

EXPLANATORY STATEMENT

Issued by the authority of the Minister for Energy and Emissions Reduction

Australian Renewable Energy Agency Act 2011

*Australian Renewable Energy Agency (Implementing the Technology Investment Roadmap)
Regulations 2021*

Purpose

The Australian Renewable Energy Agency (ARENA), as established by the *Australian Renewable Energy Agency Act 2011* (the ARENA Act), has the main objectives of improving the competitiveness of renewable energy technologies and increasing the supply of renewable energy in Australia.

ARENA's legislated functions, as outlined in section 8 of the ARENA Act, are primarily to provide financial assistance for research into, development and deployment of renewable energy technologies, and to engage in knowledge sharing in relation to the same. Paragraph 8(f) further provides that additional functions may be prescribed through regulations made under section 74 of the ARENA Act.

ARENA's functions have been expanded before under paragraph 8(f) and section 74 of the ARENA Act. The *Australian Renewable Energy Agency Regulation 2016* (the 2016 Regulations) conferred on ARENA the new function of working with the Clean Energy Finance Corporation (the CEFC) to administer the Clean Energy Innovation Fund (the CEIF), an investment fund dedicated to advancing early-stage clean energy technologies including those in the energy efficiency and low emissions sectors. The 2016 Regulations prescribed a function for ARENA that went beyond the renewable energy sector, thereby allowing the agency to make a broader contribution to the Government's emissions reductions policies. The 2016 Regulations remains in place and has been operating successfully since it was enacted.

The present instrument, the *Australian Renewable Energy Agency (Implementing the Technology Investment Roadmap) Regulations 2021* (the Regulations), further expands ARENA's functions under paragraph 8(f) and section 74 of the ARENA Act. Specifically, it prescribes a function of providing financial assistance in relation to priority low emissions technologies, with a focus on the five priority low emissions technologies and the corresponding stretch goals identified in the Government's first Low Emissions Technology Statement (LETS). It also prescribes a function of providing financial assistance in relation to five targeted programs announced in the 2020-21 Budget: Freight Efficiency Assistance Grants, the Freight Energy Productivity Trial Program, the Future Fuels Fund, the Industrial Energy Transformation Studies Program and the Regional Australia Microgrid Pilots Program. These new functions empower ARENA to contribute to Australia's fulfilment of its

obligations under the United Nations Framework Convention on Climate Change (the UNFCCC)¹ and the Paris Agreement.²

As noted above, ARENA's legislated functions are currently limited to supporting renewable energy technologies and assisting the CEFC to administer the CEIF. If the Regulations were not to be enacted, ARENA would lack the legal authority to administer any elements of the articulated 2020-21 Budget initiatives that did not sufficiently relate to renewable energy. Enactment of the Regulations is crucial to permit ARENA to play a fuller role in the delivery of the Government's technology-driven approach to the reduction of greenhouse gas emissions.

A regulation that expanded ARENA's functions, the *Australian Renewable Energy Agency Amendment (2020-21 Budget Programs) Regulations 2021* (the disallowed Regulations), was disallowed in June 2021. These Regulations are different in substance to the disallowed Regulations. Specifically, they have made material changes to the nature and scope of the new functions and programs intended to be supported by ARENA, as well as changing aspects of the context in which they will be deployed and reported on. ARENA's general ability to fund priority low emissions technologies is now entirely centred on the five priority technologies articulated in the first LETS, and is subject to new accountability, reporting and financial controls. Furthermore, ARENA's powers in relation to the five targeted budget programs are now capped financially, time limited and have more defined scopes for funding than was the case for the disallowed Regulations.

Background

The Government's Technology Investment Roadmap³ (the Roadmap) aims to mobilise and coordinate public and private investment in the next generation of new and emerging low emissions technologies with the potential for transformational economic and emissions reduction outcomes.⁴ The Roadmap envisages ARENA, together with the CEFC and the Clean Energy Regulator, playing a key role in driving down the cost of deploying priority low emissions technologies identified in the annual LETS. This will make them competitive with existing alternatives, positioning Australia as a global leader and delivering meaningful reductions in emissions. The annual LETS will communicate progress towards the technology priorities and identify opportunities to invest in new and emerging technologies.

¹ [1994] ATS 2. Available at <http://www.austlii.edu.au/au/other/dfat/treaties/1994/2.html>.

² [2016] ATS 24. Available at <http://www.austlii.edu.au/au/other/dfat/treaties/ATS/2016/24.html>.

³ The Technology Investment Roadmap refers to the Government policy of the same name, under which five priority low emissions technologies were identified in the first annual LETS, with further new and emerging technologies to be identified for future investment. See further <https://www.industry.gov.au/data-and-publications/technology-investment-roadmap-first-low-emissions-technology-statement-2020>.

⁴ For the avoidance of doubt, the range of technologies in play would include renewable, low-, zero- and negative-emissions technologies, as well as technologies that enable each of these.

In the 2020-21 Budget⁵ ARENA was allocated new baseline funding of \$1.4 billion with which to progress the commercialisation of a range of new and emerging priority low emissions technologies under the Roadmap and the first (and subsequent) LETS. In the 2020-21 Budget the Department of Industry, Science, Energy and Resources (the Department) was also allocated an additional \$192.5 million to be transferred to ARENA to deliver the following targeted programs:⁶

- A Freight Efficiency Assistance Grants initiative, to encourage activities that improve energy productivity or fuel efficiency or increase the proportion of renewable energy used in the road transport sector.
- A Freight Energy Productivity Trial Program, to test the effects of specific new renewable truck technologies on energy productivity or fuel efficiency.
- A Future Fuels Fund, to support the implementation of batteries, hydrogen and biofuels in the road transport sector.
- An Industrial Energy Transformation Studies Program, to fund studies that will inform business investment decisions in energy efficiency technologies.
- A Regional Australia Microgrid Pilots Program, to fund pilot projects testing the use of renewable energy microgrids in regional and remote areas.

The Regulations empower ARENA to play a full role in the delivery of the outlined Budget initiatives and to contribute to the delivery of the Government’s technology-driven approach to the reduction of greenhouse gas emissions.

Authority and Operation

The Regulations are made under the regulation-making power in section 74 of the ARENA Act, enlivened by the power in paragraph 8(f) of the ARENA Act to prescribe additional legislated functions through regulation.

The power to prescribe additional functions for ARENA by regulation is not limited to the subject matter of renewable energy. There is nothing in the wording of paragraph 8(f) of the ARENA Act or in the Explanatory Memorandum to the Bill that became the ARENA Act which would indicate an intention to limit the regulation-making power to renewable energy alone. While the “main object” of the ARENA Act in section 3 relates to renewable energy, there is nothing that expressly excludes ARENA from pursuing other objects, including those conferred through additional functions such as those prescribed by the Regulations. It is also relevant that the new functions prescribed by the Regulations are funded by new appropriations, and do not impact on the delivery of the statutory appropriation set out in section 64 of the ARENA Act, which in any case cannot be drawn down beyond the 2021-22 financial year.

⁵ See Budget 2020-21, *Budget Paper No. 2: Budget Measures*, pp.118-119.

⁶ Note that, while the general funding for these programs was announced in the 2020-21 Budget, the final names for some of the programs were only settled subsequent to the release of the Budget papers.

The new functions prescribed by the Regulations remain subject to ARENA's ongoing governance and accountability framework. Accordingly, when administering the new initiatives outlined above, ARENA must act in a proper, efficient and effective manner and make all investment decisions on merit.⁷ ARENA must also exercise its new functions within the legislative powers of the Commonwealth.⁸

As is the case for its existing functions under the ARENA Act, the Regulations do not provide standing for external merits review of the funding decisions made by ARENA under its new functions. Since ARENA's funding decisions relate to the allocation of finite resources, they are not amenable to merits review and it would not be appropriate to provide this here.

Noting that the following is not a comprehensive statement of relevant constitutional considerations, the 2020-21 Budget initiatives outlined above relate to the external affairs power in paragraph 51(xxix) of the Constitution, thereby grounding the exercise by ARENA of its new functions within its constitutional basis under paragraph 14(b) of the ARENA Act.

The external affairs power supports legislation implementing Australia's obligations under international treaties to which it is a party. The UNFCCC includes a range of obligations on Australia to take domestic actions that reduce its emissions of greenhouse gases. Relevantly, it provides that parties shall:

- formulate, implement, publish and regularly update national and, where appropriate, regional programs containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to climate change;⁹
- promote and cooperate in the development, application and diffusion of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases in all relevant sectors including energy, transport, industry, agriculture, forestry and waste management sectors;¹⁰ and
- adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs.¹¹

The Paris Agreement was entered into by the parties to the UNFCCC to enhance its implementation. Under the Paris Agreement, Australia has a "nationally determined contribution" comprising a 2030 emissions reduction target of 26 to 28 per cent below 2005 levels. Relevantly, article 4.2 of the Paris Agreement provides that "[e]ach Party shall

⁷ See paragraphs 9(a) and (b) of the ARENA Act.

⁸ See section 14 of the ARENA Act.

⁹ See article 4.1(b).

¹⁰ See article 4.1(c).

¹¹ See article 4.2(a).

prepare, communicate and maintain successive nationally determined contributions that it intends to achieve” and that “[p]arties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions”. The Paris Agreement also contains obligations to contribute to global emissions reductions. For example, article 10.2 includes a requirement to “strengthen cooperative action on technology development and transfer”.

Each of the initiatives ARENA will either administer or support under the Regulations will reduce or enable reductions in domestic or global greenhouse gas emissions, thereby contributing to Australia’s international emissions reduction obligations as outlined above. The initiatives will fund activities that reduce emissions intensity and energy and fuel use, switch business operations from non-renewable to renewable energy sources and develop or implement low emissions technologies. The targeted programs will also fund studies and analysis that will support further emissions reduction activities in the future.

Accordingly, the functions in the Regulations implement the same treaty obligations for which the ARENA Act provides functions for ARENA to support renewable energy technologies. Accordingly, they are consistent with the underlying constitutional purpose of the ARENA Act to implement those treaty obligations by investing in activities which reduce greenhouse gas emissions. This purpose is reflected in section 4 of the Regulations.

Details of the Regulations are outlined in Attachment A.

Consultation

Exposure drafts of the disallowed Regulations and the present Regulations were circulated to Government stakeholders, including the Department of the Prime Minister and Cabinet and ARENA, for consultation in March to July 2021. Comments and advice received were taken into account in finalising both the disallowed Regulations and this version of the Regulations.

Further public consultation was not necessary, as the Regulations only addresses machinery issues relating to the administration of announced Government initiatives. These initiatives were developed over a policy process dating back to 2019, and encompassing the independent King Review into low cost carbon abatement opportunities, which in February 2020 recommended the Government provide ARENA and the CEFC with an expanded technology-neutral remit. This informed aspects of the Roadmap Discussion Paper and first LETS, and subsequently the release of the low emissions elements of the 2020-21 Budget. There was considerable public consultation at each stage of this policy development process. In particular, the Roadmap Discussion Paper received around 500 written submissions and over 400 people participated in a public webinar. This process was central to the development of the priority low emissions technologies and cost reduction goals set out in section 7 of the Regulations.

ARENA will also undertake appropriate consultation on the implementation of the initiatives consistent with its statutory framework and responsibilities.

A statement of the Regulation’s compatibility with human rights is set out in Attachment B.

Regulatory Impact

A short-form Regulation Impact Statement agreed with the Office of Best Practice Regulation for this measure found there would likely be no more than minor regulatory impact (reference number ID 43576 refers).

Details of the *Australian Renewable Energy Agency (Implementing the Technology Investment Roadmap) Regulations 2021*

Section 1 – Name

Section 1 provides that the title of the Regulations is the *Australian Renewable Energy Agency (Implementing the Technology Investment Roadmap) Regulations 2021*.

Section 2 – Commencement

Section 2 provides that the Regulations commence the day after they are registered on the Federal Register of Legislation.

Section 3 – Authority

Section 3 provides that the Regulations are made under the *Australian Renewable Energy Agency Act 2011*.

Section 4 – Purpose of this instrument

Section 4 provides that the purpose of the Regulations is to enable ARENA to provide financial assistance for projects and other activities that could reasonably be expected to help Australia meet its obligations under the Climate Change Convention and the Paris Agreement. As noted above, these international agreements place a range of obligations on Australia to take domestic actions to reduce its emissions of greenhouse gases and contribute to global emissions reductions. It is intended for section 4 to act as an interpretive aid for the rest of the Regulations, focusing the meaning of provisions towards applications that further the reduction of emissions in Australia and other activities that contribute to Australia’s obligations (for example, developing technologies that reduce emissions outside Australia). Note that the term “Paris Agreement” is further defined below in section 5 and “Climate Change Convention” is further defined in the ARENA Act.

Section 5 - Definitions

Section 5 provides a general definition clause.

An introductory note clarifies that the terms “ARENA”, “Climate Change Convention”, “financial assistance” and “renewable energy technologies” are to be understood as defined in the ARENA Act. Section 5 then goes on to provide definitions for a number of terms.

“Act” means the *Australian Renewable Energy Agency Act 2011*.

“Carbon capture and storage” has the same meaning as the definition of the same term in section 7 of the *National Greenhouse and Energy Reporting Act 2007*. The definition relates

to the capture and permanent storage in a geological formation of a greenhouse gas that would otherwise be emitted into the atmosphere, and related processes.

“Enabling technologies” are defined as including measurement technologies. This definition is made for the avoidance of doubt, and is not intended to exclude any other types of enabling technologies that do not involve the making of measurements.

“Energy efficiency technologies” include technologies that enable, or are otherwise related to, energy conservation technologies or demand management technologies. Beyond this, it is intended for the term to carry its ordinary meaning of a technology that facilitates reductions in energy consumption or increases in productivity relative to energy consumption.

“Technology” here is intended to carry its widest possible meaning in the sense of extending to ideas, practices and processes as well as the more conventional software, machinery and equipment. Furthermore, the existence of technical or regulatory barriers to the deployment of a technology should not exclude the technology for consideration. Examples of energy efficiency technologies might include plant and machinery upgrades, technologies that increase the efficiency of agricultural production, energy storage, electrification, and demand response techniques such as load shifting. Note that the term “enabling technologies” is further defined above in section 5.

“Freight Efficiency Assistance Grants” has the meaning provided in subsection 6(7).

“Freight Energy Productivity Trial Program financial assistance” has the meaning provided in subsection 6(7).

“Future Fuels Fund financial assistance” has the meaning provided in subsection 6(7).

“Industrial Energy Transformation Studies Program financial assistance” has the meaning provided in subsection 6(7).

“Paris Agreement” means the agreement made within the UNFCCC that was concluded in Paris on 12 December 2015,¹² including any amendments to that agreement which become binding on Australia in the future.

“Priority aluminium and steel technologies financial assistance” has the meaning provided in subsection 7(6).

“Priority carbon capture and storage technologies financial assistance” has the meaning provided in subsection 7(6).

“Priority clean hydrogen technologies financial assistance” has the meaning provided in subsection 7(6).

¹² Available at <http://www.austlii.edu.au/au/other/dfat/treaties/ATS/2016/24.html>.

“Priority energy storage technologies financial assistance” has the meaning provided in subsection 7(6).

“Priority low emissions technologies” has the meaning provided in subsection 7(6).

“Priority low emissions technologies financial assistance” has the meaning provided in subsection 7(5).

“Priority soil carbon technologies financial assistance” has the meaning provided in subsection 7(6).

“Regional Australia Microgrid Pilots Program financial assistance” has the meaning provided in subsection 6(7).

“Research and development project” includes test projects as further defined below in section 5. With the inclusion of test projects, the term is intended to carry a wide definition extending beyond research and development as ordinarily understood and into the pre-commercialisation early deployment phase of the technology innovation process.

“Test project” is defined as including demonstration projects, pilot projects, feasibility studies and pilot studies. It is not intended for this definition to exclude any other types of test project not explicitly specified here, such as trials or pre-commercialisation early deployment activities traditionally supported by ARENA under its other functions.

“Type” clarifies that each paragraph of subsection 7(5) specifies a type of priority low emissions technologies financial assistance.

Section 6 – 2020-21 Budget programs

Section 6 prescribes a new legislated function for ARENA under paragraph 8(f) of the ARENA Act, to grant it all aspects of power necessary to deploy Freight Efficiency Assistance Grants, the Freight Energy Productivity Trial Program, the Future Fuels Fund, the Industrial Energy Transformation Studies Program and the Regional Australia Microgrid Pilots Program as announced in the 2020-21 Budget.

Specifically, subsection 6(1) empowers ARENA to:

- provide financial assistance for each of the programs mentioned above, on the terms set out under the definition for each program above in section 5;
- enter into and administer agreements for the purpose of providing such financial assistance;
- collect and share information and knowledge as to the outcomes of the activities so funded;
- liaise with State and Territory governments and other authorities to facilitate all of the above; and

- provide information (preferably annually, at the conclusion of each year) to the Minister about the total amount of financial assistance provided for each of the programs mentioned above, including information as to the proportion of funding provided for renewable energy technologies.

Subsection 6(2) specifies that ARENA may not provide financial assistance under subsection 6(1) if providing that financial assistance would mean that the total amount provided for the programs mentioned above would thereby exceed \$192.5 million. This ensures ARENA cannot provide funding beyond what was allocated to those programs in the 2020-21 Budget. Any additional funding would require an amendment to the Regulations.

Subsection 6(3) clarifies that the funding cap in subsection 6(2) does not apply in relation to financial assistance that ARENA could provide under another Commonwealth law (such as the Act) or another section of the Regulations. In essence this means that it is only financial assistance provided in reliance on subsection 6(1) that counts towards the \$192.5 million funding cap in subsection 6(2), and not assistance provided in reliance on paragraph 8(a) of the ARENA Act or another section of the Regulations. The purpose of this provision is to clarify that the constraint in subsection 6(2) does not bind or in any way limit the performance of ARENA's other functions, particularly those under the ARENA Act.

Subsection 6(4) specifies that ARENA may not provide financial assistance under subsection 6(1) if providing that financial assistance would mean entering into an agreement on or after 1 January 2026. This restricts ARENA's ability to provide funding for the programs mentioned above beyond the closing dates specified in the 2020-21 Budget.

Subsection 6(5) clarifies that subsection 6(4) does not prevent ARENA from varying or terminating agreements entered into before 1 January 2026 or from entering into agreements on or after 1 January 2026 under another Commonwealth law (such as the ARENA Act) or another section of the Regulations. Subsection 6(5) has been provided to ensure subsection 6(4) is not given a wider interpretation than intended. For clarity, it should also be noted that subsection 6(4) does not prevent ARENA from providing financial assistance beyond 1 January 2026 under agreements entered into before 1 January 2026 (for example, making ongoing payments under an agreement entered into before 1 January 2026 that provided for milestone payments beyond 1 January 2026).

Subsection 6(6) provides that the Minister must table in each House of Parliament the information provided to them under paragraph 6(1)(e). This must occur within 15 sitting days (for each House) from the time ARENA provides the information to the Minister. The purpose of this provision is to provide greater accountability around ARENA's exercise of its new functions. It would be expected to occur on an annual basis, following the receipt of information from ARENA at the conclusion of each year as indicated above. For clarity, it should be noted that this provision is supported by the "necessary or convenient" power in paragraph 74(b) of the ARENA Act.

Subsection 6(7) provides definitions for the five targeted programs announced in the 2020-21 Budget: Freight Efficiency Assistance Grants, the Freight Energy Productivity Trial Program, the Future Fuels Fund, the Industrial Energy Transformation Studies Program and the Regional Australia Microgrid Pilots Program.

“Freight Efficiency Assistance Grants” means financial assistance provided under the Freight Efficiency Assistance Grants initiative for anything in the road transport sector that is intended to increase energy productivity, fuel efficiency or the proportion of renewable energy used; or else for the purposes of information and certification in the road transport sector, namely energy efficiency rating or certification or providing information about increasing energy productivity or fuel efficiency or using renewable energy. The subject noun for limb (a) of the definition (“anything”) is intentionally broad, and might encompass activities across the research, trial, demonstration or deployment phases of technological development. Energy productivity and fuel efficiency are types of energy efficiency, with the former referring to achieving higher output using the same or less energy and the latter referring to using less fuel per unit of output. The term “road transport” is not defined in the Regulations, but it is intended for it to carry its ordinary meaning of any type of transport by light or heavy vehicles, including by car, bus, truck or delivery van. Note also that, where a particular project could be funded using either Freight Efficiency Assistance Grants financial assistance or Freight Energy Productivity Trial Program financial assistance, it must be funded using the latter. It is expected that information received through Freight Efficiency Assistance Grants might help inform the types of trials businesses choose to seek grants for through the Freight Energy Productivity Trial Program, although this is only one of the intended purposes of Freight Efficiency Assistance Grants.

“Freight Energy Productivity Trial Program financial assistance” means financial assistance provided under the Freight Energy Productivity Trial Program for test projects involving both the use of renewable energy and the effects of new truck drivetrain, component or logistic technologies on energy productivity or fuel efficiency. As noted above, energy productivity and fuel efficiency are types of energy efficiency, with the former referring to achieving higher output using the same or less energy and the latter referring to using less fuel per unit of output. Note that the term “test project” is further defined above in section 5.

“Future Fuels Fund financial assistance” means financial assistance provided under the Future Fuels Fund for anything that is intended to make it easier for businesses, households and others to use electric vehicles or vehicles powered by biofuels or clean hydrogen, where use relates to on-road use. Again, the subject noun for the definition (“anything”) is intentionally broad, and might encompass activities across the research, trial, demonstration or deployment phases of technological development. The definition provides non-exhaustive examples of a number of eligible areas, including battery electric vehicles, hydrogen fuel-cell electric vehicles and biofuels, as well as charging or refuelling infrastructure and associated electrical upgrades for these technologies. The example in paragraph (c) would extend to “hybrid” hydrogen refuelling infrastructure that utilised clean hydrogen produced on-site or a short distance away, but would not encompass clean hydrogen production activities alone

without a refuelling element. The example in paragraph (e) would not cover the simple purchasing of battery or hydrogen fuel-cell electric vehicles, in the absence of anything further that might make it easier for future businesses to adopt such technologies (for example, a project that involved the direct purchase of battery or hydrogen fuel-cell electric vehicles might also include a component covering the associated infrastructure or electrical upgrades required to charge or refuel these vehicles). As noted above, the term “road transport” is not defined in the Regulations, but it is intended for it to carry its ordinary meaning of any type of transport by light or heavy vehicles, including by car, bus, truck or delivery van. The term “clean hydrogen” is also not defined in the Regulations, but it is intended for it to refer to hydrogen produced using renewable energy or fossil fuels with substantial carbon capture and storage.¹³

“Industrial Energy Transformation Studies Program financial assistance” means financial assistance provided under the Industrial Energy Transformation Studies Program for studies conducted to improve business investment decision-making in relation to energy efficiency technologies, regardless of whether those investments are in energy efficiency technologies alone or also involve other low emissions technologies. Examples of eligible studies might include engineering studies, blueprints, commercial surveys or analyses undertaken by businesses or their contractors to inform specific investment cases in relation to energy efficiency technologies, as well as sectoral studies undertaken by researchers for the purpose of supporting business investments in energy efficiency technologies in general. Note that the term “energy efficiency technologies” is further defined above in section 5. The concept of “low emissions” in general is not defined in the Regulations, but it is intended for any emissions reductions that take place to be relative to a baseline of the average emissions produced by the relevant activity or sector, with ARENA ultimately being responsible for determining what does or does not fall within the definition.

“Regional Australia Microgrid Pilots Program financial assistance” means financial assistance provided under the Regional Australia Microgrid Pilots Program for pilot projects relating to the use of microgrids in regional and remote areas that employ renewable energy. The definition is limited to pilot projects because the Regional Australia Microgrid Pilots Program will only fund a small number of projects which, under a previous program, were funded to undertake feasibility studies and are now ready to move to the demonstration phase. A microgrid is a group of interconnected loads and distributed energy resources that functions as a single controllable entity, and can be operated in connection with an energy grid or in isolation as a stand-alone power system. Note that although the term “renewable energy” is not further defined in the Regulations, the term “renewable energy technologies” is further defined in the ARENA Act, where it is given an extended definition encompassing hybrid technologies as well as general technologies (including enabling technologies) related to renewable energy technologies.

¹³ See the definition of “clean hydrogen” in COAG Energy Council, *Australia’s National Hydrogen Strategy* (2019), p.xiv at <https://www.industry.gov.au/data-and-publications/australias-national-hydrogen-strategy>.

The functions prescribed in section 6 are intended to provide a broad basis for ARENA's deployment and administration of the programs mentioned above. It is expected that section 6, in conjunction with the rest of the Regulations, will supply any legislative power necessary to implement the programs that might otherwise be lacking in the ARENA Act. Section 6 would also extend, in conjunction with paragraph 8(h) of the ARENA Act, to authorising anything incidental or conducive to its performance (for example, liaising with the Minister as to the design, implementation or performance of the nominated programs). Note however that the power conferred through section 6 must still be exercised within the terms established in the Regulations and, where relevant, the ARENA Act (for example, any financial assistance must still be provided in accordance with the general funding strategy and any relevant grant guidelines in place at the time¹⁴). It is also expected that a memorandum of understanding will be developed between ARENA and the Department in relation to the nominated programs.

Section 6 is appropriately made within the scope of the power provided in paragraph 8(f) of the ARENA Act, the wording of which is not in any way limited to renewable energy. The broader concept of supporting low emissions technologies is also an important policy measure that is appropriate and adapted to implement Australia's international greenhouse gas emission reduction obligations under the UNFCCC and the related Paris Agreement, as explained above.

Section 7 – Priority low emissions technologies

Section 7 prescribes a new legislated function for ARENA under paragraph 8(f) of the ARENA Act, to grant it all aspects of power necessary to finance priority low emissions technologies under annual LETS as announced in the 2020-21 Budget.

Specifically, subsection 7(1) empowers ARENA to:

- provide priority low emissions technologies financial assistance, on the terms set out in the remainder of section 7;
- enter into and administer agreements for the purpose of providing such financial assistance;
- collect and share information and knowledge as to the outcomes of the activities so funded;
- liaise with State and Territory governments and other authorities to facilitate all of the above;
- provide advice to the Minister relating to priority low emissions technologies, including advice as to improving their competitiveness, increasing their supply or use or improving the development of skills in the sector, as well as advice on any Commonwealth programs in the sector; and

¹⁴ See sections 10 (general funding strategy) and 24 (guidelines) of the ARENA Act.

- provide information (preferably annually, at the conclusion of each year) to the Minister about the total amount of financial assistance provided during the year for priority low emissions technologies in general and for each of the specified types of priority low emissions technologies, including reporting the assistance provided under subsection 7(1) separately from the combined assistance provided under subsection 7(1) and any other Commonwealth law (such as the ARENA Act).

For the sake of clarity, when calculating the amounts for the purposes of subparagraphs 7(1)(f)(iii) and (iv), all relevant funding should be included regardless of whether it was provided in reliance on subsection 7(1) of the Regulations, paragraph 8(a) of the ARENA Act or any other Commonwealth law (but not including another section of the Regulations). For example, funding provided for a project under paragraph 8(a) of the ARENA Act that would qualify as a priority energy storage technology under the relevant definition in subsection 7(6) should be reported under subparagraphs 7(1)(f)(iii) and (iv). Note that the specified types of priority low emissions technologies are further defined below in subsection 7(5).

Subsection 7(2) specifies that ARENA must make reasonable efforts to ensure that it provides, on average, \$60 million or more per year during the 2022-23 to 2029-30 financial years across the five priority low emissions technologies outlined in subsection 7(5). When calculating this amount, ARENA should include amounts provided under subsection 7(1) as well as any other relevant amounts provided under another Commonwealth law such as the ARENA Act (but not including another section of the Regulations). This provision is designed to give ARENA flexibility in the achievement of its priority low emissions technologies spending over time, given the potentially uneven nature of project expenditure. It does not limit other controls on the performance of ARENA's functions under the ARENA Act or impact the independence of ARENA's decision making on individual projects. The funding level is well within the intended available appropriation for ARENA in each of those years. The inclusion of amounts provided under ARENA's existing functions ensures that this new function does not impede or limit the performance of ARENA's existing functions.

Subsection 7(3) clarifies that ARENA's requirement to provide information to the Minister under subparagraphs 7(1)(f)(i) and (ii) does not apply in relation to financial assistance that ARENA could provide under another Commonwealth law (such as the ARENA Act) or another section of the Regulations. In essence this means that it is only financial assistance provided in reliance on subsection 7(1) that counts towards the reporting requirement in subparagraphs 7(1)(f)(i) and (ii). The purpose of this provision is to ensure that the relevant reporting captures funding that would not occur but for ARENA's new power under subsection 7(1).

Subsection 7(4) provides that the Minister must table in each House of Parliament the information provided to them under paragraph 7(1)(f). This must occur within 15 sitting days (for each House) from the time ARENA provides the information to the Minister. The purpose of this provision is to provide greater accountability around ARENA's exercise of its new functions. It would be expected to occur on an annual basis, following the receipt of information from ARENA at the conclusion of each year as indicated above. For clarity, it

should be noted that this provision is supported by the “necessary or convenient” power in paragraph 74(b) of the ARENA Act.

Subsection 7(5) provides that “priority low emissions technologies financial assistance” comprises five “types” of financial assistance: priority aluminium and steel technologies financial assistance, priority carbon capture and storage technologies financial assistance, priority clean hydrogen technologies financial assistance, priority energy storage technologies financial assistance and priority soil carbon technologies financial assistance.

Subsection 7(6) defines the five types of priority low emissions technologies financial assistance listed in subsection 7(5). As noted above, the intention of section 7 is to grant ARENA all aspects of power necessary to finance priority low emissions technologies under annual LETS. The five types of financial assistance listed in subsection 7(5) and defined in subsection 7(6) relate to the five priority low emissions technologies prescribed in the first LETS, with the goals prescribed in column 3 being the “stretch goals” articulated for each technology in the LETS. For the sake of clarity, when applying the definitions in subsection 7(6), it is not expected that any particular project or technology will meet the relevant goal in column 3 on its own, but rather that it will be capable of helping to meet the goal in conjunction with other similar projects or technologies. It is intended that ARENA will make its own independent judgements on whether or not the requirements of the provision are met and the reasonableness of the necessary relationships established by a project.

The five types of priority low emissions technologies financial assistance are defined in subsection 7(6) as follows:

- “Priority aluminium and steel technologies financial assistance” means financial assistance provided for research and development projects in the context of technologies relating to (including enabling) manufacturing low emissions aluminium or steel, and where there is a likely causal link between the research and development projects in question and the achievement of reducing the average cost in Australia of manufacturing low emissions aluminium to under \$2,700 per tonne and low emissions steel to under \$900 per tonne. The terms “low emissions aluminium” and “low emissions steel” are not defined in the Regulations, but are intended to refer to aluminium or steel production using renewable energy or fossil fuels with substantial carbon capture and storage. It is noted that it may be appropriate to consider emissions reductions in the supply chain for the aluminium or steel, such as reducing the emissions of alumina production which is then transformed into aluminium.
- “Priority carbon capture and storage technologies financial assistance” means financial assistance provided for research and development projects in the context of technologies relating to (including enabling) carbon capture and storage, and where there is a likely causal link between the research and development projects in question and the achievement of reducing the average cost in Australia of carbon dioxide compression, hub transport and storage to under \$20 per CO₂e tonne. The term “carbon capture and storage” is further defined above in section 5. A project need not

relate to all stages of compression, transport and storage if it reduces costs for one or more elements of those processes.

- “Priority clean hydrogen technologies financial assistance” means financial assistance provided for research and development projects in the context of technologies relating to (including enabling) clean hydrogen, and where there is a likely causal link between the research and development projects in question and the achievement of reducing the average cost in Australia of clean hydrogen to under \$2 per kg. As noted above, the term “clean hydrogen” is not defined in the Regulations, but it is intended for it to refer to hydrogen produced using renewable energy or fossil fuels with substantial carbon capture and storage.¹⁵
- “Priority energy storage technologies financial assistance” means financial assistance provided for research and development projects in the context of technologies relating to (including enabling) energy storage, and where there is a likely causal link between the research and development projects in question and the achievement of reducing the average cost in Australia of stored electricity used for the purposes of firming to under \$100 per MWh. Firming refers to the process in which ancillary power sources are used to smooth out any grid supply or stability issues arising from the intermittent operation of renewable energy technologies. For the sake of clarity, energy storage would include the use of chemical processes as well as pumped hydro systems.
- “Priority soil carbon technologies financial assistance” means financial assistance provided for research and development projects in the context of technologies relating to (including enabling) soil carbon measurement, and where there is a likely causal link between the research and development projects in question and the achievement of reducing the cost in Australia of measuring soil carbon to under \$3 per hectare per year. The term “soil carbon” is not defined in the Regulations, but is intended to refer to carbon sequestration and other land management activities that encourage increases in soil carbon.

Again, “technology” here is intended to carry its widest possible meaning in the sense of extending to ideas, practices and processes as well as the more conventional software, machinery and equipment. Furthermore, the existence of technical or regulatory barriers to the deployment of a technology should not exclude the technology for consideration. The concept of “low emissions” in general is not defined in the Regulations, but it is intended for any emissions reductions that take place to be relative to a baseline of the average emissions produced by the relevant activity or sector, with ARENA ultimately being responsible for determining what does or does not fall within the definition. The term “research and development project” is further defined above in section 5, and is intended to carry a wide definition extending beyond research and development as ordinarily understood and into the pre-commercialisation early deployment phase of the technology innovation process, similar to the support provided by ARENA under their existing functions to support innovation in renewable energy.

¹⁵ See the definition of “clean hydrogen” in COAG Energy Council, *Australia’s National Hydrogen Strategy* (2019), p.xiv at <https://www.industry.gov.au/data-and-publications/australias-national-hydrogen-strategy>.

The functions prescribed in section 7 are intended to provide a broad basis for ARENA's financing of priority low emissions technologies under annual LETS. It is expected that section 7, in conjunction with the rest of the Regulations, will supply any legislative power necessary to implement the initiative that might otherwise be lacking in the ARENA Act. Section 7 would also extend, in conjunction with paragraph 8(h) of the ARENA Act, to authorising anything incidental or conducive to its performance (for example, liaising with the Minister as to the design, implementation or performance of the initiative). Note however that the power conferred through section 7 must still be exercised within the terms established in the Regulations and, where relevant, the ARENA Act (for example, any financial assistance must still be provided in accordance with the general funding strategy and any relevant grant guidelines in place at the time¹⁶).

Section 7 is necessary to clearly provide ARENA with the legislated functions to fully deploy and administer the articulated 2020-21 Budget initiative. They are appropriately made within the scope of the power provided in paragraph 8(f) of the ARENA Act, the wording of which is not in any way limited to renewable energy. The broader concept of supporting low emissions technologies is also an important policy measure that is appropriate and adapted to implement Australia's international greenhouse gas emission reduction obligations under the UNFCCC and the related Paris Agreement, as explained above.

¹⁶ See sections 10 (general funding strategy) and 24 (guidelines) of the ARENA Act.

Statement of Compatibility with Human Rights

Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011

Australian Renewable Energy Agency (Implementing the Technology Investment Roadmap) Regulations 2021

This Legislative Instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Legislative Instrument

The *Australian Renewable Energy Agency (Implementing the Technology Investment Roadmap) Regulations 2021 (the Regulations)* expands the operating remit of the Australian Renewable Energy Agency to permit it to invest in a wider range of technologies for the deployment of initiatives announced in the 2020-21 Budget.

Human rights implications

The Regulations do not engage any of the applicable rights or freedoms.

Conclusion

The Regulations are compatible with human rights as they do not raise any human rights issues.

The Hon Angus Taylor MP

Minister for Energy and Emissions Reduction