



Electricity

Licence

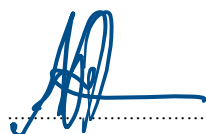


Electricity Generation Licence

South Australian Water Corporation

ABN 69 336 525 019

This licence was issued by the **Commission** on 8 July 2014 and last varied on the date specified below.



Adam Wilson
Chief Executive Officer and Commission authorised signatory

25 March 2022

Date

Variation history

Amendment number	Variation date	Reason
ESCOSA01	8 August 2018	Licence varied to include a generating plant at Crystal Brook workshop.
ESCOSA02	12/12/2018	Licence varied to reflect amendments to the Act update outdated references and include a generating plant at Hope Valley Water Treatment Plant.
ESCOSA03	April 2020	Licence varied to include a generating plant at Swan Reach and Hahndorf.
ESCOSA04	September 2020	Licence varied to include a generation plant at Morgan Whyalla Pumping 3 Station.
ESCOSA05	October 2020	Licence varied to include additional generation plant at Glenelg, Aldinga, Balhannah and Onkaparinga Hills.
ESCOSA06	December 2020	Licence varied to include additional generation plant at Morgan Whyalla Pumping Station No. 1, Morgan Whyalla Pumping Station No. 2 and Morgan Whyalla Pumping Station No. 4.
ESCOSA07	March 2021	Licence varied to include additional generation plant at the Adelaide Desalination Plant – Stage 1
ESCOSA08	April 2021	Licence varied to include additional generation plant at Myponga
ESCOSA09	July 2021	Licence varied to include additional generation plant at Mannum Adelaide PS2
ESCOSA10	August 2021	Licence varied to include additional generation plant at Mannum Adelaide PS3

ESCOSA12	September 2021	Licence varied to include additional generation plant at the Bolivar Waste Water Treatment Plant
ESCOSA13	October 2021	Licence varied to include additional generation plant and update to capacity limits at the Adelaide Desalination Plant – Stage 2
ESCOSA14	December 2021	Licence varied to include additional generation plant at the Murray Bridge Onkaparinga No. 2 Pumping Station
ESCOSA15	March 2022	Licence varied to include additional generation plant at the Happy Valley Water Treatment Plant and the Christies Beach Waste Water Treatment Plant

1 Definitions and interpretation

- 1.1 Words appearing in bold like **this** are defined in Schedule 1.
- 1.2 This licence must be interpreted in accordance with the rules set out in Schedule 2.

2 Grant of licence

- 2.1 The **licensee** is licensed under Part 3 of the **Act**, and subject to the conditions set out in this licence, to generate electricity using the electricity generating plant as specified in Schedule 3.

3 Term

- 3.1 This licence commences on the date it is issued and continues until:
 - (a) it is surrendered by the **licensee** under section 29 of the **Act**; or
 - (b) it is suspended or cancelled by the **Commission** under section 37 of the **Act**.

4 Access

- 4.1 The **licensee** must:
 - (a) in accordance with, and to the extent required by, the **Electricity Transmission Code**, grant to an **electricity entity** holding a **transmission licence** or a **distribution licence**, rights to use, or have access to, those parts of the **licensee's** electricity generating plant that are interconnected or interface with the **electricity entity's** assets for the purpose of ensuring the proper integrated operation of the South Australian power system and the proper conduct of the operations authorised by that **electricity entity's transmission licence** or **distribution licence**; and
 - (b) in the absence of agreement as to the terms on which such rights are to be granted, comply with a determination of the **Commission** as to those terms.

5 Dispute resolution

- 5.1 A dispute relating to the granting of rights to use or have access to the inter-connecting assets of the **licensee's** electricity generating plant referred to in clause 4 shall be resolved in accordance with any applicable **industry code** developed by the **Commission** for the resolution of disputes.
- 5.2 Clause 5.1 does not apply to the extent the dispute is subject to resolution in accordance with or under the **National Electricity Rules**.

6 Compliance with codes

- 6.1 The **licensee** must:
 - (a) comply with all applicable provisions of the **Electricity Transmission Code**, the **Electricity Distribution Code** and the **Electricity Metering Code**;
 - (b) comply with all applicable provisions of any other **industry code** or **rule** made by the **Commission** from time to time; and
 - (c) notify the **Commission** if it commits a material breach of the **Electricity Transmission Code**, the **Electricity Distribution Code** or the **Electricity Metering Code** within 3 days after becoming aware of that breach.

7 Safety, reliability, maintenance and technical management plan

- 7.1 The **licensee** must:
- (a) prepare, maintain and periodically revise a safety, reliability, maintenance and technical management plan dealing with matters prescribed by **regulation**;
 - (b) obtain the approval of the **Technical Regulator**:
 - (c) to the plan (prior to commencement of the operation of the electricity generating plant to which the plan relates); and
 - (i) to any revision of the plan;
 - (ii) comply with the plan as approved in accordance with clause 7.1(b);
 - (d) undertake audits of its compliance with the plan from time to time and report the results of those audits to the **Technical Regulator**, in the form required by the **Technical Regulator**.

8 National electricity market

- 8.1 The **licensee** must hold and comply with the conditions of any registration required under the **National Electricity Rules** granted by **AEMO** (or the person responsible for the granting of such registrations under the **National Electricity Law** or the **National Electricity Rules**) at all times that such registration is required for the operations authorised by this licence.

9 System controller and AEMO

- 9.1 The **licensee** must, following a request from **AEMO**, provide to **AEMO** such documents and information as **AEMO** may reasonably require for the performance of its functions under the **Act**.
- 9.2 The **Licensee** must comply with any directions given to it by the **System Controller**.

10 Information to the Commission

- 10.1 The **licensee** must, from time to time, provide to the **Commission**, in a manner and form determined by the **Commission**:
- (a) details of the **licensee's** financial, technical and other capacity to continue the operations authorised by this licence; and
 - (b) such other information as the **Commission** may require from time to time.
- 10.2 The **licensee** must notify the **Commission** of any changes to its **officers**, and (if applicable) major shareholders, within 30 days of that change.

11 Operational and compliance audits

- 11.1 The **licensee** must undertake periodic audits of the operations authorised by this licence and of its compliance with its obligations under this licence and any applicable Codes in accordance with the requirements of any applicable guidelines issued by the **Commission**.
- 11.2 The **licensee** must also conduct any further audits at a frequency and in manner approved by the **Commission**.

- 11.3 The results of audits conducted under this clause must be reported to the **Commission** in a manner approved by the **Commission**.
- 11.4 The **Commission** may require the licensee to use an independent expert approved by the **Commission** to conduct audits under this clause.
- 11.5 The **Commission** may require the costs of using an independent expert approved by the **Commission** to conduct audits under this clause to be met by the **Licensee**.

12 Confidentiality

- 12.1 The **licensee** must, unless otherwise required by law, this licence, an **industry code**, or the **National Electricity Rules**, comply with any **rules** made by the **Commission** from time to time relating to the use of information acquired by the **licensee** in the course of operating the business authorised by this licence.

13 Community service

- 13.1 The **licensee** must comply with the requirements of any scheme approved and funded by the Minister for the provision by the State of customer concessions or the performance of community service obligations by the **electricity entities**.

14 Compatibility

- 14.1 The **licensee** must not do anything to its electricity generating plant affecting the compatibility of its electricity generating plant with any **distribution network** or **transmission network** so as to prejudice public safety or the security of the power system of which the electricity generating plant forms a part.

15 Insurance

- 15.1 The **licensee** must undertake and maintain during the term of this licence insurance against liability for causing bush fires.
- 15.2 The **licensee** must provide to the **Commission** a certificate of the insurer or the insurance broker by whom the insurance was arranged (in a form acceptable to the **Commission**) to the effect that such insurance is adequate and appropriate, given the nature of the **licensee's** activities conducted under this licence and the risks associated with those activities.

16 Compliance with laws

- 16.1 The **licensee** must comply with all applicable laws including, but not limited to, any technical or safety requirements or standards contained in regulations made under the **Act**.

17 Switching Manual

- 17.1 The **licensee** must:
- (a) prepare and maintain an internal switching manual in accordance with the **regulations**;
and
 - (b) comply with any other requirements relating to switching prescribed in the **regulations**.

18 Variation

- 18.1 This licence may only be varied in accordance with section 27 of the **Act**.

19 Transfer

19.1 This licence may only be transferred in accordance with section 28 of the **Act**.

Schedule 1 – Definitions

In this licence:

Act means the Electricity Act 1996 (SA);

AEMO means the Australian Energy Market Operator Limited (ABN 94 072 010 327);

business day means a day on which banks are open for general banking business in Adelaide, excluding a Saturday or Sunday;

Commission means the Essential Services Commission established under the **ESC Act**;

distribution licence means a licence to operate a **distribution network** granted under Part 3 of the **Act**;

distribution network has the meaning given to that term under the **Act**;

Electricity Distribution Code means the code of that name made by the **Commission** under section 28 of the **ESC Act** which regulates connections to a **distribution network** and the supply of electricity by distributors;

electricity entity means a person who has been granted a licence under Part 3 of the **Act** to carry on operations in the electricity supply industry;

Electricity Metering Code means the code of that name made by the **Commission** under section 28 of the **ESC Act** which regulates the installation, maintenance and testing of meters;

Electricity Transmission Code means the code of that name made by the **Commission** under section 28 of the **ESC Act**;

ESC Act means the Essential Services Commission Act 2002 (SA);

generator means a holder of a licence to generate electricity granted under Part 3 of the **Act**;

industry code means any code made by the **Commission** under section 28 of the **ESC Act** from time to time;

Licensee means the South Australian Water Corporation (ABN 69 336 525 019);

National Electricity Rules has the meaning given to that term in the **National Electricity Law**;

National Electricity Law means the National Electricity Law referred to in the National Electricity (South Australia) Act 1996 (SA);

regulation means a regulation made under the **Act**;

rule means any rule issued by the **Commission** under section 28 of the **ESC Act**;

System Controller means the person licensed under Part 3 of the **Act** to exercise system control over a power system;

Technical Regulator means the person holding the office of Technical Regulator under Part 2 of the **Act**;

transmission licence means a licence to operate a **transmission network** granted under Part 3 of the **Act**; and

transmission network has the meaning given to that term under the **Act**.

Schedule 2 – Interpretation

In this licence, unless the context otherwise requires:

- (a) headings are for convenience only and do not affect the interpretation of this licence;
- (b) words importing the singular include the plural and vice versa;
- (c) words importing a gender include any gender;
- (d) an expression importing a natural person includes any company, partnership, trust, joint venture, association, corporation or other body corporate and any governmental agency;
- (e) a reference to a person includes that person's executors, administrators, successors, substitutes (including, without limitation, persons taking by novation) and permitted assigns;
- (f) a reference to any statute, regulation, proclamation, order in council, ordinance or by-law includes all statutes, regulations, proclamations, orders in council, ordinances or by-laws varying, consolidating, re-enacting, extending or replacing them and a reference to a statute includes all regulations, proclamations, orders in council, ordinances, by-laws and determinations issued under that statute;
- (g) a reference to a document or a provision of a document includes an amendment or supplement to, or replacement or novation of, that document or that provision of that document;
- (h) an event which is required under this licence to occur on or by a stipulated day which is not a **business day** may occur on or by the next **business day**.

Schedule 3 – Licensed Operations

	Location	Technical details of generating plant	Generating capacity	Maximum export level
1	Bolivar Waste Water Treatment Plant	<p>3 x Jenbacher JMS 616 GS-B.L four stroke, internal combustion, reciprocating gas engines, and</p> <p>3 x 2.75MVA solar PV inverters (SMA Sunny Central 2750-EV)3 x 3.02MVA biogas generating units (GE Jenbacher JMS 616 GS-B.L)</p> <p>28,224 x 380W JA solar JAM72S01-380/PR ground mounted fixed tilt panels</p> <p>3 x 0.64MVA Tesla Powerpack inverter (10 power stages @440VAC, 70 kVA nameplate variant power)</p> <p>2 x 0.58MVA Tesla Powerpack inverter (9 power stages @440VAC, 70 kVA nameplate variant power), and</p> <p>1 x 0.825MVA diesel generating unit (Magnamax 574RSL4038).</p>	21.22MVA (Generator registered capacity: 16.44MW)	10.46MW
2	Crystal Brook Workshop	<p>308 x LG NeON 2 solar panels (total capacity of 100.1kW)</p> <p>40 x Suntech solar panels (total capacity of 9.8kW)</p> <p>3 x Ecoult Ultraflex Batteries (total capacity of 22.5kW)</p>	132.4kW	132.4kW
3	Hope Valley Water Treatment Plant	4,600 x 330W solar photovoltaic panels	1.5MW	1.5MW
4	Hahndorf Waste Water Treatment Plant	684 x JA Solar JAM72S01-375/PR solar panels	200kW	200kW
5	Swan Reach Pumping Station no 1	16,576 x JA Solar JAM72S01-380/PR solar panels	4.95MW	4.95MW
6	Swan Reach Pumping Station no 2	7,308 x JA Solar JAM72S01-380/PR solar panels	2.5MW	2.5MW
7	Swan Reach Raw Water Pump Station	2,268 x JA Solar JAM72S01-380/PR solar panels	750kW	750kW

	Location	Technical details of generating plant	Generating capacity	Maximum export level
8	Swan Reach Filtration Plant	Battery energy storage system	550kVA	550kVA
9	Morgan Whyalla 3 Pumping Station	19,656 x JA Solar JAM7S01-380/PR ground mounted E-W tracking panels, and 3 x 2.5MVA (SMA Sunny Central 2500) inverters	7.5MW	6.22MW
10	Glenelg Waste Water Treatment Plant	4,000 x JAP6(K) 72/330/4BB ground-mounted fixed solar photovoltaic panels 1 x gas TESS Generating Unit (Flex GT333S) 3 x existing digester gas Generating Units (JW 316 GS), and 40 x solar photovoltaic inverter-generating units (Fronius Eco 27.3-3-S).	3.675MVA	Main feeder: 3.19MW Back up feeder: 1.15MW
11	Aldinga Waste Water Treatment Plant	3,996 x 380W JA solar JAM72S01-380/PR ground mounted fixed tilt panels 17 x 75kVA (SMA Sunny Highpower Peak) inverters 1 x 612.5kVA Tesla Powerpack inverter (10 power stages @420VAC, 70kVA nameplate variant power), and 6 x 90KW battery energy storage packs with total of 540kW capacity (1,056kWh).	1.89MVA	1.125MW
12	Balhannah Summit Storage Water Filtration Plant	2,916 x 380W JA solar JAM72S01-380/PR ground mounted fixed tilt panels 13 x 75kVA (SMA Sunny Highpower Peak1) inverters 1 x 366kVA Tesla Powerpack 2.5 inverter (6 power stages @420VAC, 70kVA nameplate variant power), and 3 x 90kW battery energy storage packs with total of 270kW capacity.	1.341MVA	1.1MW
13	Onkaparinga Hills Water Pump Station	1,144 x 380W JA solar JAM72S01-380/PR ground mounted fixed tilt panels 7 x 50kVA (SMA Sunny Tri power Core1) inverters	595kVA	530kW

	Location	Technical details of generating plant	Generating capacity	Maximum export level
		<p>1 x 245kVA tesla Powerpack 2 inverter (4 power stages @420VAC, 70kVA nameplate variant power), and</p> <p>2 x 90KW battery energy storage packs with total of 180kW capacity {360kWh}.</p>		
14	Morgan Whyalla 1 Pumping Station	<p>16,128 x 380W JA solar JAM72S01-380/PR ground mounted E-W tracking panels</p> <p>2 x 2.75 megavolt amperes (MVA) (SMA Sunny Central 2750) inverters.</p>	5.5MW	4.6MW
15	Morgan Whyalla 2 Pumping Station	<p>15,456 x 380W JA solar JAM72S01-380/PR ground mounted E-W tracking panels</p> <p>2 x 2.75MVA (SMA Sunny Central 2750) inverters</p>	5.5MW	4.6MW
16	Morgan Whyalla 4 Pumping Station	<p>15,456 x 380W JA solar JAM72S01-380/PR ground mounted E-W tracking panels</p> <p>2 x 2.75MVA (SMA Sunny Central 2750-EV) inverters</p>	5.5MW	4.56MW
17	Adelaide Desalination Plant – Stage 1 and 2	<p>32,984 x 380W JA solar JAM72S01-380/PR ground mounted fixed tilt panels</p> <p>31.03MVA exporting generation units:</p> <ul style="list-style-type: none"> ▶ 9 x 2.75MVA SMA Sunny Central 2750-EV inverters ▶ 1 x 3.14 MVA Tesla Powerpack ▶ 2 x 2.31MVA Tesla Powerpacks <p>3.14MVA non-exporting, behind the meter assets include:</p> <ul style="list-style-type: none"> ▶ 1.44MVA energy recovery mini hydro ▶ 0.22MVA of string solar PV inverters ▶ Back up 1.5MVA generation units include a 0.4MVA diesel gen set and a 1.1MVA diesel gen set 	<p>34.17MVA</p> <p>(Registered capacity of 26.1MW)</p> <p>Note: the licensed operations include only the registered capacity and maximum export limit of 26.1MW</p>	26.1MW
18	Myponga Water Filtration Plant	<p>2,088 x 380W JA solar JAM72S01-380/PR ground mounted fixed tilt panels</p>	1.24MVA	657kW

	Location	Technical details of generating plant	Generating capacity	Maximum export level
		<p>10 x 75kVA solar PV inverters (SMA Sunny Highpower Peak1)</p> <p>1 x 490kVA Tesla Powerpack 2 inverter (8 power stages @420VAC, 70kVA nameplate variant power, and</p> <p>2 x 90kW battery energy storage packs with total of 180kW capacity (352 kilowatt-hour)</p>		
19	Mannum Adelaide PS2	44,352 x 380W JA solar JAM72S01-380/PR ground mounted N/E tracking panels, and 6 x 2.75MVA (SMA Sunny Central 2750) inverters.	16.5MVA	13.4MW
20	Mannum Adelaide PS3	42,672 x 380W JA solar JAM72S01-380/PR ground mounted N/E tracking panels, and 6 x 2.75MVA (SMA Sunny Central 2750) inverters.	16.5MVA	12.4MW
21	Murray Bridge Onkaparinga No. 2 Pumping Station	34,272 x 380W JA solar JAM72S01-380/PR ground mounted N/E tracking panels, and 5 x 2.75MVA (SMA Sunny Central 2750) Inverters.	13.75MW	10.3MW
22	Happy Valley Water Treatment Plant	33,750 x 380W JA Solar JAM72S01-380/PR ground mounted N/E tracking panels 11MW (4 x 2.75MVA) SMA Sunny Central 2750 inverters, and 5.52MW Tesla Powerpack Systems	16.52MW	8.37MW
23	Christies beach Waste Water Treatment Plan	<p>5.381MVA new Generating Units, comprising:</p> <ul style="list-style-type: none"> ▶ 1 x 2.75MVA solar Photovoltaic (PV) SMA Sunny Central 2750-EV inverters ▶ 1 x 2.631MVA (2.16MW) Tesla Powerpack inverters (41 power stages @440VAC, 70 kVA nameplate variant power per inverter), and <p>5.31MVA existing Generating Units, comprising:</p> <ul style="list-style-type: none"> ▶ 1 x 0.83MVA biogas gen set (C03GN01) 	10.691MVA Registered capacity of 9.374MW) Note: the licensed operations include only the registered capacity and maximum export limit of 8.5MW	8.5MW

	Location	Technical details of generating plant	Generating capacity	Maximum export level
		<ul style="list-style-type: none"> ▶ 1 x 0.9MVA diesel gen set (C03GN03) ▶ 2 x 1.25MVA diesel gen unit (C03GN04 & C03GN05), and ▶ 40 x 27kVA solar Photovoltaic (PV) inverters (Fronius ECO 27). 		

Schedule 4

Interpretation of this schedule

[Please note: Schedule 4 only applies to Morgan Whyalla 3 Pumping Station, Morgan Whyalla 1 Pumping Station, Morgan Whyalla 2 Pumping Station, Morgan Whyalla 4 Pumping Station, Adelaide Desalination Plant – Stage 1 and Stage 2, Mannum Adelaide PS2, Mannum Adelaide PS3, Bolivar Waste Water Treatment Plant, Murray Bridge Onkaparinga No. 2 Pumping Station, Happy Valley Water Treatment Plant and Christies Beach Waste Water Treatment Plant]

1. Interpretation

1.1 Terms used in this schedule and also in the National Electricity Rules (NER) have the same meaning in this schedule as they have in those rules (unless otherwise specified or unless the context otherwise requires).

1.2 This schedule retains the numbering convention of the 2017 model licence conditions.

1.3 For the purposes of this schedule, the term:

Commission means the Essential Services Commission established under the Essential Services Commission Act 2002.

licensee means South Australian Water Corporation (ABN 69 336 525 019)

Disturbance ride through capability

9. Disturbance ride-through (voltage phase angle shift)

9.1 The generating system of the licensee must not include any vector shift or similar relay/protective function acting upon voltage phase angle which might operate for phase angle changes less than 20 degrees.

System strength

11. System strength

11.1 Individual components of plant within the generating system of the licensee, which includes but is not limited to generating units and dynamic reactive power plant, must be capable of operating down to the following levels at the high voltage terminals in relation to each component:

- (a) minimum short circuit ratio of 1.5; and
- (b) minimum positive sequence X/R ratio of 2.

System restoration

16. System restoration

16.1 Where sufficient minimum fault level is available from online synchronous machines, the generating system of the licensee must have the following capability in the event of a black system:

- (a) the generating system must be capable of operation with auxiliary loads only for 180 minutes while system load is being restored, and

- (b) the generating system, including, but not limited to, each of its generating units and dynamic reactive power plant (as applicable) must have the capability to provide steady-state and dynamic reactive power when operating with auxiliary loads only for 180 minutes while system load is being restored.



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