



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L5366/1972/14
Licence Holder	Electricity Generation and Retail Corporation
File Number	2010/007578-4
Premises	Kwinana Power Station NAVAL BASE WA 6165 Legal description – Part of Lot 22 on Diagram 72310, Part of Lot 218 on Plan 215932, Part Lot 230 on Plan 240259, Part Lot 229 on Plan 240259, and Part Lot 4552 on Plan 220690 As defined by the coordinates in Schedule 1 of the Revised Licence
Date of report	5 January 2024
Status of report	Final

1. Decision summary

Licence L5366/1972/14 is held by the Electricity Generation and Retail Corporation (Licence Holder) for the Kwinana Power Station (the Premises), located at Leath Road, Naval Base.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L5366/1972/14 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the Department of Water and Environmental Report (DWER, the department) has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at [DWER Regulatory documents | Western Australian Government \(www.wa.gov.au\)](https://www.wa.gov.au/government/publications/dwer-regulatory-framework).

2.2 Application summary

On 11 September 2023, the Licence Holder submitted an application to the department to amend Licence L5366/1972/14 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought to support the operation of the Kwinana Big Battery, a Battery Energy Storage System (BESS), being constructed adjacent to the premises:

- amend Table 1 to include additional storage infrastructure options in the event that an incident at the Battery Energy Storage System (BESS) creates firewater runoff and requires storage before offsite removal; and
- amend Table 3 to allow for receipt of potentially contaminated stormwater from the adjacent BESS site to the Kwinana Power Station (KPS) prescribed premises for treatment at the oil water separator.

2.2.1 Background

The licence holder is constructing a 100MW/200MWh battery energy storage system (BESS) on land at Kwinana Power Station, outside the premises boundary. The Kwinana Big Battery (BESS) is one of the key actions of the Western Australian Climate Policy (November 2020) and will enable renewable energy to be stored while maintaining system security in the southwest interconnected network.

The installation and operation of the BESS and associated infrastructure in isolation is not within any of the prescribed premises categories described in Schedule 1 of the *Environmental Protection Regulations 1987*, therefore the construction and operation of the premises is not regulated under Part V of the *Environmental Protection Act 1986*. However, the BESS and its associated substation are adjacent to the Kwinana Power Station prescribed premises boundary therefore some of the Kwinana Power Station infrastructure will be incorporated into the BESS operation.

Stormwater runoff from the hardstand areas underlying the BESS will be directed to the oily water separator and wastewater storage system for the Kwinana Power Station within the prescribed premises boundary. The licence holder advised the oily water separator facility has capacity for the expected volume of runoff and the water is expected to have negligible contamination due to being from an area of batteries not hydrocarbon storage. This will occur while soak wells are being installed for ongoing management of the BESS stormwater runoff.

The existing licence allows for acceptance of firewater from the BESS in the event of a thermal runaway of a lithium -ion battery and storage within FOBS Tank 6 or the premises storage dams. To ensure availability of adequate storage for firewater in such events the licence holder is seeking for an amendment to allow the firewater to alternatively be stored within FOBS Tank 5, another storage receptable located within the FOB bund, the premises fire water tanks or the overflow pond (in place of the storage dam).

The amendment is required to authorise the above proposed changes.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 1 below. Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Potentially contaminated water (minimal contamination expected)	Firewater runoff from BESS	Direct discharge to land and overland runoff or infiltration	Will be directed to storage tanks, pond or bunded receptable on the premises prior to disposal Tanks are located inside a bunded area
	Stormwater runoff from BESS hardstand area		Will be directed to the premises oily water separator prior to disposal or reuse.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Residential Premises	4 km SE from boundary
Environmental receptors	Distance from prescribed activity
Cockburn Sound	Adjacent to premises
Groundwater	4 metres below surface

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and take into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The Revised Licence L5366/2023/14 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3. Risk assessment of potential emissions and discharges from the Premises operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions of licence	Reasoning
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Operation								
Receiveal and storage of potentially contaminated water from the BESS	Potentially contaminated water (minimal contamination expected)	Direct discharge to land and overland runoff or infiltration	Groundwater and Cockburn Sound	Refer to Section 3.1	C = Minor L = Rare Low Risk	Y	Condition 1 Table 1 Condition 3 Table 2	The amendment is to allow for receipt of potentially contaminated water onto the premises and storage within existing premises infrastructure or treatment via the existing oily water separator. The Delegated Officer noted the premises has suitable infrastructure to enable the proposed activity to occur and considered the risk associated with receipt, storage and where required treatment of potentially contaminated water will not increase as a result of allowing for acceptance of potentially contaminated stormwater from the BESS.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Local Government Authority advised of proposal 19 October 2023	None received	NA
Licence Holder was provided with draft amendment on 11 December 2023	Licence holder replied on 21 December 2023 noting the amendments and requesting the remainder of the comment period be waived.	N/A

5. Decision

The delegated officer has assessed the proposal to alter the management of the fire wastewater from the BESS and determined that does not represent an unreasonable risk to public health or the environment.

The delegated officer further considered the amendment of stormwater management from the BESS and determined that there is a low risk to public health and the environment associated with this activity.

6. Conclusion

Based on the assessment in this report, the delegated officer has determined that a revised licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

6.1 Summary of amendments

Table 5 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 5: Summary of licence amendments

Condition no.	Proposed amendments
Condition 1, Table 1	Row 7 inclusion of KPS firewater tanks as an option for storage of firewater runoff from the BESS. Row 8 inclusion of FOBS tank 5 or other storage receptable within the FOB bund as possible holding tanks for firewater runoff from the BESS.
Condition 3, Table 2	Row 3 modify the handling of contaminated firewater. Row 4 allow for the storage and handling of possibly contaminated stormwater from the BESS
Schedule 1	Updated premises map

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Synergy 2023, *Licence amendment application and supporting documentation* Perth Western Australia