

Shell Energy Power Generation
Neerabup Gas-fired Power Station

Compliance Assessment Report
Ministerial Statement 759

24 December 2021

59988-134,591

JBS&G Australia Pty Ltd T/A Strategen-JBS&G

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1. Introduction

This report addresses the status and compliance of the Neerabup Gas-Fired Power Station with conditions in Ministerial Statement (MS) 759. This report has been prepared for the purpose of meeting the requirements of condition 4-1 of MS 759, which requires submission of an annual Compliance Assessment Report (CAR).

Appendix F of this report also addresses the status and compliance of the Neerabup Gas-Fired Power Station with the conditions of various environmental and planning approvals and has been prepared to meet a requirement of the “Banker’s conditions” to submit an annual compliance report.

1.1 Project background

NewGen Neerabup Partnership (NewGen) is the Proponent for a proposal to construct and operate:

- a 330 megawatt open-cycle gas-turbine power station
- a 30 kilometre long gas pipeline and compressor station to transport natural gas from the Dampier to Bunbury Natural Gas Pipeline to the power station
- a 330 kilovolt electricity transmission line, approximately two kilometres long, to connect the power station to the Western Power Neerabup terminal substation.

The Minister for the Environment issued MS 759 on 21 January 2008, under Part IV of the *Environmental Protection Act 1986* (EP Act), enabling the proposal to be implemented. A number of subsequent environmental and planning approvals have also been granted.

The power station is located at Neerabup, approximately 30 km north of Perth. The power station provides additional power into the South West Interconnected System (SWIS) during times of peak demand.

2. Current status

Construction of the power station, gas pipeline and transmission line were completed in 2009, and the power station officially opened on 3 December 2009. The power station has been supplying power into the South-West Interconnected System (SWIS; as requested by Synergy) since that time.

The 330-kilovolt electricity transmission line was handed over to Western Power on 11 March 2010 and was officially published in the WA Government Gazette on 19 March 2010.

The NewGen Neerabup Power Station (NewGen Neerabup Pty Ltd) was commissioned in October 2009 and is operated by Shell Energy ((Shell acquired ERM Power and all its subsidiaries in November 2019). NewGen remains the proponent of the Gas-Fired Power Station, transmission line and natural gas pipeline.

Typically, power station operations consist of infrequent very short run durations. During the reporting period a total of 486 starts were recorded between the two units (11 and 12), with a 6.64% total operating capacity factor for the reporting financial year.

In 2021 NewGen requested a change to the proposal under s.45C of the EP Act, to remove the 330-kilovolt electricity transmission line component from the proposal and update the current proposal address. The transmission line is no longer owned or operated by the proponent and its management and ownership has been transferred to Western Power. In June 2021, the EPA under delegation from the Minister for Environment amended the proposal under Attached 2 of MS 759 replacing Schedule 1, Attachment 1 and Figures 1 and 2 of Ministerial Statement 759.

In September 2019, NewGen submitted an application under s.46 of the EP Act requesting the following changes to the implementation conditions of MS 759:

- removal of condition 5 – relating to performance review
- removal of condition 9 – relating to stack emissions
- modification of condition 11 – remove condition 11-1 (Preparation of Preliminary Decommissioning Plan)
- changes to Table 1: Summary of key proposal characteristics, referred to in condition 1 of MS 759 – remove elements relating to maximum output levels of the facility including nominal power output, thermal efficiency, operating times, annual levels of emissions and other elements.

In February 2020, the Minister for Environment requested that the EPA inquire into and report on the matter of changing the implementation conditions 5, 9 and 11 of MS 759 relating to the proposal as requested by NewGen. In September 2021, the EPA issued its report to the Minister for Environment recommending that conditions 5, 9 and 11-1 be removed from MS 759. The EPA concluded that the requested changes to Table 1 (Summary of key proposal characteristics) were not appropriate as these elements are not represented in other regulatory instruments. In November 2021 the Minister for Environment issued Ministerial Statement 1176 changing the implementation conditions under MS 759 as follows:

1. Conditions 5 and 9 of Ministerial Statement 759 are deleted.
2. Condition 11 of Ministerial Statement 759 is changed by removing condition 11-1 and amending 11-2, as follows:

11 Decommissioning

- 11-2 At least twelve (12) months prior to the anticipated date of closure, or at a time approved by the CEO, the proponent shall submit a Final Decommissioning Plan designed to ensure that the site is suitable for future land uses, for approval of the CEO.

The Final Decommissioning Plan shall set out procedures and measures for:

- (1) removal or, if appropriate, retention of plant and infrastructure agreed in consultation with relevant stakeholders;
- (2) rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and
- (3) identification of contaminated areas, including provision of evidence of notification and proposed management measures to relevant statutory authorities.

11-3 The proponent shall implement the Final Decommissioning Plan required by condition 11-2 until such time as the Minister for the Environment determines, on advice of the CEO, that the proponent's decommissioning responsibilities have been fulfilled.

11-4 The proponent shall make the Final Decommissioning Plan required by condition 11-2 publicly available in a manner approved by the CEO.

These changes will be incorporated into future Environmental Compliance Reports required under Condition 4-1 of MS 759.

3. Audit methodology

3.1 Audit plan

3.1.1 Purpose and scope

This CAR has been prepared for NewGen (the proponent) to fulfil the requirements of condition 4-1 of MS 759, issued for the Neerabup Gas-Fired Power Station proposal. Condition 4-1 requires the proponent to submit an annual CAR (on the previous twelve-month period) to the Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) (previously the Office of the Environmental Protection Authority [OEPA]).

Condition 4-2 requires the report to address each element of an approved audit program and be in an acceptable format.

Condition 4-3 requires the report to:

1. Be endorsed by signature of the proponent's Chief Executive Officer or a person, approved in writing by the CEO, delegated to sign on behalf of the proponent's CEO.
2. State whether the proponent has complied with each condition and procedure contained in this statement.
3. Provide verifiable evidence of compliance with each condition and procedure contained in this statement.
4. State whether the proponent has complied with each key action contained in any environmental management plan or program required by this statement.
5. Provide verifiable evidence of conformance with each key action contained in any environmental management plan or program required by this statement.
6. Identify all non-compliances and non-conformances and describe the corrective and preventative actions taken in relation to each non-compliance or non-conformance.
7. Review the effectiveness of all corrective and preventative actions taken.
8. Describe the state of implementation of the proposal.

Conditions 4-3.2 and 4-3.3 refer to complying with procedures contained in MS 759 and providing verifiable evidence of compliance with the procedures. MS 759 does not contain any procedures and these requirements are consequently not applicable to this audit.

Conditions 4-3.4 and 4-3.5 refer to conformance with key actions within any environmental management plan or program required by MS 759. The plans and programs required to be implemented are:

- Rehabilitation Management Plan (RMP)
- Stack Emissions Management Plan (SEMP)
- Greenhouse Gas Abatement Programme (GGAP).

Key implementation actions of the RMP have been completed and are no longer audited. The status of implementation of the SEMP and GGAP is provided in Appendix D and Appendix E, respectively.

In addition, a third-party annual compliance review is required to address Banker's conditions. The Banker's audit, presented in Appendix F, has been undertaken as part of this CAR; incorporating the MS, subsidiary management plans and additional environmental approvals including:

- operating licence L8356/2009/2
- groundwater licence GWL164093(3).

The audit period relevant to this CAR and Banker’s audit is 1 July 2020 to 30 June 2021.

3.1.2 Methodology

The site component of the audit was undertaken by Rebecca Mason (Strategen-JBS&G) and Susanna Beech (Strategen JBS&G) on 24 November 2021. The audit included discussion and review of key documents with Bruno Lanciano, Neerabup Power Station Manager, Shell Energy.

3.2 Audit terminology

The ‘Status’ field of the audit tables (refer to Appendix B - Appendix E) describes the implementation of actions and compliance with the Statement. This report has been prepared using guidance related to the preparation of compliance audits, including generic expressions that are used to identify the status of each action (Table 3.1). The terminology in Table 3.1 has been applied to complete the status field of the audit tables given in Appendix B - Appendix E.

Table 3.1: Action implementation status

Status	Description
Compliant/conformant.	Implementation of the proposal has been carried out in accordance with requirements of the audit element.
Completed.	A requirement with a finite period of application has been satisfactorily completed.
Not required at this stage.	The requirements of the audit element were not triggered during the reporting period.
Potentially non-compliant/Potentially non-conformant.	Possible or likely failure to meet the requirements of the audit element.
In process.	Where an audit element requires a management or monitoring plan be submitted to the OEPA or another government agency for approval, that submission has been made and no further information or changes have been requested by the OEPA or the other government agency and assessment by the OEPA or other government agency for approval is still pending.
Not audited.	Unable to be audited.

Source: Adapted from OEPA (2012a, 2012b, 2012c and 2012d) – note that the ‘Not audited’ status has been added for items that were unable to be audited.

4. Audit results

4.1 Compliance with conditions

A signed Statement of Compliance is provided in Appendix A.

The results of the audit for MS 759 are presented in Appendix B.

Condition 1-1 of MS 759 requires implementation of the proposal as documented in Schedule 1 and Schedule 2 of MS 759. The results of the audit of implementation of the key characteristics contained in Schedule 1 are outlined in Appendix C. Schedule 2 has been completed as discussed in Appendix C item 759 M10.1.

Condition 4-3 requires each key action contained in any management plan/program to be audited. The results of the audit of key actions in the SEMP and GGAP are outlined in Appendix D and Appendix E.

Results of the audit of key actions of the Banker's audit including the operating licence L8356/2009/2 and groundwater licence GWL164093(3) are outlined in Appendix F. A summary of audit findings against each approvals instrument is provided below.

4.2 Compliance with conditions of MS 759

The audit addressed 39 conditions; Neerabup Power Station was found to be fully compliant with MS 759, with:

- Twenty-four conditions assessed as completed
- Twelve conditions assessed as compliant/conformant (during this audit period)
- Three conditions assessed as not required at this stage (during this audit period).

4.3 Compliance with conditions of Schedule 1 of MS 759

The audit addressed 32 conditions; Neerabup Power Station was found to be fully compliant with Schedule 1 of MS 759, with:

- Twenty conditions assessed as compliant/conformant (during this audit period)
- Ten conditions assessed as completed
- Two conditions assessed as not required at this stage (during this audit period)

4.4 Compliance with conditions of the Stack Emissions Management Plan Rev 2.0

The audit addressed five conditions; Neerabup Power Station was found to be fully compliant with all conditions of the SEMP, with:

- Four conditions assessed as compliant/conformant (during this audit period)
- One condition assessed as completed

4.5 Compliance with conditions of the Greenhouse Gas Abatement Programme

The audit addressed seven conditions; Neerabup Power Station was found to be fully compliant with all conditions of the GGAP, with:

- Five conditions assessed as compliant/conformant (during this audit period)
- Two conditions assessed as completed

Environmental monitoring

A range of monitoring programs have been undertaken during the audit period, as required by the various management plans and licences. Monitoring includes:

- air emissions monitoring in accordance with the Stack Emissions Management Plan (SEMP) and operating licence administered by DWER (previously Department of Environment Regulation [DER])
- groundwater monitoring in accordance with the operating licence and the abstraction licence administered by DWER
- greenhouse gas emissions monitoring and reporting in accordance with National Greenhouse and Energy Reporting Scheme (NGERS).

5. Stakeholder consultation

Shell Energy maintains a standard operating procedure for stakeholder management (NPS-PL-ROW-6), which requires that annual contact is made with each landowner or occupier to keep them informed of safety matters.

The following stakeholders were consulted during the audit period:

- adjacent land owners
- pipeline land owners
- other Neerabup Industrial Estate neighbours
- WA Government Departments DWER and DMIRS, and Local Government, City of Wanneroo.

In addition, the SEMP covering the audit period was sent to DWER.

No complaints were received during the audit period between 1 July 2020 to 30 June 2021.

6. Limitations

Scope of services

This report ("the report") has been prepared by Strategen-JBS&G in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and Strategen-JBS&G. In some circumstances, a range of factors such as time, budget, access and/or site disturbance constraints may have limited the scope of services. This report is strictly limited to the matters stated in it and is not to be read as extending, by implication, to any other matter in connection with the matters addressed in it.

Reliance on data

In preparing the report, Strategen-JBS&G has relied upon data and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise expressly stated in the report, Strategen-JBS&G has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. Strategen-JBS&G has also not attempted to determine whether any material matter has been omitted from the data. Strategen-JBS&G will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to Strategen-JBS&G. The making of any assumption does not imply that Strategen-JBS&G has made any enquiry to verify the correctness of that assumption.

The report is based on conditions encountered and information received at the time of preparation of this report or the time that site investigations were carried out. Strategen-JBS&G disclaims responsibility for any changes that may have occurred after this time. This report and any legal issues arising from it are governed by and construed in accordance with the law of Western Australia as at the date of this report.

Environmental conclusions

Within the limitations imposed by the scope of services, the preparation of this report has been undertaken and performed in a professional manner, in accordance with generally accepted environmental consulting practices. No other warranty, whether express or implied, is made.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in environmental investigations, before being used for any other purpose.

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7. References

Standards Australia, Australian Standard 1940 (2017) 'The Storage and Handling of Flammable and Combustible Liquids' (AS:1940), 2017.

Office of Environmental Protection Authority (OEPA) 2012a, Post Assessment Guideline for Preparing a Compliance Assessment Plan, OEPA, Perth, August 2012.

Office of Environmental Protection Authority (OEPA) 2012b, Post Assessment Guideline for Preparing an Audit Table, OEPA, Perth, August 2012.

Office of Environmental Protection Authority (OEPA) 2012c, Post Assessment Guideline for Making Information Publicly Available, OEPA, Perth, August 2012.

Office of Environmental Protection Authority (OEPA) 2012d, Post Assessment Guideline for Preparing a Compliance Assessment Report, OEPA, Perth, August 2012.

Woodman Environmental (Woodman) 2015, Neerabup Gas Pipeline Rehabilitation Completion Review, report prepared for Newgen Neerabup Partnership, 20 October 2015.

Appendix A Statement of Compliance

Appendix B MS 759 audit table

Table B.1: Compliance with MS 759

Audit code Subject	Action How Objective Criteria	Phase	When/Where	Evidence	Comments	Status
759:M1.1 Implementation	<u>Action</u> Implement the proposal as documented and described in schedules 1 and 2 of Statement 759 subject to the conditions and procedures of this statement. <u>Objective</u> To avoid unforeseen or unassessed impacts.	Overall.		Refer to Appendix C. Refer to 759:M10.1.	Refer to Appendix C of this audit report which outlines compliance with Schedule 1. Refer to 759:M10.1 which addresses compliance with Schedule 2, which is considered completed.	Compliant
759:M2.1 Nominated proponent	<u>Action</u> The proponent for the time being nominated by the Minister for the Environment under sections 38(6) or 38(7) of the <i>Environmental Protection Act 1986</i> is responsible for the implementation of the proposal. <u>Objective</u> To ensure legal responsibility rests with the nominated proponent.	Overall.		N/A	NewGen Neerabup Partnership is still the proponent for the proposal.	Compliant
759:M2.2 Proponent nomination	<u>Action</u> Notify the Chief Executive Officer of the DEC (CEO) of any change of the name and address for the serving of notices or other correspondence within 30 days of such change. <u>How</u> Written notification. <u>Objective</u> To enable the DEC to maintain contact with the proponent.	Overall.	Within 30 days of change of contact details.	N/A	The contact name and address did not change during the audit period.	Compliant
759:M3.1 Commencement	<u>Action</u> The authorisation to implement the proposal provided for in Ministerial Statement 759 shall lapse and be void within five years after the date of this statement if the proposal to which this statement relates is not substantially commenced. <u>How</u> Commence substantial construction. <u>Objective</u> To define the period for which the authorisation to implement is valid.	Overall.	Prior to 21 January 2013.	R01 Annual Compliance Audit and Performance Review (Rev 0)	This item was assessed as Completed in the 2019 CAR.	Completed
759:M3.2 Commencement	<u>Action</u> Provide the CEO with written evidence which demonstrates that the proposal has substantially commenced on or before the 21 January 2013. <u>How</u> Written evidence. <u>Objectives</u> To ensure the CEO is notified that the project has substantially commenced.	Overall.	Prior to 21 January 2013.	R01 Annual Compliance Audit and Performance Review (Rev 0)	This item was assessed as Completed in the 2019 CAR.	Completed
759:M4.1 Compliance reporting	<u>Action</u> Submit to the CEO environmental compliance reports annually reporting on the previous twelve-month period, unless required by the CEO to report more frequently. <u>How</u> Written evidence addressing each element of the audit table. <u>Objective</u> To provide evidence that the proposal is being implemented as approved and that the relevant conditions and commitments are being met.	Overall.	Annually unless required by the CEO to report more frequently.	R_001_Shell Energy_Neerabup Gas-fired Power Station_2019/2020 Compliance Assessment Report 04012021 C_001_Shell Energy_Automatic Reply: Annual Compliance Assessment Report Submission 2019/2020 07012021	The 2020 Compliance Assessment Report (CAR) addressed the audit period from 1 July 2019 to 30 June 2020 and was submitted by Shell Energy to DWER on 7 January 2021. DWER confirmed receipt of the report on 7 January 2021.	Compliant
759:M4.2 Compliance Reporting - Audit Program	<u>Action</u> Prepare and submit an Audit Program in a format acceptable to the CEO.	Design.		R01 Annual Compliance Audit and Performance Review (Rev 0)	This item was assessed as Completed in the 2019 CAR.	Completed
759:M4.3 Compliance reporting	<u>Action</u> Submit compliance reports to CEO. <u>How</u> Environmental compliance reports shall: <ol style="list-style-type: none"> 1. Be endorsed by signature of the proponent's CEO or a person, approved in writing by the CEO, delegated to sign on behalf of the proponent's CEO. 2. State whether the proponent has complied with each condition and procedure contained in Statement 759. 	Overall.	Annually, unless required by the CEO to report more frequently.	R_001_Shell Energy_Neerabup Gas-fired Power Station_2019/2020 Compliance Assessment Report 04012021 C_001_Shell Energy_Automatic Reply: Annual Compliance Assessment Report Submission 2019/2020 07012021 R_003_Shell Energy_2020-2021-SEMP_Annual Compliance Report_03112021	The 2020 Compliance Assessment Report (CAR) addressed the audit period from 1 July 2019 to 30 June 2020 and was submitted by Shell Energy to DWER on 7 January 2021. The 2021 SEMP Annual Compliance Report for the period from 1 July 2020 to 30 June 2021 was submitted to DWER in November 2021. NB: In terms of auditing key management actions within relevant management plans or programs; the RMP, SEMP and GGAP are relevant. Only key actions from these plans were audited during	Compliant

Audit code Subject	Action How Objective Criteria	Phase	When/Where	Evidence	Comments	Status
	3. Provide verifiable evidence of compliance with each condition and procedure contained in Statement 759. 4. State whether the proponent has complied with each key action contained in any environmental management plan or program required by Statement 759. 5. Provide verifiable evidence of conformance with each key action contained in any environmental management plan or program required by Statement 759. 6. Identify all non-compliances and non-conformances and describe the corrective and preventative actions taken in relation to each non-compliance or non-conformance. 7. Review the effectiveness of all corrective and preventative actions taken. 8. Describe the state of implementation of the proposal. <u>Objective</u> To provide evidence that the proposal is being implemented as approved, and that the relevant conditions and commitments are being met.				this audit period (see Appendix D and Appendix E). Actions in the RMP have been deemed completed. In addition, actions identified in the licence to operate (L8356/2009/2) and groundwater licence (GWL164093(3)) have been assessed as part of the Banker's Audit (Appendix F).	
759:M4.4 Compliance reporting – public availability	<u>Action</u> Compliance reports shall be made publicly available in a manner approved by the CEO. <u>How</u> Carry out the following: 1. Advertise the availability of the document in the 'Public Notices Section' of the local community newspaper. 2. Provide copies of the documentation to the DEC library (1 hard copy, 1 CD copy), local government public library (2 copies), JS Battye library (2 copies). 3. Post the document on the proponent's website. <u>Objective</u> To ensure that the public is kept informed.	Overall.		Site inspection 24 November 2021. R_001_Shell Energy_Neerabup Gas-fired Power Station_2019/2020 Compliance Assessment Report 04012021 Neerabup Environmental Compliance – Annual Report (shellenergy.com.au) (accessed 20122021)	The 2020 Compliance Assessment Report is available on the Shell Energy website. Previous Compliance Assessment Reports state that OEPA (now DWER) accepts publication of documents on a website as publicly available and meeting the objective of ensuring the public is kept informed.	Compliant
759:M5.1 Performance review	<u>Action</u> Submit a Performance Review Report to the EPA every five years from the start of production. <u>How</u> The Performance Review Report shall address: 1. The major environmental issues associated with implementing the project; the environmental objectives for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those objectives. 2. The level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable. 3. Significant improvements gained in environmental management, including the use of external peer reviews. 4. Stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed. 5. The proposed environmental objectives over the next five years, including improvements in technology and management processes. <u>Objective</u> To provide evidence of environmental performance and to identify aspects that may require environmental improvements.	Overall.	Every 5 years from the start of production. 5 years from 3 December 2009.	R_002_Strategen-JBS&G_2018-2019-Neerabup Environmental-Compliance-Report-1_07082019 R_008_Strategen_2013-2014-Neerabup-Environmental-Compliance-Report_14122015	Operation of the power station commenced in December 2009. The first Performance Review Report was submitted to the OEPA as part of the 2013-2014 Compliance Assessment Report (R_008). The second Performance Review Report was submitted as part of the 2018-2019 Compliance Assessment Report (R_002).	Compliant
759:M5.2 Performance review – public availability	<u>Action</u> Performance Review reports shall be made publicly available in a manner approved by the CEO. <u>How</u> Carry out the following: 1. Advertise the availability of the document in the 'Public Notices Section' of the local community newspaper. 2. Provide copies of the documentation to the DEC library (1 hard copy, 1 CD copy), local government public library (2 copies), JS Battye library (2 copies). 3. Post the document on the proponent's website. <u>Objectives</u> To ensure that the public is kept informed.	Overall.	Every 5 years after the start of construction. 5 years from 3 December 2009.	R_002_Strategen-JBS&G_2018-2019-Neerabup Environmental-Compliance-Report-1_07082019 Neerabup Environmental Compliance – Performance Review (shellenergy.com.au) (accessed 20122021)	The 2018-2019 Compliance Assessment Report - which contains the 5-year performance review is available on the Shell Energy website.	Compliant

Audit code Subject	Action How Objective Criteria	Phase	When/Where	Evidence	Comments	Status
759:M6.1 Vegetation disturbance – boundaries	<p><u>Action</u> Prior to ground disturbing activities, clearly delineate on the ground the boundaries of the gas pipeline lateral and electricity transmission line easements and the area of disturbance outside the easements.</p> <p><u>How</u> Boundaries are to be clearly visible for workers conducting disturbance activities.</p> <p><u>Objectives</u> To ensure no disturbance occurs to vegetation outside the boundaries.</p>	Design and construction.	Prior to ground-disturbing activities.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M6.2 Vegetation disturbance – exceedance of boundaries	<p><u>Action</u> Do not cause disturbance of vegetation outside the delineated gas pipeline lateral and electricity line easements, or the delineated area of disturbance outside the easements referred to in condition 6–1, unless authorised by the Minister for the Environment.</p> <p><u>How</u> Clearing to only be within delineated areas.</p> <p><u>Objective</u> To ensure no disturbance of vegetation outside the delineated boundaries.</p>	Overall.		R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M6.3 Vegetation disturbance – environmentally sensitive areas	<p><u>Action</u> Do not cause or allow disturbance of vegetation outside a 20-metre wide gas pipeline lateral easement in environmentally sensitive areas, unless authorised by the Minister for the Environment.</p> <p><u>How</u> Delineated areas within environmentally sensitive areas to be limited to a 20 m wide easement unless otherwise authorised by the Minister for the Environment.</p> <p><u>Objective</u> To ensure no additional disturbance of vegetation occurs outside approved boundaries in environmentally sensitive areas.</p>	Construction.	Within environmentally sensitive areas.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M7.1 Rehabilitation - Management Plan	<p><u>Action</u> Prior to ground disturbing activities prepare a Rehabilitation Management Plan in consultation with DEC, to the requirements of the Minister for Environment on advice of the EPA.</p> <p><u>How</u> The Rehabilitation Management Plan shall address:</p> <ol style="list-style-type: none"> 1. Weed management protocols. 2. Dieback management protocols. 3. Soil management protocols. 4. Rehabilitation completion criteria. 5. The need for propagule augmentation to achieve completion criteria. 6. With reference to, EPA Guidance Statement No. 6 - Rehabilitation of Terrestrial Ecosystems. <p><u>Objective</u> To ensure rehabilitation meets EPA requirements.</p>	Design.	Prior to ground-disturbing activities.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M7.2 Rehabilitation – management period	<p><u>Action</u> Manage rehabilitation of the gas pipeline lateral and electricity transmission line easements until the rehabilitation completion criteria, referred to in condition 7-1, have been achieved. (Note: obligations under DoIR legislation mean the vehicular access track must be maintained and thus certain completion criteria may not be achievable within the access track).</p> <p><u>How</u> In accordance with industry best practice environmental management and rehabilitation plan. Criteria established by M7.1 and EPA Guidance Statement No. 6 - Rehabilitation of Terrestrial Ecosystems.</p> <p><u>Objective</u> To ensure rehabilitation meets EPA requirements.</p>	Overall.		R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M7.3 Rehabilitation Management Plan	<p><u>Action</u> As required, review and revise the Rehabilitation Management Plan in consultation with DEC.</p>	Overall.		R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed

Audit code Subject	Action How Objective Criteria	Phase	When/Where	Evidence	Comments	Status
– review and revision	<p><u>How</u> With reference to EPA Guidance Statement No. 6 – Rehabilitation of Terrestrial Ecosystems.</p> <p><u>Objective</u> To ensure rehabilitation meets DEC and EPA requirements.</p>					
759:M7.4 Rehabilitation Management Plan – implementation	<p><u>Action</u> Implement the Rehabilitation Management Plan required by M7.1 and subsequent revisions of the Rehabilitation Management Plan as required by M7.3.</p> <p><u>Objective</u> To ensure rehabilitation planning and activities are implemented.</p>	Overall.		R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M7.5 Rehabilitation Management Plan – public availability	<p><u>Action</u> The Rehabilitation Management Plan and subsequent revisions shall be made publicly available in a manner approved by the CEO.</p> <p><u>How</u> Carry out the following (according to the recently approved Audit Program):</p> <ol style="list-style-type: none"> 1. Advertise the availability of the document in the ‘Public Notices Section’ of the local community newspaper. 2. Provide copies of the documentation to the DEC library (1 hard copy, 1 CD copy), local government public library (2 copies), JS Battye library (2 copies). 3. Post the document on the proponent’s website. <p><u>Objective</u> To ensure the public is kept informed.</p>	Overall.	After approval of the Plan by Minister for Environment.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M8.1:1 Fauna – trench clearing	<p><u>Action</u> Trapped fauna within open trenches shall be cleared and recorded by a suitably trained fauna-clearing person no later than three hours after sunrise. The clearing and recording shall be repeated before sunset. (Note: “Fauna-clearing person” means an employee of the proponent whose responsibility it is to walk the open trench to recover and record fauna found within the trench.)</p> <p><u>How</u> Employ a suitably trained fauna management person.</p> <p><u>Objective</u> To minimise death or injury to fauna trapped in the open trenches.</p>	Construction.	No later than three hours after sunrise and again before sunset.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759 M8.1:2 Fauna – trench clearing	<p><u>Action</u> Open trenches shall be cleared and recorded by a suitably trained fauna-clearing person no more than one hour prior to backfilling of trenches.</p> <p><u>How</u> Implement Fauna Management Plan/Protocol.</p> <p><u>Objective</u> To minimise death or injury to fauna trapped in open trenches.</p>	Construction.	No more than one hour before backfilling of trenches.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759 M8.2 Fauna clearing – qualifications of fauna clearing person	<p><u>Action</u> The fauna-clearing person shall be experienced to the requirements of the DEC.</p> <p><u>How</u> The fauna-clearing person will be experienced to the requirements of the DEC in:</p> <ol style="list-style-type: none"> 1. Fauna identification, capture and handling (including venomous snakes). 2. Identification of tracks, scats, burrows and nests of conservation significant species. 3. Fauna vouchering. 4. Assessing injured fauna for suitability for release, rehabilitation or euthanasia. 5. Familiarity with the ecology of the species which may be encountered in order to be able to appropriately translocate fauna encountered. 6. Performing euthanasia. <p><u>Objective</u> To ensure fauna handling and assessment is of a high standard.</p>	Construction.	Prior to trench construction and fauna handling.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M8:3 Fauna – clearing person training	<p><u>Action</u> Ensure that basic fauna handling training is provided to fauna clearing persons who do not possess the skills and experience outlined in M8-2 prior to the fauna-clearing person commencing employment.</p>	Design.	Prior to trench construction and fauna handling by inexperienced persons.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed

Audit code Subject	Action How Objective Criteria	Phase	When/Where	Evidence	Comments	Status
	<u>How</u> Fauna handling training course delivered to inexperienced staff. <u>Objective</u> To ensure fauna handling and assessment is of a high standard.					
759:M8.4 Fauna – clearing person training	<u>Action</u> Fauna handling training as outlined in M8.3 shall be developed in consultation with the DEC. <u>How</u> In consultation with DEC. <u>Objective</u> To ensure best practice fauna handling and assessment.	Design.	Prior to fauna handling by inexperienced persons.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M8.5 Fauna – open trench length	<u>Action</u> Open trench lengths shall not exceed a length capable of being inspected and cleared by fauna clearing persons within the required times as set out in condition 8.1. <u>Objective</u> To minimise death or injury to fauna trapped in the open trenches.	Construction.	In areas where there are open trenches.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M8.6 Fauna – flooding of trench	<u>Action</u> Monitor weather forecasts through the Bureau of Meteorology and in the event of a weather forecast indicating rainfall sufficient to cause flooding of trenches or drowning of fauna trapped in trenches, in consultation with DEC, backfill all lengths of open trench with a potential to be flooded or cause drowning of fauna. <u>How</u> Monitor weather forecasts in areas where there are open trenches. Calculate rainfall level which could cause flooding of trenches or drowning of fauna. Consult with DEC where weather indicates potential flooding or drowning of fauna could occur as to whether backfilling of trenches needs to occur. <u>Objective</u> To minimise harm to fauna trapped in open trenches.	Construction.	In areas where there are open trenches.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759 M8.7:1 Fauna management – report	<u>Action</u> Produce a report on fauna management within the gas pipeline lateral easement at the completion of gas pipeline construction and provide report to the CEO no later than 14 days after the completion of the gas pipeline construction. <u>How</u> The Fauna Management Report shall include: 1. Details of all fauna inspections. 2. The number of fauna cleared from trenches. 3. Fauna interactions. 4. Fauna mortalities. 5. All actions taken. <u>Objective</u> To ensure that fauna management was carried out in accordance with conditions and, to understand project impacts on fauna and to further develop industry best practice fauna management.	Post-construction.	Provided to CEO no later than 14 days after the completion of gas pipeline construction.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759 M8.7:2 Fauna management report - publicly availability	<u>Action</u> Report on fauna management to be made publicly available in a manner approved by the CEO. <u>How</u> Carry out the following (according to the recently approved Audit Program): 1. Advertise the availability of the document in the 'Public Notices Section' of the local community newspaper. 2. Provide copies of the documentation to the DEC library (1 hard copy, 1 CD copy), local government public library (2 copies), JS Battye library (2 copies). 3. Post the document on the proponent's website. <u>Objective</u> To ensure the public is informed of project impacts on fauna.	Post-construction.	No later than 14 days after the completion of gas pipeline construction.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759 M9.1 Stack Emissions Report	<u>Action</u> Prior to submission of a works approval application, provide a report to the CEO for approval.	Design.	Prior to submitting a works approval application.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed

Audit code Subject	Action How Objective Criteria	Phase	When/Where	Evidence	Comments	Status
	<p><u>How</u> The report shall:</p> <ol style="list-style-type: none"> 1. Confirm the engineering design details for the emission of gaseous and particulate pollutants, including stack heights, stack parameters, exit temperatures and exit velocities; and 2. Estimate the concentration of nitrogen oxides and other gaseous and particulate pollutants, under normal and worst-case conditions, including start-up and upset emissions. <p><u>Objective</u> To ensure that best available practicable and efficient technologies are being used and that stack emissions can be managed to below required environmental levels.</p> <p><u>Criteria</u> With reference to the DEC Continuous Emission Monitoring System (CEMS) Code for Stationary Source Air Emissions.</p>					
759 M9.2 Stack emissions Management Plan	<p><u>Action</u> Prepare a Stack Emissions Management Plan to the requirements of the Minister for Environment at least three months prior to commencement of operations.</p> <p><u>How</u> The Stack Emissions Management Plan shall include:</p> <ol style="list-style-type: none"> 1. Proposed targets and standards. 2. A stack emissions monitoring programme, which includes nitrogen oxides and other gaseous and particulate pollutants. 3. Annual reporting. <p><u>Objective</u> To ensure that best available practicable and efficient technologies are used to minimise and monitor air emissions from the power station.</p> <p><u>Criteria</u> With reference to the DEC Continuous Emission Monitoring System (CEMS) Code for Stationary Source Air Emissions.</p>	Design.	At least three months prior to commencement of operations.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759 M9.3 Stack Emissions Management Plan – implementation	<p><u>Action</u> Implement the Stack Emissions Management Plan required by condition 9.2.</p> <p><u>Objective</u> To ensure that best available practicable and efficient technologies are used to minimise and monitor air emissions from the power station.</p>	Design.		Refer to Appendix D R_003_Shell Energy_2020-2021-SEMP_Annual Compliance Report_03112021	<p>The approved updated SEMP (Rev 3.0) is being implemented (see Appendix D). No modifications were made to the plan during this audit period.</p> <p>The SEMP annual compliance report indicates that monitoring for all parameters outlined in Appendix D of the SEMP was undertaken for Unit 12 on the 27th October 2020 and Unit 11 on the 29th October 2020.</p> <p>The SEMP annual compliance report indicates that compliance with all other SEMP conditions was achieved during the reporting period.</p>	Compliant
759 M9.4 Stack Emissions Management Plan –publicly available	<p><u>Action</u> The Stack Emissions Management Plan required by condition 9.2 shall be made publicly available in a manner approved by the CEO.</p> <p><u>How</u> Carry out the following (according to the recently approved Audit Program):</p> <ol style="list-style-type: none"> 1. Advertise the availability of the document in the 'Public Notices Section' of the local community newspaper. 2. Provide copies of the documentation to the DEC library (1 hard copy, 1 CD copy), local government public library (2 copies), JS Battye library (2 copies). 3. Post the document on the proponent's website. <p><u>Objective</u> To ensure the public is kept informed.</p>	Design.	Prior to commencement of operations.	NPS-PS-SEMP-PR Stack Emissions Management Plan (SEMP) (shellenergy.com.au) (accessed 20122021)	The SEMP is made publicly available on the Shell Energy website, consistent with OEPA requirements for making documents available to the public. The updated SEMP is available on the Shell Energy website.	Compliant
759 M10.1 Greenhouse Gas Abatement Programme – prepare	<p><u>Action</u> Prior to commencement of ground disturbing activities, prepare and submit a Greenhouse Gas Abatement Programme for approval by CEO.</p> <p><u>How</u> The Greenhouse Gas Abatement Programme shall set out measures and processes to:</p>	Design.	Prior to commencement of ground disturbing activities.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed

Audit code Subject	Action How Objective Criteria	Phase	When/Where	Evidence	Comments	Status
	1. Ensure that the plant is designed and operated in a manner which achieves reductions in “greenhouse gas” emissions as far as practicable. 2. Provide for ongoing “greenhouse gas” emissions reductions over time. 3. Ensure that the total net “greenhouse gas” emissions and/or “greenhouse gas” emissions per unit of product from the project are minimised; and 4. Manage “greenhouse gas” emissions in accordance with the Framework Convention on Climate Change 1992, and consistent with the contemporary National Greenhouse Strategy as updated from time to time. <u>Objective</u> To manage greenhouse gas emissions to achieve ongoing reductions and minimise project emissions. <u>Criteria</u> Criteria set out in Schedule 2 of Statement 759 and on advice from the EPA. With reference to EPA Guidance Statement No. 12, Minimising Greenhouse Gas Emissions.					
759 M10.2 Greenhouse Gas Abatement Programme – implementation	<u>Action</u> Implement the Greenhouse Gas Abatement Programme unless modifications are approved by the CEO. <u>Objective</u> To manage greenhouse gas emissions to achieve ongoing reductions and minimise project emissions.	Overall.	Prior to commencement of ground disturbing activities.	Refer to Appendix E Management advice 24 November 2021. Site inspection 24 November 2021.	The GGAP is being implemented (see Appendix E). No modifications have been made to the plan during the audit period. Of the seven key actions, two were completed, and five were conformant.	Compliant
759 M10.3 Greenhouse Gas Abatement Programme – publicly available	<u>Action</u> Prior to commencement of ground disturbing activities, the Greenhouse Gas Abatement Programme required by condition 10.1 shall be made publicly available in a manner approved by the CEO. <u>How</u> Carry out the following (according to the recently approved Audit Program): 1. Advertise the availability of the document in the ‘Public Notices Section’ of the local community newspaper. 2. Provide copies of the documentation to the DEC library (1 hard copy, 1 CD copy), local government public library (2 copies), JS Battye library (2 copies). 3. Post the document on the proponent’s website. <u>Objective</u> To ensure the public is kept informed.	Design.	Prior to commencement of ground disturbing activities.	Neerabup Greenhouse Gas Abatement Programme (shellenergy.com.au) (accessed 20122021)	The GGAP is made publicly available on the Shell Energy website, consistent with DWER requirements for making documents regarding the proposal publicly available. The GGAP was available on the Shell Energy website at the time of the audit.	Compliant
759:M11.1 Preliminary Decommissioning Plan – prepare	<u>Action</u> Prior to commencement of ground disturbing activities, prepare a Preliminary Decommissioning Plan for approval by the CEO. <u>How</u> The Plan shall describe the framework and strategies to ensure that the site is suitable for future land uses, and provides: 1. The rationale for the siting and design of plant and infrastructure as relevant to environmental protection. 2. A conceptual description of the final landform at closure. 3. A plan for a care and maintenance phase. 4. Initial plans for the management of noxious materials. <u>Objective</u> To appropriately decommission the NewGen Neerabup 330 MW Gas Fired Power Station, Gas Pipeline and High Voltage Transmission Line in accordance with regulatory requirements and accepted best practice environmental management.	Design.	Prior to commencement of ground-disturbing activities.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
759:M11.2 Final Decommissioning Plan – prepare and submit	<u>Action</u> At least six months prior to the anticipated date of closure, or at a time approved by the EPA, submit a Final Decommissioning Plan designed to ensure that the site is suitable for future land uses for approval by the CEO. <u>How</u> The Final Decommissioning Plan shall set out procedures and measures for: 1. Removal or, if appropriate, retention of plant and infrastructure agreed in consultation with relevant stakeholders. 2. Rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s).	Operation and Closure.	At least 6 months prior to anticipated closure.	Management advice 24 November 2021. Site inspection 24 November 2021.	The project life is approximately 30 years, with closure anticipated to occur in 2040.	Not required at this stage

Audit code Subject	Action How Objective Criteria	Phase	When/Where	Evidence	Comments	Status
	3. Identification of contaminated area, including provision of evidence of notification and proposed management measures to relevant statutory authorities. <u>Objective</u> To ensure that the site is left in an environmentally acceptable condition suitable for future land uses.					
759:M11.3 Final Decommissioning Plan – implementation	<u>Action</u> Implement the Final Decommissioning Plan until such time as the Minister for the Environment determines, on advice of the CEO, that decommissioning responsibilities have been fulfilled. <u>Objective</u> To ensure that the Final Decommissioning Plan is implemented.	Closure.	Until such time as the Minister determines that decommissioning responsibilities have been fulfilled.	Refer to 759:M11.2	Refer to 759:M11.2	Not required at this stage
759:M11.4 Final Decommissioning Plan – public availability	<u>Action</u> The Final Decommissioning Plan shall be made publicly available in a manner approved by the CEO. <u>How</u> Carry out the following: 1. Advertise the availability of the document in the ‘Public Notices Section’ of the local community newspaper. 2. Provide copies of the documentation to the DEC library (1 hard copy, 1 CD copy), local government public library (2 copies), JS Battye library (2 copies). 3. Post the document on the proponent’s website. <u>Objective</u> To ensure the public is kept informed.	Overall.	After approval of Plan by CEO, and prior to implementation of Plan.	Refer to 759:M11.2	Refer to 759:M11.2	Not required at this stage

Appendix C MS 759 Schedule 1 audit table

Table C.1: Schedule 1 of MS 759 audit table

Element	Description	Evidence	Comments	Status
Project purpose:	To construct, operate and maintain a 330 MW power station and associated infrastructure.	Management advice 24 November 2021. Site inspection 24 November 2021. R_001_Shell Energy_Neerabup Gas-fired Power Station_2019/2020 Compliance Assessment Report 04012021	Previous Compliance Assessment Reports noted that construction of the gas pipeline, transmission line and power station was completed in 2009. The power station was commissioned in December 2009, with operation and maintenance currently occurring. The operator advised that no changes have been made to the construction of the power station during the audit period and the auditors observed that this was the case.	Compliant
Project life:	30 years.	N/A.	No change, closure is anticipated to occur in 2040.	Not required at this stage
Power output:	330 MW (nominal).	Management advice 24 November 2021. R_001_Shell Energy_Neerabup Gas-fired Power Station_2019/2020 Compliance Assessment Report 04012021	There have been no changes to the nominal power output for the power station. The operator advises that 330 MW is the default rating and represents a nominal rating. The station can produce 342 MW with additional controls as a maximum in peaking situations.	Compliant
Sent out electricity:	Approximately 867GWh/yr.	D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021	Data for the 2020/2021 financial year shows that sent out electricity was 198.95 GWh/yr.	Compliant
Thermal efficiency:	33.3% HHV at 25°C and 60% relative humidity.	Management advice 24 November 2021. D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021	The operator configured the Supervisory Control and Data Acquisition (SCADA) system during July 2015 to provide real-time monitoring of thermal efficiency. These monitoring results provide more accurate calculation of thermal efficiency recorded during operation. Results from real-time monitoring recorded generator thermal efficiency at approximately 29.79% based upon average heat rate calculated from Energy sent out and gas consumed.	Compliant
Plant operation:	Intermittent operation to suit demand – peak and shoulder periods.	Management advice 24 November 2021.	The operator advised that intermittent demand is so far associated with and limited to very hot or very cold days, low occurrences of other participant significant outages, low probability of high market prices and limited grid feeds (generation nomination) as requested by Synergy.	Compliant
Operating hours:	Approximately 2628 hours per year.	D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021	The operating hours for the two units combined was 1,163 hours during the audit period.	Compliant
Capacity factor:	Approximately 30%.	R_004_Shell Energy_2019-2020 NewGen Neerabup DWER Annual Monitoring & Compliance Report_24082020	Based upon 330.6 MW capacity, the capacity factor was 6.62% during the audit period.	Compliant
Power station footprint:	Site is 10 ha of cleared farming land of which approximately 4 ha is used for infrastructure.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Pipeline footprint:	Construction corridor 30 m wide over 30 km length. Approximately 30 ha of native vegetation to be cleared and rehabilitated after construction.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Transmission line footprint:	Approximately 400 m ² of native vegetation for construction of each of seven single column power pole bases.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Fuel:				
• Type:	Natural gas.	Management advice 24 November 2021.	Natural gas is delivered from the Dampier to Bunbury Natural Gas Pipeline (DBNGP) to lateral that serves the station.	Compliant
• Source:	North-west Shelf.	Management advice 24 November 2021.	The supply of gas provided through the DBNGP is sourced from the North West Shelf, and supplemented from other gas fields en-route, and is controlled by the pipeline owner/operator (DBP).	Compliant
• Method of transport:	Dampier to Bunbury Natural Gas Pipeline and an approximately 30 km long gas pipeline lateral to the power station site.	Management advice 24 November 2021. Site inspection 24 November 2021.	Gas is delivered from DBNGP to lateral that serves the station. Auditors observed the gas yard and pipeline junction that services the power station.	Compliant
Major plant components				
Power station gas turbines:	Two 165 MW open-cycle gas turbines fitted with low NOx burners.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Number of stacks:	2.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Height of stacks:	35 m.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Stack diameter:	6 m.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed

Element	Description	Evidence	Comments	Status
Gas pipeline:	A dedicated lateral from the Dampier to Bunbury Natural Gas Pipeline of approximately 30 km length.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Compressor station:	Located on gas pipeline lateral and consists of two compressor units with only one unit in operation at any time.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Electricity transmission line:	330 kV line to Western Power Neerabup terminal substation – approximately 2 km long.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
Inputs				
Natural gas:	Approximately 11.2 PJ per year.	D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021	A total of 2.385 PJ of natural gas per year was utilised during the audit period.	Compliant
Process water:	Approximately 15 ML per year from onsite bore.	R_006_Shell Energy_2020-2021-Bore 1 and 2 Water meter use cards_29062021 D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021	The licence entitlement is 100,000 kL per year and includes two bores established on the site: Bore 1-meter serial No. 08HC05315 - total water use of 15,991 kL during the audit period. Bore 2-meter serial No. 08HC05638 – total water use is 1,349 kL during the audit period. Total water use for 2020/2021 year was 17,340 kL which is within the permitted volume for the licence (GWL 164093).	Compliant
Outputs				
Wastewater:	No discharge of wastewater.	Management advice 24 November 2021. Site inspection 24 November 2021.	There was no discharge of wastewater. The Reverse Osmosis plant minimises waste water collected in the evaporation ponds.	Compliant
Oxides of nitrogen (NOx):	380,000kg/yr (<25 ppmv @ 15% O ₂).	R_004_Shell Energy_2019-2020 NewGen Neerabup DWER Annual Environmental & Compliance Reports_24082021 R_005_NPI_WA1204 Emission Report 2020-2021_10092021	Both Unit 11 and 12 was recorded at 15 ppmv, which is below the limit specified. Using NPI techniques it is estimated that NOx emissions were 53,421.76 kg/yr.	Compliant
Particulates (PM10):	74,000kg/yr.	D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021	PM10 was not included in stack testing. Using NPI techniques it is estimated that PM10 emissions were 6,692.69 kg/yr.	Compliant
Carbon monoxide (CO):	93,000kg/yr (<10 ppmv @ 15% O ₂).	R_004_Shell Energy_2019-2020 NewGen Neerabup DWER Annual Environmental & Compliance Reports_24082021 D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021	Unit 11 was recorded at <5 ppmv and Unit 12 at <2 ppmv, which is below the limit specified. Using NPI techniques it is estimated that CO emissions were 15,581.4 kg/yr.	Compliant
Sulphur dioxide (SO ₂):	5,100 kg/yr.	Management advice 24 November 2021.	NA - Not tested for in the 2020-2021 stack test program, DER licence does not require this to be tested.	N/A
Direct greenhouse gas emissions:	Approximately 590,000 tonnes of CO ₂ -e per year.	R_009_Clean Energy Regulator_NGERS S19 REPORT FY2021	The direct greenhouse gas emissions were approximately 121,235 (Scope 1) tonnes of CO ₂ -e for the audit period.	Compliant
Full fuel cycle greenhouse gas emissions:	Approximately 673,000 tonnes of CO ₂ -e per year.	R_009_Clean Energy Regulator_NGERS S19 REPORT FY2021	The full fuel cycle greenhouse gas emissions were approximately 124,564 tonnes of CO ₂ -e for the audit period.	Compliant
Greenhouse intensity:	Approximately 554kg of CO ₂ -e per MWh.	Management advice 24 November 2021. D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021	The greenhouse intensity recorded during the audit period was 615.54 kg of CO ₂ -e per MWh for the audit period which is within 10% of the 554 kg of CO ₂ -e per MWh. As reported last year, the Proponent has advised that typical operations through the reporting period involved infrequent very short duration runs (station capacity factor of 6.62 %, total of approximately 267 starts between the two units during the audit period). Management advised that low operating hours tends to unfavourably skew the greenhouse intensity data per output due to the inherent inefficiency of the fast start-up cycle and short runs associated with a peak demand power station. The Proponent also notes that the heat rate degrades when the station is run at lower power output and the Proponent receives requests from the market to run at lower than maximum capacity output. As the future capacity factor of the power station increases, the ratio of starts to 'online' hours should improve with a corresponding reduction in greenhouse intensity.	Compliant
Noise:	Will comply with the Environmental Protection (Noise) Regulations 1997: • <30dB(A) at nearest residential property and • <65dB(A) at nearest industrial property.	Management advice 24 November 2021. D_003_Shell Energy_NPS-REG-ECT-COMP External Complaints Register_23082021	No complaints were received during the audit period indicating that noise limits were within the required parameters.	Compliant

Appendix D Stack Emissions Management Plan Rev 2.0 (20 June 2013) audit table

Table D.1: Stack Emissions Management Plan Rev 2.0 (20 June 2013) audit table

Audit code	Action	Evidence	Comments	Status
SEMP1	The power station shall be designed and constructed to comply with the emission concentration targets specified in 5.1 (NO _x – 25 ppmv; CO – 10 ppmv). The power station will utilise low NO _x burners to ensure that emissions of oxides of nitrogen are minimised as far as is practicable.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2018_18122018	This item was assessed as Completed in the 2018 CAR.	Completed
SEMP2	The power station shall be maintained and operated in a proper and efficient manner and in accordance with the manufacturer's operation and maintenance manual to ensure compliance is achieved with the emission concentration targets specified in 5.1.	Management advice 24 November 2021. Site inspection 24 November 2021. R_001_Strategen-JBS&G_2019-2020-Neerabup-Compliance Assessment Report_04012021 D_002_Shell Energy_Neerabup Inspection Plan 2009-2032_211102	As reported previously, there is no specific additional air pollution control equipment at the power station. The gas turbines themselves are modern low NO _x burners. Maintenance on the Neerabup gas turbines are triggered by the number of starts rather than the equivalent operating hours (EOH) due to the peaking nature of Neerabup Operations (short runs with frequent starts). The Siemens OEM schedules minor inspections at 250 starts (+/- 10 starts) or 8,000 EOH whichever is earlier. The operator advised that the minor inspection trigger of number of starts is tracked within Neerabup Forecasted Inspection Plan 2009–2032, to indicate the appropriate timing of maintenance activities. Four minor inspections (routine maintenance outages) have been undertaken to date: First: 17 to 21 November 2014 when Unit 11 was at 273 starts and Unit 12 was at 272 starts. Second: 7 to 10 November 2017 when both Unit 11 and 12 had 523 starts. Third: 26 to 29 February 2020 when Unit 11 had 785 starts and Unit 12 had 788 starts. Fourth: 1 to 3 October 2021 (Unit 11) and 16 – 19 October 2021 (Unit 12) when Unit 11 had 1027 starts and Unit 12 has 1032 starts. At the time of the fourth minor inspection, Unit 11 had accumulated 242 starts and Unit 12 had accumulated 244 starts (inside OEM tolerance) since the previous minor inspection. It is noted that the "Minor inspections" are an "Inspection" only outage trigger to detect issues, rather than the scheduled maintenance overhaul of parts replacements that are scheduled at "Major Maintenance" triggers, which are not yet due, the minor inspections concluded that no corrective action was required. The total number of starts recorded since the first minor inspection in 2014 is in accordance with the projected number of starts outlined in the Neerabup Forecasted Inspection Plan 2009–2032. Based on the current operating regime of Neerabup Power Station the 5th minor will be due to occur in August 2022 on GT12 and September 2023 on GT11. Monitoring equipment is maintained and calibrated to maintain NATA accreditation for contractors engaged to undertake air emissions and groundwater monitoring. As outlined in SEMP 1 above, the specified emission concentration targets are being achieved.	Compliant
SEMP3	Sampling and analysis of air pollutants, specified in Table 4 below, shall be undertaken and reported as provided by Section 4.2 of Australian Standard AS4323.1. The following list summarises the parameter and frequency of monitoring required by Table 4: <ul style="list-style-type: none"> oxides of nitrogen (mg/m³) – annually carbon monoxide (mg/m³) – annually velocity, temperature and volumetric flow rate (m/s, °C, m³/s) - annually moisture content (%) - annually dry gas density, molecular weight (kg/m³, g/gmol) - annually oxygen (%) - annually. 	R_003_Shell Energy_2020-2021-SEMP_Annual Compliance Report_03112021	The SEMP annual compliance report indicates that monitoring for all parameters outlined in Table 4 were undertaken for Unit 11 on 29 October 2020 and Unit 12 27 October 2020. Sampling and analysis of air pollutants are undertaken and reported in accordance with section 4.2 of Australian Standard AS4323.1.	Compliant
SEMP4	A complaints procedure shall be established to receive complaints from the community associated with air emissions from the power station. The power station operator shall investigate all complaints and, where the power station is found to be the cause of the incident, the operator shall take actions to ensure that the cause is rectified and implement measures to ensure that there is minimal risk of the incident recurring.	Management advice 24 November 2021. D_003_Shell Energy-REG-ECT-COMP External Complaints Register_23082021	The operator has established and maintains a complaint register for the power station and pipeline. No complaints were received during the audit period.	Compliant
SEMP5	Annual internal audits and annual external audits will be conducted as specified in the Operational Environmental Management Plan. These audits will assess compliance with this SEMP.	R_001_Strategen-JBS&G_2019-2020-Neerabup-Compliance Assessment Report_04012021 R_003_Shell Energy_2020-2021-SEMP_Annual Compliance Report_03112021	The following audits and compliance reports were prepared by Shell Energy which assessed compliance with the SEMP: <ul style="list-style-type: none"> SEMP Annual Compliance Report dated 3 November 2021. Compliance Assessment Report 2019-2020 dated 4 January 2021. Annual internal audit performed on the 3 November 2021. 	Compliant

Audit code	Action	Evidence	Comments	Status

Appendix E Greenhouse Gas abatement Programme audit table

Table E.1: Greenhouse Gas Abatement Programme audit table

Audit code	Action	Evidence	Comments	Status
GGAP1	Minimise/reduce energy use through the following: <ul style="list-style-type: none"> • routine monitoring of plant efficiency • operate plant at optimum efficiency in accordance with manufacturer’s operation and maintenance. 	Management advice 24 November 2021. D_001_Shell Energy_2020-2021_Schedule 1 calcs_Audit info Neerabup Stats_Compliance_2021 D_002_Shell Energy_Neerabup Inspection Plan 2009-2032_02112021 D_005_Shell Energy_GT11 Efficiency Report_07012021 D_006_Shell Energy_GT12 Efficiency Report_07012021 D_008_Shell Energy_GT11 Comp Perf tracking_07012021 D_009_Shell Energy_GT12 Comp Perf tracking_07012021 R_003_Shell Energy_2019-2020-SEMP_Annual Compliance Report_03112020	As previously reported, it should be noted that a power station designed and operated to provide peak supply has an inherently lower operational efficiency due to the number of start-ups against operating times and the lower efficiency of running the power plant at low outputs. The operator advised that there are a number of factors that could potentially influence plant efficiency including fuel quality and age of the plant. Efficiency of the plant is generally expected to gradually decline over the life of the plant. Performance monitoring is undertaken for both units with monitoring results from efficiency tests demonstrating that Unit 11 and 12 turbines are operating at 34.47% (12) and 34.75% (11) net efficiency. The operator advised that the maintenance trigger of number of starts is tracked within Neerabup Forecasted Inspection Plan 2009–2032, to indicate the appropriate timing of maintenance activities. Four minor inspections (routine maintenance outages) have been undertaken to date: First: 17 to 21 November 2014 when Unit 11 was at 273 starts and Unit 12 was at 272 starts. Second: 7 to 10 November 2017 when both Unit 11 and 12 had 523 starts. Third: 26 to 29 February 2020 when Unit 11 had 785 starts and Unit 12 had 788 starts. Fourth: 1 to 3 October 2021 (Unit 11) and 16 – 19 October 2021 (Unit 12) when Unit 11 had 1027 starts and Unit 12 has 1032 starts. Based on the current operating regime of Neerabup Power Station the 5th minor inspection will be due to occur in August 2022 on GT12 and September 2023 on GT11.	Conformant
GGAP2	Implement a routine preventative maintenance and cleaning regime to maintain operation of the power station at optimal efficiency.	Management advice 24 November 2021. D_002_Shell Energy_Neerabup Inspection Plan 2009-2032_02112021 R_003_Shell Energy_2020-2021-SEMP_Annual Compliance Report_03112021	Refer to GGAP1. Maintenance planning schedules are in accordance with the manufacturer’s requirements. Maintenance on the Neerabup gas turbines are triggered by the number of starts rather than the equivalent operating hours (EOH) due to the peaking nature of Neerabup Operations (short runs with frequent starts). The most recent inspection, the fourth since operations began, confirmed that Unit 11 had accumulated 242 starts and Unit 12 had accumulated 244 starts between the third and fourth minor inspection (inside OEM tolerance). The Siemens OEM schedules minor inspections at 250 starts (+/- 10 starts) or 8,000EOH whichever is earlier. It is noted that the “Minor inspections” are an “Inspection” only outage trigger to detect issues, rather than the scheduled maintenance overhaul or parts replacements that are scheduled at “Major Maintenance” triggers of which are not yet due, the minor inspections were conducted revealing no corrective action was required. Based on the current operating regime of Neerabup Power Station the 5th minor inspection will be due to occur in August 2022 on GT12 and September 2023 on GT11. Water washes can be undertaken within the compressor if routine efficiency monitoring shows it is required i.e., a significant decrease in compressor efficiency. Efficiency monitoring tests are used to initiate any corrective maintenance required in accordance with ongoing preventative maintenance order (PM336) in the MEX system.	Conformant
GGAP3	Implement a ‘continuous improvement approach’ so that advances in technology and potential operational improvement of plant performance are adopted where practicable.	Management advice 24 November 2021. R_008_Shell Energy_2020 (5 th -6 th Mar) V94.2 Users Group Meeting- Minutes_05032020 R_008_Shell Energy_2021 (9 th – 16 th November) V94.2 Users Group Webinar_9 -16112021 R_009_Shell Energy_2021 ((9 th – 16 th November) V94.2 Users Group Webinar Participants List_2021	The plant utilises current technology; however, it is being reviewed to enable continuous improvement in the future. The company is represented at gas turbine user group functions which are specifically designed to address continual improvement. The operator actively participates in the V94.2 group which is a group established specifically for users of the V94.2 gas turbine allowing personnel to improve their sharing of experience and to promote best technical solutions. The last V94.2 Australian user group webinar was attended by the operator and occurred between 9 th to 16 th November 2021.	Conformant

Audit code	Action	Evidence	Comments	Status
GGAP4	NewGen Power will become a member of the Greenhouse Challenge Plus Program.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2019_06012020	The previous Compliance Assessment Report indicated that the Greenhouse Challenge Plus Program ceased on 1 July 2009 before the NewGen Power Station became operational. Based on this, the auditors have assessed this item as Completed.	Completed
GGAP5	Annual auditing of greenhouse gas emissions.	Management advice 24 November 2021. R_009_Clean Energy Regulator_ NGERs S19 REPORT FY2021_2021	The Proponent advised that reporting is undertaken annually under the requirements of the National Greenhouse and Energy Reporting Act 2007 (NGER). The auditor sighted the Section 19 – Energy and Emissions Report for the 2019-2020 reporting year. The report was submitted to the Clean Energy Regulator on 8 October 2020.	Conformant
GGAP6	Fund energy efficient programs in conjunction with Synergy, including the employment of a Greenhouse Program Officer.	R_001_Strategen-JBS&G_Neerabup Power Station CAR 2015_14102015	This item was deemed no longer relevant in the 2014-2015 Compliance Assessment Report and therefore the auditors have assessed it as Completed.	Completed
GGAP7	Undertake an annual review of state-of-the-art mitigation measures to identify advances in technology and potential operational improvements of plant performance that are relevant for open-cycle gas-turbines. Investigate the feasibility of implementing these technological improvements at the NewGen Power Station.	Management advice 24 November 2021. R_008_Shell Energy_2020 (5 th -6 th Mar) V94.2 Users Group Meeting- Minutes_05032020 R_008_Shell Energy_2021 (9 th – 16 th November) V94.2 Users Group Webinar_9 -16112021 R_009_Shell Energy_2021 ((9 th – 16 th November) V94.2 Users Group Webinar Participants List_2021	As reported previously, the company is represented at gas turbine user group functions, which are specifically designed to address continual improvement (refer to GGAP3). The operator advised that Product and Service Bulletins are reviewed when received from Siemens or at a minimum annually to ensure that all corrections and operational specifications are up to date. Correction work orders are added to the list of outstanding maintenance activities compiled within the Neerabup Product and Service Bulletin – Master List. Correction work orders are typically conducted during scheduled maintenance outages. The operator also advised that personnel have access to an international forum to allow trouble shooting and sharing of information which includes potential improvements in operation. These current measures are undertaken throughout the year in an ongoing manner, rather than once a year.	Conformant

Appendix F Banker's Audit


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