Hydrogen Infrastructure – Call for Proposals under the Renewable Technology Fund

Introduction

The $150 million Renewable Technology Fund (Fund) aims to support investment in the next generation of renewable technologies and demand management technologies which will improve the reliability and security of the South Australian electricity network, and improve affordability for South Australian consumers.

The Government of South Australia is now calling for Proposals for investment opportunities in hydrogen infrastructure.

Proponents should read this document in conjunction with the Investment Guidelines (available at ourenergyplan.sa.gov.au) which specifies important eligibility and key decision making criteria, how Proposals will be assessed and how to submit a Proposal. Proponents should also read this document in conjunction with the Hydrogen Roadmap for South Australia available from www.hydrogen.sa.gov.au. Proponents may also find South Australia's Green Hydrogen Study and South Australia's Hydrogen Investment Portal useful informational resources also available at www.hydrogen.sa.gov.au.

Producing Hydrogen for Export Call for Proposals Objectives

The key objectives of the Hydrogen Infrastructure Call for Proposals are:

1. Accelerate investments in infrastructure to produce hydrogen from South Australian renewable energy resources as well as infrastructure associated with the local use and/or export of such hydrogen[1].
2. Contribute to the growth of a hydrogen industry in South Australia through the establishment of supply / value chains.

Scope of activities

The Hydrogen Infrastructure Call for Proposals is open to proposals that are aligned with the above objectives, and are expected to fit into one or more of the following categories:

1. Hydrogen production facilities[1], e.g. electrolysers powered from renewable electricity, steam reformers using bio-methane
2. Facilities to enable local use of hydrogen as a vehicle fuel[1], e.g. hydrogen refuelling stations
3. Ammonia production facilities utilising renewable hydrogen, e.g. as an input to industry, or for export as a carrier of hydrogen
4. Hydrogen liquefaction facilities, e.g. for conversion of hydrogen gas to liquid hydrogen or to a liquid organic hydride such as methylcyclohexane (MCH) for export
5. Hydrogen storage, transport and export facilities
6. Facilities to allow hydrogen to be used as back-up power generation, e,g, via a stationary fuel cell or gas turbine

[1] excludes hydrogen production and hydrogen refuelling infrastructure for Adelaide Metro buses as this is the subject of a separate tender process issued via the SA Tenders website, www.tenders.sa.gov.au, on 8 September 2017

Key decision making criteria

Key decision making criteria relating to investment decisions made under the Fund are detailed in the Investment Guidelines.

The table below provides guidance on how the Investment Guidelines key decision making criteria may be applied to Proposals submitted in response to this Hydrogen Infrastructure Call for Proposals.

Key decision making criteria	**Hydrogen Infrastructure Call for Proposals**
Meet the eligibility criteria	Proponents are required to meet the eligibility requirements set out in the Investment Guidelines.
Contribute to achieving one or more of the objectives of the Fund	Projects will be assessed according to the value of the project in contributing to meeting the Fund objectives. Projects will also be assessed to the extent to which the project attributes can be replicated and further enhance the Fund objectives.
Viable business case, managerial capability and financial capacity to implement the project	In assessing the business case, matters to be considered could include: • Whether there are clearly defined objectives and methodology • The quality of the project plan (including timing and commerciality of implementation) • The quality of the risk management plan – including approach to identifying, managing and reporting project risks • The likely success of the project • Impact on customers including price impacts and risk allocation between project and customer In assessing the financial capacity of the proponent to deliver the project, matters to be considered could include: • financial commitments (including in-kind support, and level of conditionality of commitments) • Expected risk that an agreement cannot be successfully negotiated • Expected risk that an agreement will not be adhered to • Relevant industry benchmarks for the economics of a particular projects In assessing the proponent's managerial capability to deliver the project, matters to be considered could include: • Experience and expertise in relevant projects • Appropriateness of allocation of roles • Quality and level of commitment of proposed project partners • Readiness to implement the project based on project documentation and agreements in place • Ability to develop project and achieve financial close by specified date

Barriers to commencement	In assessing barriers to commencement of the project, matters to be considered will include (to the extent they are required): • Status of planning approvals • Status of network connection/constraints • Land access arrangements • Status of other approvals
Suitability for support through the Fund, or other State, Commonwealth and/or Local Government or industry sources	In assessing the suitability for investment by the Fund, Proposals should specify the preferred and alternative means of financing the project and the most commercial forms of investment by the Fund. The project must be sustainable over the longer term without further assistance.
Economic contribution to South Australia	In assessing the economic contribution of the project, matters to be considered will include: • How the project will create economic development opportunities in South Australia (including new employment opportunities and/or advancing the State's relevant economic and regional priorities) • The number of jobs to be created • The proposed investment strategy in South Australia • What new investments will be made within South Australia to deliver the project Where there is significant construction and purchasing required to deliver the project (if the investment by the Fund is above $2.5 million), the proponent will need to complete an Industry Participation Plan (refer https://statedevelopment.sa.gov.au/industry/south-australian-industry-participation-policy)

In addition to addressing the information set out above and in the Investment Guidelines, Hydrogen Infrastructure proposals should also address the information requirements specified in **Appendix A** in order to facilitate an assessment of the Proposal.

Should financial assistance be required to assist the development of a business case to support a Proposal, Proponents may submit an application for a Business Case Support Grant (available from the Low Carbon Economy Unit upon request) by no later than **5pm Monday 25 September 2017 (Australian Central *Standard* Time)**.

A Proposal in response to this Call for Proposals must be submitted by no later than: 5pm Monday 23 October 2017 (Australian Central *Daylight* Time).

Miscellaneous

Proposals should provide clear information on any sensitivities the project would have to financial and other matters including changes in foreign exchange and interest rate movements. Projects will be assessed based on the foreign exchange and interest rates prevailing at the date of proposal submission. Foreign currency or interest rate movements after the date of proposal submission will be considered during any subsequent negotiations.

By submitting an application, the applicant accepts the terms of this document and the Investment Guidelines. The State retains the right to extend, accelerate, remove, introduce or alter any element (including timetable, eligibility criteria, method of assessment, process requirements etc) of this Call for Proposals at any time, at its discretion. Nothing in this Call for Proposals or this process will be construed as creating any binding contract, estoppel, expectation or other legal relationship (express or implied) between the applicant and the State, and each applicant irrevocably releases the State in relation to any claims, actions, damages, judgments, losses, remedies or other matters whether in contract, negligence, tort, under statute, equitable relief or otherwise, in connection with this process.

The State reserves the right to require suitable forms of credit support, including, without limitation, a Parent Company Guarantee in respect of the Respondent's liability under the finally agreed and executed contract and a bank guarantee or insurance bond in respect of the Respondent's obligations under such a contract.

Appendix A – Information Requirements

Proponent

- Detail on experience and expertise of the Proponent and / or Proponent's consortium and allocation of roles and responsibilities
- Examples where the Proponent and/or key personnel have successfully delivered similar projects utilising similar technologies at a similar scale
- Corporate structure diagram showing the allocation of roles to key personnel
- Listing of directors of the Proponent, equity participants to the project and all parent companies of all equity participants to the project

Project

- Detail on the technology choice and design, including supporting documents
- Project plan detail including the development budget and key milestones outlining the process to Financial Close, commencement of construction, commissioning and operation
- Detail on project location including evidence of ownership or access to land and access to supporting resources
- Status of key contracts
- Quality and level of commitment of proposed project partners
- Key benefits of the Project including the extent to which it contributes to improving the reliability and security of the South Australian electricity network, and affordability of electricity for South Australian consumers.

Technical

- Status of development approvals, connection investigations (where applicable) and land access arrangements (where applicable)
- Plant layout design including plan(s) indicating boundaries of tenured site, the location of the connection point(s) and assets, and the locations of all major equipment and buildings

Financial

- Detailed financial model for the life of the project, that includes:
    - Detailed CAPEX, OPEX and revenue estimates providing a breakdown of key equipment costs, direct labour estimate, indirect labour estimate and alignment to the Project Execution Plan
    - Clearly presented assumptions (and sources of assumptions) adopted within the financial model
    - Drawdown schedule for all sources of financing
    - The most commercial form of investment by the Fund (which could relate to the provision of services or some other form of revenue mechanism)
    - Details of the assumed cost of any project debt financing (including specifying the base interest rate, the portion of hedging and hedged base rates assumed, the debt margin and any refinancing assumptions) and the proposed annual amortisation (repayment) profile.
    - Financial model outputs that include:
        - Unleveraged pre and post tax IRR
        - Leveraged pre and post tax IRR
        - FX sensitivity analysis
        - Output Metrics (where relevant)
            - Grant ($000s) /Estimated Net Output
            - Loan ($000s) /Estimated Net Output
            - Alternative investment method ($000s) /Estimated Net Output
            - Total Project cost ($000s) /Estimated Net Output