

Basis for estimated Government investment of more than \$22 billion in the decade to 2030

Summary (prepared 30 March 2022)

Budget announcements	Amount (\$m)
1. Estimated in LETS 2020	18,330
2. Announced in 2020-21 Budget, excluding ARENA base funding which was already included in (1)	674.4
3. Announced in 2021-22 Budget	1,530.0
TOTAL 1-3 (Note: this forms the basis of \$20b figure in LETS 2021)	20,534.0
4. Announced in 2021-22 Budget MYEFO	1075.5
Total before 2022-23 Budget	21,609.9
TOTAL including 2022-23 Budget	23,000.6 (More than \$22 billion)

1. Low Emissions Technology Statement 2020 (Sep 2020)

The LETS 2020, released in September 2020, stated that the Government expects to invest over **\$18 billion** in low emissions technologies over the decade to 2030. This was based on:

Description	Amount (\$m)
ARENA base funding over the decade to 2030, announced in the 2020-21 Budget ¹	1,430
CEFC investment, estimated at \$1.29 billion per year based on historical investment levels	12,900
Original ERF funding and new funding for the Climate Solutions Fund to be spent over the decade	3,000
Around \$1 billion across CSIRO, CRC and ARC, based on historical spending levels	1,000
TOTAL	18,330

2. Budget 2020-21 (Sep 2020)

The 2020-21 Budget stated that **\$1.9 billion** of funding was allocated under the 'Investment in new energy technologies' measure.²

The measure includes \$1.4 billion of base funding for ARENA, which was already included in the \$18 billion estimate (above) published in LETS 2020.

The table below shows relevant programs from this measure, as well as others, amounting to **\$674 million**. These were not included in the initial \$18 billion estimate published in LETS 2020.

¹ <https://www.minister.industry.gov.au/ministers/taylor/media-releases/investment-new-energy-technologies>

² p.118, Budget 2020-21: Budget Paper No.2, https://archive.budget.gov.au/2020-21/bp2/download/bp2_complete.pdf

Budget measure ³	Program description	Amount (\$m)
Investment in new energy technologies	Base funding for ARENA up to 2030 (included in the initial \$18 billion estimate in LETS 2020)	1,430
	Co-investment fund to support industrial, freight and agricultural businesses to identify and adopt technologies to reduce emissions and increase productivity	95.4
	Future fuels fund	74.5
	Expansion of the Regional and Remote Communities Reliability Fund to support microgrids in regional and remote areas	67.1
	Improving productivity and lowering energy costs in the building and hotels sectors	52.2
	Hydrogen hubs, research collaborations and international supply chain studies	70.2
	Carbon Capture and Storage Development Fund	50.0
Improving energy affordability & reliability	South West Integrated System Big Battery Project	15.0
Other	Accelerating major transmission projects ⁴	250.0
	TOTAL	2,104.4
	TOTAL excluding ARENA base funding	674.4

3. 2021-22 Budget (May 2021)

The 2021-22 Budget stated that **\$1.6 billion** of funding was allocated under the ‘Emissions Reduction and New Investments under the Technology Investment Roadmap’ measure.⁵

The table below shows relevant programs from this measure, as well as others, amounting to **\$1,530 million**.

Budget measure ⁶	Program description	Amount (\$m)
Emissions reduction and new investments under the Technology Investment Roadmap	Regional Clean Hydrogen Hubs (further 4 Hubs on top of the 1 Hub supported in 2020-21 under Activating Regional Hydrogen Export Hub) ⁷	275.5
	CCUS Hubs and Technologies ⁸	263.7

³ https://archive.budget.gov.au/2020-21/bp2/download/bp2_complete.pdf

⁴ <https://www.minister.industry.gov.au/ministers/taylor/media-releases/247b-lock-lower-energy-prices-reduce-emissions-and-boost-our-economy>

⁵ p.138, Budget 2021-22: Budget Paper No.2, https://budget.gov.au/2021-22/content/bp2/download/bp2_2021-22.pdf

⁶ https://budget.gov.au/2021-22/content/bp2/download/bp2_2021-22.pdf

⁷ <https://www.minister.industry.gov.au/ministers/taylor/media-releases/investing-reliable-affordable-energy-and-reducing-emissions-secure-australias-recovery>

⁸ Ibid

	Land Sector (includes soil carbon and livestock emissions) ⁹	59.6
	Strategic International Partnerships ¹⁰	565.0
	Unlocking abatement in the industrial sector through the King Review Safeguard Crediting Mechanism	279.9
	Supporting Australian businesses and supply chains to reduce energy costs through more energy efficient industrial equipment and business practices	26.4
	Supporting growth and accountability of voluntary climate action through Climate Active	10.4
Improving energy affordability and reliability	Katherine-Darwin Interconnected System big battery project and microgrid rollout in the Northern Territory	30.0
	Deployment of a renewable energy microgrid incorporating hydrogen in the Daintree in Northern Queensland	19.3
	TOTAL	1,530

4. 2021-22 MYEFO (Dec 2021)

The table below shows relevant programs from the 2021-22 MYEFO measure, Energy and Emissions Reduction, as well as others, amounting to **\$1,075 million**.

Budget measure	Description	Amount (\$m)
Energy and emissions reduction	CEFC Low Emissions Technology Commercialisation Fund	500.0
	Expansion of the Future Fuels Fund – to enhance consumer choice and accelerate uptake of new vehicle technologies reducing emissions in the transport sector	177.7
	Hydrogen hubs – funding for two additional hydrogen hubs, bring the Government’s commitment to 7 hubs	158.7
	Supporting the Bioenergy Roadmap – additional funding for ARENA to support development and deployment of sustainable aviation and marine biofuels ¹¹	33.5
	Expansion of the National Soil Carbon Innovation Challenge – additional funding to accelerate reliable, certifiable soil carbon measurement technologies	14.0
	Analysis and modelling to ensure electricity grid is ready for increased EV uptake and avoid unnecessary investment in distribution networks	10.1

⁹ Ibid

¹⁰ Ibid

¹¹ <https://www.minister.industry.gov.au/ministers/taylor/media-releases/advancing-australias-bioenergy-sector>

Other	Underwriting support for Dinawan to Wagga Wagga transmission upgrade	181.5
	TOTAL	1,075.5

5. 2022-23 Budget (March 2022)

Including the following measures in the 2022-23 Budget, the Government's investment in low emissions technologies in the decade to 2030 is more than \$22 billion. Not all funding listed in the Minister's media release on 29 March 2022 is for low emissions technology. Relevant measures are extracted below.

Budget measure	Description	Amount (\$m)
Energy and emissions reduction measures ¹²	<ul style="list-style-type: none"> \$300 million to reduce emissions from LNG production and support clean hydrogen production at Darwin, together with associated carbon capture and storage infrastructure. \$247.1 million to support increased private sector investment in low emissions technologies including hydrogen and the continued development of a hydrogen Guarantee of Origin scheme. \$200 million to increase onshore processing and value-add of iron ore exports, to support low emissions steel production in Indo-Pacific customer countries like Japan and Korea \$200 million to enhance Australia's supply chain security through new low emissions manufacturing facilities (using hydrogen and hydrogen-derivatives like ammonia, as well as carbon capture utilisation and storage) in the Pilbara region \$148.6 million to support more investment in affordable and reliable power, including the development of community microgrid projects in regional and rural Australia \$100 million to de-risk private sector investment in firm generation and grid infrastructure to increase system strength and capacity in the Pilbara region \$100 million to support pre-Final Investment Decision activities and early works to make the Port of Newcastle 'hydrogen ready'. 	1,295.7
Other	Patent box for low emissions technology ¹³	95.0
	TOTAL	1,390.7

¹² <https://www.minister.industry.gov.au/ministers/taylor/media-releases/2022-23-budget-backs-australian-industry-energy-security-and-net-zero-emissions>

¹³ Total amount is \$122.5m out to 2033-34. The amount out to 2030-31 is \$95m, which aligns with public statements on Government investment in low emissions technology in the decade to 2030. The amount announced in Budget 2022-23 is ~\$54m over the forward estimates.