



# Licence

## *Environmental Protection Act 1986, Part V*

**Licensee:** **Western Energy Pty Ltd**

**Licence:** **L8471/2010/2**

**Registered office:** Level 24,  
221 St Georges Terrace  
PERTH WA 6000

**ACN:** 102 984 252

**Premises address:** Western Energy Power Station Kwinana  
Lot 13 on Plan 39572  
Corner Burton and Donaldson Rd,  
KWINANA BEACH WA 6167  
(as depicted in Schedule 1)

**Issue date:** Thursday 3 September 2015

**Commencement date:** Sunday 6 September 2015

**Expiry date:** Saturday 5 September 2020

**Prescribed premises category**  
Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
52	Electric power generation	≥ 20 MWe in aggregate (using natural gas) or ≥ 10 MWe in aggregate (using a fuel other than natural gas)	120 MWe per annual period

### Conditions

This Licence is subject to the conditions set out in the attached pages.

Date signed: 12 February 2016

.....  
**Ed Schuller**  
Senior Manager Licensing (Process Industries)  
Officer delegated under section 20  
of the *Environmental Protection Act 1986*



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## Introduction

This Introduction is not part of the Licence conditions.

### **DER's industry licensing role**

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

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER 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**

Western Energy Power Station Kwinana is a 120 megawatt (MW) open cycle gas turbine (OCGT) peaking station on the corner of Burton Road and Donaldson Road, Kwinana Beach. The peaking power station comprises of four 30 MW open cycle gas turbines (OCGT) with a nominal design capacity of 120 MW. The OCGTs operate as a peaking power station, linking into the South West Interconnected System (SWIS) to supply additional power to meet peak and high shoulder load demands. The gas turbines are designed to run on both natural gas and distillate. However, distillate is only used when gas is unavailable.

The plant comprises:

- four dual fuel fired 30 MW turbine generator units;
- water treatment plant to produce demineralised water;
- High Density Polyethylene (HDPE) lined emergency discharge evaporation pond;
- liquid fuel storage and water tanks;
- pipeline to transmit waste water to the Water Corporation Sepia Depression Ocean Outlet Line (SDOOL).

The closest residents are located approximately 2.5 km to the east within the suburb of Medina. The premises is located approximately 2 km from Cockburn Sound.

The gas turbine combustion technology installed utilises water injection NO<sub>x</sub> control technology to minimise nitrogen oxide emissions. Waste water from the RO unit with elevated Total Dissolved Solids (TDS) and Total Suspended Solids (TSS) is disposed of through a pipeline from the site to the Water Corporation's SDOOL

This Licence an amendment to licence L8471/2010/1 and includes amendments to the frequency of monitoring and minor amendments to implement current DER policies and formatting.

The licences and works approvals issued for the Premises are:

<b>Instrument log</b>		
<b>Instrument</b>	<b>Issued</b>	<b>Description</b>
W4442/2008/1	26/06/2008	Works Approval
L8471/2010/1	02/09/2010	New application
L8471/2010/1	05/08/2013	Licence amendment to new format
L8471/2010/2	3/9/2015	New Licence issued.



L8471/2010/2	11/2/2016	This amendment
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**Severance**

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

**END OF INTRODUCTION**



## 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 For the purposes of this Licence, unless the contrary intention appears:

“**the Act**” means the *Environmental Protection Act 1986*;

“**annual period**” means the inclusive period from 1 September until 31 August in the following year;

“**AS 4323.1**” means the Australian Standard AS4323.1 *Stationary Source Emissions Method 1: Selection of sampling positions*;

“**AS/NZS 5667.1**” means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

“**AS/NZS 5667.11**” means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

“**averaging period**” means the time over which a limit is measured or a monitoring result is obtained;

“**CEO**” means Chief Executive Officer of the Department of Environment Regulation;

“**CEO**” for the purpose of correspondence means;

Chief Executive Officer  
Department Administering the *Environmental Protection Act 1986*  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: info@der.wa.gov.au;

“**fugitive emissions**” means all emissions not arising from point sources identified in Sections 2.2;

“**Licence**” means this Licence numbered L8471/2010/2 and issued under the *Environmental Protection Act 1986*;

“**Licensee**” means the person or organisation named as Licensee on page 1 of the Licence;

“**MWe**” 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;

“**Premises**” means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

“**Schedule 1**” means Schedule 1 of this Licence unless otherwise stated;

“**Schedule 2**” means Schedule 2 of this Licence unless otherwise stated;

“**six monthly period**” means the 2 inclusive periods from 1 September to 28 February and 1 March to 31 August in the following year;

“**spot sample**” means a discrete sample representative at the time and place at which the sample is taken;

“**STP dry**” means standard temperature and pressure (0°Celsius and 101.325 kilopascals respectively), dry;

“**USEPA**” means United States (of America) Environmental Protection Agency;

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

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.

1.1.5 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) being contrary to any written law.

**1.2 Premises operation**

1.2.1 The Licensee shall ensure that the water injection technology is operational when the Generators are operating under normal operation conditions.

1.2.2 No raw materials, materials or fuels other than those listed in Table 1.3.2 and which comply with any specification stated shall be subjected to the relevant process in that table.

<b>Table 1.3.2: Processing of materials</b>		
<b>Material</b>	<b>Purpose</b>	<b>Specification</b>
Natural gas	Fuel in turbines	None specified
Ultra Low Sulphur Diesel		<2% sulphur



## 2 Emissions

### 2.1 General

2.1.1 The Licensee shall record and investigate the exceedance of any descriptive or numerical limit specified in any part of section 2 of this Licence.

### 2.2 Point source emissions to air

2.2.1 The Licensee 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 2.2.1: Point source emission points to air**

Emission point reference	Emission point reference on Map of emission points	Emission Point	Emission point height (m)	Source
A1	1	Stack 1	9	Unit 1
A2	2	Stack 2		Unit 1
A3	3	Stack 3		Unit 2
A4	4	Stack 4		Unit 2

2.2.2 The Licensee shall not cause or allow point source emissions to air greater than the limits listed in Table 2.2.2.

**Table 2.2.2: Point source emission limits to air**

Emission point reference	Parameter	Fuel	Limit (including units) <sup>1</sup>	Averaging period
A1 – A4	Oxides of nitrogen	Natural Gas	70 mg/m <sup>3</sup>	One hour average
		Ultra Low Sulphur Diesel	150mg/ m <sup>3</sup>	

Note 1: All units are referenced to STP dry .

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

## 3 Monitoring

### 3.1 General monitoring

3.1.1 The licensee shall ensure that:

- all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured.

3.1.2 The Licensee shall ensure that :

- six monthly monitoring is undertaken at least 5 months apart; and
- annual monitoring is undertaken at least 9 months apart.



3.1.3 The Licensee 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.

3.1.4 The Licensee 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.

**3.2 Monitoring of point source emissions to air**

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

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

Emission point reference	Parameter	Units <sup>1,3</sup>	Frequency <sup>2</sup>	Method
A1 – A4	PM	mg/m <sup>3</sup> g/s	Annually <sup>4</sup>	USEPA Method 5 or USEPA Method 17
	Sulphur dioxide	mg/m <sup>3</sup> g/s		USEPA Method 6 or 6C
	Nitrogen oxides	mg/m <sup>3</sup> g/s	Annually or within 28 days of exceeding 500 hours of operation whichever is sooner.	USEPA Method 7E
	Carbon monoxide	mg/m <sup>3</sup> g/s		USEPA Method 10

Note 1: All units are referenced to STP dry

Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.

Note 3: All units are referenced to 15% O<sub>2</sub>

Note 4: Monitoring for SO<sub>2</sub> and Particulates shall not apply if the Generators combined hours of operation of distillate are less than 100 hrs per year. Monitoring of these parameters shall be conducted when Ultra Low Sulphur Diesel is the source.

3.2.2 The Licensee shall ensure that sampling required under Condition 3.2.1 of the Licence is undertaken at sampling locations in accordance with the AS 4323.1..

3.2.3 The Licensee shall ensure that all non-continuous sampling and analysis undertaken pursuant to condition 3.2.1 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

**3.3 Ambient environmental quality monitoring**

3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table and record and investigate results that do not meet any limit specified.





<b>Table 3.3.1 : Monitoring of ambient groundwater quality</b>				
<b>Monitoring point reference</b>	<b>Parameter</b>	<b>Units</b>	<b>Averaging period</b>	<b>Frequency</b>
GW01, GW02, GW03, GW04, GW05, GW06, GW07	pH	-	Spot sample	Six monthly
	Total Dissolved Solids (TDS)	mg/L		
	Total Suspended Solids (TSS)			
	Total Petroleum Hydrocarbons (TPH)	µg/L		
	Cadmium	mg/L		
	Copper			
	Arsenic			
	Mercury			
	Lead			
	Zinc			
	Nickel			
	Chromium			
	Nitrogen			
	Phosphorus			

## 5 Information

### 5.1 Records

5.1.1 All information and records required by the Licence shall:

- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 5.1.1(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
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

5.1.2 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee 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.

5.1.3 The Licensee 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.

### 5.2 Reporting

5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 28 calendar days after the end of the annual period. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

5.2.2 The Licensee 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.

5.2.3 The Licensee shall submit the information in Table 5.2.2 to the CEO according to the specifications in that table.

<b>Table 5.2.1: Annual Environmental Report</b>		
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Format or form<sup>1</sup></b>
-	Summary of any failure or malfunction of any pollution control equipment or any incidents that have occurred during the year and any action taken	None specified
Table 2.2.2	Limit exceedances	None specified
Table 3.2.1	Particulates, Sulphur dioxide, Nitrogen oxides, Carbon monoxide, Volumetric flow rate, Molecular weight, Moisture content, Stack exit temperature	AR1
Table 3.3.1	pH, Total Dissolved Solids, Total Suspended Solids, Total Petroleum Hydrocarbons, Cadmium, Copper, Arsenic, Mercury, Lead, Zinc, Nickel, Chromium, Nitrogen, Phosphorus	None specified
5.1.3	Compliance	AACR
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

### 5.3 Notification

5.3.1 The Licensee 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.

<b>Table 5.3.1: Notification requirements</b>			
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Notification requirement<sup>1</sup></b>	<b>Format or form<sup>2</sup></b>
2.1.1	Breach of any limit specified in the Licence	As soon as practicable but no later than 5pm of the next usual working day.	N1
Not Applicable	Hours of diesel operation exceed 100 hours in an annual period	5 working days	None specified
Not Applicable	Hours of operation exceed 500 hours in any year.	5 working days	None specified

Note 1: Forms are in Schedule 2



## Schedule 1: Maps

### Premises map

The Premises is shown in the map below. The pink line depicts the Premises boundary.





## Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

### ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

#### SECTION A LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name:	ABN:
Trading as:	
Reporting period: _____ to _____	

#### STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the Licence complied with within the reporting period? (please tick the appropriate box)

Yes  Please proceed to Section C

No  Please proceed to Section B

Each page must be initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:



## SECTION B

### DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each Licence condition that was not complied with.

a) Licence condition not complied with:	
b) Date(s) when the noncompliance occurred, if applicable:	
c) Was this noncompliance reported to DER?:	
<input type="checkbox"/> Yes <input type="checkbox"/> Reported to DER verbally Date _____ <input type="checkbox"/> Reported to DER in writing Date _____	<input type="checkbox"/> No
d) Has DER taken, or finalised any action in relation to the noncompliance?:	
e) Summary of particulars of the noncompliance, and what was the environmental impact:	
f) If relevant, the precise location where the noncompliance occurred (attach map or diagram):	
g) Cause of noncompliance:	
h) Action taken, or that will be taken to mitigate any adverse effects of the noncompliance:	
i) Action taken or that will be taken to prevent recurrence of the noncompliance:	

Each page must be initialled by the person(s) who signs Section C of this AACR

Initial:



## SECTION C

### SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this AACR is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
An individual	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; or by two directors of the licensee; or by a director and a company secretary of the licensee, or if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	by the principal executive officer of the licensee; or by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	by the chief executive officer of the licensee; or by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of \$50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

NAME:  
(printed) \_\_\_\_\_

POSITION: \_\_\_\_\_

POSITION: \_\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_

SEAL (if signing under seal)



Licence: L8471/2010/2  
Form: AR1  
Name: Monitoring of point source emissions to air

Licensee: Western Energy Pty Ltd  
Period :

Emission point	Parameter	Result <sup>1,2</sup>	Result <sup>1,2</sup>	Method	Sample date & times
A1	PM <sup>3</sup>	mg/m <sup>3</sup>	g/s	USEPA Method 5 or USEPA Method 17	
A2		mg/m <sup>3</sup>	g/s		
A3		mg/m <sup>3</sup>	g/s		
A4		mg/m <sup>3</sup>	g/s		
A1	Sulphur dioxide <sup>3</sup>	mg/m <sup>3</sup>	g/s	USEPA Method 6	
A2		mg/m <sup>3</sup>	g/s		
A3		mg/m <sup>3</sup>	g/s		
A4		mg/m <sup>3</sup>	g/s		
A1	Nitrogen oxides	mg/m <sup>3</sup>	g/s	USEPA Method 7E or 7D	
A2		mg/m <sup>3</sup>	g/s		
A3		mg/m <sup>3</sup>	g/s		
A4		mg/m <sup>3</sup>	g/s		
A1	Carbon monoxide	mg/m <sup>3</sup>	g/s	USEPA Method 10	
A2		mg/m <sup>3</sup>	g/s		
A3		mg/m <sup>3</sup>	g/s		
A4		mg/m <sup>3</sup>	g/s		
A4		°Celsius	-		

Note 1: All units are referenced to STP dry

Signed on behalf of Western Energy Pty Ltd: ..... Date: .....



Licence: L8471/2010/2  
 Form: N1

Licensee: Western Energy Pty Ltd  
 Date of breach:

**Notification of detection of the breach of a limit.**

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	

<b>Notification requirements for the breach of a limit</b>	
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	





# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** **Western Energy Pty Ltd**

**Licence:** **L8471/2010/2**

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**Registered office:** Level 24,  
221 St Georges Terrace  
PERTH WA 6000

**ACN:** 102 984 252

**Premises address:** Western Energy Power Station Kwinana  
Lot 13 on Plan 39572  
Corner Burton and Donaldson Rd,  
KWINANA BEACH WA 6167

**Issue date:** Thursday 3 September 2015

**Commencement date:** Sunday 6 September 2015

**Expiry date:** Saturday 5 September 2020

### **Decision**

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by: Peter Johns  
Licensing Officer

Decision Document authorised by: Ed Schuller  
Delegated Officer



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### 1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



## 2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/>	<input type="checkbox"/>
	New Licence <input type="checkbox"/>	<input type="checkbox"/>
	Licence amendment <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Works Approval amendment <input type="checkbox"/>	<input type="checkbox"/>
Activities that cause the premises to become prescribed premises	<b>Category number(s)</b>	<b>Assessed design capacity</b>
	52	120MWe per annual period
Application verified	Date: N/A	
Application fee paid	Date: N/A	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i> )?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Environmental Protection (Kwinana)(Atmospheric Wastes) Policy 1999		
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>



### 3 Executive summary of proposal and assessment

Western Energy Power Station Kwinana is a 120 megawatt (MW) open cycle gas turbine (OCGT) peaking station on the corner of Burton Road and Donaldson Road, Kwinana Beach. The peaking power station comprises of four 30 MW open cycle gas turbines (OCGT) with a nominal design capacity of 120 MW. The OCGTs operate as a peaking power station, linking into the South West Interconnected System (SWIS) to supply additional power to meet peak and high shoulder load demands. The gas turbines are designed to run on both natural gas and distillate. However, distillate is only used when gas is unavailable.

The plant comprises:

- four dual fuel fired 30 MW turbine generator units;
- water treatment plant to produce demineralised water;
- High Density Polyethylene (HDPE) lined emergency discharge evaporation pond;
- liquid fuel storage and water tanks;
- pipeline to transmit waste water to the Water Corporation Sepia Depression Ocean Outlet Line (SDOOL).

The closest residents are located approximately 2.5 km to the east within the suburb of Medina. The premises is located approximately 2 km from Cockburn Sound.

The gas turbine combustion technology installed utilises water injection NO<sub>x</sub> control technology to minimise nitrogen oxide emissions. Waste water from the reverse osmosis unit with elevated total dissolved solids (TDS) and total suspended solids (TSS) is disposed of through a pipeline from the site to the Water Corporation's SDOOL.

This is a decision document for Western Energy's application to amend the licence to update Table 3.2.1 and change the requirement to monitor Nitrogen Oxides and Carbon Monoxide annually instead of six monthly. Western Energy cites the fact that the facility operates for less than 100 hours a year mainly to meet Independent Market Operator for Western Australia (IMO) requirements and emission standards.

DER's risk assessment of the proposal identified NO<sub>x</sub> emissions to air as the principle environmental risk from this premises.

DER agrees that annual testing is appropriate while the facility is operating for such a short period each year; this is consistent with similar facilities throughout the state. However more frequent monitoring may be required should the facility start to generate power on a regular basis.

DER has considered whether the risk profile of other emissions and discharges from the premises has significantly changed since the previous licence was granted. No significant changes have occurred.



## 4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Genral Conditions	L1.2.1 L1.2.2 L1.2.3	<p>Condition 1.21 has been removed because it is redundant and unenforceable because pollution control equipment is not defined and specific actions required are not specified.</p> <p>Condition 1.2.2 has been removed because it inconsistently regulates for activities below the prescribed threshold for EP Act Licences, between premises that are prescribed for other purposes and those which are not.</p> <p>Condition 1.2.3 of the previous licence has been removed because it is not clear what constitutes contamination and this discharged is adequately addressed by the <i>Environmental Protection (Unauthorised Discharge) Regulations 2004</i>.</p>	<i>Environmental Protection (Unauthorised Discharge) Regulations 2004</i>
Point source emissions to air including monitoring	L2.2.2 and L3.2.1	<p><u>Emission Description</u>  <i>Emission:</i> Oxides of nitrogen (NOx) from the gas turbine.emitted via stacks.            Concentrations of NOx are 34 to 69 mg/m<sup>3</sup> when using natural gas and 114 to 125 mg/m<sup>3</sup> when using low sulphur diesel.  <i>Impact:</i> Reduction in local air quality, above NEPM standard. The premises is located in the industrial area and part of the <i>Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999</i>, the nearest residence is approximately 2.1km south east of the plant  <i>Controls:</i> Pollution control equipment installed uses water injection NOx control technology to minimise NOx emissions.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Insignificant  <i>Likelihood:</i> Unlikely</p>	<p>Ambient Air Assessment Criteria, National Environmental Protection Measure (Ambient Air Quality)</p> <p>Application supporting documentation</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Risk Rating: Low</i></p> <p><u>Regulatory Controls</u> Condition 2.2.2 requires the licensee to comply with licence limits for NOx emissions of 70 mg/m<sup>3</sup> during gas turbine operation and 150 mg/m<sup>3</sup> when using ultra low sulphur diesel. At present the power station operates less than 100 hours a year. The operation it does is mainly for IMO and DER testing. It is not necessary to measure emissions so frequently when the premises is mainly on standby for possible short term need. More frequent monitoring is required for a continuously operating facility.</p> <p>Condition 3.2.1 has been amended to change the frequency of monitoring to annually or after 500 hours of operation, whichever is sooner. This is consistent with other facilities in this scenario.</p> <p>Condition 5.3.1 has been amended to require that the licensee to notify the CEO whenever the operation of the power station exceeds 500 hours in any one year to enable DER to reassess the risk.</p> <p><u>Residual Risk</u> <i>Consequence: Insignificant</i> <i>Likelihood: Unlikely</i> <i>Residual Risk Rating: Low</i></p>	<p>Avon Industrial Park Peak Power Station Licence L8723/2012/1</p> <p>Merredin Peak Power Station Licence L8725/2013/1</p> <p>Karratha Temporary Generation Project Licence L8745/2013/1</p>
<b>Monitoring</b>	L3.1.3	<u>Condition 3.1.3 has been removed because it is unenforceable because it is unclear what is required to be recorded.</u>	
<b>Information</b>	L5.1.2	Condition 5.1.2 of the previous licence has been removed because the requirements for compliance are not clear and it is not a defence under the EP Act for the licensee or its agents to claim they were not aware.	



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
11/12/2015	Proponent sent a copy of draft instrument	Proponent advised amendments were acceptable.	Not applicable



## 6 Risk Assessment

*Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management*

**Table 1: Emissions Risk Matrix**

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High