



EP Amendment Act 2018 and draft regulations

**PAL BUS 4.01 - EP amendment act 2018 - Jan2020
- Public**

Regulatory proposal 2021–2026

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1 Overview

Business	EP Amendment Act 2018 and draft regulations
Title	Environment Protection Amendment Act 2018 and draft regulations
Project ID	PAL BUS 4.01 - EP amendment act 2018 - Jan2020 - Public
Category	Operating and capital (replacement) expenditure
Identified need	<p>To deliver environmental outcomes deemed necessary by the Environment Protection Authority of Victoria (EPAV) and the Victorian Government, we must comply with:</p> <ul style="list-style-type: none"> the set of amendments to the Environment Protection Act 2017 (Vic) (EP Amendment Act 2018) which will replace and repeal the Environment Protection Act 1970 (Vic) (EP Act 1970) from 1 July 2020 draft regulations supporting EP Amendment Act 2018
Recommended options	Option 2—ensure compliance with EP Amendment Act 2018 and draft regulations
Proposed start date	2021/22
Supporting documents	<ol style="list-style-type: none"> PAL ATT010 - Deloitte - Environment regulations RIS - Aug2019 - Public PAL ATT036 - Order in council - Environment reference standard - 2017 - Public PAL ATT037 - Environment protection transitional regulations - Public PAL MOD 4.08 - Environmental risk - Jan2020 - Public PAL MOD 9.01 - Step changes - Jan2020 - Public PAL ATT038 - GHD - Acoustic treatments substation sites - Dec2019 - Public

We operate a Health, Safety and Environment (**HSE**) management system that sets out a structural framework and practices to comply with all HSE legislation and regulatory obligations, including environmental obligations. The current legislation and regulations relevant to our environmental obligations (specific to this business case) are:

- the Environment Protection (**EP**) Act 1970 (**EP Act 1970**)
- existing regulations under the EP Act 1970
- state environment protection policies (**SEPP**) and waste management policies (**WMP**).

These are administered and managed by the Environment Protection Authority of Victoria (**EPAV**).

The Environment Protection Amendment Act 2018 (**EP Amendment Act 2018**) will repeal the EP Act 1970 from 1 July 2020 to establish a *proactive* regulatory approach of preventing waste and pollution impacts rather than managing the impacts after they occur. In August 2019, the Victorian Government published the draft

Environment Protection Regulations (**draft regulations**), along with the Regulatory Impact Statement (**RIS**), with the final regulations expected in March 2020.

The overall intent and objective of EP Amendment Act 2018 and the draft regulations is to modernise the EPAV, giving it more legislative powers and shifting the regulatory framework from reactive to proactive—preventing harm from pollution and waste rather than managing the impacts once they have occurred. The EP Amendment Act 2018 and the draft regulations (the preferred options defined in the RIS) introduce a need for a shift in our operations to a more proactive and preventive approach to managing environmental risks.

More specifically, there are new obligations on us in three areas of the EP Amendment Act 2018 and the draft regulations:

- imposition of the general environmental duty (**GED**)
- imposition of duties to manage contaminated land and to notify the EPAV of contaminated sites
- codification and augmentation of the existing noise framework, including imposition of a night noise limit, and giving force of law to the existing non-binding guideline in regional Victoria.

To comply with the new obligations we will incur material operating and capital expenditure during 2021–2026, related to:

- identifying, assessing and testing potential environmental risks of our operations
- remediation of identified contamination or pollution, mainly with regard to land contamination and noise
- implementing prevention mechanisms to reduce environmental risks so far as reasonably practicable.

Table 1 summarises the estimated expenditure necessary to comply with EP Amendment Act 2018 and draft regulations, including incremental operating expenditure not captured in the 2019 base year, bunding capital expenditure and noise mitigation capital expenditure.

The estimated costs are based on the preferred option for the draft regulations in the RIS and are subject to change when the final regulations are published. The estimated costs are high-level only, as the timing of the draft regulations did not allow for a more detailed costs assessment. We expect to review the implications of the final regulations on our operations and update the options and the costings with a more detailed assessment for the Revised Regulatory Proposal.

Table 1 Expenditure forecasts for preferred option (\$ million, 2019)

Expenditure forecast	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Incremental on-going operating expenditure	3.06	3.13	2.87	0.01	0.07	9.15
Capital (replacement) expenditure	10.05	12.20	8.81	8.98	5.51	45.55

Source: Powercor

2 Background

2.1 Current environmental regulatory framework

The following are the current legislation and regulations relevant to our environmental obligations that are the subject of this business case:¹

- the EP Act 1970
- existing regulations under the EP Act 1970
- SEPPs and WMPs
- informal instruments such as guidance documents and other educational material.

These are administered and managed by the EPAV.

The current EP Act has been in place for 50 years. It establishes the EPAV and sets out its powers, duties and functions. The main matters covered by the EP Act 1970 are:

- pollution of air, land and water
- waste
- litter
- noise
- motor vehicles.

SEPPs and WMPs are legislative instruments made under the provisions of the EP Act 1970 to provide more detailed requirements and guidance regarding the application of the EP Act 1970 and form the basis against which EPAV issues notices, works approvals and licences:

- SEPPs define the uses and environmental values to be protected in Victoria
- WMPs set state-wide objectives and directions for waste management.

2.2 Our HSE management system

We operate an HSE management system that sets out a program of works and practices to comply with all HSE legislation and regulatory obligations, including those listed above.

The following are the key areas of environmental risks that form part of our HSE management system (among others):

- land contamination—the construction, operation, maintenance and decommissioning of electricity distribution networks often involves land disturbance. In addition, the use and storage of substances such as oil and other chemicals may cause land and water contamination. Consequently, some of the existing land may have been contaminated by activities from previous land use while some land may continue to be contaminated through operations
- asbestos, lead paint and polychlorinated biphenyls (PCBs)—hazardous substances such as asbestos, PCBs and lead paint are likely to have been used in our assets in the past and if disturbed may cause harm to our

¹ PAL ATT010, Deloitte, Regulatory Impact Statement: Proposed Environment Protection Regulations, DELWP and EPA, August 2019

staff and the general public. Asbestos and lead paint are found in and on buildings while PCBs are found in plant and equipment

- noise pollution—electricity networks can create noise pollution through the operation of network equipment for switching, transforming and delivering electricity. Whilst most forms of noise pollution are transient in nature (for example the operation of a circuit breaker for a few seconds), of particular concern to nearby members of the public is any constant loud hum generated by power transformers.

2.3 Changes to the environmental regulatory framework

The Victorian Government is implementing legislative and regulatory framework changes to the EPAV, through two packages:

- the EP Act 2017, which updates EPAV's corporate governance and its objective to protect human health and the environment by reducing pollution and waste
- the EP Amendment Act 2018, which repeals the EP Act 1970 and amends the EP Act 2017 to establish a *proactive* regulatory approach of preventing waste and pollution impacts rather than managing the impacts after they have occurred.

The EP Act 2017 has already been enacted and the EP Amendment Act 2018 is intended to take effect on 1 July 2020.

With the repeal of the EP Act 1970, most SEPPs and WMPs will cease. The new EP legislation introduces a new legislative instrument called an Environment Reference Standard (**ERS**).² The ERS sets environmental values for the community and effectively replaces SEPPs and WMPs.

In September 2019, the Department of Environment, Land, Water and Planning and the EPAV published, among other documents:

- the draft regulations and an associated RIS, that assess the preferred options for the regulatory framework
- the draft Environment Protection Transitional Regulations (**draft transitional regulations**) to save certain Water SEPPs and waste classifications³
- the draft Noise Limit and Assessment Protocol (**noise protocol**) that sets the draft noise emissions limits⁴
- the draft ERS that sets out the draft environmental standards framework seeks to achieve or maintain.

The final regulations, noise protocol and ERS are expected in March 2020.

2.3.1 Intent and key features of EP Amendment Act 2018 and draft regulations

The overall intent and objective of EP Amendment Act 2018 and the draft regulations is to modernise the EPAV, give it more legislative powers and shift the regulatory framework from 'reactive' to 'proactive'—preventing harm from pollution and waste rather than managing the impacts once they have occurred.

The key feature of the new legislative framework is the establishment of the GED. The GED requires anyone conducting an activity that poses risks to human health and the environment to understand and minimise risks

² PAL ATT036, EP Act 2017, Environment reference standard, Order in council,

³ PAL ATT037 Draft transitional regulations, Environment Protection Transitional Regulations, Exposure Draft

⁴ PAL ATT036 ERS Order in Council

from pollution and waste so far as reasonably practicable. This is a similar model of protection established in Victoria's occupational health and safety laws.

Other key features of the new legislative framework are:⁵

- introduction of a duty to notify EPAV of pollution incidents
- a new duty to manage contaminated sites, and, in instances of contamination that may pose a significant risk to human health or the environment, to notify EPAV
- the introduction of industrial waste duties and complementary offences, which require that businesses must demonstrate that reasonable steps were taken to ensure industrial waste is taken to a place with lawful authority
- a new penalty system incorporating custodial sentences in the most serious of waste offences
- introduction of a new tailored and proportionate framework of controls for dealing with hazardous or mismanaged wastes and wastes with materials recovery potential
- introduction of a three-tiered permissions framework consisting of registrations, permits and licences
- greater capacity for councils and police to respond to unreasonable and aggravated noise
- additional legal powers for EPAV to work with site operators to plan for site closure and to require management of post-closure risks over extended periods of time.

We discuss the impacts of the new regulations on our operations in the following section.

⁵ PAL ATT010 Deloitte, Regulatory Impact Statement: Proposed Environment Protection Regulations, DELWP and EPA, August 2019

3 Identified need

The EP Amendment Act 2018 and the draft regulations (the preferred options defined in the RIS) introduce a need for a shift in our operations to a more proactive and preventive approach to managing environmental risks. Shifting the regulatory framework to a more proactive approach introduces new obligations on us to:

- understand and know all risks associated with our operations, including those never identified previously
- prevent any risks from occurring so far as reasonably practicable, lowering the level of risk of environmental harm compared to today
- increased remediation activity, particularly with regards to land contamination.

More specifically, there are new obligations on us in three areas of the EP Amendment Act 2018 and draft regulations:

- imposition of the GED, which requires systems to be put in place to prevent harm so far as reasonably practicable
- imposition of specific duties to manage contaminated land and to notify the EPAV of specific contaminated sites
- codification and augmentation of the existing noise framework, including by imposition of a night noise limit and giving force of law to the existing nonbinding guidelines in regional Victoria.

Table 2 summarises new obligations on us from EP Amendment Act 2018 and draft regulations.

Table 2 Summary of new obligations from EP Amendment Act 2018 and draft regulations

Obligation	Current framework	New framework	Change in obligation
Introduction of GED	N/A	A person engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably practicable	<p>We must change our operations and update our HSE management system to:</p> <ul style="list-style-type: none"> • develop and maintain an understanding of all risks associated with the operation of our network • develop a proactive program of works to mitigate all risks so far as reasonably practicable over time
Management of contaminated land	Reactive obligations that only apply in relation to new developments or as a result of a 'clean-up' notice, in accordance with the Contaminated Land SEPP	Proactive duties to manage and notify that apply to all sites (existing and new and regardless of whether they are under development or not) that contain contaminated land (whether contaminated before, on or after the date the new duties come into force)	<p>We must change our operations to proactively:</p> <ul style="list-style-type: none"> • identify and assess any risks associated with contaminated land, whether existing land or new developments • notify the EPAV of any 'notifiable contamination' as soon as practicable • inform any users of the land or other persons reasonably affected • remediate any land contamination, and prevent future contamination, so far as reasonably practicable.

Management of noise pollution	Emittance of noise pollution in metropolitan areas in accordance with the Noise SEPP	Establishes offences of 'unreasonable noise' and 'aggravated noise' in respect of non-residential premises in major urban areas	<p>We must change our operations to:</p> <ul style="list-style-type: none"> • identify any sites that may emit noise pollution in accordance with the new night time and regional emissions limits as well as the frequency spectrum • remediate any noise pollution and prevent future pollution so far as reasonably practicable.
	Establishes an offence of the emission of 'objectionable noise' and provides for the application of enforcement powers including issue of pollution abatement notices	Establishes offences of 'unreasonable noise' and 'aggravated noise' in respect of non-residential premises in rural areas and provides lower limits. The new regime effectively gives force of law to the current Regional Guidelines	
	The Noise SEPP is limited to the metropolitan region. Regional guidelines apply but do not carry the force of law	Provides for night time noise emissions limits, and an upper bound for these of 55dB(A)	
		Provides that frequency spectrum to be taken into account when considering whether noise is 'unreasonable'	

Source: Powercor

For the new standards with regard to 'notifiable contamination' and noise emission limits, refer to PAL ATT010 and PAL ATT036.

4 Cost analysis

To comply with the new obligations under the EP Amendment Act 2018 and draft regulations we will be required to change our operations to incorporate a proactive approach to management of environmental impacts as opposed to a more reactive approach. As a result, we will incur material operating and capital expenditure during 2021–2026, related to:

- identifying, assessing and testing potential environmental risks of our operations, including development and maintenance of a risk assessment framework and on-going site testing
- remediation of identified contamination or pollution, mainly with regard to land contamination and noise but also including asbestos, lead paint and other pollutants
- implementing prevention mechanisms to reduce the risk of contamination or pollution so far as reasonably practicable.

This will result in operating expenditure that is incremental to the operating expenditure related to environmental works in the 2019 base year, and a capital works program during the 2021–2026 regulatory period.

4.1 Options analysis

We have assessed two options for addressing the identified need:

- option 1—do nothing—do not comply with the EP Amendment Act 2018 and draft regulations
- option 2—incur operating and capital expenditure to comply with EP Amendment Act 2018 and draft regulations.

The cost of option 1—do nothing is assumed to be zero however it does not enable us to meet the performance specification requirements of the EP Amendment Act 2018 and draft regulations, exposes us to financial penalties under the same and would fail to achieve the outcomes deemed necessary by the Victorian Government and the EPAV.

The costs related to option 2 are based on the preferred option for the draft regulations in the RIS and are subject to change when the final regulations are published. The estimated costs have been done at a high-level only, as the timing of the draft regulations did not allow for a more detailed costs assessment.

We will review the implications of the final regulations on our operations, once available, and update the options and the costings with a more detailed assessment for the Revised Regulatory Proposal in 2020.

4.2 Operating expenditure step change

The move to a proactive regulatory framework will require us to conduct more site tests, assessments and maintain this information on an ongoing basis to develop a risk-assessment framework and related mitigation plans and systems. The risk-assessment framework is necessary for reducing risk of environmental harm so far as reasonably practicable.

Additionally, as sites are identified and assessed under the new risk-assessment framework, there will be an increase in remediation activity necessary to reduce risk of harm so far as reasonably practicable. Remediation activity is also expected to increase substantially due to a new obligation to remediate all notifiable contaminated land as opposed to only contaminated land with new development.

The preferred option under the RIS (Option 2) requires duty holders to demonstrate clean-up and removal of land contamination to the extent reasonably practicable. The RIS indicates this likely requires duty holders to undertake additional remediation and management activities over and above what may be required under the Base Case. This may require duty holders to explore a range of technologies and options before demonstrating compliance.⁶

The RIS also concludes a level of assessment and monitoring would be required given the nature of the oil contamination. Thus the average incremental cost of this option is estimated at approximately \$500,000 per instance compared to the Base Case, however this cost will vary significantly depending on the nature and scale of the contamination. This option would also likely result in additional administrative costs to duty holders in liaising with EPA and potential lost revenue if duty holders are required to delay operations at sites in order to remediate.⁷

Based on the new obligations and the expectations under the RIS, we estimate the following on-going activity to increase as a result of the new obligations and from the new risk-assessment framework:

- remediation of contaminated land, including oil removal and clean-up activities
- removal of asbestos, lead paint and PCBs.

These costs are considered to be on-going as the risk-assessment framework will provide an on-going program of remediation with reasonably practicable timing based on the level of risk at each site and the cost of remediation.

For remediation of oil contamination on land, which is the largest cost item, we have developed a desktop risk assessment and have ranked the contaminated sites according to level or risk of harm. For our cost estimate, we have included the remediation of the highest risk sites only in the 2021–2026 regulatory period. We consider this to be a reasonably practicable approach, where the highest risk sites are managed first, with around two-three sites per year. The summary of the sites and the assessment modelling are detailed in PAL MOD 4.08.

Table 3 summarises the estimated operating expenditure step change for the 2021–2026 regulatory period. Our costs are based on high-level estimates using historical actuals where available. We will conduct a more detailed cost analysis of the operating expenditure step change for the Revised Regulatory Proposal. For more details on the estimated costs of the step change refer to PAL MOD 9.01.

Table 3 Operating expenditure step change (\$ million, 2019)

	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Operating expenditure step change	3.06	3.13	2.87	0.01	0.07	9.15

Source: Powercor

4.3 Bunding

The new regulatory framework requires us to implement preventative measures to reduce the risk of harm so far as reasonably practicable. In addition to remediating already contaminated land, we will be required to implement all reasonable measures to prevent any new contamination.

⁶ PAL ATT010 Deloitte, Regulatory Impact Statement: Proposed Environment Protection Regulations, DELWP and EPA, August 2019, p.96

⁷ PAL ATT010 Deloitte, Regulatory Impact Statement: Proposed Environment Protection Regulations, DELWP and EPA, August 2019, pp.96-97

The largest network element that presents a risk to the environment of soil contamination are transformers in zone substations. Transformers may leak material volumes of oil as their condition deteriorates. One of the most effective treatments for transformer oil leak risk is to contain and treat leaks via bund walls. A bund wall is a complete enclosure built around the transformer that contains any oil spills within the wall boundary until such time that it can be treated or removed. Coupled to this is the treatment of water at the site to separate oil from water before it enters the storm water or ground water.

We install bunding and drainage at new zone substations, when replacing and upgrading transformers and in cases of serious leaks and risk of water drainage. However, due to the new obligation to prevent harm so far as reasonably practicable, we have developed a program of works to install or upgrade bunding at all existing transformers over time. This will significantly reduce the risk of oil contamination, which is consistent with the EP Amendment Act 2018 and the draft regulations.

To assess the most appropriate timing of bunding installations or upgrades, we have developed a desktop risk assessment model to rank all sites according to risk of oil contamination. We have prioritised sites with the highest risk for the 2021–2026 regulatory period, and have aligned the timing of the bunding with any other planned zone substation works to minimise costs. We consider this to reflect a reasonably practicable approach to reducing environmental risk, with a phased and coordinated program of works that reduced risk over time.

Our costs are based on high-level estimates using historical actuals where available. We will conduct a more detailed cost analysis of the capital expenditure for the Revised Regulatory Proposal. The summary of the sites and the assessment modelling are detailed in PAL MOD 4.08.

Table 4 summarises the estimated capital expenditure related to bunding for the 2021–2026 regulatory period.

Table 4 Bunding capital expenditure (\$ million, 2019)

	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Bunding capital expenditure	3.81	2.95	2.98	3.59	2.95	16.56

Source: Powercor

4.4 Noise

The EP Amendment Act 2018 and draft regulations are expected to result in a number of non-compliant zone substations. This is due to the establishment of offences of ‘unreasonable noise’ and ‘aggravated noise’ by non-residential premises in major urban areas and in rural areas, and the new night time limits and the consideration of the frequency spectrum.

We have conducted a desktop risk-assessment to identify the potential non-compliant zone substations with regard to the new night time limits. These are based on indicative night time emission limit exceedances from previous studies. Sites with indicative night-time noise exceedances are considered to be high-risk, and as such were included in the phased planned works for mitigation over the 2021–2026 regulatory period.

We engaged GHD Pty Ltd (**GHD**) to undertake a cost feasibility assessment for mitigating noise across those higher risk zone substitutions in our network. Due to limited time from the publication of draft regulations, the GHD assessment was limited to a desktop assessment (rather than a field assessment) of potential mitigation options and costings that may be suitable across the zone substations. To identify and assess various options, GHD completed structural design and noise modelling to assess the feasibility of various noise mitigation solutions. GHD also engaged with an external quantity surveyor to obtain an understanding of indicative costs associated with each solution provided. For the full GHD report refer to PAL ATT038.

Table 5 summarises the estimated capital expenditure related to noise mitigation of the highest risk sites for potential non-compliance during the 2021–2026 regulatory period. The estimated capital expenditure represents the least-cost option identified by GHD for each site. The summary of the sites and the assessment modelling are detailed in PAL MOD 4.08. We will conduct a more detailed cost analysis of the capital expenditure for the Revised Regulatory Proposal.

Table 5 Noise mitigation capital expenditure (\$ million, 2019)

	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Noise mitigation capital expenditure	6.24	9.25	5.83	5.39	2.56	29.28

Source: Powercor

5 Recommendation

We recommend option 2—incur operating and capital expenditure to comply with the EP Amendment Act 2018 and draft regulations. This option ensures we meet our obligations set out in the EP Amendment Act 2018 and the draft regulations, and meet the expectations of the EPAV, the Victorian Government and the community. Option 1 is not recommended as it does not allow us to meet our new obligations.

Table 6 summarises the operating expenditure step change, the bunding capital expenditure and the noise mitigation capital expenditure of the preferred option.

Table 6 Expenditure forecasts for preferred option (\$ million, 2019)

Expenditure forecast	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Incremental on-going operating expenditure	3.06	3.13	2.87	0.01	0.07	9.15
Bunding capital expenditure	3.81	2.95	2.98	3.59	2.95	16.56
Noise mitigation capital expenditure	6.24	9.25	5.83	5.39	2.56	29.28

Source: Powercor