



<b>Licence number</b>	L7167/1997/10
<b>Licence holder</b>	Electricity Generation and Retail Corporation T/A Synergy
<b>ACN</b>	673 830 106
<b>Registered business address</b>	Forrest Centre 219 St Georges Terrace PERTH WA 6000
<b>DWER file number</b>	DER2014/001050-1
<b>Duration</b>	30/12/2014 to 29/12/2027
<b>Date of amendment</b>	29/10/2020
<b>Premises details</b>	Mungarra Gas Turbine Power Station Nangetty- Walkaway Road Lot 101 on Plan 59625 WEST CASUARINAS WA 6630  As defined by the coordinates in Schedule 1 (delete if not applicable)

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed production / design capacity</b>
Category 52: Electric power generation: premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is generated using a fuel.	75.7 MW

This licence is granted to the licence holder, subject to the attached conditions, on 29 October 2020, by:

**MANAGER, PROCESS INDUSTRIES  
REGULATORY SERVICES**

an officer delegated under section 20  
of the *Environmental Protection Act 1986* (WA)



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## Introduction

### DWER's industry licensing role

The Department of Water and Environmental Regulation (DWER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DWER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DWER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DWER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

### Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

### Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

### Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

### Premises description and Licence summary

Mungarra Gas Turbine Power Station is located approximately 70 kilometres (km) south east of Geraldton. The power station consists of two Frame 6 gas turbines:



- Unit 1 which has been supplied by Hitachi and is rated at 37.4MW; and
- Unit 3 which has been supplied by European Gas Turbines and is rated at 38.3 MW.

The gas turbines are certified to operate in the Western Australian Wholesale Electricity Market (WEM). The principle function of these machines is to provide peak load capacity and load following and auxiliary services to the WEM.

The turbines can only be operated using natural gas. The gas turbine station is unmanned and the gas turbines are remotely operated and controlled by Western Power's Systems Operational Control Centre in East Perth. Synergy is responsible for the operation and maintenance of all turbines, plant and equipment at Mungarra Gas Turbine Station.

Key air emissions from the premises include nitrogen oxides, sulphur dioxide, particulates, carbon monoxide and volatile organic compounds. However, the risk associated with emissions to air is considered to be low.

## Licence history

Date	Ref number	Summary of changes
30/12/2000	L7167/1997/5	Licence reissue
30/01/2002	L7167/1997/6	Licence reissue
30/12/2003	L7167/1997/7	Licence reissue
30/12/2004	L7167/1997/8	Licence reissue
30/12/2009	L7167/1997/9	Licence reissue
31/10/2013	L7167/1997/9	Licence amendment to REFIRE format
15/08/2014	L7167/1997/9	Licence amended to change occupier name and updated to latest template version
27/11/2014	L7167/1997/10	Licence reissue
06/01/2016	L7167/1997/10	Amendment Notice- amendment of expiry date to 29/12/2022
29/04/2017	L7167/1997/10	Department initiated amendment in accordance with section 59(1)(k) of the Environmental Protection Act 1986 to amend the duration of the licence date month year
06/01/2017	L7167/1997/10	Amendment Notice 1 Amend registered business address
11/10/2018	L7167/1997/10	Amendment Notice 2 Removed condition 3.2.3 regarding the requirement to monitor emissions in accordance with AS 4323.1
07/05/2019	L7167/1997/10	Amendment Notice 3 Remove Unit 2 and associated conditions Corrected AN3 replaced on 13/05/2019
29/10/2020	L7167/1997/10	Licence holder initiated amendment to change the frequency of monitoring of the gas turbine stacks. Includes CEO initiated amendments to consolidate Amendment Notices 1 to 3 into the licence and other administrative corrections and updates.



# Licence conditions

## 1 General

### 1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Licence, unless the contrary intention appears:

**‘AACR’** means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department’s website);

**‘Act’** means the *Environmental Protection Act 1986*;

**‘Annual Period’** means the inclusive period from 1 July until 30 June in the following year;

**‘Approved Methodology’** means *Pinjar Gas Turbines Station Environmental Licence Compliance, Methodology Report, Report No. GTB05/98*, authored by Western Power and dated August 1998;

**‘averaging period’** means the time over which a limit or target is measured or a monitoring result is obtained;

**‘CEMS’** means continuous emissions monitoring system;

**‘CEO’** means Chief Executive Officer of the Department.

‘submit to/notify the CEO’ (or similar) means either:

Director General  
Department administering the *Environmental Protection Act 1986*  
Locked Bag 10  
JOONDALUP DC WA 6919

or:

[info@dwer.wa.gov.au](mailto:info@dwer.wa.gov.au);

**‘CO’** means carbon monoxide;

**‘code of practice for the storage and handling of dangerous goods’** means the document titled ‘Storage and handling of dangerous goods: Code of Practice’ published by the Department of Mines and Petroleum, as amended from time to time;

**‘dangerous goods’** has the meaning defined in the Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007;

**‘DWER’** means Department of Water and Environmental Regulation;

**‘environmentally hazardous material’** means material (either solid or liquid raw materials, materials in the process of manufacture, manufactured products, products used in the manufacturing process, by-products and waste) which if discharged into the environment from or within the premises may cause pollution or environmental harm. Note: Environmentally hazardous materials include dangerous goods where they are stored in quantities below placard quantities. The storage of dangerous goods above placard quantities is regulated by the Department of Mines and Petroleum;

**‘fugitive emissions’** means all emissions not arising from point sources identified in Section 2.2;

**‘Frame 6’** means Hitachi 37.4 Mega Watt (MW) European Gas Turbine (GET) 38.3 MW;

**‘licence’** means this document, which evidences the grant of a licence by the CEO under



section 57 of the EP Act, subject to the specified conditions contained within;

**‘licence holder’** means the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted;

**‘MW’** means power output (electricity generated) in megawatts;

**‘NATA’** means the National Association of Testing Authorities, Australia;

**‘NATA accredited’** means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

**‘normal operating conditions’** means any operation of a particular process excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

**‘NOx’** means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide;

**‘placard quantity’** has the meaning defined in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007*;

**‘PM’** means total particulate matter including both solid fragments of material and miniscule droplets of liquid;

**‘Premises’** means the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map in Schedule 1 of this licence;

**‘Schedule 1’** means Schedule 1 of this Licence unless otherwise stated;

**‘Schedule 2’** means Schedule 2 of this Licence unless otherwise stated;

**‘stack test’** means a discrete set of samples taken over a representative period at normal operating conditions;

**‘STP dry’** means standard temperature and pressure (0o Celsius and 101.325 kilopascals respectively), dry;

**‘SO<sub>2</sub>’** means sulfur dioxide;

**‘USEPA’** means United States (of America) Environmental Protection Agency;

**‘USEPA Method 7E’** means the *Test Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)*;

**‘USEPA Method 10’** means the *Test Method 10- Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)*;

**‘USEPA Method 18’** means the *Test Method 18- Measurement of Gaseous Organic Compound Emissions by Gas Chromatography*;

**‘usual working day’** means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia; and

**‘VOCs’** means Volatile Organic Compounds;

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

## 1.2 General conditions

1.2.1 Nothing in the Licence shall be taken to authorise any emission that is not mentioned



in the Licence, where the emission amounts to:

- (a) pollution;
- (b) unreasonable emission;
- (c) discharge of waste in circumstances likely to cause pollution; or
- (d) contrary to any written law.

- 1.2.2 The licence holder shall operate and maintain all pollution control and monitoring equipment to the manufacturer's specification or any relevant and effective internal management system.
- 1.2.3 The licence holder, except where storage is prescribed in section 1.3, shall ensure that environmentally hazardous materials are stored in accordance with the code of practice for the storage and handling of dangerous goods.
- 1.2.4 The licence holder shall immediately recover, or remove and dispose of spills of environmentally hazardous materials outside an engineered containment system.
- 1.2.5 The licence holder shall implement all practical measures to prevent stormwater run-off becoming contaminated by the activities on the Premises.

## 2 Emissions

### 2.1 Point sources to air

- 2.1.1 The licence holder shall ensure that where waste is emitted to air from the emission points in Table 2.2.1 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.

**Table 2.1.1: Point source emission points to air**

Emission point reference	Emission Point	Emission point height (m)	Source
A1	Stack 1	10.6	Unit 1 of Frame 6 gas turbine supplied by Hitachi and rated at 37.4MW
A3	Stack 3	9.2	Unit 3 of Frame 6 gas turbine supplied by European Gas Turbines and rated at 38.3MW

## 3 Monitoring

### 3.1 General monitoring

- 3.1.1 The licence holder shall ensure that all samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.
- 3.1.2 The licence holder shall ensure that annual monitoring is undertaken at least 9 months apart.
- 3.1.3 The licence holder shall record production or throughput data and any other process parameters relevant to any non-continuous or CEMS monitoring undertaken.
- 3.1.4 The licence holder shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.
- 3.1.5 The licence holder shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these



issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

- 3.1.6 The licence holder shall record the operating hours of each turbine and a total number of operating hours for both turbines in an annual period.

### 3.2 Monitoring of point sources emissions to air

The licence holder shall undertake the monitoring of any one of the emission points listed in Table 3.2.1, according to the specifications in that table, on a rotational basis such that every stack is tested at least once in 2 annual periods, when the combined operating time of the two turbines is greater than 300 hours in the previous annual period while the turbines are being fired on gas.

**Table 3.2.1: Monitoring of point source emissions to air**

Emission point reference	Parameter	Units <sup>1, 2</sup>	Averaging period	Frequency	Method
A1 or A3	NOx	mg/m <sup>3</sup> and g/s	Stack test (30 minutes average)	On a rotational basis at least once in two annual periods when the combined operating hours of the two turbines is greater than 300 hours in the previous annual period	USEPA Method 7E
	CO		Stack test (30 minutes average)	On a rotational basis at least once in two annual periods when the combined operating hours of the two turbines is greater than 300 hours in the previous annual period	USEPA Method 10
	VOCs		Stack test Spot sample	On a rotational basis at least once in two annual periods when the combined operating hours of the two turbines is greater than 300 hours in the previous annual period	USEPA Method 18

Note 1: All units are referenced to STP dry.

Note 2: All units are referenced to 15% O<sub>2</sub>.



- 3.2.1 The licence holder shall calculate on a monthly basis emissions data for parameters listed in Table 3.2.2 according to the specifications in that table using the Approved methodology.

**Table 3.2.2: Calculation of emissions air**

Emission point reference	Parameter	Units	Frequency	Method
A1, A3	NO <sub>x</sub>	mg/m <sup>3</sup> and g/s	Monthly	Approved Methodology
	SO <sub>2</sub>			
	PM			
	CO			
	VOCs			

- 3.2.2 The licence holder shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 3.2.1 for the parameters specified in Table 3.2.1 is undertaken by the holder of NATA accreditation for the relevant methods of sampling and analysis.

## 4 Information

### 4.1 Records

- 4.1.1 All information and records required by the Licence shall:
- be legible;
  - if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
  - except for records listed in 4.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
  - for those following records, be retained until the expiry of the Licence and any subsequent licence:
    - off-site environmental effects; or
    - matters which affect the condition of the land or waters.
- 4.1.2 The licence holder shall ensure that:
- any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and
  - any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.
- 4.1.3 The licence holder shall complete an Annual Audit Compliance Report (AACR) indicating the extent to which the licence holder has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.
- 4.1.4 The licence holder shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.



## 4.2 Reporting

4.2.1 The licence holder shall submit to the CEO an Annual Environmental Report by 1 October each year after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

**Table 4.2.1: Annual Environmental Report**

Condition or table	Parameter	Format or form <sup>1</sup>
3.2.2	Emissions data for the mass flow rate (g/s) and concentrations for emissions (mg/m <sup>3</sup> ) from the power generation equipment, for parameters including NO <sub>x</sub> , SO <sub>2</sub> , PM, CO and VOCs, for each existing turbine calculated using the Approved Methodology.	None specified
4.1.3	Annual Audit Compliance Report	AACR (a template of the form is available on DWER website)
4.1.4	Complaints summary	None specified
-	Operating hours of each turbine and a total number of operating hours for both turbines in an annual period	None specified
-	Summary of any failure or malfunction of any pollution control equipment or any incidents that have occurred during the annual period and any action taken	None specified
-	Quantities of raw materials used	None specified
-	Quality and quantity of wastes produced	None specified
Table 3.2.1	NO <sub>x</sub> , CO and VOC stack monitoring data	AR1

4.2.2 The licence holder shall ensure that the Annual Environmental Report also contains:

- (a) any relevant process, production or operational data recorded under Condition 3.1.3; and
- (b) an assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets with the data being presented in tabular format and significant results presented in graphical format including a discussion of any peaks in this data.



The licence holder shall submit the information in Table 4.2.2 to the CEO according to the specifications in that table.

**Table 4.2.2: Non-annual reporting requirements**

Condition or table	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form <sup>1</sup>
-	Copies of original monitoring reports submitted to the licence holder by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the licence holder from third parties

Note 1: Forms are in Schedule 2

## 4.3 Notification

4.3.1 The licence holder shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO in accordance with the notification requirements of the table.

**Table 4.3.1: Notification requirements**

Condition or table	Parameter	Notification requirement <sup>1</sup>	Format or form <sup>2</sup>
3.1.5	Calibration report	As soon as practicable.	None specified
-	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause pollution	Part A: As soon as practicable but no later than 5pm of the next usual working day.  Part B: As soon as practicable	N1

Note 1: Notification requirements in the licence shall not negate the requirement to comply with s72 of the Act.

Note 2: Forms are in Schedule 2

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## END OF CONDITIONS



## Schedule 1: Maps

### Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).



**Figure 1: Map of the boundary of the prescribed premises**



Emission points are shown in Figure 2.



Figure 2: Map of emission points



## Schedule 2: Notification and forms

Licence: L7167/1997/10

Licensee: Electricity Generation and Retail Corporation (trading as Synergy)

Form: AR1

Period:

Name: Monitoring of point source emissions to air

Form AR1: Monitoring of point source emissions to air						
Emission point	Parameter	Result <sup>1,2</sup> (mg/m <sup>3</sup> )	Result <sup>1,2</sup> (g/s)	Averaging period	Method	Sample date & times
	NOx				USEPA Method 7E	
	CO				USEPA Method 10	
	VOC				USEPA Method 18	

Note 1: All units are referenced to STP dry

Note 2: All units are referenced to 15% O<sub>2</sub>

Signed on behalf of Electricity Generation and Retail Corporation (trading as Synergy): .....Date: .....

L7167/1997/10



Licence: L7167/1997/10 Licensee: Electricity Generation and Retail Corporation  
(trading as Synergy)

Form: N1 Date of breach:

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

## Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	



## Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Electricity Generation and Retail Corporation (trading as Synergy)	
Date	