



**APPLICATION FORM FOR
THE ISSUE OF AN
ELECTRICITY
GENERATION LICENCE BY
THE
ESSENTIAL SERVICES
COMMISSION OF SA
UNDER THE *ELECTRICITY
ACT 1996***

July 2012

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ELECTRICITY

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INFORMATION FOR APPLICANTS BEFORE FILLING OUT THIS FORM

Purpose of this form

This form is to be completed by persons making application to the Essential Services Commission of South Australia (the Commission) for the issue of a licence to authorise electricity generation operations in the electricity supply industry in South Australia.

The Commission can also consider joint applications from two or more persons who wish to hold a licence jointly. Persons making joint applications must ensure that each of the applicants completes a separate application form, together with a covering letter explaining that the application is for a licence to be jointly held.

Generation operations which require a licence

Section 15(2)(a) of the *Electricity Act 1996* (the Act) is explicit in that it requires a person that carries on the operation of the generation of electricity to hold a licence. This requirement applies to all generators with the exception of a generator that can rely on:

- (1) one of the statutory exemptions specified in the *Electricity (General) Regulations 1997* (Regulations) outlined below;
- (2) an individual exemption issued by the Commission (with the approval of the Minister) pursuant to section 80(1) of the Act; or
- (3) an exemption made by Governor under a regulation pursuant to section 98(2)(e) of the Act.

Pursuant to Regulations 6(1) and (2), the following generators are exempt from the requirement to hold a generation licence:

- ▲ a generator whose generating plant has a rated nameplate output of 100kVA or less;
- ▲ a generator that does not supply electricity for reward to or by means of a transmission or distribution network;
- ▲ a generator that generates electricity for the sole consumption of that generator or a designated body (such bodies must be designated by the Minister¹); or
- ▲ a generator that generates electricity for a person at a premises occupied or used by the person as a tenant or licensee (whether directly or indirectly) of the generator (or a designated body) where that person is not charged for the supply of electricity except by a licensed retailer/generator or as an unspecified part of rent or charges for the occupation or use of the premises.

It is important for generators (or proposed generators) to carefully consider whether they can rely on a statutory exemption from the requirement to be licensed. If the reliance on a statutory exemption is queried by the Commission, the onus to provide evidence that a particular exemption can be relied upon is on the relevant generator.

¹ To date, the Minister for Energy and Resources has not designated any bodies for the purposes of Regulations 6(1).



In addition, in the event that the operations of a generator change so that it can no longer rely on one of the three exemptions specified above, it will need to apply to the Commission for a generation licence immediately in order to continue those operations.

Basis for this form

Section 16(1)(a) of the Act provides that an application for the issue of a licence must be made to the Commission in a form approved by the Commission. This is the form approved by the Commission.

Prior reading

It is essential that licence applicants read the Commission's Advisory Bulletin No 4 – "*Licensing Arrangements for the Electricity and Gas Supply Industries*" before they fill out this form. This Bulletin is available on the Commission website www.escosa.sa.gov.au under electricity/licensing.

Use of this form and applicant's responsibilities

An application for a licence may be made by any legal person including, without limitation, individuals, partnerships, incorporated associations, unit and other forms of trusts and corporations. Entities that are not a legal person (for example, an unincorporated joint venture) cannot apply for a licence.

For the purpose of this application form, reference to the term "**Officer**" include the applicant's directors and secretary, and other persons who make or participate in making decisions that affect a substantial part of the business of the applicant (e.g. Chief Executive Officer, Chief Financial Officer, General Manager etc.).

Applicants should list the information requested in the spaces provided in this form and enclose additional information when required. Applicants must take all reasonable steps to ensure the information provided in the application form is complete, true and correct and are required to make a declaration to that effect in the application form. Failure to disclose information or misrepresent any matter relevant to such information may result in a licence not being issued or in the suspension or cancellation of a licence at a later time.

Applicants are responsible for providing the Commission with current, accurate and relevant documentation. This will ensure that the application is processed promptly and without delay. All applications are assessed on a case-by-case basis. If insufficient information is provided with an application, the Commission will request additional information to be submitted before the application is considered further.

Licence conditions

Sections 21(1) and 22 of the Act requires the Commission to place certain mandatory conditions in generation licences. The Commission strongly recommends that applicants review these mandatory conditions. Applicants must be familiar with the relevant conditions and confident that they can comply with the conditions.

Special licence conditions for wind generation licensees

Applicants for a wind generation licence should also familiarise themselves with the *Commission's Statement of Principles for Wind Licensing*.² The key special licence conditions that are to be imposed on wind generation licensees as a result of the Statement of Principles are summarised below.

Fault Ride-Through Capability

1. Each generating unit which the licensee is authorized to operate under this licence must comply with:
 - (a) the automatic access standards for generating system response to disturbances following contingency events specified in clause S5.2.5.5(b)(1) of the NER; and
 - (b) subject to clause 2, the automatic access standards for generating system response to disturbances following contingency events specified in clause S5.2.5.5(b)(2) of the NER; and
 - (c) subject to clause 3, the automatic access standards for generating system response to voltage disturbances specified in clause S5.2.5.4 of the NER.
2. The licensee is not required to comply with clause 1(b) in respect of a generating unit which the Licensee is authorized to operate under this licence where:
 - (a) the minimum access standard requirements specified in clause S5.2.5.5(c)(2) of the NER in relation to generating system response to disturbances following contingency events; and
 - (b) the requirements of clauses S5.2.5.5(d), (e) and (f) of the NER are satisfied in respect of that generating unit.
3. The licensee is not required to comply with clause 1(c) in respect of a generating unit which the licensee is authorized to operate under this licence where:
 - (a) AEMO and the relevant network service provider have agreed, pursuant to clause 5.2.5.4(c)(3) of the NER, that there would be no material adverse impact on the quality of supply to other network users or of power system security as a result of that non-compliance; and
 - (b) The requirements of clauses S5.2.5.4(c), (d), (e) and (f) of the NER are otherwise satisfied in respect of that generating unit.

Reactive Power Capability

1. The electricity generating plant operated by the licensee must at all times be capable of continuous operation at a power factor of between 0.93 leading and 0.93 lagging at real power outputs exceeding 5 MW at the connection point.
2. The electricity generating plant operated by the licensee must at all times be capable of providing:
 - (a) subject to clause 4(b), at least 50% of the reactive power required to meet the power factor referred to in clause 1 on a dynamically variable basis; and

² Statement of Wind Principles can be found at <http://www.escosa.sa.gov.au/library/100430-LicenceConditionsWindGenerators-FinalDecision.pdf>.



- (b) the balance of the reactive power required to meet the power factor referred to in clause 1 on a non-dynamic basis.
- 3. At generation levels below full rated output the electricity generating plant operated by the licensee must be capable of:
 - (a) absorbing reactive power at a level at least pro-rata to that of full output; and
 - (b) delivering reactive power at a level at least pro-rata to that of full output.
- 4. For the purposes of clause 2(a):
 - (a) dynamically variable means continuous modulation of the reactive power output over its range, with an initial response time or dead time < 200 milliseconds and a rise time (as defined in clause S5.2.5.13 of the NER) < 1 second following a voltage disturbance on the network; and
 - (b) for a period of ≤ 2 seconds on any single occasion, a short-term overload capability may be used to meet the 50% requirement, provided that use of that short-term overload does not cause a breach of any other licence condition.
- 5. The reactive power capability of the electricity generating plant operated by the licensee must be capable of control by a fast-acting, continuously variable, voltage control system which is able to receive a local and remote voltage set point.
- 6. The electricity generating plant operated by the licensee must be able to operate at either a set reactive power, or a set power factor, which is able to be set locally or remotely at any time.
- 7. The power factor or reactive power control mode of the electricity generating plant operated by the licensee must be capable of:
 - (a) being overridden by voltage support mode during power system voltage disturbances; and
 - (b) automatically reverting to power factor or reactive power mode when the disturbance has ceased.

Further information

Applicants should note that the Commission may ask applicants who have submitted an application form to provide further information to the Commission, or to clarify the information that they have already provided if required.

Please note that, in the event that an application lacks sufficient detail and the Commission is required to request additional information from an applicant, delays in the assessment of the application may occur.

Consultation and Confidentiality

The Commission will consult with relevant government, industry and consumer groups in the conduct of its licensing functions through a public consultation process. Consequently, applications and/or supporting information will be made available on the Commission's website and in hard copy from the Commission's office for this purpose.

If applicants believe that they are providing confidential information when completing this form they should write "this information is confidential" after any such information. It is the



LICENCE APPLICATION FORM

1. THE APPLICANT

Applicants must answer all questions in this section.

1.1 Identity of Applicant

State the full name of the applicant. The applicant is the person who will be undertaking the electricity generation operations that will be the subject of the licence. Joint applicants should each complete an application form, and submit their application forms at the same time, with a covering letter explaining that a joint application is being made.

Name: Lumo Generation SA Pty Ltd

This licence application is submitted to extend the Electricity Generation Licence (issued by ESCOSA on the 23 March 2006 and last varied on 28 October 2014) held by Lumo Generation SA Pty Ltd to include the proposed Tailem Bend Diesel Power Station (TBDPS). The application is to include the proposed TBDPS in Annexure 1 of the current Licence.

1.2 Legal Identity of Applicant

Provide information about the applicant, (i.e. whether the applicant is a natural person, private limited company or partnership, etc). If the applicant is a body corporate, please also state the jurisdiction in which the applicant is registered, and the applicant's ABN/ACN.

Lumo Generation SA Pty Ltd is a 100% owned and controlled entity of the parent entity Snowy Hydro Ltd, which is a public company incorporated and operating in Australia. The Snowy Hydro Ltd shareholders are the Commonwealth, Victorian, and NSW Governments

Lumo Generation SA Pty Ltd - ACN 115 291 042

Snowy Hydro Ltd - ACN 090 574 431

1.3 Address and Contact Details of Applicant

Business Address: Monaro Hwy, Cooma

State: New South Wales Post Code: 2630

Telephone: Contact details below..... Facsimile:

E-mail: Contact details below

Postal Address (if different to Business Address):

State: PO Box 332, Cooma, NSW Post Code: 2630



1.4 Contact Person on behalf of Applicant

The full name, title and contact details of a person to whom the Commission can direct enquiries and correspondence about the application.

Name: **Ian Smith**

Position: **Project Manager, Snowy Hydro**

Business Address: **Monaro Hwy, Cooma**.....

State: **New South Wales** Post Code: **2630**

Telephone: **0409 840 165** Facsimile: **N/A**

E-mail: **ian.smith@snowyhydro.com.au**

Postal Address (if different to Business Address):

State: **PO Box 332, Cooma, NSW** Post Code: **2630**

1.5 Contact Person for Licence Fees

The full name and/or title of the person to whom the Commission can direct enquiries and correspondence about licence fees.

Name: **Jenny Smith**

Position: **Accounts Payable, Snowy Hydro**

Business Address: **Monaro Hwy, Cooma**.....

State: **New South Wales** Post Code: **2630**

Telephone: **0427 239 367** Facsimile: **N/A**

E-mail: **jenny.smith@snowyhydro.com.au**

Postal Address (if different to Business Address):

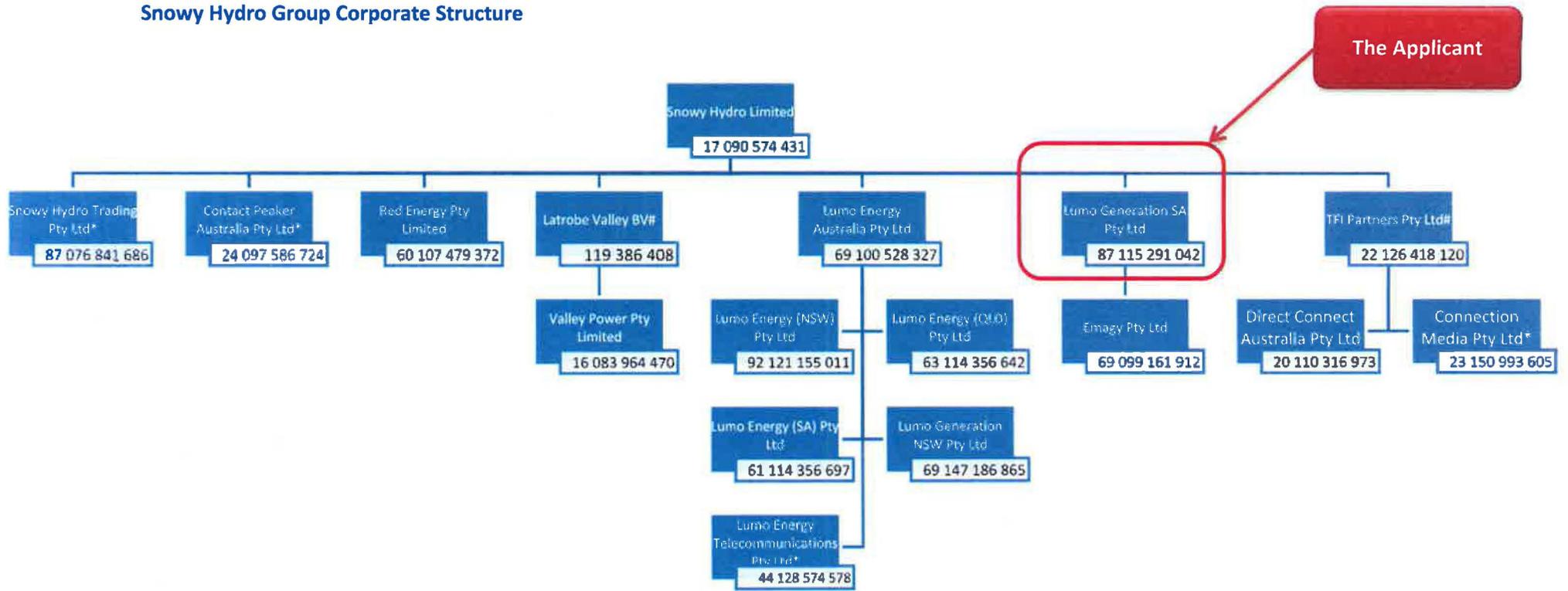
State: **PO Box 332, Cooma, NSW** Post Code: **2630**

1.6 Diagram of Corporate or other Structure

Please attach with this application form details of the corporate or other structure, including details of any related companies within the meaning of the Corporations Act 2001; and a diagram of the organisational chart, including composition of the board, management and other key personnel responsible for the key functions of the business.

Lumo Generation SA Pty Ltd is a 100% owned and controlled entity of the parent entity Snowy Hydro Ltd, which is a public company incorporated and operating in Australia. The Snowy Hydro Ltd shareholders are the Commonwealth, Victorian, and NSW Governments...

Snowy Hydro Group Corporate Structure

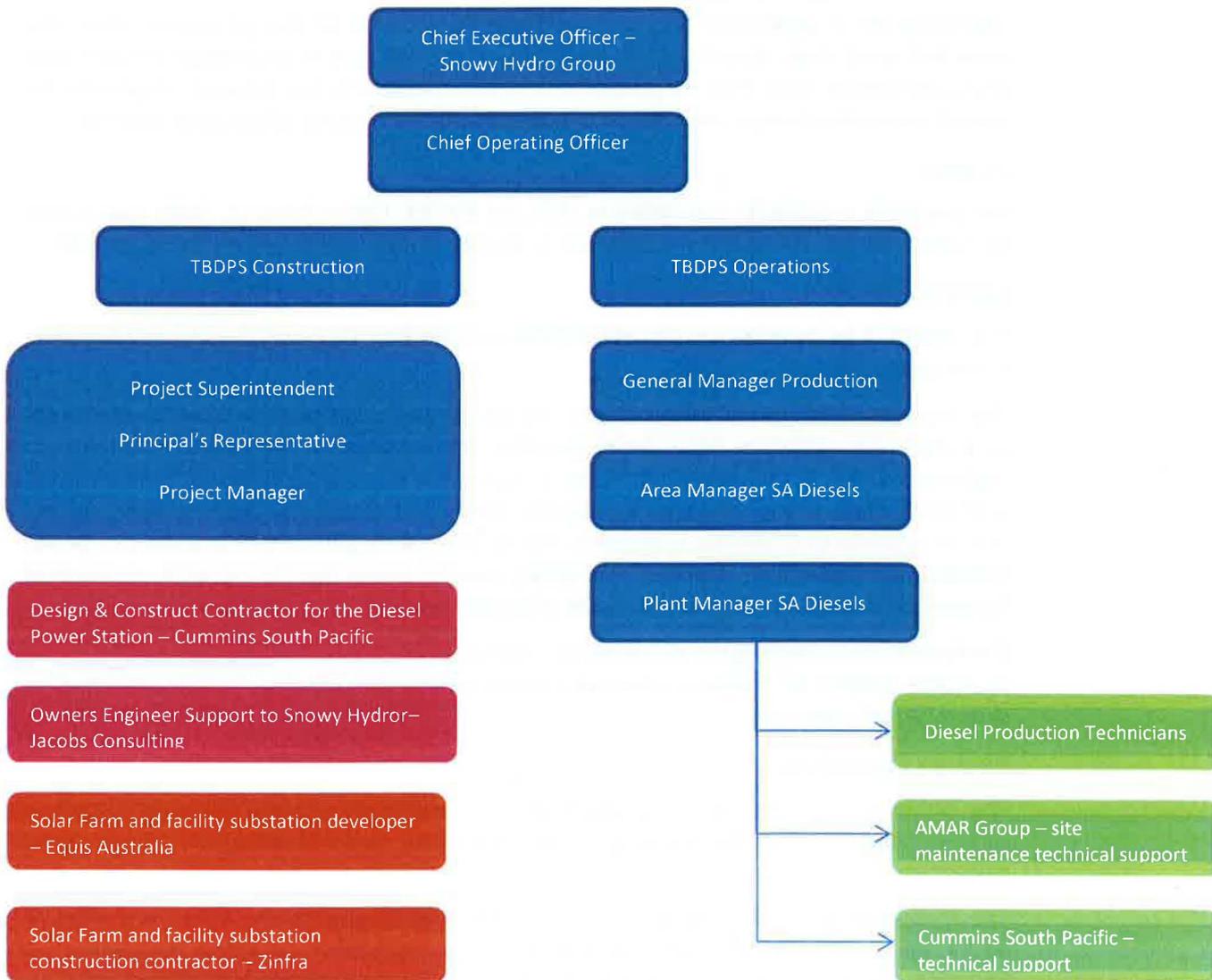


* Dormant

Dormant except as holding company

Organisational Structure relevant to construction and operation of the Taillem Bend Diesel Power Station

Board of Directors – Snowy Hydro Group
 Noel Harold Cornish - Chairman – from 1 February 2015
 Paul Anthony Broad – Chief Executive Officer
 Michael Francis Ihlein – Nonexecutive Director
 Joycelyn Cheryl Morton – Nonexecutive Director
 The Hon. Helen Lloyd Coonan – Nonexecutive Director
 Nigel Julien Clark – Nonexecutive Director
 Wallace Richard Sheppard – Nonexecutive Director
 Leanne Kay Bond– Nonexecutive Director
 Glen Dewing – Company Secretary



Legend:

- Snowy Hydro Personnel
- Construction contractors
- Operational contractors
- Solar Development



2 THE LICENCE

Applicants must answer all questions in this section.

2.1 Date from which Licence is sought

If the applicant seeks to have the licence issued by a certain date, provide this date. Please note that the Commission does not undertake to issue the licence by this date. Applicants should usually allow the Commission a minimum of eight weeks to consider an application, as a public consultation period of several weeks forms part of the Commission's consideration of licence applications.

The Applicant seeks to have the licence issued by 1 August 2017.

2.2 Nature and scope of operations for which Licence is sought

Applicants for a generation licence must state the location of the generation plant, the expected name plate capacity of the generation plant, the type of generation and fuel used and some details about how the generator is to be connected to the network. Applicants for a wind generation licence must attach a map showing the location of the wind turbines.

Location

The proposed location for the TBDPS is 172 Lime Kiln Rd, Tailem Bend SA, 5160, with access off Substation Rd. The location is adjacent to the ElectraNet switchyard on Substation Rd.

Capacity

The TBDPS is to have a capacity of 28.8MW constituting 16 diesel fuelled reciprocating engine driven generation units.

The capacity ratings of the power station are set out below (as per the OEM Generator set data sheet for C2250-D5 50Hz diesel gensets). It's noted that the Applicant intends to enable operation of the power station in "Limited-time running power" and "Prime power" and when necessary in "Emergency standby power" (1.8MW), the latter making up the station capacity of 28.8MW. In practice, this means the Applicant will operate the power station in a manner that provides emergency standby power for the network, as required by network market events and in support of system security.

The Applicant is assessing the feasibility of modifying the power station control architecture to enable support for frequency control ancillary services (FCAS) thus further providing for system security services.

Network Connection:

The TBDPS will connect into the adjacent solar development's facility substation, which in turn will connect into the existing 132kV switchyard within ElectraNet's Tailem Bend substation.

The connection point with the NSP will be the termination point of the 132kV transmission in the solar development's facility substation. The Transmission Connection Agreement will be held by the solar development, and this application is currently being finalised for review by ElectraNet, during which the connection point will be confirmed.

The connection point will in turn will be connected to the two 'Collector' 132/33 kV step-up transformers in the solar development's facility substation, to which the TBDPS will connect to one of, at 33kV. The MVA rating of the facility substation transformers is to be finalised during the Transmission Connection Agreement process.

The TBDPS will consist of 16 diesel generator sets in three 'banks' in a 6, 6, 4 configuration. Each generator connects to a 2.25MVA 0.400/33kV step-up transformer, which are similarly grouped in a 6, 6, 4 configuration, exporting power to the solar facility substation at 33kV.

3 SUITABILITY OF APPLICANT TO HOLD A LICENCE

Applicants must answer all questions in this section.

3.1 Standard of honesty and integrity shown by Applicant

In deciding whether the applicant is a suitable person to hold a licence, the Commission may:

- ▲ *consider the applicant's previous commercial and other dealings, and*
- ▲ *the standard of honesty and integrity shown in those dealings.*

Please provide information that will assist the Commission in its consideration of this matter. If the applicant:

- ▲ *has been found guilty of any criminal offence,*
- ▲ *has been successfully prosecuted under any Territory, State or Commonwealth legislation (such as the Australian Securities and Investments Commission Act 2001 or the Competition and Consumer Act 2010) or*
- ▲ *has been the subject of disciplinary action,*
- ▲ *has been the subject of any past or present administrative or legal actions in relation to an authorisation, authority, or licence in any industry,*

details of such matters must be disclosed. Failure to disclose such information or misrepresent any matter relevant to such information may result in the cancellation of a licence.

The Commission may use the service of an external expert to assist with the assessment of the applicant's standard of honesty and integrity.

Please see the supporting information provided, including financial reports and business analysis reports. The Director's Report in each of the Financial Reports details the history and experience of each of the Company Directors.

The Applicant strives to maintain the highest levels of honesty and integrity at all times. The Applicant is part of, and subject to the oversight of, the Snowy Hydro Group, which has a successful record of operation in the National Electricity Market (NEM) with a proud history of good corporate governance, regulatory compliance and co-operative stakeholder engagement.

3.2 Standard of honesty and integrity shown by Officers and major shareholders of Applicant

Applicants should address responses to this question in the same manner as 3.1 above except here it relates to officers and major shareholders of the applicant.

Please also supply details of any policies and procedures addressing the probity and competence of officers and other key management staff.

Please see the supporting information provided, including financial reports and business analysis reports.

The ultimate major shareholder of the Applicant is Snowy Hydro Limited, which is one of the largest and longest established participants in the NEM with a track record of good corporate conduct. The relevant Officers all have at least a significant number of years' industry experience and unblemished records of employment in the industry. The Director's Report in each of the Financial Reports details the history and experience of each of the Company Directors.

The major shareholders of Snowy Hydro are the following State and Federal governments

- New South Wales 58%;
- Victoria 29%; and
- Commonwealth of Australia 13%

3.3 Names and addresses of the Officers of Applicant

State the names and addresses of the officers of the applicant. "Officers" of the applicant include the applicant's directors and secretary, and other persons who make or participate in making decisions that affect a substantial part of the business of the applicant.

The Officers of Snowy Hydro are listed below, as the owner of Lumo Generation SA Pty Ltd.

Full Name: Noel Harold Cornish

Date of Birth: 24/01/1950 Office Held: Chairman

Address: 15 Coledale Avenue, Coledale

State: NSW Post Code: 2515

Full Name: Paul Anthony Broad

Date of Birth: 08/04/1951 Office Held: Chief Executive Officer

Address: 41 Fredericks Street, Merewether

State: NSW Post Code: 2291

Full Name: Michael Francis Ihlein

Date of Birth: 25/07/1955..... Office Held: Nonexecutive Director

Address: 69 Darling Point Road, Darling Point.

State: NSW Post Code: 2027

Full Name: Joycelyn Cheryl Morton

Date of Birth: 29/03/1959..... Office Held: Nonexecutive Director



Address: 602/55 Lavender Street Milsons Point

State: NSW..... Post Code: 2061.....

Full Name: The Hon. Helen Lloyd Coonan

Date of Birth: 29/10/1947..... Office Held: Nonexecutive Director.....

Address: 6 Rosemont Avenue Woollahra

State: NSW..... Post Code: 2025.....

Full Name: Nigel Julien Clark

Date of Birth: 21/01/1965..... Office Held: Nonexecutive Director.....

Address: 370 River Road, Claudelands Hamilton

State: NEW ZEALAND..... Post Code: 3214.....

Full Name: Wallace Richard Sheppard

Date of Birth: 21/02/1949..... Office Held: Nonexecutive Director.....

Address: N1104/23.Shelley Street, Sydney

State: NSW..... Post Code: 2000.....

Full Name: Leeanne Kay Bond

Date of Birth: 24/06/1965..... Office Held: Nonexecutive Director.....

Address: 1 Abuklea Street Wilston

State: QLD..... Post Code: 4051.....

Full Name: Glen Dewing

Date of Birth: Office Held: Company Secretary

Address: Cooma

State: NSW..... Post Code: 2630.....

(attach additional pages if necessary)

3.4 Names and addresses of major shareholders of Applicant

State the full names and addresses of the major shareholders of the applicant

Name: Snowy Hydro Ltd

Address: Monaro Highway, Cooma

State: **NSW** Post Code: **2630**

3.5 Details of the group members

This is information about entities controlled by the applicant, or by the ultimate parent entity of the applicant (if applicable).

Please see the supporting information provided, including financial reports and business analysis reports. The Corporate Structure is outlined in question 1.6.

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3.6 Additional information

Please answer the following questions.

- ▲ *Is the applicant a resident of, or does it have permanent establishment in, Australia? Where the answer to this question is no, please provide further detail.*

The Applicant is a Corporations Act company domiciled in Australia, capable of being sued in its own name in Australia and is not under external administration.

- ▲ *Is the applicant under external administration (as defined in the Corporations Act 2001) or under a similar form of administration under any laws applicable to it in any jurisdiction? Where the answer to this question is yes, please provide further detail.*

No

- ▲ *Is the applicant immune from suit in respect of the obligations under the Electricity Act 1996? Where the answer to this question is yes, please provide further detail.*

No

- ▲ *Is the applicant capable of being sued in its own name in a court of Australia? Where the answer to this question is no, please provide further detail.*

Yes

(attach additional pages if necessary)

3.7 Financial resources available to the Applicant

Provide information about the financial resources available to the applicant. If the applicant is a company, please also enclose:

- ▲ *copies of all audited profit and loss statements and balance sheets for the last three financial years (including all notes), and*
- ▲ *director's declaration that the financial statements comply with accounting standards, give a true and fair view, have been made in accordance with the Corporations Act and that there are reasonable grounds to believe the company/entity will be able to pay its debts as and when they fall due; and*
- ▲ *the director's report and the audit opinion.*

If the applicant is a subsidiary company, please also provide:

- ▲ *copies of all audited profit and loss statements and balance sheets of the applicant's parent company for up to the last three financial years.*

The applicant should also submit copies of:

- ▲ *its business plans including at least strategic direction and objectives, identified opportunities in the market place and forecast results; and*
- ▲ *evidence of capital and liquidity support in place, including any bank or cross guarantees, to support the business and evidence of negotiations with the network service provider concerning credit support arrangements.*

Please see the supporting information provided, including financial reports and business analysis reports. The Director's Report in each of the Financial Reports provides the Director's Declaration, auditor's opinion, with the body of the reports providing the detailed financial information.....

3.8 Additional Details of Structure of Applicant

If the applicant is part of a group of related companies, and/or party to a partnership, joint venture or alliance agreement with another company, please provide:

- ▲ *contractual arrangements (e.g. alliance contracts, associate contracts, establishment contracts) that define relationships within the group – including shared resources, guarantees, revenue flows, obligations and or responsibilities.*

As identified in question 1.2 and 1.6, the Applicant Lumo Generation SA Pty Ltd is a 100% owned and controlled entity of the parent entity Snowy Hydro Ltd, which is a public company incorporated and operating in Australia. The Snowy Hydro Ltd shareholders are the Commonwealth, Victorian, and NSW Governments. Please see the supporting information provided, including financial reports and business analysis reports.

3.9 Human resources available to the Applicant

Provide information about the human resources available to the applicant. This includes:

- ▲ *the experience and qualifications of those employees outlined in the organisational chart (see point 1.6); and*
- ▲ *if the applicant will employ contractor/s to assist with the licensed operations, the name of that contractor/s, details about the experience of the contractor/s in such operations and details of the processes in place to ensure the contractor/s complies with the regulatory obligations imposed by the licence.*

The Applicant 'Lumo Generation SA Pty Ltd' is operated by Snowy Hydro. As such all of the knowledge, skills, and personnel resources of Snowy Hydro are available for the operation of the Lumo Generation SA Pty Ltd assets. Snowy Hydro has owned and operated three comparable Cummins engine diesel power stations at Port Stanvac, Lonsdale, and Angaston in SA (each identified in Annexure 1 of the Electricity Generation Licence to which this application is made), since October 2015, and also owned and operated the TBDPS at its current location in NSW location. Asset management expertise and commercial expertise previously operating the power stations at Infratil have continued employment at Snowy Hydro and the associated corporate knowledge from the operation of the power stations.

Snowy Hydro also contracts maintenance personnel on a full time basis from the AMAR Group, for day to day operation and maintenance of the SA diesel power stations.

The key operational support and maintenance providers, AMAR and Cummins, are engaged with a view to long term service level agreements.

The Snowy Hydro compliance framework is provided as an attachment, refer question 3.18.

Snowy Hydro SA Diesel Personnel

Gary Blanch - Area Manager - Gas & Diesels

19 years' experience in the power industry with experience on Gas Fired Power Stations, Hydro Power Stations as well as Diesel Power Stations. This experience includes operating and maintaining these type of assets at plants throughout Australia, including Western Australia, Queensland, Victoria and New South Wales. Trade qualified as an "A" Class electrician Gary was heavily involved with the commissioning and plant setup for Snowy Hydro's 320MW Laverton North Power Station and now looks after all of Snowy Hydro's Gas & Diesel Assets which consists of plants in New South Wales, Victoria and South Australia. This includes the diesel power stations identified in Annexure 1 of the current Lumo Generation SA Electricity Generation Licence.

Jason Walker - Plant Manager - Diesels

12 years' experience in the power industry on Hydro and Diesel Power Stations including both operation and maintenance roles. Trade qualified as an "A" Class electrician for 20 years with HV switching experience, commissioning new or upgraded plant, and instrumentation maintenance. Jason has spent the last 2 years onsite in Adelaide as Plant Manager for Snowy Hydro's diesel fleet of Angaston, Lonsdale and Pt Stanvac. This includes the diesel power stations identified in Annexure 1 of the current Lumo Generation SA Electricity Generation Licence.

Siloma Tago - Production Technician - Diesels

Mechanical Engineering by trade with more than 15 years' experience in the power generation industry, leading and supervising major overhauls of a range of diesel generator sets (from medium to high speed) and a range of mini hydro turbine models. Siloma has specific experience in diesel types Mirrlees (UK), Caterpillar (US), Niigata (JP) and Cummins diesel generator sets (UK), and 6 consecutive years' experience with Cummins equipment including operation and maintenance of the 28.8MW power station being relocation from its current location in NSW to Taillem Bend as the TBDPS. He has worked directly for 2 years with Cummins South Pacific, and 2 years with Thiess Pty Ltd (Energy Department) who were the operator maintainer of the Snowy Hydro SA diesel power stations.

Cummins South Pacific

Snowy Hydro continues to contract Cummins South Pacific, the Original Equipment Manufacturer and constructor of the Diesel Power Station in its current location in NSW, to provide operations and maintenance services at the Snowy Hydro's SA diesel power stations, and intends to do so at the Diesel Power Station proposed for Taillem Bend. Cummins staff involved in the operation and maintenance of the power station includes staff that has been with the company since commissioning.



The experience of the Cummins personnel available to Snowy Hydro is an accumulated over 100 years of experience on diesel generating sets, of a variety of roles including field service technicians, service supervisors, electrical and commissioning engineers, software application engineers, and business application engineers. Cummins provide local support to the Snowy Hydro diesel power stations from their offices and service facility in Pooraka, Adelaide. With application in design, construction, installation, commissioning, and ongoing operational and maintenance support directly applicable to the generating sets in grid connected applications as to be used at the Taillem Bend DPS. Specific experience available to Snowy Hydro from Cummins includes;

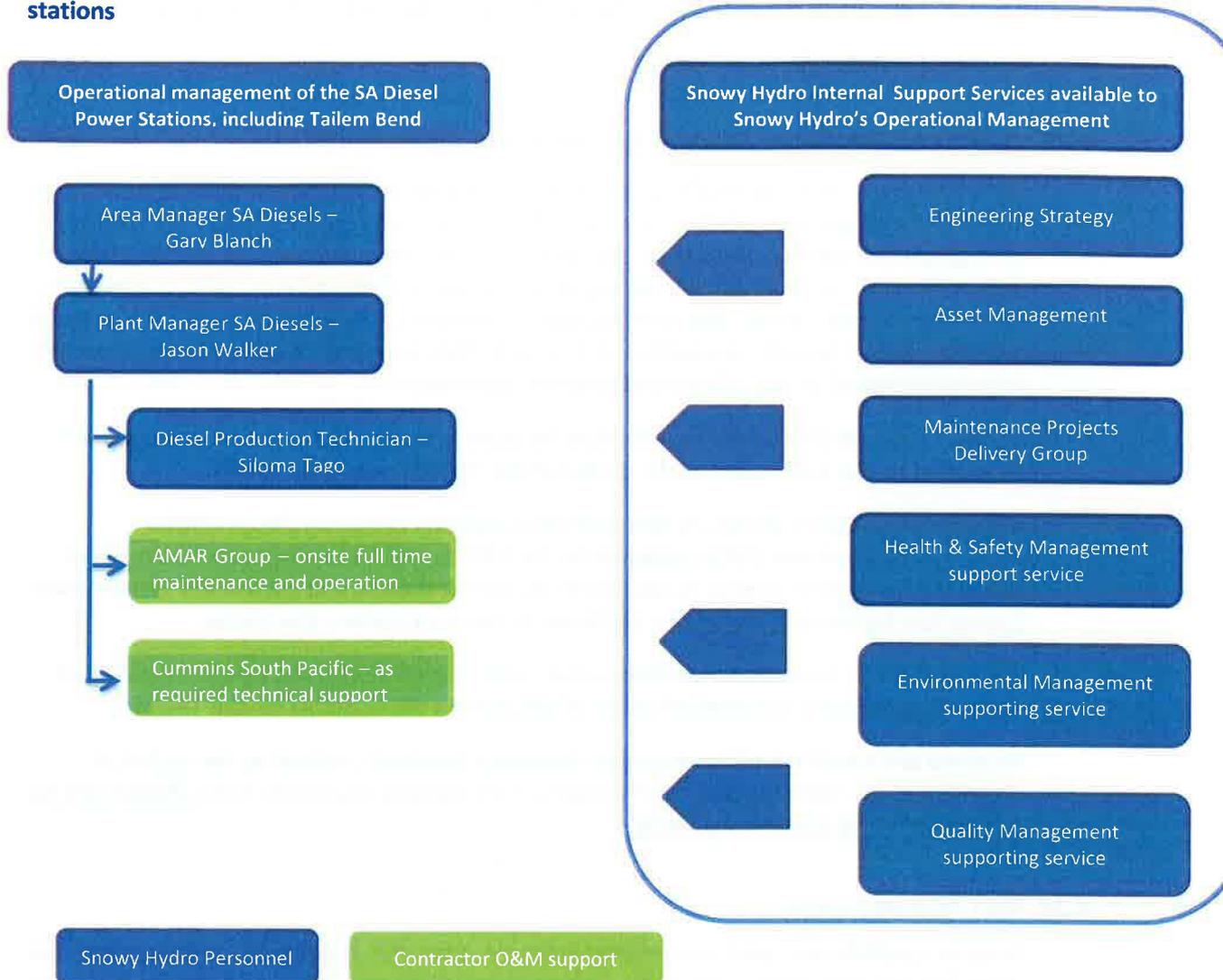
- Electrical Design for new installations as well as modifications, upgrade, extensions for existing systems to meet new requirements and compliance with codes & standards, including substation design & commissioning.
- O&M requirements, scheduled and unscheduled maintenance services for electrical equipment
- Power quality measurements & analysis and system studies - short circuit, load flow, motor starting, harmonics studies.
- Support for control & protection systems, single line diagrams, schematics, settings, communications.
- HV/LV switching and isolation procedures and operations and re-energisation.
- PLC architecture design, development, and programming across a range of supporting providers
- Engine servicing and upgrades for improved reliability, longevity, and corrective and preventative maintenance.

AMAR Group

Snowy Hydro contracts with the AMAR Group for operations and maintenance support at the SA diesel power stations. The AMAR Group has worked within the power generation industry for over twenty years and has extensive experience in design, installation, project management and commissioning of over 200MW of power generation, and all facets of diesel and gas fuelled power generation installations, including commissioning of high voltage switchgear, switchyards, transformers, and underground reticulation systems.

This has included maintenance support on the Port Stanvac, Lonsdale, and Angaston diesel power stations in SA for Snowy Hydro and for the previous owners Infratil, to which Lumo Generation SA Pty Ltd was also a subsidiary. This has included control systems design and commissioning engineering, and a close association with Cummins the OEM.

Organisational Structure of Operations and Maintenance of the TBDPS and SHL SA diesel power stations



3.10 Technical resources available to the Applicant

Applicants for a generation licence are asked to provide details about the availability of technical resources to be used in carrying out the operations for which a licence is sought. The information should include details about the technically qualified staff available to the applicant and (if relevant) details of experience gained in similar operations.

Where applicants are relying on a third party to provide staff and resources to meet the technical requirements of the generation licence, please provide:

- ▲ a list of all functions and activities being proposed to outsource;
- ▲ details of any formal agreement/s to provide services, including confirmation that the third party possess relevant technical competencies to conduct the proposed activities;

- ▲ a summary of the third party's technical capacity to meet relevant obligations, including relevant accreditations; and
- ▲ a summary of the third party's experience and knowledge in the relevant area.

Refer to question 3.9

3.11 Quality of Electricity Produced/Connection Agreement

The Commission may not issue a generation licence unless it is satisfied that the generating plant (or proposed generating plant) will generate electricity of the appropriate quality for the relevant transmission or distribution network. The Commission will be satisfied that the electricity is of an appropriate quality if the applicant has entered into a connection agreement which meets the Commission's technical requirements with the licensed operator of the relevant transmission or distribution network. Applicants are therefore required to submit a copy of such a connection agreement.

As discussed with ESCOSA it is understood the approach of a case by case assessment will be applied to this application as the output of the TBDPS is less than 30MW.

It is understood that ESCOSA, AEMO, and ElectraNet will confer on the Generator Performance Standards (GPS) applicable to the TBDPS, which may form conditions of the Electricity Generation Licence as applied to the power station, and used in the Transmission Connection Agreement process by the Network Service Provider, ElectraNet.

It is noted that a Transmission Network Connection Agreement is not able to be provided with this application, as a confirmed set of GPS are not yet available for the TBDPS.

Attached are a draft set of Generator Performance Standards, indicating the technical capability of the TBDPS to address Chapter 5 of the National Electricity Rules **[PROVIDED AS COMMERCIAL-IN-CONFIDENCE]**.

3.12 Risk Management

Provide confirmation and reasonable evidence that the applicant's management has identified the risks associated with electricity operations and has established, utilises and relies upon risk management systems and processes which are adequate, accurate and current to address those risks. A copy of the applicant's risk management strategy should be submitted.

See the attached Risk Management Framework **[PROVIDED AS COMMERCIAL-IN-CONFIDENCE]**.

3.13 Development Act Approval

Please advise if the applicant has or is applying for approval under the Development Act 1993 (SA). If so, provide details, including the date on which approval was or will be granted.

Development Act Approval was received on 21st December 2016 from the Minister for Planning to construct and operate the Taillem Bend Diesel Power Station as Public Infrastructure.

- Approval was granted under section 49 of the Development Act 1993
- Date of Decision: 21 December 2016
- Development Number: 571/V004/16

The project was sponsored as Public Infrastructure by the Department of State Development under section 49 of the Development Act 1993, on the basis of the project providing "additional backup to the State's existing renewable generation supply."

3.14 Registration with AEMO

Please advise if the applicant will apply to register with AEMO. If so, provide details. Applicants for a wind generation licence should note that registration as a semi-scheduled market participant is required for all new generators and all expansions to existing wind generation plant.

Lumo Generation SA Pty Ltd will be applying for registration with AEMO for the TBDPS, envisaged as having Market Scheduled status.

3.15 Licences held by the Applicant in other Australian jurisdictions.

If the applicant holds, or has previously held, electricity and/or gas licences in other Australian jurisdictions please provide details. If a licence previously held has been suspended or cancelled, please provide details.

The Applicant has not held an electricity or gas licence in another Australian jurisdiction. Refer to question 3.17 for associates of the Applicant.

3.16 Previous unsuccessful licence applications in other Australian jurisdictions

Please state whether the applicant has applied for an electricity or gas licence in another Australian jurisdiction and not been issued with a licence, and provide details if relevant.

The Applicant has not had an unsuccessful electricity or gas licence application.

3.17 Licences held by Associates of the Applicant

If an associate of the applicant (within the meaning of the Corporations Act) holds an electricity or gas licence in South Australia or in other Australian jurisdictions, please provide details.

With regard to associates of the Applicant, the following were obtained for the Laverton Power Station in Victoria which is owned and operated by Snowy Hydro;

- Office of the Regulator-General Victoria – Electricity Generation Licence – Valley Power power station, issued September 2004
- Victorian Energy Networks Corporation (VENCORP) – Snowy Hydro / Vencorp Use of System Agreement – 30 August 2004



The following were obtained for the Valley Power power station in Victoria, owned and operated by Snowy Hydro;

- Essential Services Commission Victoria – Electricity Generation Licence – Valley Power power station, issued November 2001
- Victorian Energy Networks Corporation (VENCORP) – Use of System Agreement Valley Power Pty Ltd – 10 January 2002

Prior to Snowy Hydro ownership of Lumo Energy (the retail cousin of the Applicant), Lumo secured an electricity licence in VIC in August 2002, a gas licence in VIC in 2004, electricity licence for SA in 2005, electricity licence for QLD in 2006 and an electricity licence for NSW in 2007. Lumo also secured its gas licence for NSW in FY12.

3.18 Compliance Plans

Applicants are required to submit a copy of their Compliance Plan which demonstrates how the compliance systems the applicant has (or will have) in place will ensure compliance with all of the applicable regulatory obligations imposed by the relevant licence.

Please see the attached Regulatory Compliance Framework **[PROVIDED AS COMMERCIAL-IN-CONFIDENCE]**.

3.19 Additional Information

The Commission encourages applicants to provide any additional information they consider would be of assistance in supporting the application. Please provide below.

The following information is provided in support of this application with regard to the contribution of the TBDPS and Snowy Hydro portfolio to system security and the objectives of the ESCOSA Inquiry into Licensing of Generators in SA.

1. Alignment with SA Government objectives for power system security SA Energy Plan

The generation capability of the proposed TBDPS, together with the solar development, aligns with the objectives of the SA Energy Plan with respect to additional renewable generation, support for intermittent energy supply, and capability that supports the objectives of the 'Temporary Energy Security Measure'.

Emergency Standby Power

The intended design and operation of the generator sets for which this application is made, is specified by the OEM as 'Emergency Standby Power'. This is generation at 1.8MW, commonly referred to as standby power. The Applicant is intending to enable the generating units as capable of operating at this rating, incurring the additional maintenance costs, and does so currently at the SA Diesels, thereby supporting the network.

2. Geographic diversity

The Snowy Hydro diesel power station portfolio is diversely positioned in SA, at Port Stanvac (36 x 1.8MW capacity) and Lonsdale (18 x 1.15MW capacity) south of Adelaide, at Angaston (24 x 1.6kW capacity) norther of Adelaide, and now with this application at Taillem Bend (16 x 1.8MW capacity) east of Adelaide. The locations are on strategically

opposing sides of the physical transmission network around the main load centre in Adelaide, and therefore positioned to supply generation into the market in the event of a transmission infrastructure failure, and resilience against localised fault conditions.

3. State sponsorship of solar and diesel project

The project to construct and operate the HEZ at Tailem Bend was sponsored on 23rd May 2016 as Public Infrastructure by the Chief Executive of the Department of State Development under section 49 of the Development Act 1993, on the basis of the project providing “additional backup to the State’s existing renewable generation supply.” It’s noted that this commitment was made significantly prior to the envisaged changes to generator performance standards as outcomes of the ongoing ESCOSA Inquiry into licensing of generators.

4. Long term view and investment in SA

The investment in diesel power stations (Lonsdale, Port Stanvac, Angaston) and now project to locate the HEZ at Tailem Bend, together with the increasing retail customer base (refer to question 4), demonstrates Snowy Hydro’s long term view of participation in the South Australian segment of the electricity markets, both as a generator and retailer. With the TBDPS project improving the ability to hedge price risk associated with the development of the retail customer base in SA. Consequently, the ability to develop the retail base, and to undertake the TBDPS project economically have an influence on the decision to proceed with one another.

5. Scheduling of Generators for central dispatch

Upon acquisition of the existing diesel power stations in SA, SHL changed the market registration of the power stations from Non-Scheduled to Scheduled Generators, enabling central dispatch of the generating units as managed by AEMO, and thus facilitating support of the SA network. The HEZ at Tailem Bend would be similarly registered.

6. Provision of Frequency Control Ancillary Service (FCAS)

Snowy Hydro is undertaking a project to advance the controls and data acquisition capability of each of its diesel power stations in SA, to improve dispatch compliance, ramping capability and potentially to provide FCAS services to the market from its current power stations and TBDPS after further feasibility work.

Provision of FCAS is identified in AEMO’s interim recommendation (24th February) to ESCOSA on Generation Licence conditions as an alternative to implementation of the new Generator Performance Standards envisaged by ESCOSA.



4 FACTORS SPECIFIED IN THE ESSENTIAL SERVICES COMMISSION ACT 2002

In considering a licence application, the Commission must have as its primary objective protection of the long term interests of consumers with respect to the price, quality and reliability of electricity supply, and must also have regard to the need to:

- (a) promote competitive and fair market conduct;
- (b) prevent misuse of monopoly or market power;
- (c) facilitate entry into relevant markets;
- (d) promote economic efficiency;
- (e) ensure consumers benefit from competition and efficiency;
- (f) facilitate maintenance of the financial viability of regulated industries and the incentive for long term investment;
- (g) promote consistency in regulation with other jurisdictions.

If the applicant believes that information about their application would assist the Commission in its consideration of these factors, the applicant should provide such information below.

The Snowy Hydro Group is a vertically integrated generator and electricity retailer that views the South Australian retail electricity market as a prospective one, with approximately 60,000 retail customers under the Lumo Energy and Red Energy electricity retailers in that State, upon a total base of 1,000,000 retail customers.

With regard to the long term interest of customers as ESOCSA's primary objective, the following awards are determined based on the vote of direct retail customers to Red Energy, which is the only energy retailer to have won Canstar Blue 5 star awards in five consecutive years. And while achieved in NSW and Victoria, it is the same business practices that will be brought to SA with the Red Energy retailer, supported by the Snowy Hydro generation assets.

- 2015 Roy Morgan Customer Satisfaction Award – Electricity and Gas Provider of the Year
- 2015 Canstar Blue Award, Most Satisfied Customers – Electricity Providers, NSW
- 2014 Roy Morgan Customer Satisfaction Award – Gas Provider of the Year
- 2014 Canstar Blue Award, Most Satisfied Customers – Electricity Providers, NSW
- 2013 Canstar Blue Award, Most Satisfied Customers – Natural Gas Providers, Vic.
- 2012 Canstar Blue Award, Most Satisfied Customers – Electricity Providers, Vic.
- 2011 Inaugural Roy Morgan Customer Satisfaction Award, Electricity Provider of the year.
- 2011 Canstar Blue Award, Most Satisfied Customers – Electricity Providers, Vic.
- 2010 Canstar Blue Award, Most Satisfied Customers – Electricity Providers, Vic.

Further aspects of the TBDPS the subject of this Generation Licence application, with regard to consumer interests and reliability of electricity supply include

- The TBDPS provides critical capacity hedging to support Snowy Hydro's South Australian expanding retail customer base;

- The TBDPS and Snowy Hydro diesel portfolio contribute to mitigating retail electricity price risk for those customers;
- The TBDPS is part of a broader development encompassing approximately 100MW of PV solar being developed by Equis Australia. The TBDPS provides peaking support to the SA market in conjunction with the solar renewable energy. As such the development as a whole provides reliability electricity while increasing the renewable base.
- The Snowy Hydro Group will purchase in the order of 200GWh of solar energy from the adjacent solar development, and provide a base of renewable energy (supported by diesel peaking for reliability) to the SA customers
- As discussed in 3.19 the Snowy Hydro diesel portfolio is diversely positioned in SA on strategically opposing sides of the physical transmission network and therefore positioned to increase the resilience of supply to the retail market.

Consequently, enabling Snowy Hydro's presence as a generator in SA will continue to positively contribute to ESCOSA's objectives identified above.

5 APPLICATION FEES

Applicants for a licence must pay to the Commission an application fee fixed by the Minister for Energy from time to time. This fee is presently set at \$1,000 per licence. Please enclose this fee with the application. An application cannot be considered until this fee has been received and cannot be refunded.



6 DECLARATION

All information in this application for the issue of a licence to authorise electricity generation operations in the electricity supply industry in South Australia must be verified by a Statutory Declaration of the applicant, in accordance with the provisions of the *Oaths Act 1936* (SA)³, stating that the information contained in the application is true and correct to the best of the applicant's knowledge, information and belief.

Where the applicant is a body corporate, evidence of the relevant authority of the declarant to sign on behalf of the body corporate must also be provided to the Commission.⁴

Statutory Declaration

I ROGER WHITBY

of 143 DEEPWATER ROAD, CASTLE COVE, 2069

do solemnly and sincerely declare that the information contained in this Application for the issue of a licence to authorise electricity generation operations in the electricity supply industry in South Australia is true and correct to the best of my knowledge information and belief.

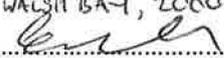
And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1936*.

Date 22/5/17

Signature 

(Where the applicant is a body corporate, the declaration must be made by a person authorised by body corporate to sign on its behalf)

Declared at: 23 HICKSON RD, WALSH BAY, 2000 this 22ND day of MAY 2017

Before me: 

LEIGH CRESWELL, SOLICITOR OF THE SUPREME COURT OF NSW
(Signature of Justice of the Peace or other person authorised under the *Oaths Act 1936*)

³ or equivalent legislation in other Australian jurisdictions.

⁴ The Commission will accept a copy of a Board minute (or circulating resolution) giving approval for the declarant to sign on behalf of the applicant as evidence of the relevant authority.

