

# Strategic Asset Management Plan

November 2022

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# 1. Executive summary

Essential Energy operates and maintains one of Australia's largest electricity networks, across 95 per cent of NSW and parts of southern Queensland. Serving more than 880,000 customers – including homes, hospitals, schools, businesses and community services – Essential Energy is an economic enabler for regional, rural and remote communities.

We aim to continually improve safety for employees, contractors and communities, and maintain the reliability, security and cost-efficiency of the network, while striving to maintain downward pressure on customers' network charges and deliver an acceptable return on capital employed.

The energy industry is experiencing rapid and sustained change in the use and availability of technology and the ways in which our customers demand and use energy. As a Distribution Network Service Provider (DNSP), we have a responsibility to ensure the services we deliver meet the needs and expectations of our customers, industry and stakeholders, today and well into the future.

As a business, we work safely to deliver the best outcomes for our customers and to demonstrate that value to our regulators. This requires network outcomes be delivered in a way that offers the right performance, at acceptable levels of cost and risk. We engaged extensively with customers to understand their priorities when preparing our Regulatory Proposal for 2024–29, and to inform our Corporate Strategy and in turn our asset management objectives.

Our Asset Management System is critical to the delivery of these outcomes. Translating our business objectives and 'pillar' outcomes into meaningful Asset Management Objectives is a fundamental activity that sets us up for success.

This Strategic Asset Management Plan defines how we establish our Asset Management Objectives and how we use the Asset Management System, to deliver them. It provides confidence to our customers and stakeholders that we truly understand our network, the outcomes it must deliver and how we're going to do it.

Essential Energy is continually improving its approach to asset management to support our business vision of empowering communities to share and use energy for a better tomorrow.



Luke Jenner  
**Chief Operating Officer**



Chris Dhu  
**Group Head Asset Engineering Risk and Compliance**

## 2. Purpose

This Strategic Asset Management Plan (SAMP) describes how Essential Energy's business context and organisational objectives are converted into Asset Management Objectives (AMOs) and the role of the Asset Management System (AMS) in delivering these objectives. Essential Energy's Asset Management Policy Statement (see Appendix A) drives our commitment to effective asset management.

This document provides information on the asset management environment in which Essential Energy operates, and how this environment works with our corporate ambition to drive the content of our AMOs. Delivery of the AMOs is described in terms of the Asset Management System Framework (AMSF), and the associated high-level measures and targets that enable their delivery to be monitored and reported on.

This SAMP relates to the assets within the scope of the AMS (see Appendix B). It will be amended in response to changes in our operating environment and business objectives that have a material impact on the AMOs. Consistent with the Corporate Strategy, a 15-year planning horizon has been applied.

## 3. Context

### 3.1 About Essential Energy

Our core business is operating and maintaining one of Australia's largest electricity networks, across 95 per cent of NSW and part of southern Queensland. The network includes over 183,000 kilometres of powerlines traversing 737,000 square kilometres of landmass.

A state-owned organisation serving more than 880,000 customers – including homes, hospitals, schools, businesses and community services – Essential Energy is an economic enabler for regional, rural and remote communities. We aim to continually improve safety for employees, contractors and communities, and maintain the reliability, security and cost-efficiency of the network, while striving to maintain downward pressure on customers' network charges and deliver an acceptable return on capital employed.

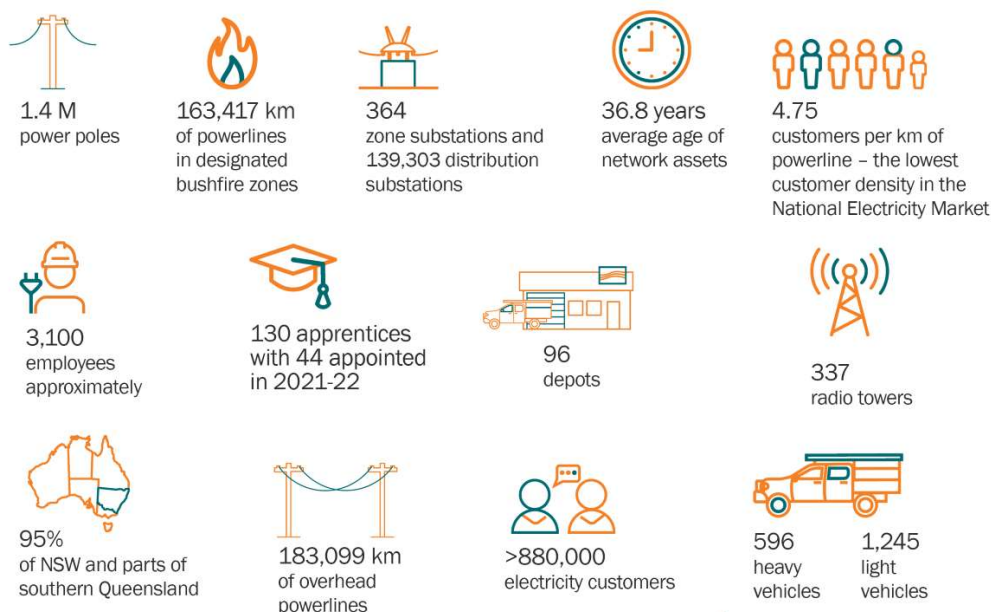
Our vision is to 'empower communities to share and use energy for a better tomorrow', and we do this by 'enabling energy solutions that improve life'. We maintain a safe and reliable network today, and continue to implement transformation programs and a range of continuous improvement initiatives to ensure we meet customers' and communities' needs into the future.

Our values set the parameters for how we behave, with our customers and with each other. They inform our decisions and how we do our work. We encourage and enable our employees to:



Figure 1 provides a statistical snapshot of the Essential Energy network.

**Figure 1: Essential Energy snapshot**





## 3.2 Delivering value

Our AMS and AMOs work together to drive the required value from our network. These objectives define what we need to deliver from our assets, asset management and AMS. These outcomes are financial and non-financial, tangible and non-tangible.

The value we need to deliver may change each year depending on factors such as the changing context of our organisation, our corporate ambitions and our business objectives. Not all business objectives relate to our assets, asset management or AMS. That's why it's important we translate our business objectives into AMOs that are meaningful to the assets in scope.

A key role of the AMS is to translate the application of the AMOs into strategies, projects, programs and plans to ensure the work we do is the right work, performed in the most efficient way.

## 3.3 Our stakeholders

With customers spread across 95 per cent of regional, rural and remote NSW, their needs are varied and often unique. A rapidly changing energy industry with advancing technologies is shifting customer expectations. We need to adjust our services and how we engage with everyone we serve to accommodate this change.

Essential Energy is committed to delivering a service that meets the needs of our customers. In line with that commitment, our Regulatory Proposal has been co-designed with customers and reflects the priorities that have been developed through an extensive engagement program that started at the end of 2019. Our customer priorities are shown in Figure 2.

Our aim is to deliver safe, reliable, resilient and affordable energy from 2024 to 2029 – a period in which the Australian energy market is likely to undergo many changes. Our customers want us to be future-focused and to innovate in ways that encourage, rather than limit, the growth of renewable energy generation and storage.

To further guide our efforts, we launched a new Customer Experience Strategy in October 2020. The AMS plays a key role in making asset management decisions that provide value to our customers and our business.



Figure 2: Customer priorities

Essential Energy has four categories of stakeholders, as described below.

### 3.3.1 Connected customers

Connected customers are billed through a retailer and include:

- residential
- small to medium enterprises (SMEs)
- commercial and industrial.

Connected customers are the end consumers of the electricity we distribute and the products and services we provide. The fact that Essential Energy does not bill connected customers directly does not change this – we play a critical role in the energy chain.

Our connected residential customers are typically engaged in their energy consumption. They include those who are constrained in their export of generated electricity, and who are concerned by the cost of electricity; to passive energy consumers who just need electricity to be there when they ‘flick the switch’; to those who rely on electricity to run vital life-support equipment.

A subset of this group includes future customers who are in the process of connecting to the network. This includes renewable developers and solar proponents; real estate developers; and joint-use customers including our TelBu non-regulated business unit.

### 3.3.2 Partners (direct and indirect)

Our direct partners include those that are billed directly on a fee-for-service basis, including:

- Accredited Service Providers and electrical contractors
- retailers
- local councils.

Indirect partners are suppliers of non-network solutions, suppliers of energy management products and services, and landowners.

### 3.3.3 Stakeholders (internal and external)

Our internal stakeholders include our employees and Board. From an external perspective, our stakeholders include regulators, government, customer representation groups, unions, media, and other electricity distributors.

### 3.3.4 Community

Community includes groups of customers affected by our services and infrastructure, while in use or during installation and maintenance, that is:

- communities within the geographical boundary of Essential Energy’s network
- communities from other geographical regions affected by our services.

### 3.4 Understanding our context

The way Essential Energy operates is influenced by a range of internal and external factors. On a macro level, external forces affect not only our long-term strategy but also our annual planning to ensure that as a business we can respond to the rapid pace of change in our external environment.

From a regulatory perspective, as a state-owned DNSP with our network predominantly in NSW, but also in part of Queensland and the ACT, we are subject to a range of regulatory and compliance requirements to maintain our funding and licence to operate. While these factors inform our internal operating environment, there are also key factors that influence our context from an internal perspective. Figure 3 provides an overview of our context at all levels.

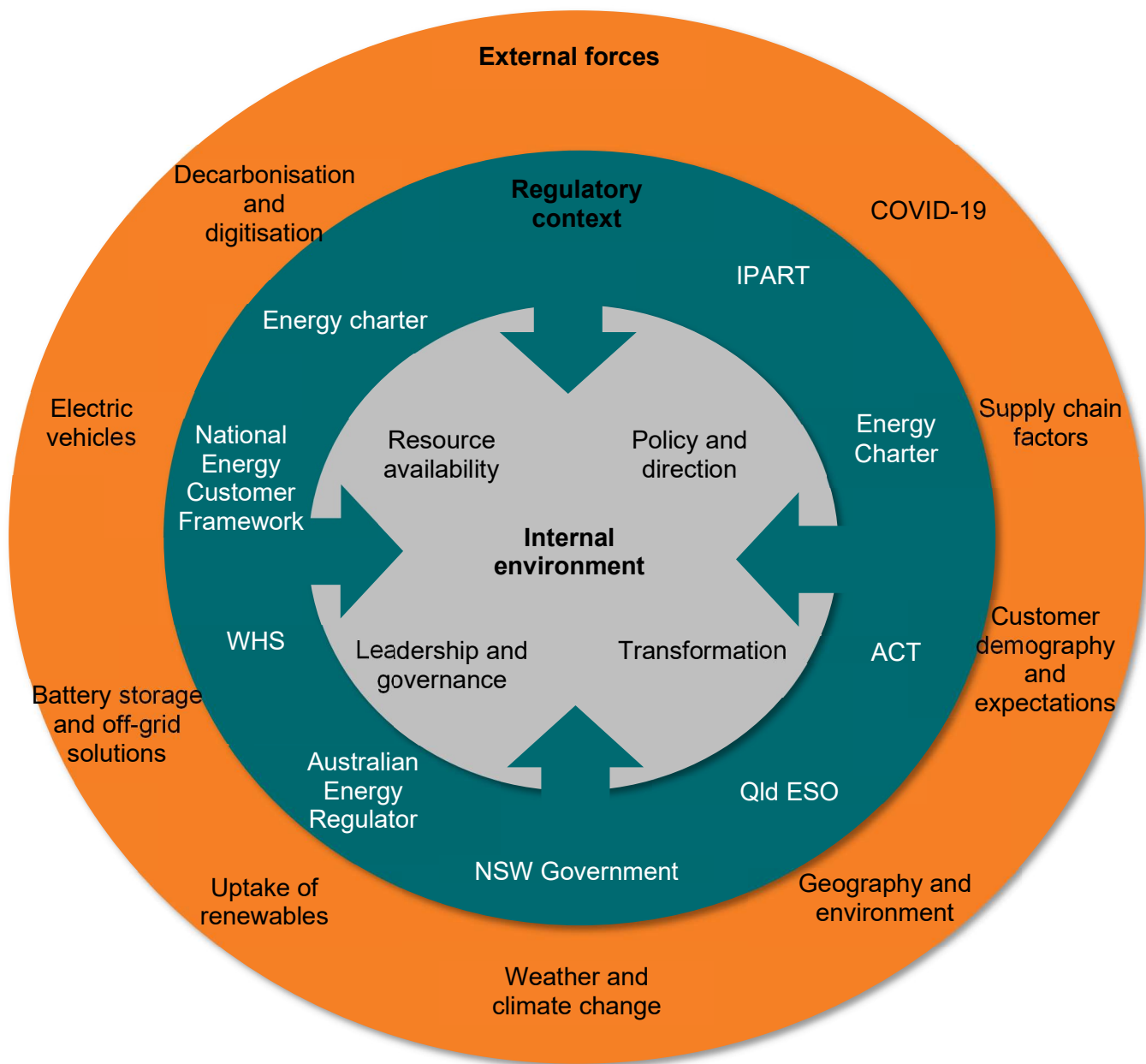


Figure 3: Overview of our context



### 3.4.1 External forces

Essential Energy maintains one of Australia's largest distribution networks and is continually evolving in response to changes in how its customers want to use the network. This means embracing new technologies such as solar, batteries, electric vehicles and off-grid energy solutions. The electricity industry is experiencing significant and rapid change. Networks are changing from being largely one-directional to a complex interconnected multi-dimensional energy ecosystem.

While the size of the network footprint is significant, the customer density is relatively low, creating engineering and design challenges that our metropolitan counterparts don't experience.

While the size and topography of our network is challenging enough, our assets also exist in a range of different climates, including arid, marine, sub-tropical, temperate and alpine. Collectively and individually, these challenges have impacts across the asset lifecycle from planning to design, construction, operation, maintenance and disposal.

Alongside this, the frequency of climate change events is increasing, with significant impacts on the network, our customers and their regional communities. Record periods of drought followed by extreme fire events and flooding within the current regulatory period alone has had a significant impact on our network. These factors and modelling around the likelihood of increased climate volatility affect the methodologies and approaches we use to manage our assets.

Increasing levels of economic hardship experienced in regional, rural and remote NSW influence customer expectations of how we manage our business. As an Energy Charter signatory, we are focused on fostering a customer-centric culture and conduct to create real improvements in price and service delivery. Our commitment to the five principles of the charter means we will:

1. put customers at the centre of our business and the energy system
2. improve energy affordability for customers
3. provide energy safely, sustainably and reliably
4. improve the customer experience
5. support customers facing vulnerable circumstances

### 3.4.2 Regulatory context

Essential Energy is a New South Wales Statutory State Owned Corporation established under the *Energy Services Corporations Act 1995* (NSW) and the *State Owned Corporations Act 1989* (NSW) to provide services critical to the economy and infrastructure for NSW. The business is governed, primarily, by these two statutes and its Constitution, and operates within the terms of the *Electricity Supply Act 1995* (NSW).

Essential Energy is also subject to most of the statutory and other legal requirements that other businesses are subject to, including workplace health and safety (WHS), environmental, competition, industrial, consumer protection, critical infrastructure and information laws.

At a national level, Essential Energy is subject to the National Electricity Law (NEL) and the National Electricity Rules (NER), which regulate the National Electricity Market (NEM). Essential Energy operates in the NEM as a DNSP.

The Australian Energy Regulator (AER) regulates the transmission and distribution sectors of the NEM under the NEL and NER. At a state level, Essential Energy's activities are governed by the NSW Electricity Supply Act, the Energy Services Corporations Act. The Independent Pricing and Regulatory Tribunal (IPART) is responsible for monitoring compliance with licence conditions.

Essential Energy receives its funding (that is, its revenue allowance) via a regulatory determination process. Funding is awarded on a five-year basis and requires accurate forecasting on the necessary operating and capital expenditure needed to operate, maintain, change and improve the network.

Alongside this, the business is required to respond to government policy and initiatives such as solar or electric vehicle take-up incentive schemes. This requires modelling and engineering planning to manage demand or impact on the electricity network, and are important factors in our planning processes.

These principles influence the way we manage our assets and how we set our corporate and asset management objectives.

Supporting this, the business is represented on many industry-based working groups to ensure we have access and contribute to opportunities to collaborate and solve challenges. Such groups provide important intelligence and context on a broad range of external issues in a regulatory context.

### 3.4.3 Internal environment

Our Board, CEO and executives set the direction for Essential Energy and are ultimately responsible for business performance. All directors of the Board, except the CEO, are appointed by the voting shareholders. Our leaders set and drive our business objectives via the Corporate Strategy Pillars.

Supporting this, we have policies, processes and procedures that guide and inform the way we work every day, ensuring a systemised approach to achieving our external obligations. Our Asset Management Policy statement (see Appendix A) exemplifies this as it clearly articulates our commitment to an asset management approach that enables a safe, sustainable and efficient network and non-network services that meet the needs of our customers and stakeholders, now and into the future.

From a workforce perspective, Essential Energy's Code of Conduct sets out the expectations for employee behaviour that is fundamental to the business's success. The Code encourages a culture of responsibility and accountability to ensure ethical and responsible decision-making.

The ability to deliver our AMOs requires access to the right resources and capabilities. The business has provided resources to locations through its physical depots, servicing manageable network areas with strategic access to stores or logistics. This ensures that service is delivered to the entire state. One of the business's key considerations is enabling and activating the capability of our people and supporting systems, and has been included in our succession planning for many years. We do this through programs like the yearly apprentice intake and engineering graduate program.

At an enterprise level, the business employed a business-wide transformation program with the aim of uplifting capabilities and maturity across the Corporate Strategy pillars. This program is driven across eight workstreams and will, among other things, help provide us with the tools needed to mature our asset management practices.

The program is shaping the future of our business and enables us to step up and meet the changing needs of our customers and industry. We are setting up these foundations now so we can continue to empower our communities in a changing and evolving industry.

To maximise the benefit to the business, we have actively engaged subject matter experts to lead and deliver these initiatives, develop their knowledge base, build their capabilities, and to spread their knowledge and experiences across our business-as-usual functions.

Our transformation program embodied significant improvements of the AMS, with many of the initiatives supporting asset and works delivery processes.

1. **Drive safety and performance through people:** We aim to equip all Essential Energy employees with leading asset management and customer service approaches.
2. **Identify the right work and enable the network of the future:** We aim to understand our assets and how to manage them in a best practice, world-leading way to ensure the network is safe, reliable and secure, today and into the future.
3. **Empowering the frontline:** We will refine the insights we provide to our frontline so they have what they need to do their jobs safely and strategically. This includes providing easily accessible information and ensuring that planned work maximises the output and outcomes for our customers and assets each and every day.
4. **Empowering our customers:** We will provide our customers with access to timely and accurate information during their service interaction with us or when there are planned or unplanned network outages. This is all part of us being a customer-centric organisation.
5. **At the right price:** We will continue to leverage value from our procurement to deliver direct savings to customers, ensuring we remain accountable for the money we spend.
6. **Essential technology:** We will deliver a secure, simplified yet sophisticated suite of technology backed by internal technical capabilities to provide continued support.
7. **Enterprise data enablement:** We will provide the necessary data that sits at the centre of each of our systems and processes. Having the right data, at the right time, to the right quality and standard is key to evidenced-based decision-making.
8. **Better service delivery:** We will optimise our back office to support asset management and the frontline by making informed decisions to operate effectively, efficiently, sustainably and safely.

## 4. Strategy and objectives

### 4.1 Corporate strategy

Our corporate strategy applies a 15-year time horizon to identify the key focus areas for the business as part of our mission to 'empower communities to share and use energy for a better tomorrow'. It builds on our vision, purpose and values, and undergoes a refresh or review annually.

Our business objectives are outlined below:



Continuous improvements in safety culture and performance



Operate at industry best practice for efficiency, delivering best value for customers



Deliver real reductions in customers' distribution network charges



Deliver a satisfactory Return on Capital Employed



Reduce the environmental impact of Essential Energy where it is efficient to do so

Our Corporate Strategy is designed to address two main challenges:

- the need to address energy affordability and reduce our network charges
- the ability to respond to a range of external challenges facing our business, including changing consumer preferences, rapid technological change, and a regulatory and political landscape that is in a constant state of flux.

To keep providing excellent service to our customers in the rapidly changing energy market, we need to keep improving the ways we do business. The strategy provides clear direction on what we as a business need to focus on for the next 15 years.

It is underpinned by our transformation program and the divisional plans, which are in turn underpinned by business unit plans. As a business, and from an asset management discipline perspective, we must focus our efforts to achieve what needs to be done, to position Essential Energy for the future as we work towards our vision of 'empowering communities to share and use energy for a better tomorrow'.

Our corporate strategy is depicted by four 'pillars', as shown in Figure 5, and is the roadmap for how we measure our organisational success over time. They are the outcomes we intend to achieve, though the way we get there might alter over time to match continued customer input and feedback. Preparing ourselves for the future requires targeted investment in the network to change our data, systems, processes and technology, and to ensure our people have the capability to deliver sustainable, customer value-driven outcomes.

Commencing in 2018 and refreshed in 2020, the first two years were designed to predominantly focus on strengthening the core business. The strategy then increasingly focuses on pillars 2, 3 and 4 to ensure the network delivers the highest value for the benefit of our customers. The corporate strategy is critical to the development of the AMOs.

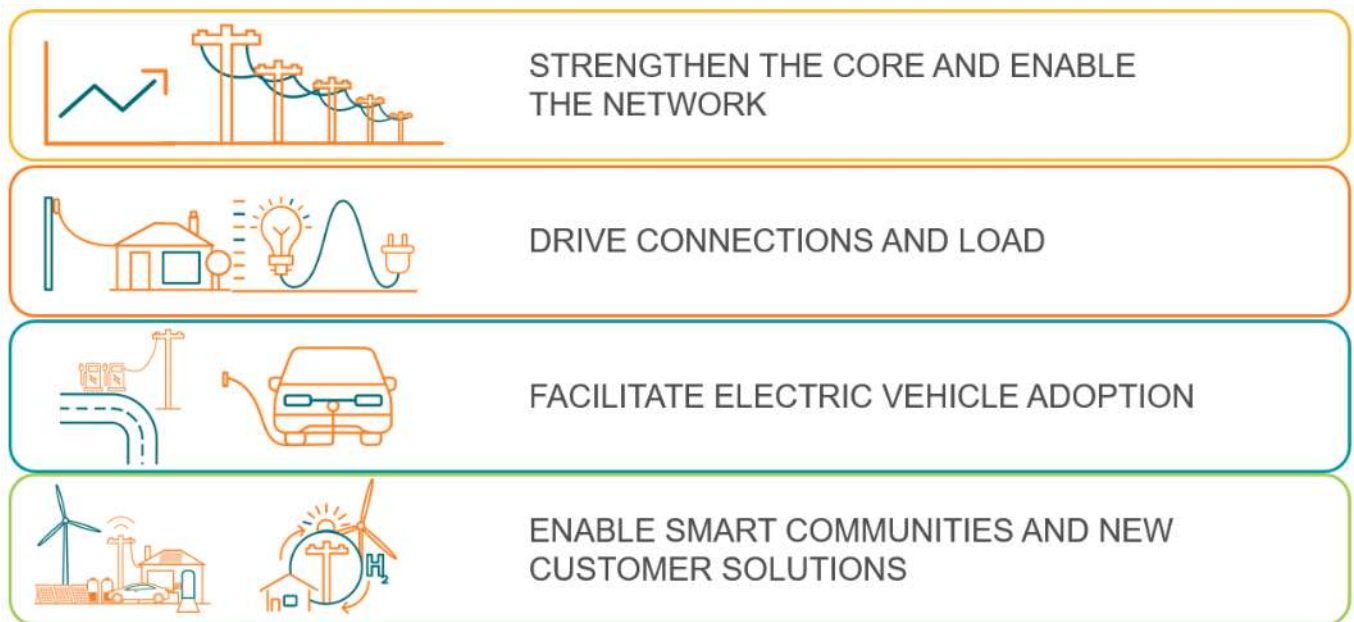


Figure 4: Corporate Strategy

## 4.2 Our physical network

Essential Energy's predominantly rural network developed in response to community needs. Its roots are in the early 1900s, though today's network developed largely around 1940 using the planning, design and construction standards of the day. Maximum energy demands grew, and County Councils responded to this, building networks across NSW driven by cost and the availability of post-war materials.

Since those early days, social expectations around electricity supply have grown. Nowadays, it is viewed as an essential service rather than the privilege it once was. Our current lifestyle depends on the availability of a safe and reliable power supply. Today's connections are far more numerous, with many more appliances and larger loads per installation. The average age of our network assets is 36 years.

Customers demand high power quality so they can operate a proliferation of appliances. Our customers want to use the network differently, requiring Essential Energy to embrace new technologies such as solar, batteries and electric vehicles. The electricity industry is experiencing a significant change; networks are changing from being largely one-directional to a complex interconnected multi-dimensional energy ecosystem.

Our distribution network is one component of an integrated system through which electricity is generated, transmitted, and distributed to customers. The majority of costs associated with electricity distribution are not driven by the number of customers or their demand on the network. Rather, network costs are driven by the *number of assets required to deliver electricity to each customer*. Whether there are 50 customers connected to one pole or 50 poles connecting one customer, each asset needs to be inspected, maintained, and replaced at the end of its life.

As described in Section 3.1, Essential Energy's network traverses 95 per cent of New South Wales. The network has a large number of asset types across different voltage levels. Customers can be connected at any voltage level from 220,000 volts down to low voltage (400/230 volts), depending on their power needs. Approximately 95 per cent of the network is of an overhead construction type, and 95 per cent of distribution substations are pole-mounted due to the predominantly rural nature of the network.



Our network assets broadly fit into five distinct but interrelated systems; overhead, underground, zone substation secondary systems and public lighting.

Our overhead network is ageing. We replace many assets each year, but the volume of replacements is not sufficient to prevent an increasing age profile. The overhead network is particularly vulnerable to extreme weather events. Most of the risk from our overhead network comes from network (reliability), bushfire and safety risks. An asset management approach has already identified several high-value options and will play an increasing role in making sure our investment is targeted at removing higher-risk assets from the network, improving defect management and reducing inspection costs. New technologies offer opportunities to remove cost and risk from the network – for example, the use of composite materials and Standalone Power Systems (SAPS) in areas where the cost to serve is high.

Underground elements are the least visible parts of our network, and the asset base is growing. While it is less susceptible to bushfire risk, it is vulnerable to other climate-related events such as flooding. An asset management approach will drive activities that tell us more about the health of these assets (such as increased testing and inspection). It will also validate the risk profile, make the case for investment, and optimise our maintenance practices through better data.

Our zone substations are the interface between the sub-transmission network and our distribution network. These assets are relatively young and have received significant investment in recent regulatory periods. An asset management approach will help mitigate the risks associated with a bow wave of potential future replacements, highlight the criticality of spares management on these long lead items, drive realisation of the opportunity to use operational technology advances to increase monitoring of these assets and identify opportunities to replace older assets with modern alternatives that bring reduced risk.

Our Secondary System assets provide critical functions such as protection, visibility, regulation, and control over our primary system infrastructure. The assets are vulnerable to changes in technology, customer requirements and regulatory environments and as such these assets are relatively young when compared to other assets across Essential Energy's network. Changing regulatory frameworks, technologies and customer requirements will continue to drive growth on these assets. An asset management approach will help us understand the full value of these assets, balance competing requirements and identify high value investment opportunities.

Our public lighting system is a vital community service provided to a range of organisations including Local Councils and Roads and Maritime Services NSW. The viability of LED technology is a major driver as customers and Essential Energy seek to achieve the service level objectives at the lowest lifecycle cost. An asset management approach will ensure implementation of new technologies are both commercially and technically viable and will maximise the cost-benefit of these assets.

The status of our network, together with other internal and external factors all have an impact on the risk profile of our network, and with it the costs of delivering an acceptable level of performance. Asset management is the key to making the best investment decisions, increasing efficiency and effectiveness and gaining a better understanding of the cost, risk, and performance trade-offs necessary to ensure the very best outcomes.

## 4.3 Developing the Asset Management Objectives

Essential Energy has developed AMOs that support the current and future needs of our organisation, our customers and stakeholders. These AMOs relate to the assets in scope of the AMS (see Appendix B) and reflect the context of our organisation as well as our business objectives and Corporate Strategy.

Our AMOs have also taken account of our network and asset-related needs, ensuring both a top-down and bottom-up approach to their development. The resulting set of AMOs can therefore be seen as an all-encompassing set of requirements that drive the right activities through the business.

Our AMOs reflect business-as-usual priorities that will enable us to fulfil our obligations, required improvements to existing practices, and a corporate ambition to embrace new ways of working and new technologies to deliver an electricity distribution system that enables the network of the future.

Figure 5 in the following section demonstrates the top-down and bottom-up approach taken when developing the AMOs. **Error! Reference source not found.** describes each AMO in more detail.

## 4.4 The Asset Management Objectives in focus

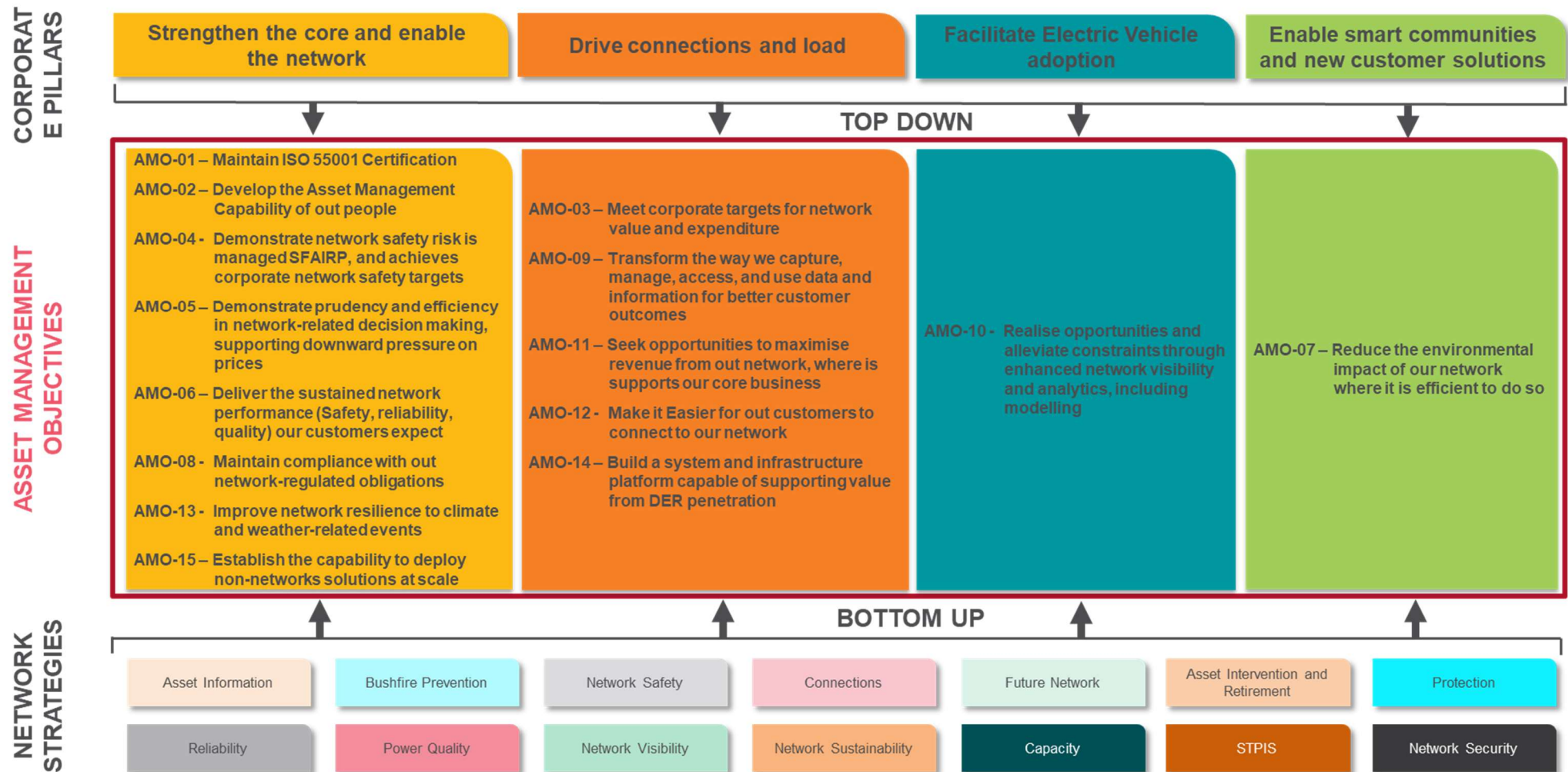


Figure 5: Alignment between corporate pillars and Asset Management Objectives

Table 1: Asset Management Objective Descriptions

ID	Asset Management Objective	Description
AMO-01	Maintain ISO 55001 accredited certification for the Asset Management System.	Essential Energy has an IPART Licence Condition to maintain certification to AS ISO 55001:2014 for its AMS
AMO-02	Develop the Asset Management capability of our people.	This objective will enable Essential Energy to grow its asset management maturity as well as that of its Asset Management System. It will help to ensure we are well-placed to make the best decisions about our network as well as provide opportunities for employees to learn about asset management (opening new career paths), in turn strengthening our asset management capability still further.
AMO-03	Meet corporate targets for network value and expenditure.	This objective drives achievement of Essential Energy's expenditure and value targets, where value equals the net benefit minus the cost of an investment. Both targets are reported at various forums within the business, including at Board level.
AMO-04	Demonstrate network safety risk is managed SFAIRP and achieve corporate network safety targets.	This objective reinforces Essential Energy's commitment to ensuring the safety of our customers, our employees and the communities we serve. It reinforces the need for a SFAIRP approach as well as the achievement of our corporate safety outcomes.
AMO-05	Demonstrate prudence and efficiency in network-related decision making.	Our regulator requires Essential Energy to apply a network investment approach that ensures (and can demonstrate) a prudent and efficient outcome. Typically, this results in investments and activities that achieve the required objectives at the lowest long-term cost to customers, supporting downward pressure on prices.
AMO-06	Deliver the sustained network performance (safety, reliability, quality) our customers expect.	This objective drives an understanding of the performance our customers expect in addition to those performance levels set by our regulatory and corporate environment.
AMO-07	Reduce the environmental impact of our network where it is efficient to do so.	This objective drives activities that reduce the environmental impact of Essential Energy's network in the context of the full set of requirements and obligations it must adhere to.
AMO-08	Maintain compliance with our network related obligations (both internal and external).	Maintaining compliance with our external obligations is part of Essential Energy's licence to operate. However, we also have internal policies and procedures we must comply with to ensure the safe and efficient operation of our network (e.g., our maintenance policies).  This objective recognises and drives compliance with these obligations and the associated critical controls.
AMO-09	Transform the way we capture, examine, manage, access and use data and information for better customer outcomes.	Essential Energy recognises that the best decisions will be made through access to the right data and information.  This objective focuses the organisation on activities that support the capture of the right information in systems that enable more advanced analytics and drives compliance with data and information legislation.
AMO-10	Realise opportunities and alleviate constraints through enhanced network visibility and analytics, including modelling.	Essential Energy realises there are opportunities to be gained from more efficient use of its network as well as constraints that restrict its use.  This objective drives activities that support increased visibility of utilisation and modelling that makes the best use of the network and will direct investment to where it is needed most.
AMO-11	Seek opportunities to maximise revenue from our network, where it supports our core business.	The electricity industry is changing rapidly. Energy is being supplied to customers in different ways and legislation is enabling market participants to act in different ways.  This objective drives activities that seek to maximise revenue from the network and look for opportunities for new revenue streams to benefit our customers, society and our business.
AMO-12	Make it easier for our customers to connect to our network.	Essential Energy's network needs increasingly to support two-way energy flows. More and more customers are wanting to connect to our network to realise the benefits from renewable energy sources and achieve their outcomes.  This objective focuses the organisation on streamlining its processes to enable these customers to connect more easily whilst still ensuring we protect the integrity of our network for all customers.

ID	Asset Management Objective	Description
AMO-13	Improve network resilience to climate and weather-related events.	<p>Essential Energy's extensive geographical footprint and network configuration can make it vulnerable to the increasing threat from extreme weather events.</p> <p>This objective drives consideration of what can be done to improve the resilience of the network to these types of events for improved societal and business outcomes.</p>
AMO-14	Build a systems and infrastructure platform capable of supporting value from DER penetration.	<p>With the continued growth of DER connections across the network, Essential Energy must adapt its approach to find new ways to support value for customers and for the business.</p> <p>This objective drives activities that build not just a physical network but the systems and platforms through which we can operate the network to deliver the best value.</p>
AMO-15	Establish the capability to deploy non-network solutions, at scale.	<p>Essential Energy's network configuration lends itself to the deployment of non-network solutions in areas where the cost to serve is high. Technological improvements and customers' willingness to embrace sustainable energy solutions means non-network options are becoming ever more viable.</p> <p>This objective drives activities that establish a robust, sustainable framework to install and enable non-network solutions prudently and efficiently.</p>



## 5. Delivering the Asset Management Objectives

The AMSF provides a simple representation of our AMS and how we align network activities, projects and programs for delivery with our AMOs.

The previous chapter described how our AMOs are derived. This section of the SAMP describes the delivery of these AMOs through our strategies and/or through special projects and programs. The outcomes delivered by our AMOs typically fall into one of three categories:

1. Those that **deliver a network outcome** and are expanded upon or supported by a Network Strategy – such as for safety, reliability, future network or connections – which are delivered within business as usual.
2. Those that **lead to an asset- or system-related outcome** that are supported by a Network, Asset Class and/or System Strategy and often require an associated network investment and lifecycle delivery; the delivery of these objectives follows the 'business as usual' path.
3. Those that **deliver an asset management or AMS capability uplift** that don't relate directly to a strategy but are realised through the stand-up of a special (branch) project or transformation initiative that can deliver this capability at a faster pace than would be possible during business as usual.

These delivery categories can be represented by an interim layer in the AMSF.

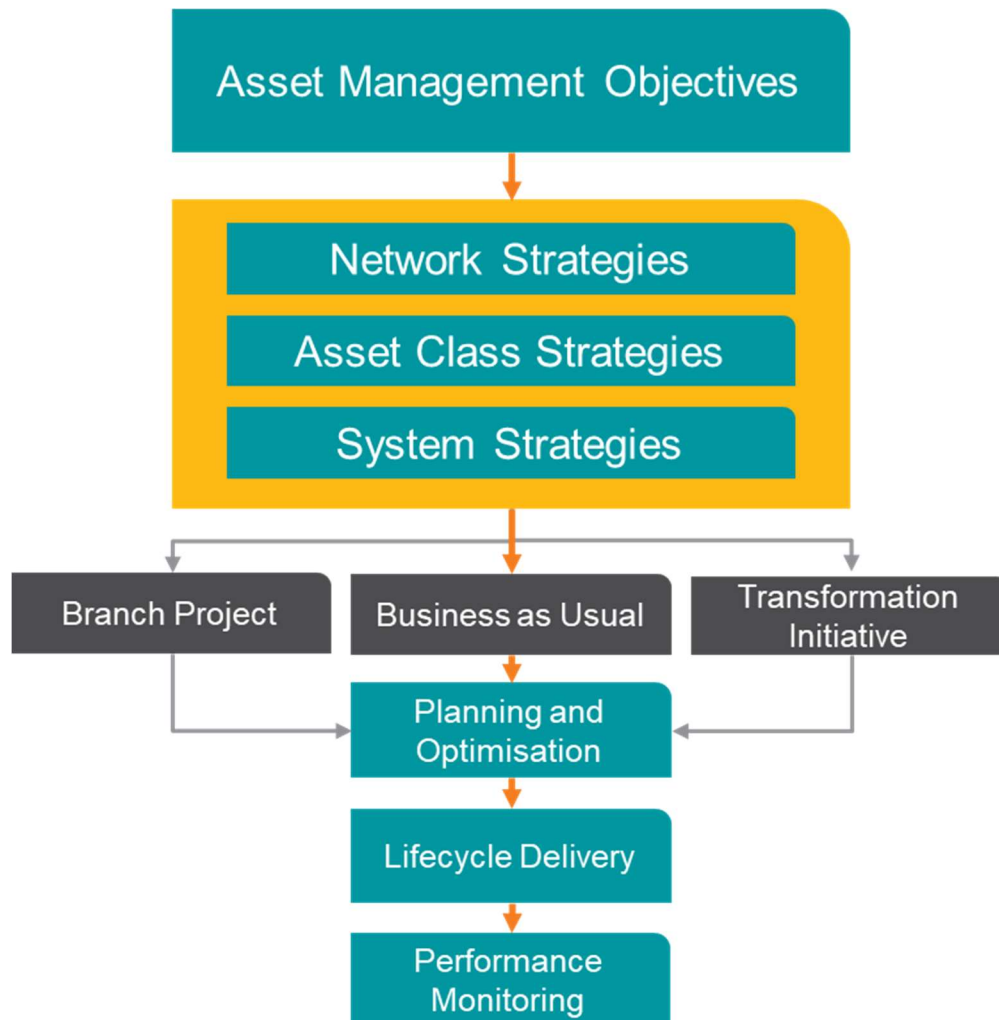


Figure 6: Delivery categories interim layer within the Asset Management System Framework

## 5.1 Business-as-usual delivery

Essential Energy has a suite of strategies at three different levels or layers – network, asset class and system. Each layer presents different amounts of detail; they come together to provide the necessary direction for the business to help achieve the AMOs. Collectively they enable a holistic (yet detailed) view of the cost, risk and performance of our network over a 20-year period.

- > **Network Strategies** address key characteristics or qualities our network must have or deliver. Each strategy applies the AMOs to the characteristic in question and develops specific measures and targets that can be implemented directly by the business or used by the Asset Class Strategies. Examples of Network Strategies include Network Safety, Bushfire Prevention, Future Network, Power Quality and Connections.
- > **Asset Class Strategies** focus in detail on each of our asset types (or classes), for example poles, conductors and vegetation. They describe the assets within each class, and contain a strengths, weaknesses, opportunities and threats (SWOT) analysis. They use Probability of Failure (PoF) and Consequence of Failure (CoF) models to define the level of risk the asset class presents. They use the AMOs and the strategic direction provided through the Network Strategies to set measures and targets at an asset level, provide strategic directions of their own across the lifecycle, and present a cost, risk and performance profile over a 20-year period.
- > **System Strategies** recognise that the best network outcomes cannot be realised by implementing individual asset class strategies in isolation from one another. There are four system strategies – overhead, underground, zone substation and secondary systems – that bring together the groups of assets that interact most closely with one another, each functioning as a sub-system of our network. In doing this, the recommendations from the asset class strategies are ‘rolled up’ to enable efficient consideration and delivery of recommendations.

The outputs from each strategy provide strategic (and tactical) direction across the lifecycle. These recommendations are taken forward by many different parts of the business with overall coordination of these activities being managed by the Asset Management branch.

## 5.2 Branch project or transformation initiative delivery

Some AMOs don't relate directly to a Network, Asset Class or System Strategy. These objectives typically deliver a new or uplifted capability in the business, for which a new project or initiative is required. Upon completion of the project or program, these new capabilities are embedded in the business and drive improved asset management practices.

## 5.3 Planning and optimisation

Network investments are initiated, planned, developed and optimised through the coordinated activities of several functions across the business, including (but not limited to) Network Planning, Network Design, Network Portfolio, Investment Optimisation and Network Delivery.

Investment identification is influenced by the content of our strategies; preferred investments are identified through application of a range of decision-making criteria and optimised within Essential Energy's Asset Investment Planning software. These investments, together with additional mandatory projects, programs and cyclic maintenance-related activities form our network portfolio which is approved, managed, and governed using well-established practices.

## 5.4 Lifecycle delivery

Our network portfolio is delivered principally through the coordinated activities and efforts of teams across the business through the development of Works Programs and Packaging and Scheduling activities.

## 5.5 Monitoring and measuring performance

Each AMO has one or more key measures and targets that enable performance to be measured and monitored. Should performance deviate from its anticipated course, a correction can then be made (in the form of one or more activities) to try to bring it back on track. These measures and targets are expanded upon and added to in the Network, Asset Class and System Strategies to provide more specific direction that enables further action.

The AMO's will be internally reported as part of the governance processes for the SAMP. Our approach to governance is detailed further in the AMS Manual.

**Table 2: Asset Management Objectives performance measures**

ID	Objective	Metric	Target	Responsible officer
AMO-01	Maintain ISO 55001 certification for the AMS	<ul style="list-style-type: none"> <li>Confirmation from a JAZ-ANZ-accredited certification body that Essential Energy's AMS conforms to the requirements of AS ISO 55001:2014</li> </ul>	<ul style="list-style-type: none"> <li>End FY 2023</li> </ul>	Manager, Asset Management Framework
AMO-02	Develop the asset management capability of our people	<ul style="list-style-type: none"> <li>AM Competence Framework established for AM&amp;E and L4 employees</li> </ul>	<ul style="list-style-type: none"> <li>End FY 2023</li> </ul>	Manager, Asset Management Framework
		<ul style="list-style-type: none"> <li>AM Fundamentals training delivered to identified employees</li> </ul>	<ul style="list-style-type: none"> <li>End FY 2023</li> </ul>	
AMO-03	Meet corporate targets for network value and expenditure	<ul style="list-style-type: none"> <li>Network Portfolio Total Expenditure</li> </ul>	<ul style="list-style-type: none"> <li>&lt;=\$Approved Expenditure</li> </ul>	Group Head Network Investment and Maintenance
		<ul style="list-style-type: none"> <li>Network Portfolio Total Value Delivered</li> </ul>	<ul style="list-style-type: none"> <li>&gt;=\$Value Expected</li> </ul>	
AMO-04	Demonstrate network safety risk is managed SFAIRP, and achieve corporate network safety targets	<ul style="list-style-type: none"> <li>Number of IPART reportable incidents</li> </ul>	<ul style="list-style-type: none"> <li>Cat 1 (major) incidents 4-year average &lt;0.5/yr</li> <li>Cat 2 (minor) incidents 4-year average &lt;6.6/yr</li> </ul>	Manage Network Risk and Performance
		<ul style="list-style-type: none"> <li>Network safety SFAIRP demonstration maintained through the ENSMS</li> </ul>	<ul style="list-style-type: none"> <li>100% compliance</li> </ul>	
AMO-05	Demonstrate prudence and efficiency in network-related decision making	<ul style="list-style-type: none"> <li>Value Calculator replacement completed</li> </ul>	<ul style="list-style-type: none"> <li>End FY 2023</li> </ul>	Group Head Network Investment and Maintenance
		<ul style="list-style-type: none"> <li>Asset Management Decision Making Framework v1.0 Embedded</li> </ul>	<ul style="list-style-type: none"> <li>End FY 2023</li> </ul>	Manager Network Risk & Performance

ID	Objective	Metric	Target	Responsible officer
AMO-06	Deliver the sustained network performance (safety, reliability, quality) our customers expect	• System Average Interruption Duration Index (SAIDI)	• <=212.38 mins for FY 2023	Manager, Asset Management Framework
		• System Average Interruption Frequency Index (SAIFI)	• <=1.813 interruptions for FY 2023	
		• Service target performance incentive scheme (STPIS) performance	• STPIS return of \$4.9 million by FY 2024	
		• No. of validated power quality overvoltage events	• Rolling count of validated over voltage events established by FY 2024	
		• No. of network-related public shocks	• <= 204 shocks FY 2023	
		• No. of network fire events	• <= 233 fire starts per annum (5-year rolling average)	
AMO-07	Reduce the environmental impact of our network where it is efficient to do so	• No. of incidents requiring mandatory reporting	• 0 per annum	Manager Environmental Services
		• Deliver corporate sustainability strategy targets	• End FY 2025	Sustainability Manager
AMO-08	Maintain compliance with our network-related obligations (both internal and external)	• Compliance with external obligations	• End FY 2023	Manager Network Risk and Performance
		• Establish compliance management arrangements for key management systems	• End FY 2023	
		• Create a network obligations register (internal and external)	• End FY 2023	
AMO-09	Transform the way we capture, examine, manage, access and use data and information	• New enterprise asset management (EAM) system installed with (existing) data approved, migrated, and critical reports and data marts published	• End FY 2024	EAM Programme Lead
		• Access to digital asset management (digital twin) for business decision making	• End FY 2024	Manager Digital Asset Management
AMO-10	Realise opportunities and alleviate constraints through enhanced network visibility and analytics, including modelling	• Baseline SINCAL (tool for undertaking load flow analysis and fault calculations) condition models established for our medium-voltage network	• End FY 2023	Group Head Network Investment and Maintenance

ID	Objective	Metric	Target	Responsible officer
AMO-11	Seek opportunities to maximise revenue from our network, where it supports our core business	<ul style="list-style-type: none"> <li>Identify net present value positive commercial opportunities from our existing network</li> </ul>	<ul style="list-style-type: none"> <li>End FY 2024</li> </ul>	Group Head of Commercial
AMO-12	Make it easier for our customers to connect to our network	<ul style="list-style-type: none"> <li>Customer satisfaction scores (<i>Corporate Scorecard</i>)</li> </ul>	<ul style="list-style-type: none"> <li>&gt;= 79% FY 2023</li> </ul>	Head of Customer
		<ul style="list-style-type: none"> <li>Design information packs provision timeframe</li> </ul>	<ul style="list-style-type: none"> <li>&gt;= 80% design packs completed within 15 days</li> </ul>	Group Head Network Investment and Maintenance
AMO-13	Improve network resilience to climate and weather-related events	<ul style="list-style-type: none"> <li>Timber to composite pole transition</li> </ul>	<ul style="list-style-type: none"> <li>Increasing % of composite poles on the network</li> </ul>	Manager, Asset Management Framework
		<ul style="list-style-type: none"> <li>Identify appropriate holding number for generation assets (emergency response SAPS) required to support long duration outages</li> </ul>	<ul style="list-style-type: none"> <li>End FY 2024</li> </ul>	
		<ul style="list-style-type: none"> <li>Network Resilience Strategic Plan developed for FY25-29 regulatory submission</li> </ul>	<ul style="list-style-type: none"> <li>End FY 2023</li> </ul>	
AMO-14	Build a systems and infrastructure platform capable of supporting value from DER penetration	<ul style="list-style-type: none"> <li>Deliver on DER outcomes as approved by the AER for the regulatory period</li> </ul>	<ul style="list-style-type: none"> <li>End of regulatory period (2029)</li> </ul>	Group Head Strategy and Future Network
		<ul style="list-style-type: none"> <li>Implementing systems that allow for Dynamic Operating Envelopes (DOEs)</li> </ul>	<ul style="list-style-type: none"> <li>Increasing percentage of network capable of DOEs</li> </ul>	
AMO-15	Establish the capability to deploy non-network solutions at scale	<ul style="list-style-type: none"> <li>Commence deployment of business-as-usual stand alone power systems (SAPS)</li> </ul>	<ul style="list-style-type: none"> <li>FY 2024</li> </ul>	Non-network Solutions Manager



## 5.6 Managing key threats and identifying opportunities

The successful delivery of our AMOs requires an understanding of associated threats and opportunities. In this way, action can be taken to mitigate or exploit these factors to achieve the required outcomes. Table 3 considers the threat categories in achieving our AMOs. Risks and potential mitigations for the successful delivery of each AMO as detailed in Table 2 have been documented in a separate risk register and are available artefacts supporting the AMS.

**Table 3: Threats to achieving AMOs and potential opportunities**

Threat category	Threat	Mitigation	Opportunity
<b>Resource capacity</b>	<ul style="list-style-type: none"> <li>&gt; Insufficient funding through regulatory submission outcome.</li> <li>&gt; We do not have the required number of staff in the relevant divisions and branches to deliver the volume of work.</li> <li>&gt; Not attracting candidates for available roles.</li> <li>&gt; We do have the required materials or equipment to successfully complete the volume of work.</li> <li>&gt; Impacts from pandemics/disaster response (on our network or other DNSP or transmission network services provider networks)</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Well-justified regulatory submission built from reliable and trusted data from within the asset management system.</li> <li>&gt; The ability to describe the long-term vision for the network in terms of the resources required to deliver it.</li> <li>&gt; Organisation-wide workforce planning that takes account of AM resource needs.</li> <li>&gt; Appropriate branch structures with clear roles and responsibilities.</li> <li>&gt; Leverage our future work portfolio to engage in early position engagement.</li> <li>&gt; The ability to leverage external resources on a temporary, short- to medium-term basis to supplement internal capacity.</li> <li>&gt; Secure resourcing (capacity, materials, equipment), not just through traditional methods.</li> <li>&gt; The ability to perform inventory management well (i.e. procurement, store locations, stock levels, logistics)</li> <li>&gt; Well defined and understood Crisis Management procedures and Contingency Plans.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Promote regional advertising to increase application numbers for divisions or branches.</li> <li>&gt; Promote ability for remote working where it is functionally applicable to do so.</li> <li>&gt; Raise awareness of the functions and roles in the business and generating interest working in the area through direct appointment or secondment.</li> <li>&gt; Increased number of organisations on available panels supporting agile resource requirements.</li> <li>&gt; To flex our inventory needs based on historical and future requirements, driven by our asset data and modelling capabilities.</li> <li>&gt; Learn from historical disaster responses to better our approach and outcomes.</li> </ul>
<b>Resource capability</b>	<ul style="list-style-type: none"> <li>&gt; Our staff do not have the required competence and/or capability to perform work that requires a specialist skill set.</li> <li>&gt; We are unable to recruit staff members with the required capabilities from the external market.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Staff development programs and/or the provision of access to training to upskill our staff.</li> <li>&gt; The ability to access external advisory services (consultants) on a temporary short- to medium-term basis to supplement internal capability.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Strengthen our asset management capabilities through staff with an enhanced understanding of asset management.</li> <li>&gt; A quicker uplift of internal capability through the use of tools/knowledge developed specifically for EE in shorter timescales using external service providers.</li> </ul>

Threat category	Threat	Mitigation	Opportunity
	<ul style="list-style-type: none"> <li>&gt; Use of inappropriate equipment / materials / technology to support network needs</li> <li>&gt; Government policy changes that impact on resource capability needs</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Use of SMEs to evaluate equipment and materials, and current and future technology offerings for use with our network.</li> <li>&gt; Well-defined network standards and governance processes preventing inappropriate use of equipment, materials and technology.</li> <li>&gt; We are aware of upcoming changes that enable us to configure our competency requirements and offer additional training or other relevant support to meet changing needs.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Leverage our future work portfolio to engage in early capability uplift.</li> </ul>
<b>Changing business context and priorities</b>	<ul style="list-style-type: none"> <li>&gt; Understanding our customer expectations.</li> <li>&gt; Our external context and/or business priorities change, reducing the relevance of our AMOs.</li> <li>&gt; The scope of one or more of our AMOs expands, affecting the ability of the business to deliver them and/or the timeframe in which they can be delivered.</li> <li>&gt; Adverse events impact our network that take focus and resources away from the delivery of AMOs.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Use of our Stakeholder Engagement Framework.</li> <li>&gt; Periodical refresh of our Corporate Strategy, which covers customer expectations, market developments, economic developments, pace of decarbonisation, and technology developments.</li> <li>&gt; Regular assessment of our external context, and maintaining open communication lines with our customers and stakeholders.</li> <li>&gt; Annual refresh of our AMOs against business objectives, pillars and pillar outcomes to help ensure their continued relevance.</li> <li>&gt; A long-term vision for our network that enables us to evaluate the impact of changes to priorities and/or scope and to adjust resourcing accordingly.</li> <li>&gt; Crisis management procedures are in place to ensure an efficient response that minimises business impacts.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Continued development of initiatives that enable delivery of our Corporate Strategy.</li> <li>&gt; Continuous improvement of our metrics that enable our performance against our Corporate Strategy.</li> <li>&gt; A mechanism that ensures changes to internal priorities (e.g., business objectives) are controlled and communicated. That is, it enables us to assess changing contexts, agree actions the business requires, and to resource and widely communicate the actions to enable their impact on AMOs.</li> <li>&gt; The ability to achieve an AMO in a shorter timeframe, bringing forward benefits to customers and the network, particularly in cases where incentives are made available to Essential Energy.</li> <li>&gt; To improve the efficiency and effectiveness of our crisis and emergency management practices.</li> </ul>

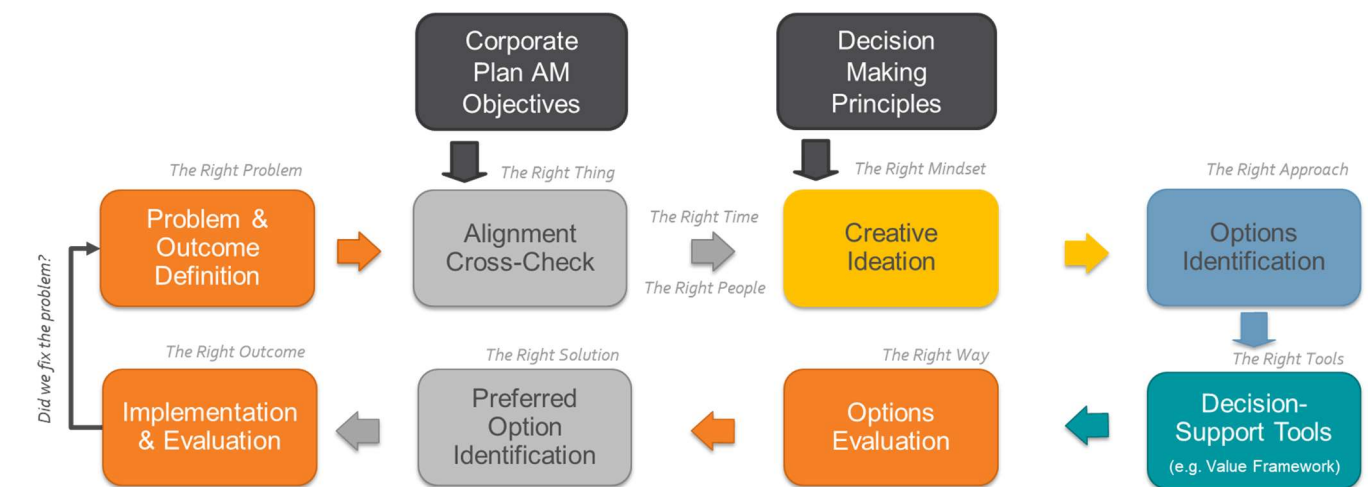
## 6. Decision-making approach

Decision-making and the way decisions are made are critical to ensuring we not only meet our objectives but deliver value for our assets and stakeholders. Making the right decisions at the right time is critical for sustained, continuous improvement for our business and customers.

As a predominantly regulated business, our decision-making can minimise risks to our customers and employees. Our approach to decision-making is driven by a core set of decision-making principles that are designed to ensure a consistent and transparent approach regardless of the level or type of decision. These principles require that decisions shall always:

- seek to maximise the benefit to all customers
- be necessary, prudent and efficient
- align with our corporate risk appetite and risk tolerability criteria
- support the mitigation of critical risks and associated critical controls
- align with our critical compliance obligations
- be consistent with our corporate social responsibility obligations
- be sustainable, meeting the needs of the present without compromising future outcomes
- consider all credible options – opex, capex, system, non-system, asset, non-asset
- consider basic affordability
- address uncertainty to ensure investment is timely, appropriate and avoids stranded capacity
- consider the broader context of the network/environment – that is, what else is happening.

Decision-making follows a common process, shown in Figure 8.



**Figure 7: Decision-making process**

Key components of this process include:

- clear definition of the problem and/or the outcome we are seeking – ensuring organisational focus on solving the right problems and obtaining clarity on what we must achieve after implementation
- clear alignment to corporate or asset management objective – avoids expending effort to realise a benefit that isn't considered a priority by the business or by stakeholders
- creative ideation and options identification – taking on board the decision-making principles outlined above
- options evaluation – through the application of the decision criteria and methods outlined below.

Decisions are taken through consideration of the following criteria:

Compliance	The minimum requirement to ensure decisions address critical internal and external compliance obligations.
Safety	Ensure decisions manage safety risk SFAIRP and towards the business objective for improved safety performance and culture.
Risk	Ensure decisions do not adversely impact the delivery of critical risk controls; considering their contribution to defined objectives for risk management; understanding any risks introduced by a decision, and any associated risk transfer; and understanding the uncertainty or delivery risk associated with each decision.
Performance	Consider the contribution of different decision options to the AMOs.
Value	Consider the value of decisions through appropriate quantitative and qualitative measures.
Cost	Include consideration of lifecycle total expenditure costs and opportunity costs associated with specific decisions.

Figure 8: Decision-making criteria

Options are evaluated based on consideration of the associated costs and benefits. This means decision-making methods are tailored to the context of the decision.

Our AM Decision Making Framework (CECG1146) provides additional guidance on how to make decisions in a variety of contexts and criticalities, and broaden the range of decision-making criteria and tools available.

# 7. SAMP development process

This SAMP has been developed using a sequential process incorporating stakeholder feedback where necessary; this process is described below.

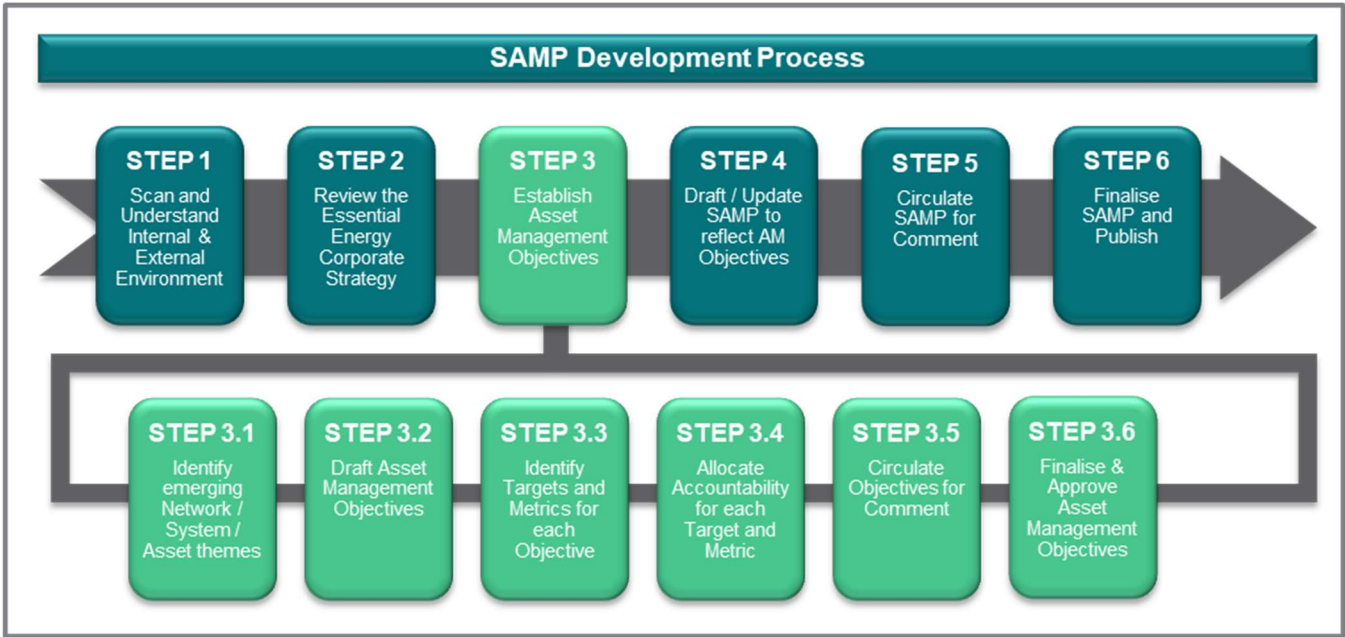


Figure 9: SAMP development process

The SAMP will be reviewed annually in line with the Corporate Strategy review/refresh timetable to enable assessment of any changes to our business objectives, pillars or pillar outcomes that may impact our AMOs. Updates may also be triggered by significant changes to our operating or regulatory environment that have the potential to impact the AMS.

The SAMP is approved by the Chief Operating Officer and stored in Essential Energy’s Policy Library. The primary Responsible Officer for reviewing and updating the SAMP each year is the Manager, Asset Management Framework.



# Appendix A – Asset Management Policy statement

## Asset Management Policy Statement



**We are committed to being a world class energy distribution organisation, enabling energy solutions that drive the best value for our customers.**

**Our commitment is underpinned by our asset management approach, which enables safe, sustainable and efficient network and non-network services that meet the needs of our customers and stakeholders, now and for the future.**

**We will achieve this by:**

### **Being customer centric**

We apply a service mindset, ensuring that the objectives of our customers and stakeholders are reflected in our asset management approach and drive delivery of the necessary levels of safety, service and compliance.

### **Coordinating our asset management activities**

Our Asset Management System coordinates our approach to asset management to deliver the value our customers, shareholders and other stakeholders require from our assets; this system will be certified against the requirements of AS ISO 55001:2014.

### **Demonstrating a clear 'line of sight'**

We provide the leadership and direction necessary to establish a clear line of sight between our corporate objectives and the activities we undertake to plan, design, construct, commission, operate, maintain, de-commission and dispose of our assets.

### **Applying a risk-based, lifecycle approach**

We will consistently apply a risk and value-based approach to the decisions we make; our decisions will balance the competing factors of cost, risk and performance to achieve optimum whole of life outcomes.

### **Investment optimisation**

Investments in our network will be optimised in a way that takes account of our opportunities and constraints; we will allocate resources in a way that demonstrates prudence and efficiency, delivering best value to our customers, shareholders and other stakeholders.

### **Data-driven decision making**

We will embed enterprise-wide data governance and asset information systems into our organisation delivering efficiencies in the way we collect, receive, manage, utilise, access, dispose of and improve our data, supporting the very best analytics and decision making.

### **Growing our asset management culture**

We will inspire a commitment to our asset management approach through the sharing of information, listening and acting upon suggestions to improve network outcomes and learning from each other. We will share our approach with our supply chain and broader stakeholder base, working together with them to achieve the best outcomes.

### **Continuously improving**

We will measure our asset management performance and improve the maturity of our asset management practices, meeting our commitments and obligations with increasing efficiency.

A stylized, handwritten signature in orange ink, appearing to read 'John Cleland'.

**John Cleland**  
Chief Executive Officer



Asset Management Policy Statement, 27 May 2021  
Next Review: June 2023

## Appendix B – Assets in scope of the Asset Management System

