



Facility security upgrade

**UE BUS 8.04 - Facilities security -
Jan2020 - Public**

Regulatory proposal 2021–2026

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1 Overview

Business	United Energy
Title	Facility security upgrade
Project ID	UE BUS 8.04 - Facilities security - Jan2020 - Public
Category	Other non-network capex IT capital expenditure - recurrent
Identified need	The physical security of our facilities requires investment to ensure we maintain energy security and the safety of workers and the public.
Recommended option	Option 1: Upgrade CCTV and consolidate to the CPPAL Building Access Control system at the Head Office
Proposed start date	2021/22
Proposed end date	2025/26
Supporting documents	<ol style="list-style-type: none">1. UE MOD 8.03 - Facilities security - Jan2020 - Public2. UE ATT048 - BG - Strategic security review - Jun2019 - Public3. UE ATT049 - Facilities security site implementation - Jan2020 - Public4. UE MOD 12.02 - Quoted services labour rate - Jan2020 - Public5. UE ATT179 - ENA - Prevention of unauthorised access - 2006 - Public6. UE ATT180 - ANZCTC - Protection infrastructure from terrorism - Public

The physical security systems for our corporate and network facilities require investment to ensure we continue to protect the safety of the public and our employees, maintain energy security for our customers and align with industry standards.

We considered three options described as follows:

- Option 0 - Do not invest in our facilities' physical security
- Option 1 - Upgrade our Closed Circuit Television (**CCTV**) cameras and consolidate to the CitiPower/Powercor (**CPPAL**) Building Access Control (**BAC**) system at the Head Office
- Option 2 –Extend BAC integration to our three depot sites.

Table 2 summarise the capital expenditure for each option over the five-year regulatory period 2021–2026.

Table 1 Options summary, \$m June 2021

Option		Cost
0	Do nothing	0.0
1	Upgrade CCTV and consolidate BAC at head office	5.7
2	Extend BAC to depots	6.6

Source: United Energy

We recommend option 1 to upgrade the BAC system and our Closed Circuit Television (**CCTV**) cameras. This option addresses the highest risks while ensuring cost efficiency.

2 Background

Existing security capabilities

Our network facilities include a corporate office and three depots spread out over 1,472 km². Maintaining the physical security of our facilities is essential to the safe and secure management of our network. This includes ensuring only authorised personnel with required authorisations have access to certain facilities and intentional or unintentional entry or misuse of facilities is detected and/or prevented.

We conduct regular risk analysis to assess the exposure of critical sites to ensure that the most prudent and practical approach is being taken to minimise the potential security threats. Physical security measures, such as fences and locks are the first line of defence from intrusion, with the control of access cards and keys being critical in authorising access. The next level of control is early detection and monitoring of critical sites for unauthorised entry, and then mounting an appropriate response.

The combination of physical security measures and monitoring helps ensure that only appropriately authorised access is allowed to critical sites. It is therefore essential to maintain our physical security systems so that security vulnerabilities are mitigated.

However, the environment we are operating in is becoming more challenging as distributors encounter incidents of break-ins and theft from depots and fleet vehicles. In addition to thefts, unauthorised access incidents occur due to homeless people seeking refuge from the elements. Without investment to maintain our current security capabilities, there will be increasing risks to the security of our energy supply and the safety of workers and the public. It is therefore imperative that we invest to maintain our existing security standards.

Alignment to industry and government guidelines relating to electricity infrastructure

We must ensure we maintain our network in accordance with relevant industry and government guidelines, policies and processes relating to energy security and occupational health and safety standards (**OHS**).

In particular we aim to align where applicable with the Energy Networks Association–National guidelines for prevention of unauthorised access to electricity infrastructure (**ENA Guidelines**), which was developed to support the objectives of the National Electricity Network Safety Code. These Guidelines:

- promote safety as a priority for customers, the public and industry workers
- promote nationally consistent practices
- promote economic efficiencies through standardisation.¹

We aim to align with section 6.5.6(a)(iii) of the National Electricity Rules (**the Rules**), which state that a distributor must maintain the quality, reliability, and security of supply of standard control services and also with the government's prioritisation of critical asset protection, which states that:

- 'those physical facilities, supply chains, information technologies and communication networks which, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact the social or economic wellbeing of the nation or affect Australia's ability to conduct national defence and ensure national security'.²

¹ UE ATT179: Energy Networks Association, ENA DOC 015 –2006, National guidelines for prevention of unauthorised access to electricity infrastructure, p 3.

² UE ATT180: Australia-New Zealand Counter-Terrorism Committee, National Guidelines for Protecting Critical Infrastructure from Terrorism.

3 Identified need

Our facilities security systems require renewal to ensure we maintain our existing security capabilities to industry standards. In particular, upgrading CCTV by enhancing the way we identify, assess and combat ongoing and emerging security issues. Without investment, our network is unlikely to have adequate energy security in future.

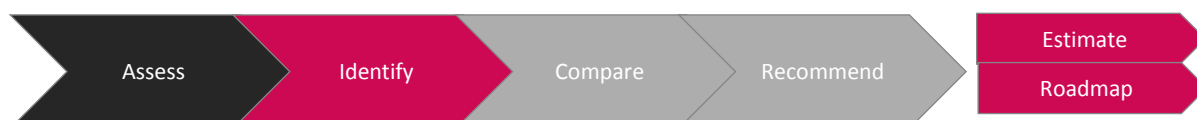
In addition, there is an opportunity to upgrade the outdated United Energy security systems at low cost by leveraging the security strategy in CitiPower and Powercor (**CPPAL**).

4 Options analysis

4.1 Approach

Three options have been explored to determine the solution that best addresses our security risks while ensuring cost efficiency.

Figure 1 option analysis approach



Source: United Energy

Assess

Our internal subject matter experts (**SMEs**) assessed our future needs, taking into account best practice government and industry standards for electricity infrastructure (detailed in the background section above).

Identify

We drew on internal and industry experience when identifying which initiatives would best meet our needs, and prioritised the management of our most important security threats.

Compare

We developed and compared three options for the 2021-2026 regulatory period, which progressively build on each other to expand the coverage of our facilities' security capabilities. We took this approach as it allowed us to determine the trade-off between risk and the cost of implementation in order to provide the best value for customers.

In order to accelerate the implementation of the strategy, we would need to acquire additional resources above our current workforce, which would add additional costs. To delay implementation would mean prolonging high risk assets. Therefore we did not compare different timings in our options analysis.

Recommend

We selected and recommend option 1, which mitigates the highest risks at an efficient cost.

Estimate and Roadmap

We estimated the recommended option using historical project costs, with adjustments for additional scope where required. We also developed a high-level roadmap over the period 2021–2026 of proposed activities to ensure deliverability of the project.

4.2 Summary

We considered three options for following the approach outlined above. These options are described as follows:

- Option 0 - Do not invest in our facilities' security
- Option 1 - Upgrade CCTV and consolidate to the CPPAL BAC system at the Head Office
- Option 2 –Extend BAC integration to additional depot sites.

Table 2 summarise the capital expenditure for each option over the five-year regulatory period 2021–2026.

Table 2 Options summary, \$m June 2021

	Option	Cost
0	Do nothing	0.0
1	Upgrade CCTV and consolidate BAC at head office	5.7
2	Extend BAC to depots	6.6

Source: United Energy

4.3 Option 0 – do nothing

Option 0 - Do nothing means we will not upgrade our physical security measures. This is not a viable option as it will put our customers' energy supply security at risk and does not address the risk of the potential for harm to workers and/or members of the public. The advantages of option 0 are set out in table 3 below.

Table 3 Advantages and disadvantages of option 0

Category	Advantages	Disadvantages
Safe & dependable		Reliance on existing security capabilities during the 2021–2026 regulatory period will reduce our ability to protect staff and the wider community and detect against unauthorised intrusions, increasing the likelihood of a major security incident.
		Increased likelihood that a major security incident may result in a failure to deliver a safe and dependable supply of electricity to customers, breaching of section 6.5.6(a)(iii) of the Rules and other industry standards.
Flexible		<p>Unsupported security capabilities will not allow us to identify and respond new or emerging security threats.</p> <p>In addition, this approach will not allow us to respond to uplifts in electricity security industry best practices.</p>
Affordable	No capital expenditure incurred.	Significant costs will be incurred by customers to respond to and remediate security breaches, including those resulting from personnel and public injuries.

Source: United Energy

4.4 Option 1 – upgrade CCTV and consolidate BAC

The initiatives under option 1 are outlined in table 4.

Table 4 Initiative under option 1

Initiative	Current challenge	Proposed initiative	Addressed need
Consolidate Tronsec to CPPAL's BAC system	<p>Tronsec is standalone system providing physical access to sites.</p> <p>Manual works are required to reconcile this system with HR information to determine who should have site/asset access.</p>	<p>We can migrate to CPPAL's superior BAC system in order to prevent unauthorised access.</p> <p>The BAC system used by CPPAL is an integrated solution that combines the SAP Human Resources systems and the Gallagher security system physical access control system.</p> <p>The Gallagher system provides electronic access and intrusion detection. The integration component allows employee or contractor information to be shared from SAP HR to Gallagher – namely the status of the employees (active or terminated), and the appropriate competencies for access to distribution properties.</p> <p>The physical card readers and security cabinets would be implemented at the Head Office in Pinewood.</p>	<p>Converting the Tronsec System to CPPAL's BAC / Gallagher system will allow us to provide additional physical security functionality, decreasing the risk of unauthorised access and protecting our energy installations in a cost-efficient method.</p>
CCTV upgrade	<p>Our existing CCTV cameras monitoring our depots will reach their end of life during the reset period.</p>	<p>CCTV provides a remote view of an installation and can record the activities within its field of view. This is a primary element of recording events and monitoring intruders.</p> <p>This initiative will upgrade our cameras reaching their end of life so we can ensure continued CCTV coverage of our network.</p>	<p>Upgrading our existing CCTV cameras will continue to help us to detect and respond to incidents.</p>

Source: United Energy

By implementing the required physical security renewals and enhancing our detection and monitoring capabilities, we can ensure energy security as well as the safety and security of workers and the public.

The advantages and disadvantages of option 1 are in table 5 below.

Table 5 Advantages and disadvantages of option 1

Category	Advantages	Disadvantages
Safe & dependable	<ul style="list-style-type: none"> Improves the perimeter security of sites Enhances the level of protection to critical assets Provides evidence to be submitted to the authorities in order to identify and prosecute offenders Ensures compliance with industry practice 	
Flexible	Balanced investment option that includes reasonable provisions to address rising security threats according to industry best practice security standards	
Affordable	<ul style="list-style-type: none"> Targets highest risk sites and provides a practical delivery approach Lower capital expenditure per risk reduction than option 2. 	Higher cost compared to option 0.

Source: United Energy

4.5 Option 2 - extend BAC to depots

Option 2 involves implementing the above-mentioned initiatives in option 1 and extending the BAC initiative to our three depots, as outlined in table 6.

Table 6 Extension of BAC initiative to the three depots

Initiative	Enhancement on option 2
BAC Expansion	Expansion of the BAC's solution to the three field depots (i.e. Burwood, Keysborough and Mornington). This would align the entire United Energy the locations onto the same platform, therefore simplifying the management of the access arrangements. The majority of staff accessing these additional sites are contract employees acting on behalf of United Energy which do not have a HR record within the SAP system. Therefore rolling out BAC to the 3 depots would allow benefits for UE staff, but create a bigger admin activity for the contractor.

Source: United Energy

Option 2 is the highest cost solution and therefore not the preferred option. However, this approach would have the largest potential to reduce customer's energy supply security risk and the potential for harm to our staff and/or members of the public. The advantages and disadvantages of option 1 are in table 7 below.

Table 7 Advantages and disadvantages of option 2

Category	Advantages	Disadvantages
Safe & dependable	<p>Provides the greatest reduction in risk of a safety incident occurring to employees or the public from security upgrades including from improved site perimeter security and protection to critical assets.</p> <p>Increasing the coverage of initiatives that enhances our ability to detect and respond to unauthorised access breaches in a timely manner, before they result in a major safety incident or theft.</p> <p>Provides evidence to be submitted to the authorities in order to identify and prosecute offenders.</p>	
Flexible	Provides alerts for when intrusions occur so that staff operating on site can be alerted and the authorities can be notified	
Affordable		Highest cost compared to other options.

Source: United Energy

5 Recommendation

We recommend option 1 as this provides a balanced investment approach for the following reasons:

- **Safe & dependable:** option 1 supports the continued safe, reliable, and secure delivery of electricity
- **Flexible:** option 1 includes reasonable provisions to address rising security threats according to industry best practice security standards
- **Affordable:** option 1 reflects a balanced investment in security, targeting high risk sites.

We do not recommend the other options for the following reasons:

- Option 0 detracts from our ability to ensure a safe and dependable supply of electricity to our customers, and consequently introduce unacceptable levels of risk to the business, our customers, and the community more broadly. Therefore, whilst they may be appealing from an affordability perspective, it is not a viable option.
- Option 2 does not provide sufficient additional security benefits given the additional investment, as the existing controls and residual risk are not commensurate to the additional investment required.

Table 8 below summarises the expenditure profile for our recommended option 1 in the 2021–2026 regulatory period.

Table 8 Expenditure profile option 1 in the 2021–2026 regulatory period, \$m June 2021

Expenditure forecast \$2020m	2021/22	2022/23	2023/24	2024/25	2025/26	Total
IT capital expenditure	0.1	0.6	0.7	3.2	0.1	4.7
Property capital expenditure			0.9			
Total	0.1	0.6	1.6	3.1	0.1	5.7

Source: United Energy

Note there is an IT and a Property component in the CCTV initiative. The IT component relates to CCTV back office hardware and server upgrade costs, while the property component relates to the cost of purchasing and installing the CCTV.