence characterisation of silicon bricks	\$330,195	NSW	Accelerating solar PV innovation	Solar PV	Fellowship
University of New South Wales	Closed	Alexander To: Surface passivation of high voltage solar cell structures with ALD deposited aluminium oxide	\$51,015	NSW	Accelerating solar PV innovation	Solar PV	Scholarship
University of New South Wales	Closed	Advanced recombination-based loss analysis methods for silicon wafer and silicon solar cells	\$381,328	NSW	Accelerating solar PV innovation	Solar PV	R&D
University of New South Wales	Terminated	Vincent Allen: Fabrication of a new cost-effective high-efficiency solar cell structure	\$111,840	NSW	Accelerating solar PV innovation	Solar PV	Scholarship

APPENDIX 1: FINANCIAL ASSISTANCE AGREEMENTS AND PROGRESS

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
University of South Australia	Active	Maximising solar PV with phase change thermal energy storage	\$995,290	SA	Accelerating solar PV innovation	Enabling	R&D
University of South Australia	Closed	Shane Sheoran: A direct contact heat exchanger for high-temperature thermal storage in solar power plants	\$120,000	SA	Other	Solar thermal	Scholarship
University of Tasmania	Active	Tidal Energy in Australia - Assessing resource and feasibility to Australia's future energy mix	\$2,494,860	TAS	Delivering secure and reliable electricity	Marine	Demonstration
University of Technology, Sydney	Active	Develop lithium-sulfur batteries for large-scale electrical energy storage	\$830,000	NSW	Delivering secure and reliable electricity	Enabling	R&D
University of Technology, Sydney	Active	Networks Renewed: Using innovative inverter and battery storage technologies to improve network power quality, reduce costs and support solar PV	\$1,871,000	NSW	Delivering secure and reliable electricity	Enabling	Demonstration
University of Technology, Sydney	Closed	Mapping Potential Network Opportunities for Renewable Energy DM	\$538,240	NSW	Delivering secure and reliable electricity	Enabling	Study
University of Western Australia	Active	From single to multiple wave energy converters: Cost reduction through location and configuration optimisation	\$994,198	WA	Other	Marine	R&D

APPENDICES AND GLOSSARY

Proponent name	Project status*	Project description	Funding committed (ex. GST)	Location	Investment priority	Primary technology	Innovation
University of Wollongong	Active	Smart sodium storage system for renewable energy storage	\$2,707,000	NSW	Delivering secure and reliable electricity	Enabling	R&D
University of Wollongong	Closed	Joseph Giorgio: Light-weight and flexible solid-state dye-sensitised solar cells	\$49,227	NSW	Accelerating solar PV innovation	Solar PV	Scholarship
Vast Solar Pty Ltd	Active	Vast Solar 6 MWth grid-connected CSP research, development and demonstration facility with thermal energy storage	\$9,896,960	NSW	Delivering secure and reliable electricity	Solar thermal	Demonstration
Voyages Indigenous Tourism	Active	Yulara 1.8 MW Dispersed PV	\$447,525	NT	Delivering secure and reliable electricity	Solar PV	Demonstration
Weipa Solar Farm Pty Ltd	Active	Weipa Solar PV Project	\$11,300,000	QLD	Improving energy productivity	Solar PV	Demonstration
Whitsunday Solar Farm Pty Ltd	Active	Whitsunday Solar Farm	\$9,500,000	QLD	Delivering secure and reliable electricity	Solar PV	Deployment
WorleyParsons Services Pty Ltd	Active	Tidal turbine reef feasibility study	\$280,000	WA	Other	Marine	Demonstration
Total		128	\$801,012,714				

*Projects listed as active include projects that are substantially complete but are still fulfilling knowledge sharing commitments.