



Environmental  
Protection  
Authority

# Mt Keith Power Station Capacity Expansion Project

TEC Desert Pty Ltd and TEC Desert No.2 Pty Ltd in partnership as  
Southern Cross Energy

Report 1780

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This assessment report has been prepared by the Environmental Protection Authority (EPA) under s. 44 of the *Environmental Protection Act 1986* (Western Australia). It describes the outcomes of the EPA's assessment of the Mt Keith Power Station Capacity Expansion Project proposal by TEC Desert Pty Ltd and TEC Desert No.2 Pty Ltd in partnership as Southern Cross Energy.

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 considers appropriate.



**Darren Walsh**  
Chair  
Environmental Protection Authority

31 March 2025

Assessment No. 2404

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# Summary

## Proposal

The Mt Keith Power Station Capacity Expansion Project is a proposal to construct and operate up to 150 megawatts of new gas reciprocating engines (GREs) and associated infrastructure to supply electricity to the existing off-grid islanded Southern Cross Energy North (SCEN) network. The proposal is located approximately 90 kilometres (km) north of Leinster in the Northern Goldfields region of Western Australia (Figure 1).

The proponent for the proposal is TEC Desert Pty Ltd and TEC Desert No.2 Pty Ltd in partnership as Southern Cross Energy (TransAlta). The SCEN network, owned and operated by TransAlta, currently provides electricity to BHP Nickel West Pty Ltd (BHP Nickel West). The proposal is intended to displace less efficient gas and diesel power generation infrastructure on the SCEN network, be operated in preference to the existing Mt Keith Power Station, and meet current and future increased power demand for BHP Nickel West and other potential third-party operators (Stantec 2025a). The proposal will provide firming generation and support the integration of renewable energy power sources into the SCEN network.

The proposal and associated infrastructure are situated within an existing laydown area at the BHP Nickel West Mount (Mt) Keith mine site operations and does not require the clearing of vegetation (Figure 2).

## Assessment of key environmental factors

Greenhouse gas (GHG) 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
<p>Cumulative GHG emissions contribute to climate change, which impacts on Western Australia’s environment.</p> <p><b>Scope 1:</b> GHG emissions of up to 164,380 tonnes of carbon dioxide equivalent (t CO<sub>2</sub>-e) per annum, up to 3,780,740 t CO<sub>2</sub>-e over life of the proposal.</p> <p>Savings of up to 2,400,334 t CO<sub>2</sub>-e over the life of the proposal with proponent</p>	<p><b>Avoidance and minimisation measures to reduce Scope 1 emissions by 2030:</b> The proponent has adopted avoidance and mitigation measures to reduce GHG emissions at proposal commencement. Benchmarking against other gas-fired power stations indicates emissions intensities are best practice for such facilities.</p> <p><b>Trajectory from 2030 to net zero by 2050:</b> The proponent has proposed a linear trajectory of emissions reductions to net zero to align with the Commonwealth’s Safeguard Mechanism. Proposals regulated under the Safeguard Mechanism are required to take actions to reduce emissions to ensure Australian emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050 are achieved.</p> <p>The EPA considers these emission reductions are reasonably achievable with a combination of new and emerging technology, incorporation of additional renewable energy projects into the SCEN network and offsets. In consideration of this, the EPA is of the view</p>

Environmental factor: Greenhouse gas emissions	
Residual impact on key value	Assessment finding/environmental outcome
<p>commitments to a net zero trajectory by 2050.</p> <p><b>Scope 2:</b> There are no operational scope 2 GHG emissions associated with this proposal.</p> <p><b>Scope 3:</b> GHG emissions of up to 12,441 t CO<sub>2</sub>-e per annum, 286,120 t CO<sub>2</sub>-e over the life of the proposal.</p>	<p>that emissions reductions required under the Safeguard Mechanism represent an as far as practicable reduction of the proposal's scope 1 GHG emissions, and therefore the likely environmental effects of the proposal can be mitigated to achieve consistency with the environmental factor objective for GHG emissions.</p> <p><b>Scope 3 emissions:</b> Scope 3 emissions arise due to the production and distribution of the fuels used for the proposal. The EPA notes that the annual scope 3 emissions of up to 12,441 t CO<sub>2</sub>-e are well below 100,000 t CO<sub>2</sub>-e per annum and therefore has not considered them further.</p> <p><b>Offsets:</b> The proponent has identified, after application of the mitigation hierarchy, that offsets may be used to ensure that net emissions reduce to its trajectory of zero emissions by 2050. Proposed offsets include Australian Carbon Credit Units (ACCU) under the Commonwealth <i>Carbon Credits (Carbon Farming Initiative) Act 2011</i>. The EPA considers that offsets are likely to be reasonably available and any offsets utilised will be required to meet requirements of the Safeguard Mechanism, to ensure the offsets have integrity.</p>

**Units and abbreviations**t CO<sub>2</sub>-e - tonnes of carbon dioxide equivalent

## 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*.

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

# 1 Proposal

The Mt Keith Power Station Capacity Expansion Project is a proposal to construct and operate up to 150 megawatt (MW) of new gas reciprocating engines (GREs) and associated infrastructure to supply electricity to the existing off-grid islanded Southern Cross Energy North (SCEN) network. The proposal is located approximately 90 kilometres (km) north of Leinster in the Northern Goldfields region of Western Australia (WA; Figure 1).

The proponent for the proposal is TEC Desert Pty Ltd and TEC Desert No.2 Pty Ltd in partnership as Southern Cross Energy (TransAlta). The SCEN network, owned and operated by TransAlta, currently provides electricity to third party mining operations operated by BHP Nickel West Pty Ltd (BHP Nickel West). The proposal is intended to displace less efficient gas and diesel power generation infrastructure on the network, be operated in preference to the existing Mt Keith Power Station, and meet current and future increased power demand for BHP Nickel West and other potential third party operators (Stantec 2025a). The proposal will provide reliability and firming generation capacity for renewable power sources that feed into the SCEN until storage technology is feasible and reliable (Stantec 2025a).

The proposal and associated infrastructure are situated at the existing Mount (Mt) Keith nickel mine site operations. The proposal is located within an existing laydown area comprising a development envelope of 4.56 hectares (ha) and does not require the clearing of vegetation (Figure 2). The gas for the proposal will be supplied via the existing Mt Keith lateral pipeline that is owned and operated by APA Group.

The proposal may be constructed in two stages, comprising an initial 100 MW of GREs and associated infrastructure, followed by an additional 50 MW of GREs to meet additional load growth and displace legacy power generation at the existing Mt Keith Power Station (Stantec 2025a).

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

**Table 1: Proposal content document (TransAlta 2025)**

Proposal element	Location	Maximum extent or range
<i>Physical elements</i>		
Overall extent of the proposal	Figure 2	A development envelope of 4.56 ha (Figure 2).
<i>Operational elements</i>		
Gas-fired Power Station	Figure 2	Up to 150 MW of GREs.
<i>Proposal elements with greenhouse gas emissions</i>		
<i>Operational elements</i>		
Mt Keith Power Station Capacity Expansion Project (the proposal)		
Scope 1	N/A	Up to 164,380 t CO <sub>2</sub> -e per annum.
Scope 2		None.
Scope 3		Up to 12,441 t CO <sub>2</sub> -e per annum.
The existing Mt Keith Power Station (not part of the referred proposal)		
Scope 1	N/A	165,136 t CO <sub>2</sub> -e reported in FY 2023 (CER 2024a).
<i>Timing elements</i>		
Proposal timing	Maximum project life	29 years
	Construction phase	2 years
	Operations phase	25 years
	Decommissioning phase	2 years

**Units and abbreviations**

CO<sub>2</sub> – carbon dioxide

FY – financial year

GRE – gas reciprocating engine

MW – megawatts

t CO<sub>2</sub>-e – tonnes of CO<sub>2</sub> equivalent

## Proposal context

The construction and operation of the existing Mt Keith Power Station was approved under Part V of the *Environmental Protection Act 1986* (EP Act), including Licence L8801/2013/1 (gas turbines) and L7348/1999/10 (diesel generators), which allow for a combined operating capacity of up to 114 MW (Stantec 2025a). The existing Mt Keith Power Station is also located within the BHP Nickel West Mt Keith mine site and connected to the SCEN network, but does not form part of the proposal.

The SCEN is an off-grid islanded network that is not connected to the South West Interconnected System (SWIS). The SCEN network currently comprises firm diesel generators and gas turbines to supply electricity to existing BHP Nickel West Mt Keith and Leinster mine site operations in the Northern Goldfields. These operations typically operate 24 hours a day, 7 days a week.

The proposal is intended to assist the proponent to progressively decarbonise the SCEN network over time by allowing the phase out of the legacy power infrastructure and the integration of renewable energy power (Stantec 2025a). The proposal is intended to provide reliability and firming generation capacity for renewable power sources that feed into the SCEN as an off-grid network and until storage technology is feasible and reliable (Stantec 2025a).

The proponent has a partnership and Power Purchase Agreement (PPA) with BHP Nickel West to develop, construct and operate tailored energy infrastructure to support mining operations in the Northern Goldfields (Stantec 2025a). Scope 2 emission reductions are intended to support BHP Nickel West to meet their decarbonisation targets and strategies (Stantec 2025a). The proponent's capacity to add new power generation to the SCEN network is driven by the PPA and investment decisions made by BHP Nickel West with consideration to forecasted growth, load requirements and decarbonisation objectives. BHP Nickel West is planning for future load growth on the SCEN network including for expanded processing capacity, potential electrification of mining fleets and other third-party operators (Stantec 2025a).

The proponent recently constructed a solar farm at the Mt Keith mine site, and a solar farm and battery energy storage system (BESS) at the Leinster mine site. These projects are collectively referred to as the Northern Goldfields Solar Project and connect to the SCEN network (Stantec 2025a), however do not form part of this proposal under assessment by the EPA. The proponent is investigating potential additional renewable energy options across the SCEN network and developing the proposal alongside renewables as part of the proponent's network energy plan (Stantec 2025a, 2025b).

BHP Nickel West operations are temporarily in care and maintenance with this position due for review in 2027 (Stantec 2025a). The proponent considers this proposal critical for the recommencement of BHP Nickel West operations (Stantec 2025a).



## Proposal alternatives

Section 1.4.2 of the proponent's referral supporting information document (Stantec 2025a) and section 3.3 of the proponent's greenhouse gas (GHG) management plan (Stantec 2025b) describes the alternative options, locations and technologies considered for the proposal. The proposal location was selected given it allowed for the reuse of an existing laydown at the Mt Keith mine site, avoided vegetation clearing and provided access to existing infrastructure such as the gas supply pipeline (Stantec 2025a, 2025b).

The proponent considered a 'no development option' to use the existing Mt Keith Power Station. The current plant is considered less efficient and reliable than the proposed GREs and may increase the likelihood of outages, black starts and excess diesel generation (Stantec 2025b). This option also may have higher operating and maintenance costs associated with aging assets and the cost of diesel as a fuel source. In the absence of any new power generation, using the existing power station to meet increased load may increase emissions overall by 29,586 t CO<sub>2</sub>-e per annum in 2028 and 42,414 t CO<sub>2</sub>-e per annum by 2032 (Stantec 2025b).

The use of the older, less reliable and inefficient existing plant to meet new load requirements does not align with TransAlta's decarbonisation goals and would result in increased emissions of GHG and other air pollutants such as oxides of nitrogen and sulfur, carbon monoxide and particulate matter (Stantec 2025b). In comparison to the existing gas turbines and diesel generators, the proposed GREs will have a lower emission intensity, flexibility to deal with load changes from renewables, will not require diesel and allow for the use of hydrogen blend fuels in the future (Stantec 2025a, 2025b).

The proponent also considered alternative gas and diesel technology options (Stantec 2025a, 2025b). GREs were preferred over open cycle and combined cycle aeroderivative gas turbines due to their flexibility, efficiency and contribution to decarbonisation of the SCEN network (Stantec 2025a, 2025b).

The proponent considered an alternative renewable energy facility (wind, solar and BESS). The exclusive use of renewable energy for the proposal is not considered feasible at this stage (Stantec 2025a, 2025b). Renewable energy technology (wind and solar) options currently available are not economically feasible to provide the firming generation required to meet BHP Nickel West's mining operational requirements up to 24 hours a day, 365 days a year.

The proposal meets the proponent's requirements to add new, efficient firm generation and spinning reserve to the SCEN network to ensure sufficient firming generation is available to meet the increased load and maintain system security (Stantec 2025a).

## Consultation

The EPA published the proponent's referral information for the proposal on its website for seven days public comment from 7 February 2024 to 14 February 2024. No comments were received during this public consultation period. On 27 February 2024, the EPA decided to assess the proposal at the level Referral Information.



Figure 1: Proposal location



Figure 2: Development envelope

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## 2 Assessment of key environmental factors

This section details the outcome of 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

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

The EPA recognises that the proponent has prepared its information relating to this factor in accordance with the 2023 version of the Environmental Factor Guideline – Greenhouse Gas Emissions (EFG GHG; EPA 2023). However, the EPA considers it has adequate information to have due regard to its recently updated EPA (2024) EFG GHG in its assessment of the proposal's GHG emissions.

The proponent submitted a GHG Management Plan (GHG MP; Stantec 2023a) with the proposal referral submission which was revised during the assessment (Stantec 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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub>-e; EPA 2024).

In the absence of any emissions reductions, a total of up to 3,780,740 t CO<sub>2</sub>-e scope 1 and up to 286,120 t CO<sub>2</sub> e scope 3 emissions would be expected over the life of the proposal (Stantec 2025b). In comparative terms, WA's yearly scope 1 emissions based on 2022 levels were 82.5 million tonnes (Mt) CO<sub>2</sub>-e (DCCEEW 2024a) and national emissions for 2023 were 432.9 Mt CO<sub>2</sub>-e (DCCEEW 2023). There are no scope 2 emissions for the proposal given all electricity required would be generated by the proposal as an off-grid power generating facility controlled by the proponent and captured in scope 1 emissions (Stantec 2025b).

The scope 3 emissions emitted in WA will also become an increased percentage of the State's scope 1 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
<b>GHG emissions estimates</b>	
<p>The proponent estimated scope 1 GHG emissions from the operation of the proposal (without mitigation) to be up to 164,380 t CO<sub>2</sub>-e per annum or up to 3,780,740 t CO<sub>2</sub>-e over the life of the proposal.</p> <p>The proponent advised there are no scope 2 emissions associated with the proposal, given the proposal is for off-grid power generation controlled by the proponent and emissions for power consumption have been captured under scope 1 emissions.</p> <p>Scope 3 emissions (without mitigation) are estimated to be up to 12,441 t CO<sub>2</sub>-e per annum or up to 286,120 t CO<sub>2</sub>-e over the life of the proposal.</p>	<p>A GHG peer review was completed for the proposal by Preston Consulting (2023) based on the EPA (2023) EFG GHG and involved reviewing whether the proponent’s emissions estimates were reasonably accurate and comprehensive. The review focused on proposal emission sources, source data, verification of calculation methodologies and level of certainty associated with the emission estimates, benchmarking and offsets integrity.</p> <p>The EPA considers the proponent’s GHG emissions estimates are a reliable basis for the assessment.</p>
<b>Baseline emissions avoidance and minimisation, including best practice review and benchmarking</b>	
<p>Mitigation measures to avoid, reduce or offset scope 1 emissions are detailed in section 3.3 of the GHG MP (Stantec 2025b).</p> <p>The proponent’s GHG MP outlines that GHG emission avoidance strategies were applied during the proposal’s planning phase, including consideration of a ‘no development’ scenario, and alternative technologies and locations (refer to section 1). Load forecasting estimates identified that use of the GREs would result in an approximate reduction of 42,414 t CO<sub>2</sub>-e per annum by 2032 when compared to using existing generation infrastructure (Stantec 2025b).</p> <p>The GHG MP considered other potential future mitigation measures, including carbon sequestration and storage, additional BESS to reduce run times and lower GRE loads and the use of hydrogen and hydrogen blend fuel. The feasibility of these options will continue to be re-evaluated by the proponent for future adoption to assist the proponent in meeting net zero targets by 2050 (Stantec 2025b). TransAlta has a goal to achieve net zero emissions globally by</p>	<p>The Preston Consulting (2023) peer review included benchmarking of emission intensities and found the emission intensity of the proposal sits at the lower to midpoint of comparable facilities. Mott MacDonald (2024) completed an independent review of best practice technologies for the proposal that compared primary power generation technologies currently used in WA including GREs, and open and combined cycle gas turbine technologies. The review concluded that the use of GREs for the proposal represent best practice and support the adoption of renewable power generation sources and electrical storage, and reduced emissions when combined with renewable generation and compared with gas turbines.</p> <p>The benchmarking of emissions identified that the proposal has an expected emission intensity of 0.43 t CO<sub>2</sub>-e per megawatt hour of energy (MWh; Stantec 2025a, 2025b). The existing Mt Keith Power Station has an emission intensity of 0.60 t CO<sub>2</sub>-e / MWh (Stantec 2025a) given it uses less efficient gas turbine technology and the default emission intensity value for onsite electricity generation is 0.539 t CO<sub>2</sub>-e / MWh (CER 2023). Benchmarking comparisons</p>

<p>2045, including a 75% reduction from 2015 levels by 2026 (Stantec 2025b).</p> <p>The proponent used data available from the Clean Energy Regulator under the <i>National Greenhouse Gas and Energy Reporting Act 2007</i> (NGER Act) for benchmarking and comparisons of emission intensities.</p>	<p>identified that emissions intensities for gas fired power stations range from 0.39 to 0.89 t CO<sub>2</sub>-e / MWh (Stantec 2025a).</p> <p>The proposal's emission intensity is in the lower to mid-range of intensities for similar gas fired power generation facilities and below the Safeguard Mechanism default emissions intensity value. The EPA recently released its report for the Yarnima Power Station Stage 4 which comprised GREs and included an emissions intensity of 0.46 t CO<sub>2</sub> e / MWh which is comparable to the proposal.</p> <p>The EPA considers the use of renewable sources for electricity generation to be best practice. However, the EPA acknowledges that the GREs are proposed to reduce emissions compared to legacy gas and diesel infrastructure, meet current and future increased power demand from mining operations and third parties, and provide for firming generation capacity and integration of renewable power generation within the context of the islanded off-grid SCEN network.</p> <p>The EPA considers that the estimated baseline emissions provided by the proponent have appropriately considered avoidance and minimisation, through the exploration of alternatives and use of efficient technology compared to industry benchmarks.</p>
<p><b>Emissions trajectory to 2050</b></p>	
<p>The proponent has proposed a linear trajectory of emission reductions to net zero by 2050 for the proposal as shown in Figure 3, which factors in emission reductions to the baseline emissions from when operations are expected to commence in 2028.</p> <p>Separate to this proposal, but part of the proponent's regional decarbonisation strategy for the SCEN network, the proponent has recently developed the Northern Goldfields Solar Project comprising two solar farms and a BESS which connects to the SCEN network. In the medium to long term, the proponent proposes to displace older, less efficient legacy gas and diesel power on the SCEN network with additional renewable energy power sources (wind turbines, future solar and BESS) to support TransAlta's decarbonisation targets and achieve emissions reductions required</p>	<p>The EPA notes the proposed emissions reduction trajectory will mitigate approximately 2,400,334 t CO<sub>2</sub>-e of scope 1 emissions. The EPA considers these reductions are reasonably achievable through the adoption of emerging and new technology and major projects, and the use of offsets at other times.</p> <p>The EPA recognises that the Commonwealth Safeguard Mechanism requires the proponent to take actions to reduce scope 1 GHG emissions through decline rates to achieve net zero emissions by 2050, discussed further below.</p> <p>Overall, with regulation under the Safeguard Mechanism and emissions reductions proposed, the proposal is estimated to emit 1,380,406 t CO<sub>2</sub>-e of scope 1 emissions by 2050.</p>

<p>under the Safeguard Mechanism (Stantec 2025a, 2025b).</p> <p>The proponent expects innovation in new and emerging carbon reduction technologies and the addition of renewable energy into the SCEN network will help achieve the proponent’s emissions reductions (Figure 3; Stantec 2025a, 2025b). The proponent notes that the renewable energy projects in combination with the proposal will significantly decrease scope 1 emissions from the SCEN network despite the increased power requirements at the Mt Keith mine site and this approach will meet the Safeguard Mechanism reduction requirements for the proposal (Stantec 2025b).</p> <p>The EFG GHG (EPA 2024) outlines that scope 2 emissions from a proposal are also the scope 1 emissions from an independent energy proposal. The EPA notes that the proponent owns and has control over proposal scope 2 emissions, which are considered to be scope 1 emissions for the proposal, and therefore the proponent’s proposed decarbonisation strategy mitigates scope 1 emissions for the proposal.</p> <p>The proponent advised that if the proposed renewables projects and emission reduction measures are not adequate to meet the reductions required under the Safeguard Mechanism it will procure and surrender Australian Carbon Credit Units (ACCUs) or other offsets to meet its obligations (Stantec 2025b).</p>	
<p><b>Scope 2 emissions</b></p>	
<p>The proposal will produce its own electricity and therefore there are no scope 2 emissions associated with the proposal (Stantec 2025b).</p>	
<p><b>Scope 3 emissions</b></p>	
<p>The EPA notes that scope 3 emissions are estimated to be up to 12,441 t CO<sub>2</sub>-e per annum or up to 286,120 t CO<sub>2</sub>-e over the life of the proposal (Stantec 2025b). The proponent advised that scope 3 estimates will be refined once supply chains and project design have progressed (Stantec 2025b). The GHG MP outlines that the proponent will explore options for reducing scope 3 emissions where practicable and throughout the life of the proposal through regular reviews (Stantec 2025b).</p> <p>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</p>	



<p>100,000 t CO<sub>2</sub>-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.</p>	
<p><b>Offsets</b></p>	
<p>The proponent advised that if proposal annual emissions exceed the benchmark emissions baseline under the Safeguard Mechanism, the proponent will be required to procure and surrender ACCUs or other offsets to meet its obligations (Stantec 2025b). The proponent’s scope 1 emission reductions are primarily focused on the development and integration of renewable energy power generating projects into the SCEN network. The proponent does not propose to use carbon offsets for more than 30% of the proposal’s expected baseline scope 1 emissions.</p> <p>The proponent has committed to procuring credible offsets that have been validated, verified, registered and likely to be practicable and available at the time of surrender (Stantec 2025b). This includes but is not limited to offset integrity standards set out in the <i>Commonwealth Carbon Credits (Carbon Farming Initiative) Act 2011</i> (Stantec 2025b).</p>	<p>The EPA has not been able to assess the specific amount of or type of offsets at this stage. However, the EPA acknowledges that offsets are not intended to be used to mitigate more than 30% of the proposal’s baseline GHG emissions. The EPA advises that any carbon offsets which may be surrendered should demonstrate they meet offset integrity principles, and be based on clear, enforceable and accountable methods.</p> <p>ACCUs are administered by the Clean Energy Regulator and assured by the Emissions Reduction Assurance Committee, an independent statutory committee which assesses ACCU compliance against the Offsets Integrity Standards set out in section 113 of the <i>Carbon Credits (Carbon Farming Initiative) Act 2011</i>. The EPA considers that given the quantity of offsets likely involved and the regulatory regimes governing offsets, there is likely to be sufficient assurance that ACCUs meet the legislated Offsets Integrity Standards by the time offsets are required to be surrendered.</p>
<p><b>Other decision-making processes, including Commonwealth Safeguard Mechanism</b></p>	
<p><u>Commonwealth Safeguard Mechanism</u></p> <p>The existing Mt Keith Power Station is covered by the Commonwealth Safeguard Mechanism and the Safeguard Mechanism will apply to this proposal. The proponent advised that under the Safeguard Mechanism reforms, the proposal will be an extension of the existing Mt Keith Power Station facility for reporting purposes under the NGER Act and Safeguard Mechanism (Stantec 2025b).</p> <p>The proponent advised that the proposal will be used to meet the required loads in preference to the existing gas and diesel infrastructure, including Mt Keith Power Station, which will remain as a back-up option and considered for retirement in the future (TransAlta 2025a). The proposal is planned to meet the current and future load growth without the need to run the existing power station. Scope 1 emissions reported for the existing Mt Keith Power Station in FY</p>	<p>The Commonwealth Safeguard Mechanism applies to this proposal given the scope 1 emissions are greater than 100,000 t CO<sub>2</sub>-e per annum. The EPA recognises that the significantly strengthened Safeguard Mechanism requires the proponent to take actions to reduce GHG emissions, including imposing annual baseline decline rates to ensure Australian emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050 are achieved.</p> <p>In consideration of this, the EPA is of the view that emission reductions required under the Safeguard Mechanism represent an as far as practicable reduction of the proposal’s scope 1 GHG emissions, and therefore the likely environmental effects of the proposal can be mitigated to achieve consistency with the environmental factor objective for GHG emissions.</p> <p>The EPA has recommended a condition that requires the proponent to notify the State of a</p>

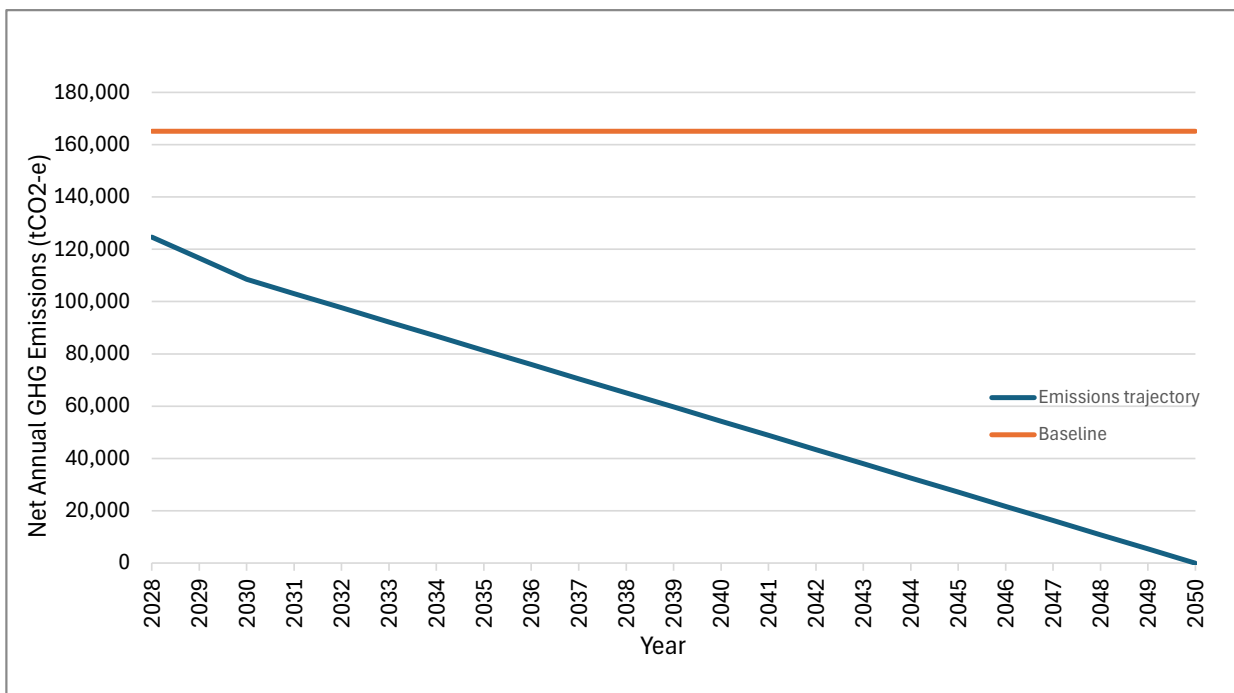
2023 were 165,136 t CO<sub>2</sub>-e at an emission intensity of 0.57 t CO<sub>2</sub>-e/MWh (CER 2024a).

In 2023, the existing Mt Keith Power Station facility transitioned from a calculated baseline to a production-adjusted baseline facility (Stantec 2025b) which considers the Safeguard Mechanism decline rate, emission intensity and actual production. Production adjusted baselines are determined by the Clean Energy Regulator following the reporting of emissions and productions data under the NGER Act and Safeguard Mechanism.

The proponent provided a baseline for the proposal of 165,136 t CO<sub>2</sub>-e and an estimated emissions intensity of 0.43 t CO<sub>2</sub>-e/MWh (Stantec 2025b). A production-adjusted baseline will be determined annually by the Clean Energy Regulator and provide a GHG emissions limit for the respective year (Stantec 2025b).

The proponent advised that the emissions from the proposal will be maintained at or below the baseline as required by the Safeguard Mechanism, and will procure and surrender ACCUs or other suitable offsets to meet its emissions reductions obligations if required (Stantec 2025b).

substantial change to its obligations under the Safeguard Mechanism (recommended condition B1).



**Figure 3: Annual emissions with proposed reduction targets**

In summary, the EPA considers that the emissions avoidance, minimisation and offsets proposed by the proponent 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*.

With scope 1 emission reductions proposed by the proponent to 2050, emission reduction actions regulated through the Safeguard Mechanism will mitigate approximately 2,400,334 t CO<sub>2</sub>-e of scope 1 emissions over the life of the proposal.

The proposal, in isolation from the proponent's decarbonisation of the SCEN network, would require the purchase and use of offsets to align with a trajectory to net zero by 2050, noting that structural abatement measures to reduce emissions of electricity generation from GREs are limited. However, as part of its assessment the EPA has taken into consideration the proponent's commitment to net zero emissions and implementation of renewable power sources across the SCEN network. This includes the proponent's use of GREs to support the integration of current and planned renewable energy sources.

In consideration of this, the EPA is of the view that emissions reductions required under the Safeguard Mechanism represent an as far as practicable reduction of the proposal's scope 1 GHG emissions, and therefore the likely environmental effects of the proposal can be mitigated to achieve consistency with the environmental factor objective for GHG emissions.

### 3 Holistic assessment

While the EPA assessed the impacts of the proposal against the key environmental factor and environmental values individually in the key factor assessment above, and given the link between the key environmental factor and other environmental factors 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 WA's environment and environmental values. GHG emissions have the potential to impact all other environmental factors through the effects of climate change. The EPA considers that the Commonwealth Safeguard Mechanism and the proposed conditions relating to 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 likely to be significantly affected by the proposal
- assessment of key environmental factors, separately and holistically (this has included considering cumulative impacts of the proposal where relevant)
- EPA's confidence in the proponent's proposed mitigation measures
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA's objective for the key environmental factor
- 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

Section 44(2)(b) of the *Environmental Protection Act 1986* specifies that the EPA's report must set out (if it recommends that implementation be allowed) the conditions and procedures, if any, to which implementation should be subject. This appendix contains the EPA's recommended conditions and procedures.

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

#### MT KEITH POWER STATION CAPACITY EXPANSION PROJECT

**Proposal:** The proposal is to construct and operate up to 150 megawatts of gas reciprocating engines and associated infrastructure located approximately 90 kilometres north of Leinster in the Northern Goldfields region of Western Australia.

**Proponent:** TEC Desert Pty Ltd and TEC Desert No.2 Pty Ltd in partnership as Southern Cross Energy  
Australian Business Number 79 271 003 656

**Proponent address:** Level 3, 167 St Georges Terrace  
Perth WA 6000

**Assessment number:** 2404

**Report of the Environmental Protection Authority:** 1780

**Introduction:** Pursuant to section 45 of the *Environmental Protection Act 1986*, it has been agreed that the proposal entitled Mt Keith Power Station Capacity Expansion Project described in the 'Proposal Content Document' (25 March 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: 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		
Overall extent of the Proposal	Within the development envelope shown in Figure 1	Development envelope of <b>4.56 ha</b>
Operational Elements		
Gas-fired Power Station via Gas Reciprocating Engines	Within the development envelope shown in Figure 1	Up to <b>150 MW</b>
Timing elements		
Proposal time	Maximum project life	30 years

## **PART B – ENVIRONMENTAL OUTCOMES, PRESCRIPTIONS AND OBJECTIVES**

### **B1 Greenhouse Gas Emissions**

- B1-1 The proponent must notify the **CEO** in writing within one month of it becoming aware that implementation of the proposal will not be or is not expected to be regulated under the **Safeguard Legislation** as a **designated large facility** (the notifiable event) and such notice must briefly describe the reasons for and expected duration of the notifiable event.
- B1-2 The proponent must, if requested in writing by the **CEO**, provide the **CEO** with a report on the implications for the proposal of any amendment or proposed amendment to the **Safeguard Legislation**, or a decision or proposed decision made under the **Safeguard Legislation** that is specified in the **CEO's** request.
- B1-3 The report required by condition B1-2 must:
- (1) be submitted to the **CEO** within three months of the date of the **CEO's** request or such longer period as the **CEO** agrees to in writing; and
  - (2) explain the implications that the specified amendment or decision has had or is expected to have on:
    - (a) the obligation to reduce net **Scope 1 greenhouse gas** emissions from implementation of the proposal under the **Safeguard Legislation**
    - (b) the quantity of actual and net **Scope 1 greenhouse gas emissions** likely to result from the future implementation of the proposal.

## **PART C – COMPLIANCE, TIME LIMITS, AUDITS AND OTHER CONDITIONS**

### **C1 Contact Details**

- C1-1 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.

### **C2 Time Limit for Proposal Implementation**

- C2-1 The proposal must be **substantially commenced** within five (5) years from the date of this Statement.
- C2-2 The proponent must provide to the **CEO** documentary evidence demonstrating that they have complied with condition C2-1 no later than fourteen (14) days after the expiration of period specified in condition C2-1.



C2-3 If the proposal has not been **substantially commenced** within the period specified in condition C2-1, implementation of the proposal must not be commenced or continued after the expiration of that period.

Table 1: Abbreviations and definitions

Acronym or abbreviation	Definition or term
<b>CEO</b>	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or the <b>CEO's</b> delegate.
<b>Designated large facility</b>	A designated large facility as defined under <b>Safeguard Legislation</b> .
<b>GHG emissions</b>	<b>Greenhouse gas</b> emissions expressed in tonnes of carbon dioxide equivalent (CO <sub>2</sub> -e) as calculated in accordance with the definition of 'carbon dioxide equivalence' in Section 7 of the <i>National Greenhouse and Energy Reporting Act 2007</i> (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.
<b>Greenhouse gas or GHG</b>	Has the meaning given by Section 7A of the <i>National Greenhouse and Energy Reporting Act 2007</i> (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.
<b>ha</b>	Hectare(s)
<b>MW</b>	Megawatts
<b>Operations / Commencement of operations</b>	Operation of the plant infrastructure for the proposal and includes pre-commissioning, commissioning, start-up and operation of the plant infrastructure for the proposal.
<b>Proposal greenhouse gas emissions</b>	<b>Scope 1 GHG Emissions</b> 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, calculated in accordance with: (a) the <i>National Greenhouse and Energy Reporting Act 2007</i> (Cth) and its subsidiary legislation; or (b) if that Act or the relevant subsidiary legislation is amended or repealed such that it does not provide a mechanism for calculating the Proposal Emissions, any other Act, regulation or instrument concerning greenhouse gases as specified by the <b>CEO</b> .
<b>Safeguard Legislation</b>	The Commonwealth <i>National Greenhouse and Energy Reporting Act 2007</i> and associated <i>National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015</i> .
<b>Scope 1</b>	Scope 1 emissions of <b>greenhouse gas</b> , in relation to a facility, means the release of <b>greenhouse gas</b> into the atmosphere as a direct result of one or more activities, which are part of the proposal, that generate <b>greenhouse gas</b> emissions.
<b>Substantially commenced</b>	Physical construction activities for, and progress of an important or essential element or elements of the Proposal scope.

**Figures (attached)**

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



**Figure 1** Development envelope for the proposal.

## Schedule 1

All co-ordinates are in metres, listed in Map Grid of Australia Zone 50 (MGA Zone 50), datum of Geocentric Datum of Australia 2020 (GDA 2020).

Spatial data depicting the figures are held by the Department of Water and Environmental Regulation (DWER) Environment Online.

## Appendix B: Decision-making authorities

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

Decision-making authority	Legislation (and approval)
1. Executive Director, Resource and Environmental Compliance Division, Department of Energy, Mines, Industry Regulation and Safety	<i>Mining Act 1978</i> - Mining proposal and mine closure plan
2. Chief Executive Officer, Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i> - Part V works approval and licence - Part IV compliance (Ministerial Statements)
3. Chair, Economic Regulation Authority	<i>Electricity Industry Act 2004</i> - Electricity generator licence amendment

## Appendix C: Regulation under other statutory processes

**Table C1: Regulation under other statutory processes**

Statutory decision-making process	Environmental outcome
<p><i>Environmental Protection Act 1986</i> Part V Division 3</p> <ul style="list-style-type: none"> <li>- Part V works approval and licence.</li> </ul>	<p>The works approval and licence are to regulate emissions and discharges during construction, commissioning and operations to achieve the following outcomes:</p> <ul style="list-style-type: none"> <li>• minimise and manage noise and dust emissions to protect environmental values and amenity at sensitive receptors</li> <li>• maintain air quality and minimise emissions so that environmental values are protected</li> <li>• no adverse impacts to soil, surface water and groundwater quality.</li> </ul>
<p><i>Mining Act 1978</i></p> <ul style="list-style-type: none"> <li>- Mining proposal and mine closure plan</li> </ul>	<p>The mining proposal and mine closure plan will regulate the construction, operation, decommissioning and rehabilitation of the proposal to be consistent with the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) environmental factor objectives for water resources, land and soils and rehabilitation and mine closure to:</p> <ul style="list-style-type: none"> <li>• maintain the hydrological regimes, quality and quantity of groundwater and surface water to the extent that existing and potential uses, including ecosystem maintenance, are protected.</li> <li>• maintain the quality of land and soils so that environmental values are protected.</li> <li>• ensure mining activities are rehabilitated and closed in a manner to make them physically safe to humans and animals, geo-technically stable, geo-chemically non-polluting/non-contaminating, and capable of sustaining an agreed post-mining land use, and without unacceptable liability to the State.</li> </ul> <p>The DEMIRS objectives are consistent with the EPA objectives for inland waters and terrestrial environmental quality.</p>
<p><i>National Greenhouse and Energy Reporting Act 2007</i> (Commonwealth)</p>	<p>The reduction of scope 1 GHG emissions to meet Australian emission targets of 43% below 2005 levels by 2030 and net zero by 2050.</p> <p>The potential environmental effects of the proposal associated with the emissions of scope 1 GHG emissions are likely to be mitigated to achieve consistency with the environmental factor objective for GHG emissions through the obligations required under the <i>National Greenhouse and Energy Reporting Act 2007</i> and the Commonwealth Safeguard Mechanism.</p>

## Appendix D: Environmental Protection Act principles

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

EP Act principle	Consideration
<p><b>1. The precautionary principle</b></p> <p><i>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.</i></p> <p><i>In application of this precautionary principle, decisions should be guided by –</i></p> <p>(a) <i>careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and</i></p> <p>(b) <i>an assessment of the risk-weighted consequences of various options.</i></p>	<p>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 damage to Western Australia'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 to minimise the risk of environmental harm associated with climate change.</p> <p>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 requirements under the Commonwealth's Safeguard Mechanism. The proponent has committed to progressive environmental targets to support the long-term objectives. The EPA considers the Commonwealth's Safeguard Mechanism represents an as far as practicable reduction of the proposal's GHG emissions. The EPA recommends a condition that requires the proponent to notify the State of a substantial change to its obligations under the Safeguard Mechanism (recommended condition B1).</p>
<p><b>2. The principle of intergenerational equity</b></p> <p><i>The present generation should ensure that the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations.</i></p>	<p>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 Intergovernmental Panel on Climate Change (IPCC) 1.5 report, and to use offsets should these targets not be met by continuous improvement.</p> <p>In considering this principle, the EPA has had particular regard to the principle of intergenerational equity in its assessment of GHG emissions. The EPA considers consistency with this principle should be achieved with the implementation of the proponent's obligation under the Safeguard Mechanism and recommended condition B1.</p>



EP Act principle	Consideration
<p><b>3. The principle of the conservation of biological diversity and ecological integrity</b></p> <p><i>Conservation of biological diversity and ecological integrity should be a fundamental consideration.</i></p>	<p>The EPA has had particular regard to the principle of conservation of biological diversity and ecological integrity in its assessment of GHG emissions and other factors. The EPA has considered the extent of potential impacts from the proposal to flora and vegetation and terrestrial fauna to ensure consistency with the principle of conservation of biological diversity and ecological integrity.</p> <p>The proponent has selected an existing disturbed site for the proposal to avoid clearing of any native vegetation. In addition, the EPA has considered the emission reductions proposed for GHG emissions and how this may impact biodiversity holistically.</p> <p>The EPA has concluded that given the nature of the impacts, the proposal is not likely to reduce the extent of any biological or ecological values within the area to a significant degree. The EPA is satisfied the proposal is likely to be consistent with EPA objectives and the principles of the conservation of biological diversity and ecological integrity.</p>
<p><b>4. Principles relating to improved valuation, pricing and incentive mechanisms</b></p> <p><i>(1) Environmental factors should be included in the valuation of assets and services.</i></p> <p><i>(2) The polluter pays principle — those who generate pollution and waste should bear the cost of containment, avoidance or abatement.</i></p> <p><i>(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.</i></p> <p><i>(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 maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.</i></p>	<p>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 by 2050.</p>

EP Act principle	Consideration
<p><b>5. The principle of waste minimisation</b></p> <p><i>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</i></p>	<p>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 use of GREs for power generation will reduce the extent of atmospheric emissions compared to the use of diesel through both improved efficiency and by integration of renewable energy in the SCEN network.</p> <p>The proposed GREs comprise closed cooling systems to minimise the production of wastewater and are designed to ensure minimal production generation of waste hydrocarbon (Stantec 2025a). The proposal is located in an area with sufficient internal and external waste management infrastructure to allow the above waste management hierarchy to be implemented.</p>

## 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
<b>Land and Water</b>			
<p>Terrestrial environmental quality and inland waters</p>	<p>Discharges that may result in contamination of stormwater, groundwater and land and interference with natural drainage.</p>	<p><u>Public comments</u></p> <ul style="list-style-type: none"> <li>No public comments were received.</li> </ul> <p><u>Agency comments</u></p> <ul style="list-style-type: none"> <li>No agency comments were received.</li> </ul>	<p>The proposal is located within a possible contaminated site, however it is unlikely to result in the significant spread of existing contamination at the site. Hydrocarbon and chemical spills that may cause further contamination of soil and inland waters are likely to be localised, not affect any significant environmental values and can be managed through the proponent's safety and environmental management system (Stantec 2025a).</p> <p>Operational water use of up to 7,000 litres per week will be supplied from the existing BHP Nickel West mine. Processing water allocation and stormwater drainage will be managed via existing contours and engineered diversion channels for the existing Mt Keith nickel mine and around the site (Stantec 2025a). Groundwater abstraction is not required for the implementation of the proposal.</p> <p>The Department of Water and Environmental Regulation (DWER) advised that the proposal's activities can be adequately managed and regulated through a works approval and a future new or amended licence under Part V of the EP Act. Discharges from the proposal that may result in contaminated soils, land or water can be regulated under Part V of the EP Act and the <i>Contaminated Sites Act 2003</i>. The <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> also apply to the proposal. The <i>Mining Act 1978</i> will mitigate impacts at closure and decommissioning of the site to ensure it is safe, stable and non-polluting.</p> <p>It is considered that other decision-making authorities and statutory processes will adequately regulate this proposal in a manner that will meet 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 terrestrial environmental quality and inland waters to be key environmental factors at the conclusion of its assessment.</p>

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
<b>Air</b>			
Air quality	The proposal will produce air emissions from the combustion of natural gas. The nearest sensitive receptor is the Mt Keith worker village located approximately 7 kilometres (km) south.	<p><u>Public comments</u></p> <ul style="list-style-type: none"> <li>No public comments were received.</li> </ul> <p><u>Agency comments</u></p> <ul style="list-style-type: none"> <li>No agency comments were received.</li> </ul>	<p>The separation distance between the proposal and sensitive receptors aligns with the Separation Distances between Industrial and Sensitive Land Uses (EPA 2005) which stipulates a 3 to 5 km generic distance for power generation of 20 megawatts (MW) or more using natural gas. The principal source of pollutant emissions associated with the proposal are from the combustion of fuel and include nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulphur dioxide (SO<sub>2</sub>) and particulate matter (PM).</p> <p>Air quality modelling completed for the proposal comprised individual and cumulative scenarios with the existing nickel mine (Environmental Technologies &amp; Analytics 2023). The modelling predicted that concentrations of NO<sub>x</sub>, SO<sub>2</sub> and CO at sensitive receptors are likely to be well below the assessment criteria specified in the <i>National Environment Protection (Ambient Air Quality) Measure</i> (NEPM; NEPC 2021) and <i>DWER Air Emissions</i> guideline (DWER 2019) for all modelled scenarios (at maximum 13% of the assessment criteria). PM<sub>2.5</sub> concentrations were well below the assessment criteria for proposal scenarios. Where cumulative worst case scenario predictions exceeded PM<sub>2.5</sub> criteria (by up to 11%) at the nearest sensitive receptor location (Mt Keith worker village approximately 7 km south of the proposal), emissions were associated with the existing nickel mining operations, with the proposal contributing less than 1% of the criteria value. It is noted that the nickel mining operations are located relatively close to the worker village at approximately 3 km. DWER advised that the proposal's emissions can be adequately managed and regulated through a works approval and a future new or amended licence under Part V of the EP Act to meet the EPA's environmental factor objective for air quality. The <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> also apply to the proposal.</p> <p>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.</p> <p>Accordingly, the EPA did not consider air quality to be a key environmental factor at the conclusion of its assessment.</p>

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
<b>People</b>			
Social surroundings	The proposal has the potential to impact social surroundings via emissions of noise and dust. The nearest sensitive noise and dust receptors is approximately 7 km away. The nearest registered Aboriginal heritage site is approximately 4 km from the proposal.	<p><u>Public comments</u></p> <ul style="list-style-type: none"> <li>No public comments were received.</li> </ul> <p><u>Agency comments</u></p> <ul style="list-style-type: none"> <li>No agency comments were received.</li> </ul>	<p>Dust mitigation measures, such as the use of water for dust suppression during construction, will be used to minimise dust emissions at the closest sensitive receptor (Stantec 2025a). Due to the distance of the proposal to the closest sensitive receptor and use of dust mitigation measures, dust emissions are considered unlikely to significantly impact amenity.</p> <p>Noise modelling measured individual and cumulative impacts for the proposal and found that predicted noise levels are at least 7 decibels (dB) below assigned noise criteria at the nearest sensitive receptor at any time of day, based on the <i>Western Australian Environmental Protection (Noise) Regulation 1997</i> (Stantec 2023b). DWER advised that the proposal's activities can be adequately managed and regulated through a works approval and a future new or amended licence under Part V of the EP Act to meet the EPA's objectives for social surroundings (noise). It is considered that other decision-making authorities and statutory processes will adequately assess and regulate this proposal under Part V of the EP Act and will mitigate impacts to social surroundings (air quality and noise) in a manner that will meet the EPA objective for social surroundings and that the factor does not require further assessment under Part IV of the EP Act.</p> <p>Accordingly, the EPA did not consider social surroundings to be a key environmental factor at the conclusion of its assessment.</p>

## Appendix F: List of submitters

### 7-day comment on referral

#### Organisations and public

- No submissions were received from the public during the 7-day public comment period.

#### Government agencies

- Department of Water and Environmental Regulation
- Department of Energy, Mines, Industry Regulation and Safety

## Appendix G: Assessment timeline

Date	Progress stages	Time (weeks)
27 February 2024	EPA decided to assess – level of assessment set	
26 March 2024	EPA receives additional information requested prior to level of assessment.	4
20 May 2024	EPA requested additional information	8
7 February 2025	EPA received final information for assessment	38
20 February 2025	EPA completed its assessment	2
1 April 2025	EPA provided report to the Minister for Environment	6
3 April 2025	EPA report published	3 days
24 April 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 2005, *Guidance for the Assessment of Environmental Factors (in accordance with the Environmental Protection Act 1986) Environmental Protection Authority No. 3 June 2005 Separation Distances between Industrial and Sensitive Land Uses*. June 2005. Western Australia.
- EPA 2016a, *Environmental factor guideline – Flora and vegetation*, Environmental Protection Authority, Perth, WA.
- EPA 2016b, *Environmental factor guideline – Terrestrial Fauna*, Environmental Protection Authority, Perth, WA.
- EPA 2016c, *Environmental factor guideline – Social surroundings*, Environmental Protection Authority, Perth, WA.
- EPA 2016d, *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, *Statement of environmental principles, factors, objectives and aims of EIA*, Environmental Protection Authority, Perth, WA.
- EPA 2023, *Environmental factor guideline – Greenhouse gas emissions*, Environmental Protection Authority, Perth, WA.
- EPA 2024, *Environmental factor guideline – Greenhouse gas emissions*, Environmental Protection Authority, Perth, WA.

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Department of Water and Environmental Regulation (DWER) 2019. *Guideline. Air Emissions. Activities regulated under the: Environmental Protection Act 1968. Environmental Protection Regulations 1987. October 2019. Draft for external consultation*.

Environmental Technologies & Analytics Pty Ltd (Environmental Technologies & Analytics) 2023, *Mount Keith Power Generation Expansion (150 MW) Air Quality Assessment*, Report Version 02. Prepared for TransAlta. April 2023. Project Number: 1343.

Intergovernmental Panel on Climate Change (IPCC) 2023. *Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001.

Mott MacDonald Australia Pty Limited (Mott MacDonald) 2024, *Mt Keith Power Station Capacity Expansion Project - Independent Technology Review Revision B*. September 2024.

National Environment Protection Council (NEPC) 2021, *National Environment Protection (Ambient Air Quality) Measure (NEPM)*, as amended 15 April 2021.

Preston Consulting Pty Ltd (Preston Consulting) 2023, *Greenhouse Gas Management Plan Peer Review Report Mount Keith Power Station Capacity Expansion Project*. Doc ID: TRA-MKE-RPT-01, Revision Number 0, prepared for TransAlta Energy Pty Ltd by Preston Consulting Pty Ltd. 4 August 2023.

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.

Stantec Australia Pty Ltd (Stantec) 2023a, *Mount Keith Power Station Capacity Expansion Project - Greenhouse Gas Management Plan*. Stantec Australia Pty Ltd. August 2023.

Stantec 2023b, *Mt Keith Power Station Capacity Expansion Project Acoustics Report Revision 003*, Stantec Australia Pty Ltd. Prepared for TransAlta Corporation. 8 February 2023. Ref: 300003488.

Stantec 2023c, *Mount Keith Power Station Capacity Expansion Project. Referral of a Proposal under Section 38 of the Environmental Protection Act 1986. Referral Supporting Information Document.* August 2023

Stantec 2025a, *Mt Keith Power Station Capacity Expansion Project Supporting Document Referral under Section 38 Environmental Protection Act 1986. Version 2f* Stantec Australia Pty Ltd, Prepared for TransAlta, March 2025.

Stantec 2025b, *Mount Keith Power Station Capacity Expansion Project - Greenhouse Gas Management Plan. Version 2e.* Stantec Australia Pty Ltd. Prepared for TransAlta, March 2025.

TEC Desert Pty Ltd & TEC Desert No.2 Pty Ltd in partnership as Southern Cross Energy (TransAlta) 2024, *Mt Keith Power Station Capacity Expansion Project response to Notice Requiring Information for Assessment.*

TransAlta 2025, *Mount Keith Power Station Capacity Expansion Project Proposal Content Document, Version 4, March 2025.*