GOVERNMENT OF WESTERN AUSTRALIA

Environmental Protection Authority

K2 Project

Western Energy Pty Ltd (a subsidiary of AGL Energy Ltd)

Report 1791

September 2025

This assessment report has been prepared by the Environmental Protection Authority (EPA) under s. 44 of the *Environmental Protection Act 1986* (WA). It describes the outcomes of the EPA's assessment of the K2 Project proposal by Western Energy Pty Ltd (a subsidiary of AGL Energy Ltd).

This assessment report is for the Western Australian Minister for Environment and sets out:

- what the EPA considers to be the key environmental factors identified in the course of the assessment
- the EPA's recommendations as to whether or not the proposal may be implemented and, if it recommends that implementation be allowed, the conditions and procedures, if any, to which implementation should be subject
- other information, advice and recommendations as the EPA thinks fit.

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Proposal

The K2 Project is a proposal for the expansion of the approved Kwinana Swift Power Station (KSPS) to increase the sites overall nominal generation capacity. The proposal involves the construction, installation and operation of four open cycle gas turbines with a combined nominal capacity of 250 MW. The project is intended to operate as a gas-fired peaking power station, supplying electricity to the South West Interconnected System (SWIS) network.

The proposal is located approximately 40 kilometres south of Perth, within the Kwinana Industrial Area at 1 Burton Place, Kwinana Beach (Lot 13 on Deposited Plan 39572), in the City of Kwinana, Western Australia (see Figure 1). The proposal does not require any additional clearing of native vegetation and would utilise existing site infrastructures for connecting into the SWIS network (see Figure 2).

The proponent for the proposal is Western Energy Pty Ltd (a subsidiary of AGL Energy Ltd).

Assessment of key environmental factors

Greenhouse Gas Emissions is the key environmental factor that may be impacted by the proposal.

The EPA has considered potential impacts to other environmental factors such as terrestrial environmental quality, inland waters, air quality, and social surroundings in Appendix E.

Environmental factor: Greenhouse gas emissions	
Residual impact on key value	Assessment finding / environmental outcome
Cumulative GHG emissions contribute to climate change, which impacts on Western Australia's environment. **Scope 1** GHG emissions predicted up to 191,763 tonnes of carbon dioxide equivalent (t CO_2-e) per annum (pa) on average, or up to 8,629,357 t CO_2-e over the life of the proposal. The unmitigated scope 1 GHG emissions are	**Avoidance and minimisation measures to reduce scope 1 GHG emissions**: The proponent has incorporated upfront GHG emissions avoidance and mitigation measures during the design and development of the proposal to reduce emissions from commencement. Benchmarking against gas-fired power stations of comparable age and technology indicates the proposal has a lower-than-average emissions intensity and ranks within the top 25 per cent of best-performing gas-fired power stations nationally. This benchmarking review indicates that the proposal will operate at a comparatively high level of efficiency, and that opportunities are likely to be available for further emissions reductions over time through the adoption of emerging technologies and improved operational practices. The EPA advises that emissions avoidance and mitigation measures should be reviewed throughout the life of the proposal to demonstrate continuous improvement. This is expected to

Environmental factor: Greenhouse gas emissions	
Residual impact on key value	Assessment finding / environmental outcome
estimated at up to 1,054,814 t CO_2-e pa should the proposal operate at 100 per cent load. Mitigation of up to approximately 4.7 million t CO_2-e of scope 1 GHG emissions over the life of the proposal with proponent commitments to a net zero trajectory by 2050. **Scope 2** emissions of up to 530 t CO_2-e pa on average or 23,850 t CO_2-e total over life of the proposal. **Scope 3** emissions of up to 22,462 t CO_2-e pa on average or 1,010,793 t CO_2-e over life of the proposal.	occur through five-yearly reviews of the Greenhouse Gas Management Plan (GHGMP), consistent with condition B1-2 & B1-6, requiring a GHGMP to be reviewed, approved and implemented. **Scope 1 GHG emissions:** the proponent has estimated scope 1 GHG emissions for both: the maximum throughput of the power generation facility (100 per cent load); and also, a lower emissions scenario which provides an indication of the likely emissions profile based on current understanding of electricity demand. The proponent has advised that electricity demand and the subsequent emissions profile is not under complete control of the proponent, as this is managed by Australian Energy Market Operator (AEMO). While it is noted that the proposal is unlikely to consistently reach the maximum throughput emission scenario as the power station will only be required to run during peak power demand periods where lower cost-lower emissions power sources are unavailable. It is however possible that electricity demand and therefore emissions may be higher than the lower indicative emissions profile predicted. This is particularly the case in the period of when coal fired power stations are being retired and renewable energy sources such as solar and wind are being brought into the network. In light of this and the role of AEMO, the proponent has proposed an emissions baseline (and associated emissions targets) based on the maximum emissions possible by the power station. The EPA considers the proponent's proposed emission limits which incorporates a trajectory to net zero emissions by 2050, to be appropriate for its assessment. The EPA notes that through recommended conditioning of the reduction targets, including mitigation measures, the proposal's lifetime net scope 1 GHG emissions would reduce by approximately 4.7 million tonnes of CO_2-e (M t CO_2-e). The EPA considers this to be reasonable and proportionate to the full potential impact of the GHG emissions. **Trajectory from 2030 to net zero by 2050**: The proponent has proposed a linear emissions reduction trajectory to achieve net zero by 2050, consistent with the EPA's minimum expectations for proposals. The EPA considers this trajectory to be reasonably achievable through a combination of emerging technologies, carbon offsets, and ongoing five-yearly reviews of the GHGMP. As mentioned above, the EPA recommends the emissions reduction trajectory be required through condition B1-1. **Commonwealth Safeguard Mechanism**: The K2 Project is a proposed grid-connected electricity generator that would operate under the Commonwealth Safeguard Mechanism's sectoral baseline. The EPA advises that the Safeguard Mechanism's sectoral baseline does not require any emission avoidance, minimisation or reductions for the proposal and does not meet the EPA's environmental objective for the GHG emissions factor (EPA

Environmental factor: Greenhouse gas emissions	
Residual impact on key value	Assessment finding / environmental outcome
	2024). Therefore, the EPA recommends conditions B1-2 to B1-6 requiring the GHG MP to be reviewed, approved and implemented. The EPA recommends inclusion of condition C1-1 to reduce the potential for future duplication of GHG emission regulation. This condition would enable the Chief Executive Officer of the Department of Water and Environmental Regulation (DWER) to determine that implementation of the GHGMP is not required under State legislation, if and when appropriate. **Scope 2 and 3 emissions**: The scope 2 and 3 emissions are below the EPA's thresholds for consideration and have not been further assessed. The EPA expects the proponent to take reasonable measures to avoid and reduce scope 2 and 3 emissions over the life of the proposal. **Offsets**: The proponent has identified, following application of the mitigation hierarchy, that offsets will be used as a last resort to achieve net zero emissions by 2050. Proposed offsets include tangible measures such as re-vegetation activities and verified carbon credits like Australian Carbon Credit Units (ACCUs) and nature-based solutions carbon credits. The EPA considers these offsets are likely to be available and recommends conditions, to ensure the offsets have integrity.

Holistic assessment

The EPA considered the connections and interactions between relevant environmental factors and values to inform a holistic view of impacts to the whole environment. The EPA formed the view that the holistic impacts would not alter the EPA's conclusions about consistency with the EPA factor objectives.

Conclusion and recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values which may be significantly affected by the proposal.
- residual impacts, emissions and effects in relation to the key environmental factors, separately and holistically (this has included considering cumulative impacts of GHG emissions).
- likely environmental outcomes (and taking into account the EPA's recommended conditions), and the consistency of these outcomes with the EPA objectives for the key environmental factors.
- the EPA's confidence in the proponent's proposed mitigation measures.

- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment.
- principles of the *Environmental Protection Act 1986* (EP Act).

The EPA has recommended that the proposal may be implemented, subject to conditions recommended in Appendix A.

1 Proposal

The K2 Project is a proposal for the expansion of the approved Kwinana Swift Power Station (KSPS) to increase the site's nominal capacity up to 370 megawatts (MW) to supply electricity to the South West Interconnected System (SWIS) network. The proposal involves the construction, installation, and operation of four open cycle gas turbines (OCGT) with a combined nominal capacity of 250 MW and associated infrastructures. This is in addition to the KSPS existing current operating nominal capacity of 120MW. It will operate as a peaking power station, connecting into the SWIS network to supply additional power during periods of peak demand from the grid.

The proposal is located 40 kilometres (km) south of the Perth within the Kwinana Industria Area at 1 Burton Place, Kwinana Bech (Lot 13 DP39572) within city of Kwinana, Western Australia (see Figure 1).

The proposal will participate in the Reserve Capacity Mechanism (RCM) whereby the facility must be available to generate electricity when called upon by the Australian Energy Market Operator (AEMO). The actual operational demand of the Proposal will therefore be determined by the capacity requirements set by AEMO.

The proposed gas turbines would be multi-fuel capable, with an ability to operate on natural gas, diesel, distillate, ethane, liquefied natural gas (LNG), liquefied petroleum gas (LPG), and/or hydrogen (RAMBOLL 2025b).

The proponent for the proposal is Western Energy Pty Ltd (a subsidiary of AGL Energy Ltd). The proponent referred the proposal to the Environmental Protection Authority (EPA) on 17 April 2025. The referral information was subsequently published on the EPA website for seven days public comment. Two (2) public submissions were received from individuals during this period. On 15 May 2025, the EPA determined to assess the proposal at the level of Referral Information with addition information.

The proposal is located within an existing laydown area comprising a development envelope of 3.55 hectares (ha) and does not require the clearing of vegetation (Figure 2).

The main elements of the proposal which have been subject to the EPA's assessment are included in Table 1.

[1]The Kwinana Swift Power Station (KSPS) proposal was initially approved under Ministerial Statement 625 (MS 625), but the proposal did not proceed and was never implemented.

[2] The proposal was later re-referred to the EPA in 2008 with changes in the operational elements of the originally approved proposal. Considering the nature of the revised proposal, the EPA determined that the environmental impacts were not significant to warrant assessment under Part IV of the EP Act.

[3] KSPS is currently regulated under the Part V licence L8471/2010/2 and operates as a peaking power station with a nominal capacity of 120 MW, connected to the SWIS network.

Table 1: Proposal content document (RAMBOLL 2025)

Proposal element	Location	Maximum extent or range
Physical elements		
Power station and supporting infrastructures	Within development envelope shown in figure 2.	A development envelope of 3.55 ha.
Operational elements		
Power station (nominal capacity)	Within development envelope shown in figure 2.	Up to 250 MW
Fuels (including natural gas, diesel)	N/a	Up to 50 TJ/day (natural gas or diesel)
Wastewater effluent	N/a	Up to 720 KL/day
Proposal elements with greenhouse gas emissions		
Operational elements		
Scope 1	N/a	191,763 t CO_2-e pa on average 8,629,357 t CO_2-e over the life of the proposal.
Scope 2	N/a	530 t CO_2-e pa on average 23,850 t CO_2- over the life of the proposal.
Scope 3	N/a	22,462 t CO_2-e pa on average. 1,010,793 t CO_2-e over the life of the proposal.
Other elements which affect extent of effects on the environment		
Proposal time	Maximum project life	Up to 48 years
	Construction phase	Up to 3 years
	Operations phase	45 years
	Decommissioning phase	Up to 12 months

Units and abbreviations
ha – hectare
KL/day – kilo litre per day
MW – Megawatts
pa – per annum
t CO2-e – tonnes carbon dioxide equivalent
TJ/day – Terra Joule per day

Proposal alternatives

The proponent considered low-carbon fuel alternatives and explored technology options, emphasising the use of aeroderivative multi-fuel turbines in an open cycle configuration capable of operating on multi-fuels such as biodiesel and hydrogen, and prioritised the selection of turbines with low nitrogen oxide (NOx) emissions and high efficiency to reduce greenhouse gas emissions. However, it was determined that no reliable, cost-competitive sources of biodiesel or hydrogen are currently available, despite proposed production facilities in the Kwinana area.

The selection of turbine technology specifically included the potential for future use of biodiesel or hydrogen, and the proponent has committed to continuing to investigate alternative technologies and strategies over the life of the proposal as new decarbonisation options emerge.

The proponent recognises that combined cycle gas-fired turbines (CCGT) represent the most efficient technology from an emissions intensity perspective; however, this was not considered best practice for the proposed peaking power station, given that the plant's primary objective is to supply intermittent firming power to support the increased penetration of renewable energy into the SWIS and contribute to network decarbonisation. In this context, an open cycle gas turbine (OCGT) configuration was determined to be better suited to the proposal, as it offers quicker start-up times, a smaller physical footprint, and greater operational reliability (RAMBOLL 2025a). The OCGT configuration was also preferred because it allows for an increase in the nominal capacity of the site without requiring additional land disturbance for the power station or new transmission infrastructure, as existing assets can accommodate the site's expansion and capacity increment. While OCGT has a higher emissions intensity compared to CCGT and may not represent the best available technology in absolute terms, the OCGT turbines would still rank within the best-performing 25% of gas-powered electricity generators in Australia (RAMBOLL 2025b). Furthermore, the emissions intensity of the proposal is the lowest among all OCGT facilities nationally and compares favourably even against many CCGT facilities (Preston Consulting 2025a).

Alternative locations were not investigated, as the proposal is sited within the existing brownfield location in the Kwinana Industrial Area (KIA), and co-locating the proposal within the existing power station footprint allows the reuse of existing infrastructure and avoids the need for native vegetation clearing required for a new development. Relocating the proposal to a different site was therefore not considered, as it was unlikely to improve environmental outcomes and would increase greenhouse gas emissions due to additional vegetation clearing and transport requirements.

A full description of the proposal alternatives considered by the proponent is available in section 1.4 of proponent's referral supporting document.

Proposal context

The proposal is currently located within the Kwinana Industrial Area (KIA) which is currently zoned under the Kwinana Town Planning Scheme No. 2 as 'General Industrial' and is located within the Council's 'Heavy Industry Zone 2' area.

The Kwinana Swift Power Station (KSPS) proposal for the construction and operation of combined cycle gas turbine power plant was initially approved under Ministerial Statement 625 (MS 625), but the proposal did not proceed and was never implemented. The proposal was later re-referred to the EPA in 2008 with changes in the operational elements of the originally approved proposal. The changes primarily relate to the proponent switching the configuration to OCGT from originally assessed CCGT. Considering the nature of the revised proposal, the EPA determined that the environmental impacts were not significant to warrant assessment under Part IV of the EP Act.

The construction and operation of the KSPS proposal was approved under Part V of the *Environmental Protection Act 1986* (EP Act) and is regulated under Part V licence L8471/2010/2, which allows for an operating capacity of 120 MW. It is connected to SWIS network however, KSPS does not form part of this proposal. At present, the estimated Scope 1 GHG emissions from the KSPS are 64,886 t CO_2-e as reported to National Greenhouse and Energy Reporting (NGER) Scheme with an emission intensity of 0.58 t CO_2-e/MWh (CER 2025). The proposed expansion of the proposal would increase the overall site's nominal capacity to 370 MW.

The proposal is intended to address the forecast electricity shortfall identified in the 2024 WEM Electricity Statement of Opportunities (ESOO) from the 2027/28 period due to the planned retirement of coal-fired power plants by the State. It will serve as peaking power station to respond to the increasing demand for electricity during that period to maintain SWIS grid stability and support the gradual decarbonisation of the SWIS network while additional renewable energy sources are integrated into the SWIS (RAMBOLL 2025b). This transition aligns with the objectives of State Emission Reduction Strategy (SERS), promoting and overall reduction in cumulative greenhouse gas emissions over time and facilitating the integration of renewable energy sources.

The proposal will participate in the Reserve Capacity Mechanism (RCM) whereby the facility must be available to generate electricity when called upon by the Australian Energy Market Operator (AEMO). The actual operational demand of the Proposal will therefore be determined by the capacity requirements set by AEMO.

Figure 1: Project location

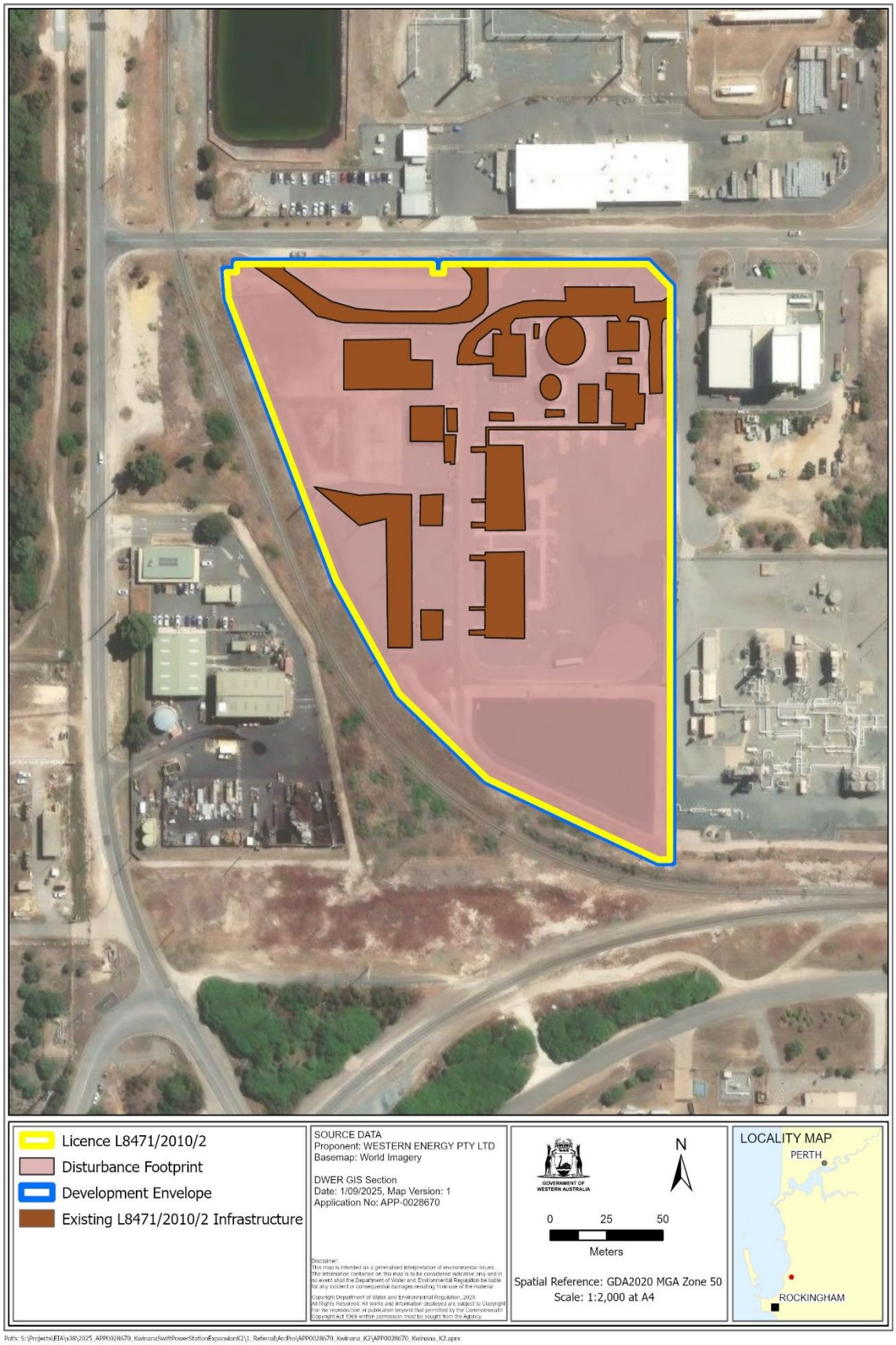

Figure 2: Development envelope and disturbance footprint

2 Assessment of key environmental factors

This section includes the EPA's assessment of the key environmental factors against its environmental objectives, and its recommendations on conditions the proposal should be subject to if it is implemented.

The EPA has also considered the principles of the EP Act in assessing whether the residual impacts will be consistent with its environmental factor objective (Appendix D).

The EPA evaluated the impacts of the proposal on other environmental factors and concluded these were not key factors for the assessment (Appendix E).

2.1 Greenhouse Gas Emissions

2.2.1 Environmental objective

The EPA environmental objective for greenhouse gas (GHG) emissions is *to minimise the risk of environmental harm associated with climate change by reducing greenhouse gas emissions as far as practicable.*

The proponent submitted a Greenhouse Gas Management Plan (GHG MP; Preston Consulting 2025a) with the proposal referral submission which was revised during the assessment (Preston Consulting 2025b).

Key environmental values and context
GHG emissions from a cumulative range of sources have an impact on WA's environment, even if the specific impact of a particular proposal's emissions may not be known with certainty. This is because there is an established link between GHG emissions and the risk of climate change. The EPA recognises that climate change will have an impact on WA's environment and environmental values. For example, climate change has already caused a significant drying of the State's south-west, which in turn places significant additional pressures on water resources, flora and fauna, marine environmental quality and social surroundings. There is also an established correlation between global temperature rise and GHG emissions. The EPA advises that for every 1,000 billion (G) tonnes (t) CO_2 emitted by human activity, global surface temperature rises by 0.45°C, as a best estimate, with a likely range from 0.27°C to 0.63°C (IPCC 2023). The best estimates of the remaining global carbon budgets from the beginning of 2020 are 500 Gt CO_2 for a 50% likelihood of limiting global warming to 1.5°C (IPCC 2023). Remaining carbon budgets from 2020 depend on emissions and emissions mitigation from that time (IPCC 2023).

The EPA therefore usually considers GHG emissions for proposals when emissions are reasonably likely to exceed 100,000 tonnes of scope 1 or scope 2 emissions each year measured in tonnes of carbon dioxide equivalent (t CO_2-e; EPA 2024).

In the absence of emissions reduction measures, the proposal is expected to generate up to 8,629,357 t CO_2-e of scope 1 GHG emissions over its operational life (Preston Consulting 2025b). For context, Western Australia's scope 1 GHG emissions in 2022 totalled approximately 82.54 million tonnes CO_2-e (DCCEEW 2024c), and Australia's national emissions for 2023 were approximately 432.9 million tonnes CO_2-e (DCCEEW 2023). On this basis, the proposal would therefore contribute approximately 0.2 per cent of Western Australia's annual scope 1 GHG emissions and around 0.04 per cent of total national emissions.

Scope 2 and 3 GHG emissions are currently predicted below EPA's currents threshold with scope 2 is estimated at 530 t CO2-e per annum and scope 3 22,462 t CO2-e per annum.

The scope 3 emissions emitted in WA will also become an increased percentage of the State's scope 1 GHG emissions over time as WA begins its trajectory to net zero emissions by 2050 and may become a material contribution to the State's emissions at the end of proposal life.

Impacts from the proposal	Assessment finding, environmental outcome and recommended conditions
GHG emissions estimates	
Due to minimal construction activity being required for the proposal, which are limited to assemblance of infrastructure and movement of light vehicles over a short period, the proponent has not estimated scope 1 GHG emissions relating to construction activities. The proponent has estimated GHG emissions based on a conservative scenario in which the proposal would operate at maximum throughput capacity year-round at 100 per cent load. On this basis, unmitigated scope 1 GHG emissions are estimated at up to 1,054,814 t CO_2-e per annum (pa). However, based on indicative future electricity demand provided by AEMO, the proponent has forecast average scope 1 GHG emissions of up to	The EPA reviewed the Greenhouse Gas Management Plan (GHG MP) against the *Environmental Factor Guideline – Greenhouse Gas Emissions* (EPA 2024) and the requirements of the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*. The EPA notes to estimate the GHG emissions the proponent has used an indicative future electricity demand provided by AEMO, which includes forecast electricity capacity requirements to 2058. For the remainder of the project life beyond 2058, the proponent has extrapolated the demand profile based on the available data. As the actual operational demand for power is determined by the capacity requirements set by AEMO, and is not fully under control of the proponent, representing maximum emissions limits is a reasonable approach to estimate scope 1 GHG emissions. The EPA considers that the proposal's emission sources, underlying source data, calculation methodologies, and the level of certainty associated with the emission estimates are appropriate and reasonable

191,763 t CO_2-e pa, or gross emissions of up to 8,629,357 t CO_2-e over the life of the proposal, reflecting more realistic operational expectations under which the plant would operate. Scope 2 emissions are estimated only to be up to 530 t CO_2-e pa or up to 23,850 t CO_2-e for life of proposal. As the proposal is for the power generation and emissions estimates are based on assumption that the proposal will require purchase of 1 MWh of electricity pa to maintain connection during maintenance and shutdowns. No other scope 2 emissions are expected to be generated during operational phase. Scope 3 emissions are estimated to be up to 22, 462 t CO_2-e pa or up to 1,010,793 t CO_2-e for life of proposal. In the absence of emissions reduction measures, the proposal is estimated to generate up to 8,629,357 t CO_2-e of scope 1 GHG emissions over its operational life. This represents approximately 0.2 per cent of Western Australia's annual scope 1 GHG emissions (82.5 Mt CO_2-e in 2022) and around 0.04 per cent of Australia's national emissions (432.9 Mt CO_2-e in 2023).	for the purposes of assessment. The EPA also considers the benchmarking and proposed offset approach to be consistent with relevant policy frameworks.
Baseline emissions avoidance and minimisation, including best practice review and benchmarking	
<u>Mitigation Measures</u> The GHG Management Plan (Preston Consulting 2025b) section 2.3 outlines the mitigation measures applied to scope 1	The EPA notes that the proposal is intended to operate as a peaking power station, providing firming power to the SWIS to support the planned retirement of State-owned coal-fired power stations by 2030 and to the broader decarbonisation of the SWIS network. The facility will participate in the Reserve Capacity Mechanism (RCM), with dispatch managed by AEMO

GHG emissions associated with the Proposal. The GHG MP indicates that the proponent has considered emissions reductions during early design and planning phase of the proposal. This includes but not limited to: • avoiding emission by co-locating the proposal within an existing power station, thereby avoiding the need for clearing of native vegetation and additional land disturbance; • selection of appropriate turbines with low emission intensity and high efficiency; • operating only when lower cost or lower-emission sources are unavailable. The Proposal involves the installation of open-cycle gas turbine (OCGT) technology, selected for its suitability for intermittent operation and fast-start capability. The proponent has stated that this configuration is intended to support firming capacity within the South West Interconnected System (SWIS), complementing the increasing penetration of renewable energy. The selected gas turbine equipment has been described as compatible with alternative fuels, including hydrogen and biodiesel. While natural gas is the proposed primary fuel, the proponent has identified a potential to transition to low-carbon fuels over the life of the Proposal, subject to feasibility, cost, and fuel availability. The GHGMP outlines that this	based on short-run marginal cost (SRMC). As such, the facility is expected to operate only when lower-cost or lower-emission generation sources - such as wind, solar, or battery storage are unavailable or are insufficient to meet electricity demand. Operation will therefore be intermittent and responsive to grid requirements, with demand on the plant expected to fluctuate over the life of the proposal. In this context, the proposal in not intended to displace renewable generation but to provide backup supply during periods of low renewable availability. [4]The EPA notes that the average emissions intensity of coal-fired generation in the SWIS during the 2023-24 financial year was approximately 0.9482 t CO2-e / t MWh. Given that the proposal would operate at a lower emissions intensity (0.507 t CO2-e / t MWh) and only during periods when higher-emitting sources would otherwise be used, the facility is expected to result in a net reduction in scope 1 GHG emissions when compared to traditional power generation means. The EPA notes that the benchmarking review (Appendix 2 of GHGMP) undertaken by the proponent does not represent a like-for-like comparison, as emissions for the proposal are projected estimates based on assumed operational scenarios such as those dictated by AEMO. In contrast, the emission data for other projects included in the comparison are actual emissions reported under the National Greenhouse and Energy Reporting (NGER) scheme. Notwithstanding this limitation, the proponent benchmarked the proposal against the best practice technologies for gas fired power generation facilities currently operational in Australia. The EPA considers this benchmarking approach appropriate for the purpose of the assessment. The proposal was benchmarked against OCGT, CCGT, and gas reciprocating engines which utilises range of fuel sources including natural gas, diesel or in some cases blended fuels. The proposals benchmarked against were actual emissions data reported under the NGER Scheme. The review determined that the appropriate metric to enable comparison was GHG emission intensity, allowing for consistent comparison between the Proposal and other gas-fired electricity generation facilities (Preston Consulting 2025b). Benchmarking comparisons identified that emissions

[4] Emissions intensity of major SWIS coal and gas-fired facilities for FY 2023/24 are Collie: 0.951 t CO_2-e/MWh, Bluewater 1: 0.891 t CO_2-e/MWh, Bluewater 2: 0.903 t CO_2-e/MWh, Muja: 0.966 t CO_2-e/MWh & Pinjar: 1.03 t CO_2-e/MWh.

flexibility was a key consideration in equipment selection. The proposed turbines will be fitted with dry low emissions (DLE) technology to minimise Oxides of Nitrogen (NOx) emissions. NOx emissions are predicted to comply with standards prescribed by *National Environment Protection (Ambient Air Quality) Measure 2021* (NEPM) (RAMBOLL 2025b). <u>Baseline emissions</u> The proponent has estimated the baseline emission taking into consideration of proposal's maximum nominal capacity i.e. 250 MW operating 8,322 hours a year (accounting maintenance and shutdowns periods) at 100 per cent load. The proposal at this operational capacity can generate up to 2,080,500 Mega Watts per hour (MWh). Although the proposal will operate as a peaking power station and is not expected to run at maximum nominal capacity year-round, maximum throughput has been used as a conservative basis. The proponent anticipates that the plant will operate for approximately 25 per cent of the year (RAMBOLL 2025b); however, actual operational hours will be determined by load demand on the SWIS grid. The proponent has indicated that the Proposal will participate in the Reserve Capacity Mechanism (RCM), which requires the facility to be available to generate	intensities for gas fired power stations range from 0.33 to 1.39 t CO_2-e / MWh (Preston Consulting 2025b). The Proposal's GHG emission intensity is within the lower range of similar gas-fired power generation facilities and below the Safeguard Mechanism default emissions intensity value of 0.539 t CO_2-e/MWh. The EPA has recently released reports for the Mt Keith Power Station (EPA Report 1780), Yarnima Power Station Stage 4 (EPA Report 1776), and Kemerton Power Station (EPA Report 1772). Both Mt Keith and Yarnima facilities comprise gas reciprocating engines (GREs) and recorded emissions intensities of 0.43 and 0.46 t CO_2-e/MWh respectively, which are slightly lower than the Proposal. In comparison, the Kemerton Power Station, which is comparable in technology and scale—utilising OCGT and having a nominal capacity of 260 MW—recorded a significantly higher emission intensity of 0.62 t CO_2-e/MWh. [5]When compared against emissions intensities reported under the NGER scheme, the EPA determines that the Proposal is, on average, a lower emission intensity facility for gas-fired power generation and would still rank within the best-performing 25 per cent of gas-powered electricity generators in Australia (Preston Consulting 2025b). This indicates that the proposal will operate at a comparatively high level of efficiency, and that opportunities are likely to be available for further emissions reductions over time through the adoption of emerging technologies and improved operational practices. The proponent recognises that CCGT represent the most efficient technology from an emissions intensity perspective; however, this was not considered best practice for the proposed peaking power station, given that the plant's primary objective is to supply intermittent firming power to support the increased penetration of renewable energy into the SWIS and contribute to network decarbonisation. In this context, an open cycle gas turbine (OCGT) configuration was determined to be better suited to the proposal, as it offers quicker start-up times, a smaller physical footprint, and greater operational reliability (Ramboll, 2025a). The EPA considers the use of renewable sources for electricity generation to be best practice. However, the EPA

[5] The default emissions intensity for electricity generation facilities under the Safeguard Mechanism is 0.539 t CO_2-e/MWh, as established under the *National Greenhouse and Energy Reporting Act 2007* (NGER Act). Based on emissions data reported under the NGER scheme, the average emissions intensity for gas-fired power stations in Western Australia is approximately 0.59 t CO_2-e/MWh. Nationally, the average emissions intensity for gas-fired electricity generation facilities is higher, at approximately 0.63 t CO_2-e/MWh (Clean Energy Regulator 2025).

electricity upon request by the AEMO. Consequently, the facility's operational demand will be determined by AEMO in response to grid requirements, rather than being based on the proponent's forecasts or discretion. The proponent has advised that the current selected gas turbines have an emission intensity of 0.507 t CO_2-e/ MWh, and it is representative of the turbines that are likely to be installed and operated. The proponent has estimated the baseline emissions at approximately 1,054,814 t CO_2-e, based on the facility operating at maximum nominal capacity at 100 per cent load for 8,322 operating hours per annum.	acknowledges that the OCGTs are proposed to reduce emissions compared to legacy coal and diesel infrastructure, meet current and future increased power demand from SWIS due to the Statewide retirements of coal powered electricity plants, and provide firming generation capacity and integration of renewable power generation for the SWIS network. The approach for considering baseline emissions based on maximum nominal capacity of 100 per cent load is the most accurate means in reflecting the emissions possible by the power station and this approach is consistent with previous assessments including the Kemerton Power Station Increased Operation Hours proposal (MS 1241).
Emissions trajectory to 2050	
The proponent has proposed a linear emissions reduction trajectory to achieve net zero by 2050. This trajectory, illustrated in Figure 3, applies from the commencement of operations in 2029 and includes progressive reductions from the estimated baseline emissions.	The EPA notes that in absence of emissions reduction measures the proposal would generate up to 8,629,357 t CO_2-e of gross scope 1 GHG emissions over its operational life. However, with the implementation of the proposed abatement measures from 2031 onwards approximately 4.7 million t CO_2-e would be avoided or offset, resulting in net scope 1 emissions of 3,886,834 t CO_2-e over the life of the Proposal. The EPA considers these reductions to be reasonably achievable through the implementation of emerging and new technologies, transition to low carbon fuels where available, and application of offsets where required. To provide ongoing regulatory certainty regarding the achievability of emissions reductions, the EPA recommends that a Greenhouse Gas Management Plan (GHG MP) be required under Condition B1-2. The GHG MP would provide flexibility in how future emissions reductions are delivered, enabling the proponent to adapt to technological advancements and evolving mitigation opportunities. In addition, Condition B1-1 is recommended to specify an emissions reduction limit,

	set at a level that reflects the highest expected emissions under worst-case operating conditions. These conditions are intended to ensure that greenhouse gas emissions reductions are demonstrably achieved over time and that the EPA's environmental objectives for greenhouse gas emissions are met.

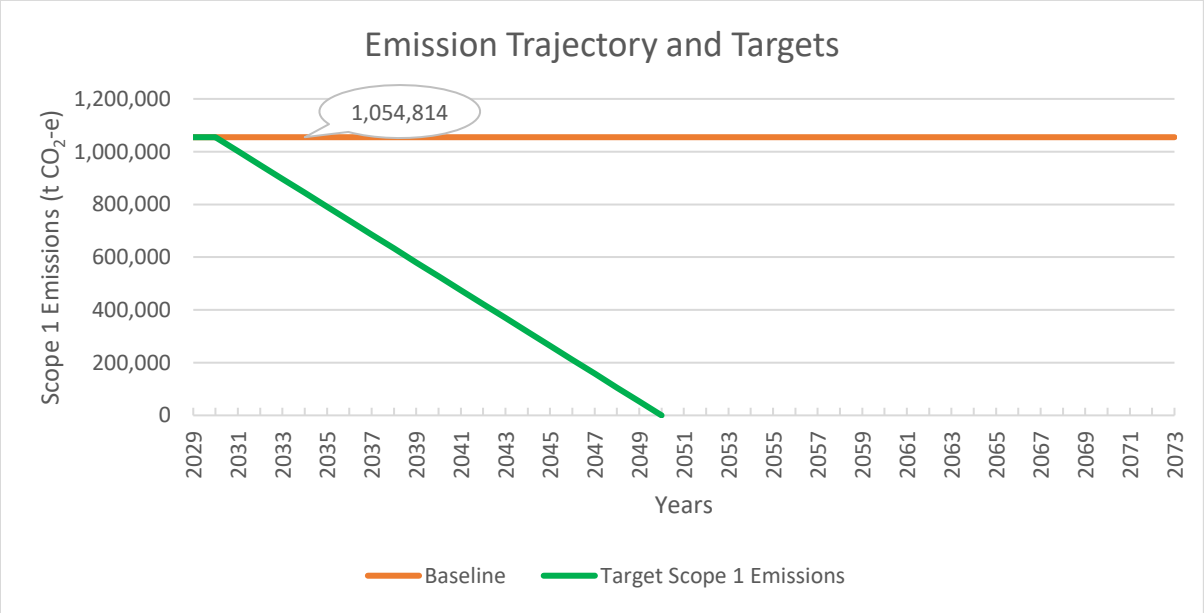

Figure 3: Emission reductions targets towards net zero

The proponent has established the Scope 1 GHG emissions baseline at 1,054,814 t CO_2-e, based on the facility operating at maximum nominal capacity at 100 per cent load, providing an upper estimate of potential emissions. The EPA considers this approach appropriate, because it allows the EPA to consider the maximum extent of the proposal in relation to potential impacts on the environment from GHG emissions, and this approach is consistent with recent assessments where baselines for grid connected plants were determined based on full-load capacity. The proponent has also estimated Scope 1 GHG emissions under a typical 'business-as-usual' scenario (Figure 5; GHGMP, Preston Consulting 2025b), based on modelling provided by AEMO that considers projected future electricity demand. Operational hours for the facility will be determined through contractual arrangements with AEMO and will depend on market conditions and SWIS electricity requirements; therefore, actual scope 1 GHG emissions will vary annually. Although, actual scope 1 GHG emissions are expected to vary, the proponent has estimated scope 1 GHG emissions of up to 191,763 t CO_2-e per annum on average. The estimated Scope 1 GHG emissions under a typical 'business-as-usual' scenario shows a peak-trough pattern beyond 2050. The proponent has communicated that as coal and legacy gas/diesel stations are retired, the resulting increase in load on the SWIS grid will raise the operational demand for the proposal, leading to higher Scope 1 GHG emissions, particularly during the initial years of operating the proposal. Conversely, as additional renewable energy sources are integrated and the SWIS grid stabilises, operational demand and associated emissions are expected to decrease over time.

The EPA considers that the peaking power station is intended to provide firming power to the SWIS network and support gradual decarbonisation of the network. The power station is not expected to run at full capacity year-round, except under a couple of unlikely circumstances. For example, during periods of extended cloud cover or low wind conditions, where power

generation from renewables is significantly reduced and, to maintain firming power to the grid, the proposal may be required to dispatch power at its upper operating limits to meet demand. As additional renewables are integrated into SWIS, the operational demand and associated scope 1 GHG emissions of the proposal is expected to gradually decrease over time. The EPA also notes that scope 1 GHG emissions beyond 2058 are extrapolated based on the modelling provided by AEMO, and actual operations may vary due to unforeseen technological or market changes. To ensure ongoing achievement of greenhouse gas reduction and the EPA's objective for GHG emissions factor is met, the EPA recommends Condition B1-1, establishing emissions reduction limits to achieve net zero emissions by 2050 along a linear trajectory, and net zero emissions thereafter.

Cumulative Impacts

The EPA notes that, cumulatively, the existing KSPS proposal and the K2 Project are estimated to generate up to 11,532,330 million tonnes (Mt) CO_2-e of gross scope emissions over their combined operational life. This cumulative figure represents approximately 0.3 per cent of Western Australia's total annual scope 1 GHG emissions and approximately 0.06 per cent of Australia's total national emissions (DCCEEW 2023; DCCEEW 2024a).

At the sectoral level, emissions from electricity generation in Australia were estimated at 153 Mt CO_2-e in 2024, with projections indicating a 62 per cent reduction to 59 Mt CO_2-e by 2030 (DCCEEW 2024b). This decline is driven by a national transition to renewable energy, targeting 82 per cent renewable electricity generation by 2030, and supported by the progressive closure of coal-fired power stations. In Western Australia, the State Government has committed to close its coal-fired power stations—Collie and Muja D—by 2030, contributing to the broader decarbonisation trend.

Within the Western Australian Wholesale Electricity Market (WEM), emissions in 2024 were reported at 10 Mt CO_2-e, with projections indicating a reduction to 3 Mt CO_2-e by 2030. Based on this, the cumulative emissions from the KSPS and K2 Project would represent approximately 2.6 per cent of WEM emissions in 2024. In comparison to the National Electricity Market (NEM), the cumulative emissions represent approximately 0.2 per cent of total emissions from electricity generation.

Given the scale of projected emissions reductions in the electricity sector and the small proportional contribution of the proposal at the State, national, and market levels, the EPA considers that the cumulative scope 1 GHG emissions from the KSPS and K2 Project are not significant in the broader context of Western Australia's and Australia's total greenhouse gas emissions.

The EPA considers that, while the electricity sector is undergoing a significant transformation, gas-fired generation is intended to operate as intermittent firming power to support the increased penetration of renewable energy into the SWIS and contribute to network decarbonisation as coal-fired generation retires and electricity demand increases. These facilities are expected to operate primarily during periods of low renewable availability. The EPA therefore considers that cumulative greenhouse gas emissions are unlikely to be significant and can be regulated through the recommended condition B1-1 to ensure consistency with the EPA's objective for the greenhouse gas environmental factor.

Scope 2 emissions
Scope 2 emissions are estimated to be minimal estimated to be up to 530 t CO_2-e pa on average & 23, 850 t CO_2-e for life of proposal, with only approximately 1 MWh per annum of electricity proposed to be sourced from the South West Interconnected System (SWIS) to maintain grid connection during maintenance and shutdown periods (RAMBOLL 2025c). The EPA notes that scope 2 emissions are well below the 100,000 t CO_2-e per annum threshold outlined in the EPA (2024) EFG GHG for consideration by the EPA and therefore has not considered these emissions further in its assessment.
Scope 3 emissions
The EPA notes that scope 3 emissions associated with the proposal are estimated to be up to 22,462 t CO_2-e per annum on average, or up to 1,010,793 t CO_2-e over the life of the proposal (Preston Consulting 2025b). The GHG MP outlines that the proponent will review opportunities to reduce Scope 3 emissions throughout the life of the proposal. This includes reviewing third-party fuel supply options and considering their carbon footprint in procurement decisions, with a preference for suppliers with lower carbon emissions intensity. The EPA encourages the proponent to take all measures it can reasonably take to reduce scope 3 emissions. The EPA notes that the estimated scope 3 emissions are well below the 100,000 t CO_2-e per annum threshold in the EPA (2024) EFG GHG for consideration by the EPA and therefore has not considered these emissions further in its assessment.
Offsets

The proponent has advised that where structural abatement and the application of the mitigation hierarchy are insufficient to meet the proposal's emissions reduction targets, the residual emissions will be addressed through the use of offsets. Offsets are proposed as a transitional measure, to be used only where emissions cannot be otherwise avoided or reduced. This approach is consistent with the principle that offsets should be a last resort, applied only after all reasonable avoidance and minimisation measures have been implemented. The GHGMP states that offsets are expected to be required post-2048, with a total of approximately 439,794 t CO_2-e forecast to be offset between 2048 and 2050. Beyond 2050, the proponent anticipates an ongoing requirement to offset an average of approximately 191,763 t CO_2-e per annum (Preston Consulting 2025b).	The EPA considers it highly likely that the proponent will need to rely on carbon offsets to meet the proposal's emissions reduction trajectory in the medium to long term. However, the EPA also acknowledges that technological advancements and the increased availability of low-carbon alternative fuels may reduce the need for offsets over time. The EPA notes that several production facilities for low-carbon fuels - such as hydrogen and biodiesel - have been proposed in the Kwinana industrial area, which may provide viable supply options to the proponent during the operational life of the proposal. As such, while offsets are

Offsets will be focused on tangible and credible carbon abatement outcomes, with a commitment to ensuring that any offsets used are validated, verified, and registered in accordance with established frameworks. This includes alignment with integrity standards set out under the *Commonwealth Carbon Credits (Carbon Farming Initiative) Act 2011*, or equivalent recognised schemes (Preston Consulting 2025b). Proposed offsets include tangible measures such as re-vegetation activities and verified carbon credits like Australian Carbon Credit Units (ACCUs) and nature-based solutions carbon credits. The proponent has advised that, based on current emissions projections, net zero emissions after 2050 will be achieved through offsets. However, as low-carbon technologies and alternative fuels - such as hydrogen and biodiesel - become more commercially viable and available, the proponent expects to reduce reliance on offsets and may be able to achieve future emissions reduction targets without the need for offsetting (Preston Consulting 2025b).	expected to be required in the near term, the EPA considers it reasonable to expect that the proponent's reliance on offsets may diminish over time as alternative fuel options become practicable and commercially available. In this context, while the EPA has not assessed the specific quantity or type of carbon offsets that may be required for the proposal at this stage, the proponent projects that they will likely need to offset an average of approximately 191,763 t CO_2-e per annum beyond 2050, which represents a small proportion (approximately 1 percent) of the total carbon credits expected to be issued nationally in 2025. The EPA advises that any offsets proposed for surrender should demonstrate they meet offset integrity principles and be supported by clear, enforceable, and accountable methods. Australian Carbon Credit Units (ACCUs) are administered by the Clean Energy Regulator and assured by the Emissions Reduction Assurance Committee (ERAC) — an independent statutory body responsible for assessing compliance against the Offsets Integrity Standards established under section 113 of the *Carbon Credits (Carbon Farming Initiative) Act 2011*. Given the scale of offsetting likely to be required and the regulatory frameworks governing offset markets, the EPA is satisfied that offsets are likely to be reasonably available and have sufficient integrity at the time they are required. The EPA considers that, by the time any offsets are required to be surrendered, there is likely to be sufficient assurance that ACCUs will meet the

	legislated Offsets Integrity Standards. The EPA considers that offsets are likely to form part of the proponent's approach to meeting its emissions reduction trajectory, particularly beyond 2048. As such, the EPA recommends condition B1-2(4) to require GHGMP to identify and describe measures the proponent will implement to avoid, reduce, and/or offset proposal GHG emissions.
Other decision-making processes, including Commonwealth Safeguard Mechanism	
<u>Commonwealth Safeguard Mechanism</u> The Commonwealth Safeguard Mechanism under the *National Greenhouse and Energy Reporting Act 2007* (NGER Act) applies to facilities with scope 1 GHG emissions exceeding 100,000 t CO_2-e per annum. For most facilities, this threshold results in an individual facility baseline being established, with compliance obligations if those baselines are exceeded. However, for the grid connected electricity generation sector, the Safeguard Mechanism instead applies a single 'sectoral baseline' that spans across all electricity generators connected to the grids rather than individual facility baselines. The Sectoral baseline is set at 198 million tonnes CO_2-e, which is based on the electricity sector's emissions from 2009-10 to 2013-14 and this is not expected to be exceed. Individual facilities connected to one of Australia's main electricity grids are not considered covered facilities under the Safeguard Mechanism, provided that total emissions from grid-connected electricity generators remain below the sectoral baseline. As a result, these facilities are not subject to the same compliance obligations as other facilities individually covered under Safeguard Mechanism. Whilst the proposal is expected to emit an average of 191,763 tonnes CO_2-e per annum of Scope 1 GHG emissions and exceed the 100,000-tonne threshold that would typically trigger coverage under the Safeguard Mechanism, the facility forms part of the grid-connected electricity sector being connected to SWIS. As such, the	The EPA notes the electricity sector baseline of 198 million t CO_2-e is considerably higher than the total reported scope 1 GHG emissions for the sector from grid connected generators in 2022-23 of 137.2 million t CO2-e (CER 2025). The EPA recognises that the K2 proposal would operate below the Safeguard Mechanism's sectoral baseline and the proponent has committed to continued compliance with any potential future amendments, reductions or requirements of the baseline. However, the EPA advises that the Safeguard Mechanism's sectoral baseline does not require any emissions avoidance, minimisation or reductions for the proposal and does not meet the EPA's environmental objective for the GHG emissions factor (EPA 2024). Therefore, Condition B1-1 is recommended to specify an emissions reduction limit, set at a level that reflects the highest

facility is not considered a covered facility under the Safeguard Mechanism. The K2 Project GHG emissions will be reported annually through the NGER Scheme.	expected emissions under worst-case operating conditions. This condition will ensure that emissions reductions are achieved and that the EPA's environmental objectives for GHG emissions are met. The EPA also recommends condition B1-2 requiring a GHG MP, for consistency with other proposals and to ensure ongoing reviews of GHG emissions avoidance and mitigation actions. However, to reduce the potential for duplication of GHG emissions regulation by other Commonwealth or State laws, policies or regulations in the future, the EPA also recommends condition C1-1 be included. This provides a mechanism for the Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) to advise the proponent the GHG MP is not required to be implemented, if the Commonwealth or a State law, policy or regulation applies and meets the EPA's environmental objectives for GHG emissions.

In summary, the EPA considers that the proponent's proposed measures to avoid, minimise and offset emissions are generally consistent with the EPA's factor objective *to minimise the risk of environmental harm associated with climate change by reducing greenhouse gas emissions as far as practicable*.

The EPA notes that as a result of the proponent's scope 1 GHG emission reductions measures and operation of the proposal to achieve the proposed emission targets, there is expected to be mitigation of approximately 4.7 Mt CO_2-e of scope 1 GHG emissions over the life of the proposal compared to baseline emissions.

The EPA notes the proposal was assessed considering the maximum power generation of the power station therefore resulting in a maximum scope 1 GHG emissions profile. The EPA considers this appropriate as there is a likelihood that during the initial period of the proposal implementation that emissions would exceed the modelled lower indicative emissions profile if required by AEMO. This is a plausible

scenario given the predicted early retirement of coal fired power stations supplying the network and the possible timing of the introduction of wind and solar energy to the network.

The EPA notes the science and policy of GHG emissions and climate change is rapidly evolving. The EPA's recommended GHG MP conditions are expected to be able to be responsive to this, particularly by enabling reviews and reporting of the proposal to reflect any substantial changes. This may include if there are material changes to relevant State, Commonwealth or international GHG science or reports, policy or other mechanisms to support the achievement of net zero GHG emissions.

The EPA recommends conditioning of the proponent's proposed emission targets, which provide for a trajectory to net zero emissions by 2050. The EPA considers that Condition B1 provides an appropriate framework to ensure continuous improvement and innovation in emissions reduction technologies, consistent with the EPA's Greenhouse Gas Emissions Guideline (EPA 2024). The EPA also notes that the Minister may request the EPA to inquire into the adequacy of conditions, including GHG conditions, at any time.

3 Holistic assessment

While the EPA assessed the impacts of the proposal against the key environmental factors and environmental values individually in the key factor assessments above, given the link between the key environmental factor and other environmental factors as described in Appendix E, the EPA also considered connections and interactions between them to inform a holistic view of impacts to the whole environment.

There is an established link between GHG emissions and the risk of climate change. The EPA recognises that climate change will impact on Western Australia's environment and environmental values. GHG emissions have the potential to impact on all other environmental factors through the effects of climate change. The EPA considers that the proposed conditions relating to limits on net GHG emissions will ensure that the impacts to other factors and values of the environment are likely to be consistent with the EPA environmental factor objectives.

4 Recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values which may be significantly affected by the proposal.
- residual impacts, emissions and effects in relation to the key environmental factors, separately and holistically (this has included considering cumulative impacts of GHG emissions).
- likely environmental outcomes (and taking into account the EPA's recommended conditions), and the consistency of these outcomes with the EPA objectives for the key environmental factors.
- the EPA's confidence in the proponent's proposed mitigation measures.
- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment.
- principles of the EP Act.

The EPA recommends that the proposal may be implemented subject to the conditions recommended in Appendix A.

Appendix A: Recommended conditions

Recommended Environmental Conditions

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
***(Environmental Protection Act 1986*)**

K2 PROJECT

Proposal:	The proposal is to expand the existing Kwinana Swift Power Station by up to 250 megawatts (MW) for the purpose of supplying electricity to the South West Interconnected System (SWIS) network.
Proponent:	Western Energy Pty Ltd Australian Company Number 115 061 375
Proponent address:	L24/221 St Georges Terrace, Perth WA 6000
Assessment number:	2497

Report of the Environmental Protection Authority: 1791
Introduction: Pursuant to section 45 of the *Environmental Protection Act 1986,* it has been agreed that the proposal entitled K2 Project described in the 'Proposal Content Document' attachment of the referral of 4 August 2025, may be implemented and that the implementation of the proposal is subject to the following implementation conditions and procedures:

Conditions and procedures

Part A: Proposal extent

Part B: Environmental outcomes, prescriptions and objectives

Part C: Environmental management plans and monitoring

Part D: Compliance and other conditions

PART A: PROPOSAL EXTENT

A1 Limitations and Extent of Proposal

A1-1 The proponent must ensure that the proposal is implemented in such a manner that the following limitations or maximum extents / capacities / ranges are not exceeded:

Proposal element	Location	Maximum extent
Physical elements		
Power station and supporting infrastructures	Figure 2	A development envelope of 3.55 **ha**
Operational elements		
Power station (nominal capacity)	Within development envelope shown in figure 2.	Up to 250 **MW**
Timing elements		
Proposal time	Maximum project life	Up to 48 years
	Construction phase	Up to 3 years
	Operation phase	45 years
	Decommissioning	Up to 12 months

PART B – ENVIRONMENTAL OUTCOMES, PRESCRIPTIONS AND OBJECTIVES

B1 Greenhouse Gas Emissions

B1-1 The proponent shall take measures to ensure that **net GHG emissions** do not exceed:

(1) 2,109,628 tonnes of **CO2-e** for the period from which this statement is issued until 30 June 2030;

(2) 4,482,960 tonnes of **CO2-e** for the period between 1 July 2030 and 30 June 2035;

(3) 3,164,442 tonnes of **CO2-e** for the period between 1 July 2035 and 30 June 2040;

(4) 1,845,925 tonnes of **CO2-e** for the period between 1 July 2040 and 30 June 2045;

(5) 527,407 tonnes of **CO2-e** for the period between 1 July 2045 and 30 June 2050; and

(6) zero tonnes of **CO2-e** for every five (5) year period from 1 July 2050 onwards to the end of proposal operations.

B1-2 The proponent must implement the **Greenhouse Gas Emissions Environmental Management Plan** to:

(1) be consistent with the achievement of the **net GHG emissions** limits in condition B1-1 (or achievement of emission reductions beyond those required by those emission limits);

(2) specify the estimated **proposal GHG emissions** and **emissions intensity** for the life of the proposal;

(3) include a comparison of the estimated **proposal GHG emissions** and **emissions intensity** for the life of the proposal against other relevant emissions reduction practices, pathways and comparable facilities;

(4) identify and describe any measures that the proponent will implement to avoid, reduce and/or offset **proposal GHG emissions** and/or reduce the **emissions intensity** of the proposal; and

(5) provide a program for the future review of the plan to:

(a) assess the effectiveness of measures referred to in condition B1-2(4); and

(b) identify and describe options for future measures that the proponent may or could implement to avoid, reduce, and/or offset **proposal GHG emissions** and/or reduce the **emissions intensity** of the proposal.

B1-3 Within one (1) month of:

(1) the date of this Statement; or

(2) any subsequent version of the **confirmed Greenhouse Gas Environmental Management Plan** submitted under condition C1-2 or condition B1-8 which satisfies the requirements of condition B1-2,

the proponent must submit a separate summary of the relevant plan to the **CEO**, which must:

(3) include a summary of the matters specified in conditions B1-2(1) to condition B1-2(4); and

(4) be published as required by condition B1-7.

B1-4 The proponent shall submit an annual report to the **CEO** each year by 31 March, commencing on the first 31 March after the **commencement of operations**, or such other date within that financial year as is agreed by the **CEO** to align with other reporting requirements for **GHG**, specifying for the previous financial year:

(1) the quantity of **proposal GHG emissions**; and

(2) the **emissions intensity** for the proposal.

B1-5 The proponent shall submit to the **CEO** by 31 March 2030 or such other date within that financial year as is agreed by the **CEO** to align with other reporting requirements for GHG, and every five (5) years thereafter:

(1) a consolidated report specifying:

(a) for each of the preceding five financial years, the matters referred to in conditions B1-4(1) and conditions B1-4(2);

(b) for the period specified in condition B1-1 that ended on 30 June of the year before the report is due:

(i) the quantity of **proposal GHG emissions**;

(ii) the **net GHG emissions**;

(iii) any measures that have been implemented to avoid or reduce **proposal GHG emissions;** and

(iv) the type, quantity, identification or serial number, and date of retirement or cancellation of any **authorised offsets** which have been retired or cancelled and which have been used to calculate the **net GHG emissions** referred to in condition B1-5(1)(b)(ii), including written evidence of such retirement or cancellation.

(2) an audit and peer review report of the consolidated report required by condition B1-5(1), carried out by an independent person or independent persons with suitable technical experience dealing with the suitability of the methodology used to determine the matters set out in the consolidated report, whether the consolidated report is accurate and whether the consolidated report is supported by credible evidence.

B1-6 A consolidated report referred to in condition B1-5(1) must be accompanied by:

(1) a revision of the **confirmed Greenhouse Gas Environmental Management Plan** required under condition B1-2; and

(2) a separate summary report, for the period specified in condition B1-1 that ended on 30 June of the year before the report is due and any previous periods specified in condition B1-1, and which includes:

(a) a graphical comparison of **net GHG emissions** with the **net GHG emissions** limits detailed in condition B1-1;

(b) proposal **emissions intensity** compared to comparable facilities;

(c) a summary of measures to reduce the **proposal GHG emissions** undertaken by the proponent for compliance periods detailed in condition B1-1; and

(d) a clear statement as to whether limits for **net GHG emissions** set out in condition B1-1 have been met, and whether future **net GHG emissions** limits are likely to be met, including a description of any reasons why those limits have not been, and/or are unlikely to be met.

B1-7 In addition to the requirements of condition C1-6 about publication of the **confirmed Greenhouse Gas Environmental Management Plan**, the proponent shall make the summary of the **confirmed Greenhouse Gas Environmental Management Plan**, and all reports required by this condition B1 publicly available on the proponent's website within the timeframes specified below, or in any other manner or time specified by the **CEO**:

(1) the summary of the **confirmed Greenhouse Gas Environmental Management Plan** within twenty (20) business days of submitting the document to the **CEO** in accordance with condition B1-3; and

(2) the reports referred to in condition B1-4, condition B1-5, and condition B1-6 within twenty (20) business days of submitting the document to the **CEO,** and they shall remain published for the life of the proposal.

B1-8 In addition to the requirements of condition C1-2, the proponent must revise and submit to the **CEO** the **confirmed Greenhouse Gas Environmental Management Plan** by the date that the first five (5) yearly consolidated report is required to be submitted under condition B1-5 and every five (5) years after that date.

PART C – ENVIRONMENTAL MANAGEMENT PLANS AND MONITORING

C1 Environmental Management Plans: Conditions Relating to Approval, Implementation, Review and Publication

C1-1 Upon being required to implement an environmental management plan under Part B, the proponent must:

(1) implement the most recent version of the **confirmed** environmental management plan; and

(2) continue to implement the **confirmed** environmental management plan referred to in condition C1-1(1), other than for any period which the **CEO** confirms by notice in writing that it has been demonstrated that the relevant requirements for the environmental management plan have been met, or are able to be met under another statutory decision-making

process, in which case the implementation of the environmental management plan is no longer required for that period.

C1-2 The proponent:

(1) may review and revise a **confirmed** environmental management plan provided it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan;

(2) must review and revise a **confirmed** environmental management plan and ensure it meets the relevant requirements of that environmental management plan, including any consultation that may be required when preparing the environmental management plan, as and when directed by the **CEO;** and

(3) must revise and submit to the **CEO** the **confirmed** Environmental Management Plan if there is a material risk that the **outcomes** or **objectives** it is required to achieve will not be complied with, including but not limited to as a result of a change to the proposal.

C1-3 Despite condition C1-1, but subject to conditions C1-4 and C1-5, the proponent may implement minor revisions to an environmental management plan if the revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, **outcomes** or **objectives** which the environmental management plan is required to achieve.

C1-4 If the proponent is to implement minor revisions to an environmental management plan under condition C1-3, the proponent must provide the **CEO** with the following at least twenty (20) business days before it implements the revisions:

(1) the revised environmental management plan clearly showing the minor revisions;

(2) an explanation of and justification for the minor revisions; and

(3) an explanation of why the minor revisions will not result in new or increased **adverse impacts** to the environment or result in a risk to the achievement of the limits, **outcomes** or **objectives** which the environmental management plan is required to achieve.

C1-5 The proponent must cease to implement any revisions which the **CEO** notifies the proponent (at any time) in writing may not be implemented.

C1-6 **Confirmed** environmental management plans, and any revised environmental management plans under condition C1-4(1), must be published on the proponent's website and provided to the **CEO** in electronic form suitable for on-

line publication by the Department of Water and Environmental Regulation within twenty (20) business days of being implemented, or being required to be implemented (whichever is earlier).

C2 Conditions Related to Monitoring

C2-1 The proponent must undertake monitoring capable of:

(1) substantiating whether the proposal limitations and extents in Part A are exceeded; and

(2) **detecting** and substantiating whether the environmental **outcomes** identified in Part B are achieved (excluding any environmental **outcomes** in Part B where an environmental management plan is expressly required to monitor achievement of that outcome).

C2-2 The proponent must submit as part of the Compliance Assessment Report required by condition D2-1, a compliance monitoring report that:

(1) outlines the monitoring that was undertaken during the implementation of the proposal;

(2) identifies why the monitoring was capable of substantiating whether the proposal limitation and extents in Part A are exceeded;

(3) for any environmental **outcomes** to which condition C2-1(2) applies, identifies why the monitoring was scientifically robust and capable of **detecting** whether the environmental **outcomes** in Part B are met;

(4) outlines the results of the monitoring;

(5) reports whether the proposal limitations and extents in Part A were exceeded and (for any environmental **outcomes** to which condition C2-1 (2) applies) whether the environmental **outcomes** in Part B were achieved, based on analysis of the results of the monitoring; and

(6) reports any actions taken by the proponent to remediate any potential non-compliance.

PART D – COMPLIANCE, TIME LIMITS, AUDITS AND OTHER CONDITIONS

D1 Non-compliance Reporting

D1-1 If the proponent becomes aware of a potential non-compliance, the proponent must:

(1) report this to the **CEO** within seven (7) days;

(2) implement **contingency measures**;

(3) investigate the cause;

(4) investigate environmental impacts;

(5) advise rectification measures to be implemented;

(6) advise any other measures to be implemented to ensure no further impact;

(7) advise timeframe in which contingency, rectification and other measures have and/or will be implemented; and

(8) provide a report to the **CEO** within twenty-one (21) days of being aware of the potential non-compliance, detailing the measures required in conditions D1-1(1) to D1-1(7) above.

D1-2 Failure to comply with the requirements of a condition, or with the content of an environmental management plan required under a condition, constitutes a non-compliance with these conditions, regardless of whether the **contingency measures**, rectification or other measures in condition D1-1 above have been or are being implemented.

D2 Compliance Reporting

D2-1 The proponent must provide an annual Compliance Assessment Report to the **CEO** for the purpose of determining whether the implementation conditions are being complied with.

D2-2 Unless a different date or frequency is approved by the **CEO**, the first annual Compliance Assessment Report must be submitted within fifteen (15) months of the date of this Statement, and subsequent reports must be submitted annually from that date.

D2-3 Each annual Compliance Assessment Report must be endorsed by the proponent's Chief Executive Officer, or a person approved by proponent's Chief Executive Officer to be delegated to sign on the Chief Executive Officer's behalf.

D2-4 Each annual Compliance Assessment Report must:

(1) state whether each condition of this Statement has been complied with, including:

(a) exceedance of any proposal limits and extents;

(b) achievement of environmental **outcomes**;

(c) achievement of environmental **objectives**;

(d) requirements to implement the content of environmental management plans;

(e) monitoring requirements;

(f) implement **contingency measures**;

(g) requirements to implement adaptive management; and

(h) reporting requirements;

(2) include the results of any monitoring (inclusive of any raw data) that has been required under Part C in order to demonstrate that the limits in Part A, and any **outcomes** or any **objectives** are being met;

(3) provide evidence to substantiate statements of compliance, or details of where there has been a non-compliance;

(4) include the corrective, remedial and preventative actions taken in response to any potential non-compliance;

(5) be provided in a form suitable for publication on the proponent's website and online by the Department of Water and Environmental Regulation; and

(6) be prepared and published consistent with the latest version of the Compliance Assessment Plan required by condition D2-5 which the **CEO** has confirmed by notice in writing satisfies the relevant requirements of Part C and Part D.

D2-5 The proponent must prepare a Compliance Assessment Plan which is submitted to the **CEO** at least six (6) months prior to the first Compliance Assessment Report required by condition D2-2, or prior to implementation of the proposal, whichever is sooner.

D2-6 The Compliance Assessment Plan must include:

(1) what, when and how information will be collected and recorded to assess compliance;

(2) the methods which will be used to assess compliance;

(3) the methods which will be used to validate the adequacy of the compliance assessment to determine whether the implementation conditions are being complied with;

(4) the retention of compliance assessments;

(5) the table of contents of Compliance Assessment Reports, including audit tables; and

(6) how and when Compliance Assessment Reports will be made publicly available, including usually being published on the proponent's website within sixty (60) days of being provided to the **CEO**.

D3 Contact Details

D3-1 The proponent must notify the **CEO** of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

D4 Time Limit for Proposal Implementation

D4-1 The proposal must be **substantially commenced** within five (5) years from the date of this Statement.

D4-2 The proponent must provide to the **CEO** documentary evidence demonstrating that they have complied with condition D4-1 no later than thirty (30) days after **substantial commencement**.

D4-3 If the proposal has not been **substantially commenced** within the period specified in condition D4-1, implementation of the proposal must not be commenced or continued after the expiration of that period.

D5 Public Availability of Data

D5-1 Subject to condition D5-2, within a reasonable time period approved by the **CEO** upon the issue of this Statement and for the remainder of the life of the proposal, the proponent must make publicly available, in a manner approved by the **CEO**, all validated environmental data collected before and after the date of this Statement relevant to the proposal (including sampling design, sampling methodologies, monitoring and other empirical data and derived information products (e.g. maps)), environmental management plans and reports relevant to the assessment of this proposal and implementation of this Statement.

D5-2 If:

(1) any data referred to in condition D5-1 contains trade secrets; or

(2) any data referred to in condition D5-1 contains particulars of confidential information (other than trade secrets) that has commercial value to a person that would be, or could reasonably be expected to be, destroyed or diminished if the confidential information were published,

the proponent may submit a request for approval from the **CEO** to not make this data publicly available and the **CEO** may agree to such a request if the **CEO** is satisfied that the data meets the above criteria.

D5-3 In making such a request the proponent must provide the **CEO** with an explanation and reasons why the data should not be made publicly available.

D6 Independent Audit

D6-1 The proponent must arrange for an independent audit of compliance with the conditions of this statement, including achievement of the environmental **outcomes** and/or the environmental **objectives** and/ or environmental performance with the conditions of this statement, as and when directed by the **CEO**.

D6-2 The independent audit must be carried out by a person with appropriate qualifications who is nominated or approved by the **CEO** to undertake the audit under condition D6-1.

D6-3 The proponent must submit the independent audit report with the Compliance Assessment Report required by condition D2, or at any time as and when directed in writing by the **CEO**. The audit report is to be supported by credible evidence to substantiate its findings.

D6-4 The independent audit report required by condition D6-1 is to be made publicly available in the same timeframe, manner and form as a Compliance Assessment Report, or as otherwise directed by the **CEO**.

Table 1: Abbreviations and definitions

Acronym or abbreviation	Definition or term
Adverse impact / adversely impacted	Negative change that is neither trivial nor negligible that could result in a reduction in health, diversity or abundance of the receptor/s being impacted, or a reduction in environmental value. Adverse impacts can arise from direct or indirect impacts, or other impacts from the proposal.
Authorised offsets	Units representing GHG emissions issued under one of the following schemes and cancelled or retired in accordance with any rules applicable at the relevant time governing the cancellation or retiring of units of that kind: (a) Australian Carbon Credit Units issued under the Carbon Credits (Carbon Farming Initiative) Act 2011 (Cth); (b) Verified Emission Reductions issued under the Gold Standard program; (c) Verified Carbon Units issued under the Verified Carbon Standard program; or (d) other offset units that the Minister has notified the proponent in writing meet integrity principles and are based on clear, enforceable and accountable methods.
CEO	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the *Environmental Protection Act 1986*, or the **CEO's** delegate.
CO_2-e	Carbon dioxide equivalent
Confirmed	In relation to a plan required to be made and submitted to the **CEO**, means, at the relevant time, the plan that the **CEO** confirmed, by notice in writing, meets the requirements of the relevant condition. In relation to a plan required to be implemented without the need to be first submitted to the **CEO**, means that plan until it is revised, and then means, at the relevant time, the plan that the **CEO** confirmed, by notice in writing, meets the requirements of the relevant condition.
Contingency measures	Planned actions for implementation if it is identified that an environmental outcome, environmental objective, threshold criteria, or management target are likely to be, or are being, exceeded. Contingency measures include changes to operations or reductions in disturbance or **adverse impacts** to reduce impacts and must be decisive actions that will quickly bring the impact to below any relevant threshold, management target and to

	ensure that the environmental outcome and/or objective can be met.
Detecting/ Detectable	The smallest statistically discernible effect size that can be achieved with a monitoring strategy designed to achieve a statistical power value of at least 0.8 or an alternative value as determined by the **CEO**.
Emissions intensity	**Proposal GHG emissions** per tonnes per annum of product produced.
GHG emissions	Greenhouse gas emissions expressed in tonnes of carbon dioxide equivalent (**CO_2-e**) as calculated in accordance with the definition of 'carbon dioxide equivalence' in Section 7 of the *National Greenhouse and Energy Reporting Act 2007* (Cth), or, if that definition is amended or repealed, the meaning set out in an Act, regulation or instrument concerning greenhouse gases as specified by the Minister.
Greenhouse Gas Environmental Management Plan	Kwinana Swift Power Station Expansion Project Greenhouse Gas Management Plan (Rev 2, RAM-KSX-EMP-01, 31/07/2025).
Greenhouse gas or GHG	Has the meaning given by Section 7A of the *National Greenhouse and Energy Reporting Act 2007* (Cth) or, if that definition is amended or repealed, the meaning set out in an Act, regulation or instrument concerning greenhouse gases as specified by the Minister.
ha	Hectare(s)
MW	Megawatt(s)
Net GHG emissions	Proposal GHG emissions for a period less any reduction in GHG Emissions represented by the cancellation or retirement of **authorised offsets** which: (a) were cancelled or retired between the first day of the period until 1 March in the year after the period has ended; (b) have been identified in the report for that period as required by condition B1-5(1)(b)(iv); (c) have not been identified as cancelled or retired in the report for that period as required by condition B1-5(1)(b)(iv); (d) have not been used to offset GHG emissions other than proposal GHG emissions; and (e) were not generated by avoiding proposal GHG emissions.
Objective(s)	An **objective** is the proposal-specific desired state for an environmental factor/s to be achieved from the implementation of management actions.
Operations / Commencement of operations	Operation of the plant infrastructure for the proposal and includes pre-commissioning, commissioning, start-up and operation of the plant infrastructure for the proposal.

Outcome(s)	A proposal-specific result to be achieved when implementing the Proposal.
Proposal GHG emissions	**GHG emissions** released to the atmosphere as a direct result of an activity or series of activities that comprise/s or form/s part of the proposal.
Substantially commenced/ Substantial commencement	**Substantial commencement** is more than the preparatory works for a proposal and generally includes ground disturbance activities which are solely attributed to proposal elements described in the proposal content document, and a substantial portion of the total disturbance and infrastructure works physically commenced.

Figures (attached)

Figure 1 Project location (This map is a representation of the co-ordinates referenced in Schedule 1)

Figure 2 Development envelope (This map is a representation of the co-ordinates referenced in Schedule 1)

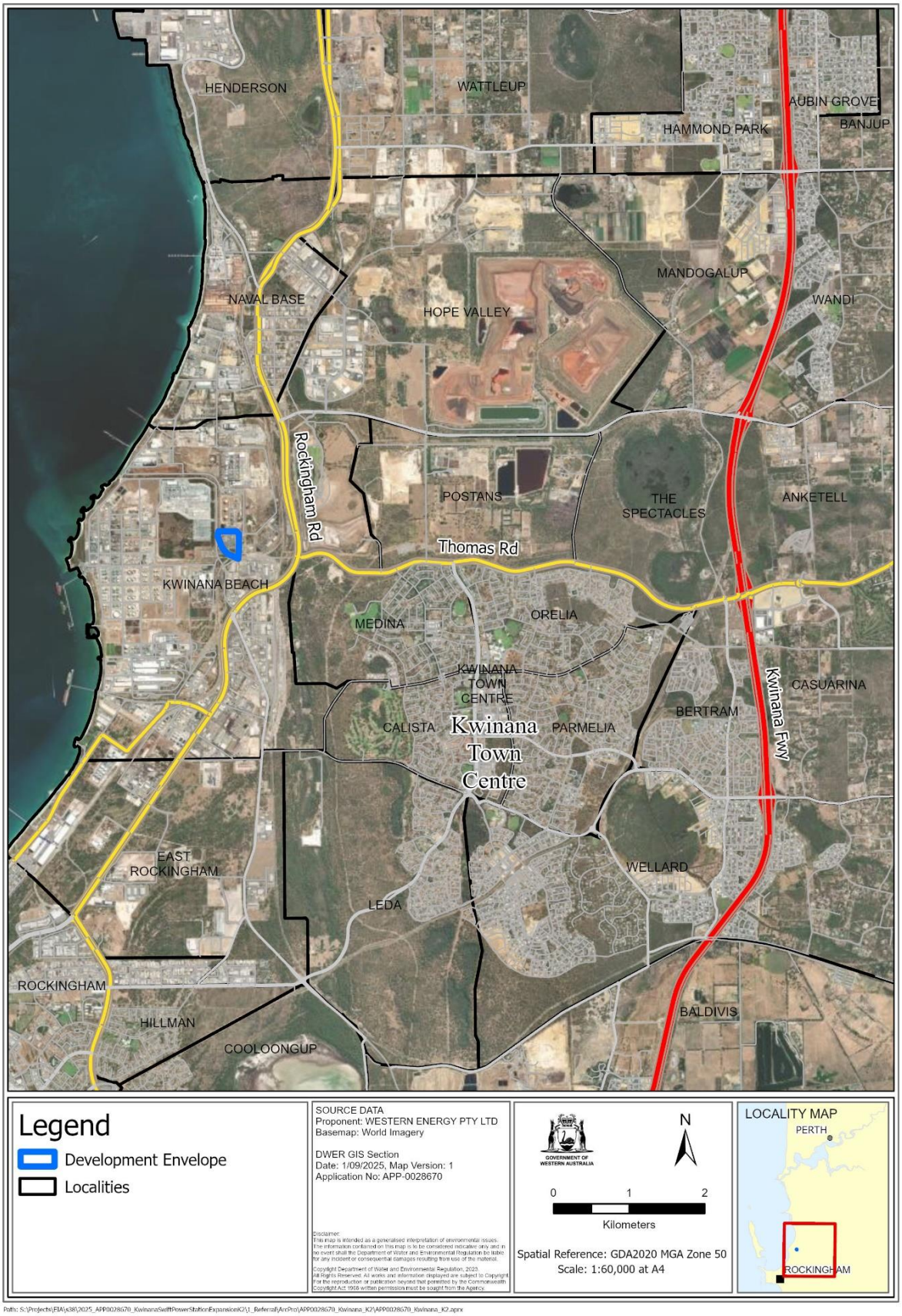

Figure 1 K2 Project - project location

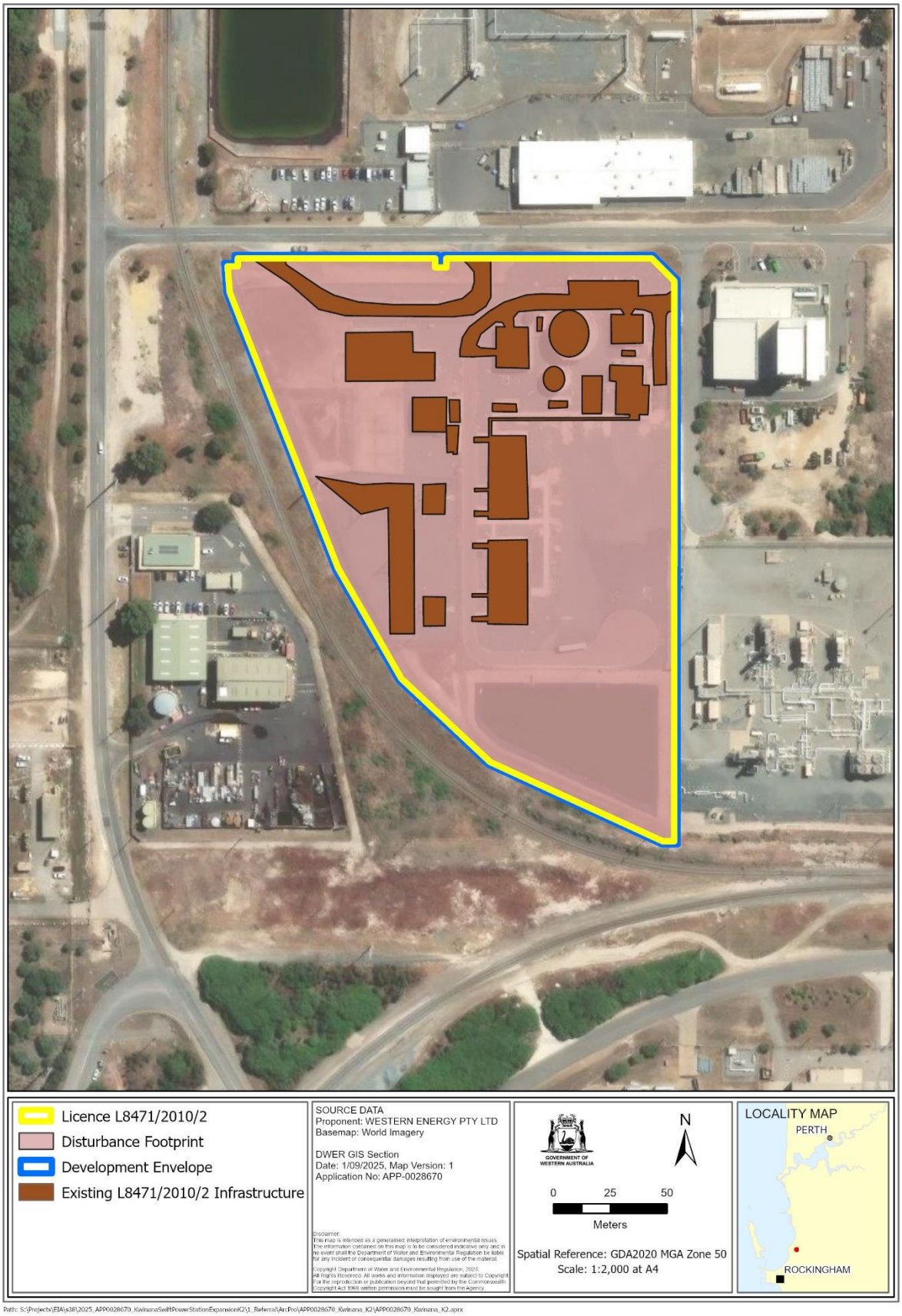

Figure 2 K2 Project - development envelope and disturbance footprint

Schedule 1

All co-ordinates are in metres, listed in Map Grid of Australia Zone 51 (MGA Zone 51), datum of Geocentric Datum of Australia 2020 (GDA 2020).

Spatial data depicting the figures are held by the Department of Water and Environmental regulation. Record no. DWER-801164602-407575, DWER-801164602-441165, and DWER-801164602-441164.

- Figure 1: K2 Project – project location - DWER-801164602-441165.
- Figure 2: K2 Project - development envelope and disturbance footprint - DWER-801164602-441164.

Appendix B: Decision-making authorities

Table B1: Identified relevant decision-making authorities for the proposal

Decision-Making Authority	Legislation (and approval)
1. Chief Dangerous Goods Officer Department of Mines, Industry Regulation and Safety	*Dangerous Goods Safety Act 2004* - storage and handling of dangerous goods
2. Chair, Western Australian Planning Commission	*Planning and Development Act 2005* - s. 135 subdivision or amalgation of land - s. 115 development approval within planning control area - approval for developments in areas reserved under the Metropolitan Region Scheme proponent)
3. Chief Executive Officer, Department of Water and Environmental Regulation	*Environmental Protection Act 1986* - part V works approval and licence
4. Chief Executive Officer, City of Kwinana	*Building Act 2011* - permit for worker accommodation *Planning and Development Act 2005* - planning approval/development approval
5. Chair, Economic Regulation Authority	*Electricity Industry Act 2004* - *Electricity Generation licence*

Appendix C: Regulation under other statutory processes

Table C1: Regulation under other statutory processes

Statutory decision-making process	Environmental outcome
Environmental Protection Act 1986 Part V Division 3 - Part V works approval and licence	The works approval and licence are to regulate emissions and discharges during construction, commissioning and operations to achieve the following outcomes: - minimise and manage noise and dust emissions to protect environmental values and amenity at sensitive receptors - maintain air quality and minimise emissions so that environmental values are protected - no adverse impacts to soil, surface water and groundwater quality.
Electricity Industry Act 2004 *and* *Electricity Industry Amendment (Distributed Energy Resources) Act 2024*	licence issued under section 19 of the Act include provisions requiring the proponent to prepare and implement strategies for managing greenhouse gas emissions.
National Greenhouse and Energy Reporting Act 2007 (Commonwealth)	The reduction of scope 1 GHG emissions to meet Australian emission targets of 43% below 2005 levels by 2030 and net zero by 2050.

Appendix D: Environmental Protection Act principles

Table D1: Consideration of principles of the *Environmental Protection Act 1986*

EP Act principle	Consideration
1. The precautionary principle *Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.* *In application of this precautionary principle, decisions should be guided by –* *(a) careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and* *(b) an assessment of the risk-weighted consequences of various options.*	The EPA has considered the precautionary principle in its assessment and has had particular regard to this principle in its assessment of greenhouse gas (GHG) emissions. The EPA notes that climate change as a result of cumulative GHG emissions has the potential to cause serious damage to WA's environment. The specific impacts of any single proposal's GHG emissions are not able to be known with certainty at this time. However, the EPA has not used this as a reason for postponing assessment of the proposal's contribution to the State's GHG emissions or recommending practicable conditions to reduce emissions in order to minimise the risk of environmental harm associated with climate change. The objective of the GHG MP for the proposal is to avoid, reduce or mitigate 100% of scope 1 GHG emissions from the proposal by 2050, consistent with this, the EPA has recommended conditions to ensure this outcome, the EPA has recommended conditions that require the proponent to implement progressive emissions reduction measures, track performance against interim targets, and demonstrate achievement of net zero emissions over time to ensure the achievement and reporting of net zero GHG emissions limits.
2. The principle of intergenerational equity *The present generation should ensure that the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations.*	The EPA has noted that GHG emissions pose a risk to future generations, however, also notes that the proponent has committed to following a linear trajectory to net zero emissions by 2050 consistent with the Paris Agreement and the Intergovernmental Panel on Climate Change (IPCC)1.5 report, and to use offsets should these targets not be met by continuous improvement. The EPA has recommended conditions to ensure these outcomes will be met. In considering this principle, the EPA has had regard to the principle of intergenerational equity in its assessment of GHG emissions. The EPA considers consistency with this principle could be achieved with the implementation of tis recommended conditions on GHG.

EP Act principle	Consideration
3. The principles of the conservation of biological diversity and ecological integrity *Conservation of biological diversity and ecological integrity should be a fundamental consideration.*	The EPA has had particular regard to the principle of conservation of biological diversity and ecological integrity in its assessment of greenhouse gas (GHG) emissions and other relevant factors. In considering this principle, the EPA considered the potential impacts of the proposal on flora, vegetation, and terrestrial fauna to ensure alignment with the conservation of biological and ecological values. The proponent's selection of an already disturbed site has avoided the need for clearing native vegetation, thereby reducing direct impacts on biodiversity. In addition, the EPA has considered the emission reductions proposed for GHG emissions and how this may impact biodiversity holistically. Based on the available information, the EPA has concluded that the nature and scale of impacts from the proposal are not likely to reduce the extent of any biological or ecological values within the area to a significant degree. Accordingly, the EPA considers the proposal likely to be consistent with its environmental objectives and the principle of conservation of biological diversity and ecological integrity.
4. Principles relating to improved valuation, pricing and incentive mechanisms *(1) Environmental factors should be included in the valuation of assets and services.* *(2) The polluter pays principle — those who generate pollution and waste should bear the cost of containment, avoidance or abatement.* *(3) The users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes.* *(4) Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, which enable those best placed to*	In considering this principle, the EPA notes that the proponent will be responsible for bearing the costs of implementing measures to reduce and offset GHG emissions, including the costs of adopting advances in process management and other measures in the future to further reduce and offset GHG emissions to achieve net zero along a linear trajectory to net zero by 2050.

EP Act principle	Consideration
maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.	
5. The principle of waste minimisation *All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.*	The EPA notes that waste will be minimised through the life of the proposal by adopting the hierarchy of waste controls of avoid, reuse, recycle, recover energy and safe disposal. The proposal is situated within an existing power station and located within an area with sufficient internal and external waste management infrastructure to allow the above waste management hierarchy to be implemented. The proposal incorporates technology and design features to minimise waste generation and discharge to the environment. The use of Open Cycle Gas Turbines (OCGTs) for power generation is expected to result in lower atmospheric emissions compared to coal-fired power generation. Emissions reductions will be achieved through improved operational efficiency and the inclusion of technologies such as wet compression systems and dry low NOx burner systems, which are designed to reduce NOx emissions to the atmosphere. The OCGT units will also incorporate closed-loop cooling systems to minimise wastewater generation, and the facility has been designed to limit the production of hydrocarbons and other atmospheric emissions.

Appendix E: Other environmental factors

Table E1: Evaluation of other environmental factors

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
Land and Water			
Terrestrial environmental quality and Inland waters	Terrestrial environmental quality and Inland waters may be impacted by: • potential chemicals and hydrocarbon spill and leaks	Public comments • No public comments were received relevant to this factor. Agency comments • DWER advised emissions and discharged associated with the proposal activity can be adequately managed and regulated under Part V of the EP Act.	The proposal area is not expected to interact with groundwater sources. There are no natural surface water features within the proposal area.,. The nearest wetland, Long Swamp, is located approximately 3.5 km northeast of the site, and the proposal is not expected to impact this wetland (DEC 2010). The proposal presents a low risk of impacting groundwater quality and marine environment, as there will be no direct discharge from operations into the marine environment and the fuel and chemical storage will be contained within fully bunded and sealed areas designed in accordance with relevant standards. No groundwater abstraction is required for the operation of the facility and the proponent will be supplied with scheme water from Water Corporation at a rate of 100 m^3 per hour, with a maximum of 720 kilolitres per day (kl/day) expected to be discharged during operations at Water Corporation's Kwinana Water Recycling Plant (KWRP). This includes a licensed discharge via the Sepia Depression Ocean Outfall Line (SDOOL). The KSPS plant currently meets Water Corporation's water quality acceptance criteria. There are existing groundwater monitoring bores in place to monitor groundwater quality to ensure groundwater quality is not being impacted by the implementation of the proposal. The proponent has undertaken routine bi-annual groundwater monitoring in accordance with the Part V

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
			licence (issued for KSPS) and reports indicates no significant impacts on groundwater quality and no significant changes from historical levels. Given these controls and management practice, the potential for groundwater contamination and subsequent impact on the marine waters of Cockburn Sound is unlikely. The Department of Water and Environmental Regulation (DWER) advised that emission and discharges associated with the proposal's activities can be adequately managed and regulated through a works approval and future new licence under Part V of the EP Act. The *Environmental Protection (Unauthorised Discharges) Regulations 2004* also apply to the proposal. Licence issued under the *Dangerous Goods Act 2004* would ensure that dangerous goods, in this case diesel, are stored, handled and transported in a manner that reduces the risk of unintentional discharges into the environment. Considering the above, the EPA notes that the potential impacts to terrestrial environmental quality and inland waters can be adequately managed and regulated by other and statutory processes and decision-making authorities in a manner consistent with the EPA objectives for terrestrial environmental quality and inland waters and these factors do not require further assessment under Part IV of the EP Act. Accordingly, the EPA did not consider inland waters and terrestrial environmental quality to be a key environmental factor at the conclusion of its assessment.
Air			

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
Air quality	Air quality may be impacted by: • fugitive emissions from the combustion of fuels for electricity production. • NOx emissions resulting from high-temperature fuel combustion, contributing to ground-level ozone formation and smog. • dust emissions during construction activities	<u>Public comments</u> • No public comments were received relevant to this factor. <u>Agency comments</u> • DWER advised emissions and discharged associated with the proposal activity can be adequately managed and regulated under Part V of the EP Act.	The proposal is located within the KIA, with the nearest sensitive receptor being a recreational oval approximately 1.5 km northeast and the closest residential receptor about 2.3 km southeast of the proposal area. The principal source of pollutant emissions associated with the proposal are from the combustion of fuel and include oxides of Nitrogen (NO_x), carbon monoxide (CO), sulphur dioxide (SO_2) and particulate matter (PM). Air Quality Assessment (AQA) undertaken to assess emissions from the proposal area of the plant at identified sensitive receptors primarily focussed on NOx. Emissions of carbon monoxide and particulate matters were considered insignificant and were not assessed further. Previous air dispersion modelling indicated that oxides of Sulfide (SOx) and particulate matter concentrations were expected to remain below relevant NEPM criteria (RAMBOLL 2025). Dust emissions are not expected to be significant due to the limited nature of construction activities, which are confined to assemblance of infrastructure (turbines and generators) and vehicle movement. The modelling considered five operational scenarios which also included cumulative impacts of NOx emissions comparing predicted NOx concentrations against the standard prescribed by National Environment Protection (Ambient Air Quality) Measure 2021 (NEPM). The modelling predicted that 1-hour average and annual average NOx concentrations, at sensitive receptors are likely to be well below the prescribed limits in the NEPM criteria (151 µg/m³ for 1-hour, 28 µg/m³ annual). However, a single 1-hour average exceedance was

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
			predicted in an industrial zone; 3 km east of the proposal site. The modelling has taken into consideration the worst-case scenario and assumed the facility would operate continuously throughout the year. However, the plant is intended to operate as a peaking power station, supplying electricity to SWIS during periods of peak demand. As a result, the predicted exceedances in air quality standards are based on a conservative estimate that does not reflect the likely operational patterns depending on electricity demand and requirements by AEMO. Given the intermittent nature of the plant's operation, the overall impact on air quality is not likely to be significant during implementation of the proposals combined. DWER advised that emission and discharges with the potential to cause significant impact on air quality associated with the proposal's activities can be adequately managed and regulated through a works approval and a future new licence under Part V of the EP Act. The *Environmental Protection (Unauthorised Discharges) Regulations 2004* also apply to the proposal. It is considered that other decision-making authorities will adequately assess and regulate this proposal under Part V of the EP Act and will mitigate impacts to air quality in a manner that will meet the EPA objective for this factor and that it does not require further assessment under Part IV of the EP Act. Accordingly, the EPA did not consider air quality to be a key environmental factor at the conclusion of its assessment.

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
People			
Social surroundings (Noise)	Potential impacts to social surroundings include: • nuisance to sensitive receptors due to noise and vibration from operation of gas turbines.	Public comments • No public comments were received relevant to this factor. Agency comments • DWER advised emissions and discharged associated with the proposal activity can be adequately managed and regulated under Part V of the EP Act.	*Heritage* There are no world or national heritage properties within or adjacent to the proposal site (Terra Rosa 2024). *Noise* Noise modelling indicates that noise emissions from the proposal operating at full capacity are predicted to comply with the *Environmental Protection (Noise) Regulations 1997* (EPNR) during daytime and evening periods. However, modelling at residential receptor (R3) predicts an exceedance of night-time EPNR criteria by 2 decibels (dB(A)), when the proposal operates at full capacity i.e., 350 MW. The modelling considered the worst-case scenario, including the proposal operating at full capacity. Given that the facility is intended to operate as a peaking power station rather than a continuously running plant, actual night-time operations are likely to be limited and associated noise emissions— during the night-time period would be reduced under normal conditions. DWER advised that emission and discharges associated with the proposal's activities can be adequately managed and regulated through a works approval and future new licence under Part V of the EP Act to meet the EPA's objectives for social surroundings (noise). Considering the above, the EPA notes that the potential impacts to social surroundings (noise) can be adequately assessed, managed, and regulated through other statutory processes and decision-making authorities. As such, the potential impacts to social surroundings (noise) do not require further assessment

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
			under Part IV of the EP Act and are expected to be mitigated in a manner consistent with the EPA's objective for this factor. Accordingly, the EPA did not consider social surroundings to be a key environmental factor at the conclusion of its assessment.

Appendix F: List of submitters

7-day comment on referral

Organisations and public

- 2 public submissions were received from individuals during the 7 – day public comment period

Government agencies

- Department of Water and Environmental Regulation

Appendix G: Assessment timeline

Date	Progress stages	Time (weeks)
15 May 2025	EPA decided to assess – level of assessment set	
23 June 2025	EPA requested additional information	6
4 August 2025	EPA received additional information	6
7 August 2025	EPA accepted additional information	1
21 August 2025	EPA completed its assessment	3
8 September 2025	EPA provided report to the Minister for Environment	3
11 September 2025	EPA report published	3 days
2 October 2025	Appeals period closed	3

Timelines for an assessment may vary according to the complexity of the proposal and are usually agreed with the proponent soon after the EPA decides to assess the proposal and records the level of assessment.

In this case, the EPA met its timeline objective to complete its assessment and provide a report to the Minister.

Appendix H: Relevant policy, guidance, procedures and references

The EPA had particular regard to the policies, guidelines and procedures listed below in the assessment of the proposal.

EPA 2016a, *Environmental factor guideline – Social surroundings*, Environmental Protection Authority, Perth, WA.

EPA 2016b, *Environmental factor guideline – Terrestrial environmental quality*, Environmental Protection Authority, Perth, WA.

EPA 2018, *Environmental factor guideline – Inland waters*, Environmental Protection Authority, Perth, WA.

EPA 2020, *Environmental factor guideline – Air quality*, Environmental Protection Authority, Perth, WA.

EPA 2021a, *Environmental impact assessment (Part IV Divisions 1 and 2) procedures manual*, Environmental Protection Authority, Perth, WA.

EPA 2021b, *Environmental impact assessment (Part IV Divisions 1 and 2) administrative procedures*, Environmental Protection Authority, Perth, WA.

EPA 2021c, *Statement of environmental principles, factors, objectives and aims of EIA*, Environmental Protection Authority, Perth, WA.

EPA 2024, *Environmental factor guideline – Greenhouse gas emissions*, Environmental Protection Authority, Perth, WA.

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Preston Consulting 2025b, *Kwinana Swift Power Station Expansion Project - Greenhouse Gas Management*, Revision 2, Preston Consulting, Prepared for AGL Energy Pty Ltd.

RAMBOLL 2025a, *Response to the EPA's Request for Information – K2 Project*, RAMBOLL, Prepared for Western Energy Pty Ltd.

RAMBOLL 2025b, *Supporting Document to EPA Referral - Kwinana Swift Power Station Expansion – K2 Project*, Revision 4.0, RAMBOLL, Prepared for Western Energy Pty Ltd.

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State of Western Australia 2021, *Western Australia Government Gazette, No. 180*, *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2021,* 22 October 2021.

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