NETWORK STRATEGY

The Future of our Energy Network

April 2018

Endeavour Energy

CONTENTS

1.0 OVERVIEW

1.1 BACKGROUND, SCOPE AND TIMEFRAME

This strategy has been developed to direct the activities of the asset management functions of the business to achieve the vision for Endeavour Energy's network for the current regulatory control period (FY15 - FY19) and into the next (FY20 - FY24). Its purpose is to direct the business outcomes that the Company requires for the network.

Endeavour Energy is a commercially successful, customer-focused business. Our vision is to thrive with the opportunities that will emerge as the Australian energy industry transforms. We intend to ensure that our network meets the future challenges of customers energy supply needs by renewing and creating a network that enhances customer's energy supply experience. We will achieve this through integrating traditional network supply arrangements with distributed renewable generation, and enabling the provision of energy storage capability to assure supply security. In doing so we intend to be known for our benchmarked safety excellence, operational efficiency and energy supply performance.

Our network spans the third largest economy in Australia, and includes the only two priority growth centres in NSW, in Sydney's North West and South West regions. These areas are similar in size to Wollongong and Canberra, and are earmarked by the NSW Government for current and future housing development, as well as Sydney's proposed second airport.

Safety is our highest priority in conducting our business. The continued focus on safety leadership over the years through shaping culture, measuring safety outcomes and managing performance have contributed to the current safety results which are the best in the history of our organisation.

The national electricity supply industry is undergoing significant change and Endeavour Energy is proactively staying at the forefront of these changes. The emergence of new technologies presents both challenges and opportunities for electricity distributors. Customers are seeking more involvement in the industry, as they actively engage in how they consume and produce their own electricity, contribute to the debate on tariff reform in the face of rising prices, and participate in the widespread uptake of renewable energy generation.

1.2 NETWORK VISION

Endeavour Energy's goal for our network and the asset management functions that support it is to create and manage a supply network that is safe, reliable and sustainable. In doing so, we have set ourselves a vision of:

"Being the best performing network in Australia within five years."

1.3 ENDEAVOUR ENERGY'S STRATEGIC OBJECTIVES

Endeavour Energy's purpose is captured in the statement:

"To be of service to our communities by efficiently providing energy supply services to our customers in a way that is safe, reliable and sustainable."

The Company's corporate strategy is to meet the long-term interests of our customers, shareholders, people and communities by delivering on three key strategic goals:

- Safety – We will deliver safe outcomes for our employees, contractors, our customers and the community;
- Reliability – We will provide an energy supply network and associated services upon which customers can rely, that meets their evolving long-term energy supply needs; and
- Sustainability – We will build a thriving, adaptable business by growing long-term value for customers and shareholders through creating and operating an efficient, adaptive electricity network, and providing related services.

The corporate strategy is enacted through a series of supporting strategies and prioritised areas of focus. This Network Strategy defines the specific outcomes required for the network we manage in order to deliver the Corporate Strategy.

2.0 BUSINESS ENVIRONMENT

2.1 ENDEAVOUR ENERGY'S NETWORK

Endeavour Energy's network spans nearly 25,000 square kilometres covering densely populated and regional areas including Sydney's Greater West, the Blue Mountains, the Southern Highlands, Illawarra and the South Coast of NSW. It provides reliable electricity supply to major load centres in Western Sydney (the third largest economy in Australia), including the only two Priority Growth Centres in NSW located in Sydney's North West and South West regions. Our regulatory asset base (RAB) is valued at more than $6 billion[1], and provides power to almost 1 million customers, or approximately 2.4 million people in households and businesses[2].

Our distribution network assets include[1]:

- A sub-transmission system of consisting of 132kV, 66kV and 33kV assets;
- A high voltage distribution system consisting of 22kV, 11kV and 12.7kV SWER assets;
- A low voltage distribution system of 230V and 400V assets;
- A total of 24 sub-transmission substations, 164 zone substations and nearly 32,000 distribution substations across voltage levels from 11kV to 132 kV;
- Nearly 60,000 km of overhead lines and underground cables;
- Metering assets;
- Communications assets; and
- Street lighting assets.

[1] As at 30 June 2017
[2] As at 30 June 2017

2.2 KEY STAKEHOLDERS

Endeavour Energy is a regulated electricity distribution business with assets spread across a broad geographical area as noted above. Given this, our performance and the way we manage our assets has an impact on a broad range of stakeholders who are not just those with a direct commercial relationship with the Company. Endeavour Energy's corporate plans and business strategies recognise this not only in their objectives but in the culture required to meet the broad ranging requirements of all key stakeholders.

Endeavour Energy's key stakeholders are:

- End-use customers;
- Communities in which Endeavour Energy's network assets are situated;
- Electricity retailers;
- Other connected networks (TransGrid, Ausgrid, Essential Energy, and other private networks), and generators;
- Employees, suppliers and external service providers
- Industry governance and regulatory bodies (such as the NSW Department of Industry, Workcover, etc);
- Independent Pricing & Regulatory Tribunal (IPART – the technical and licence compliance regulator in NSW);
- Australian Energy Regulator (AER the economic energy markets and networks regulator);
- Australian Energy Market Operator (AEMO – the administrator and operator of the wholesale National Energy Market);
- Australian Energy Market Commission (AEMC – the rule maker under the National Electricity Law); and
- Shareholders, including the NSW Government.

Understanding and meeting the needs of this broad range of public and private stakeholders presents unique challenges that Endeavour Energy continually faces and meets. Ongoing refinement of our network strategy is necessary to continue to adapt to the changing requirements of these stakeholders.

2.3 HISTORICAL CONTEXT

At Endeavour Energy's formation in 1996[3], the company adopted an Asset Manager-Service Provider business model under which it was to operate for several years. This model reflected the development of organisational design and structural arrangements that were emerging amongst asset-based organisations such as utilities at that time. It was recognised as a necessary step to clearly articulate the business and performance outcomes for the network, and to ensure that efficiency in service delivery was able to be achieved through arm's length separation of the services arm of the business (competing against third-party service providers).

[3] As part of Integral Energy, a combined energy retailer and network services business.

In the early 2000's however the Company identified the need to substantially increase its network investment to address identified network needs, particularly with a focus on asset renewal and greenfield network development. The network strategy developed at that time identified that chronic under-investment in asset renewal and a lag in network capacity growth compared to customer demand was leading to an overall decline in network performance and network capability. In response to this the network strategy[4] specifically targeted:

- Arresting the deteriorating condition of the asset base;
- Turning around a decline in reliability performance of the network, and
- Providing adequate capacity and network capability in accordance with defined planning and reliability standards.

This strategic approach to defining outcomes for the network led to the successful regulated revenue determinations of 2004 and 2009. These periods of asset renewal and extensive network development were aimed at establishing a network foundation that better placed Endeavour Energy to meet the changing energy supply demands of customers.

Endeavour Energy's ability to deliver the outcomes identified in these two determinations, and the successful delivery of the associated unprecedented network capital investment programs whilst continuing to deliver its maintenance program, is testament to the Company's asset management and business process agility.

The 2015 revenue determination surfaced new challenges going forward. A period of consolidation was required in order to contain network capital investment in-line with community expectations without sacrificing network risk and network performance outcomes. This was undertaken to ensure greater operational efficiency. It was achieved through adapting and further refining our asset management capability to better meet customers and stakeholders evolving energy supply requirements.

With the right balance now struck between efficiency and energy supply performance, Endeavour Energy is well placed to move forward with our customers in their evolving energy supply needs, particularly facilitating the uptake of embedded renewable generation and the need for energy storage. Our network will require ongoing renewal to transform it from its traditional bulk-generation to end-use supply framework to become a neural network of remotely controlled interconnections of multiple distributed generation sources, peer-to-peer energy transfer solutions, and to meet the emerging requirement for bulk and distributed energy storage.

This network strategy is aimed at continuing to evolve and develop our network through strategically targeted technological renewal and adaptive network development to provide the energy services capability that our customers require for the future.

2.4 CURRENT BUSINESS CHALLENGES

The areas of strategic focus pertaining specifically to our network are as follows:

Safety continues to be a key priority

The focus on safety at Endeavour Energy has been on the development of safety leadership capability, safety culture and safety management frameworks, which have helped to drive the

[4] Integral Energy Network Strategy, March 2003.

significant improvement in safety outcomes over the past few years. This approach will continue into the future.

The continual focus on safety has led to continually improving safety results over time, with further initiatives planned as outlined in the Health, Safety & Environment (HSE) Corporate Plan.

Safety culture initiatives including the Network Fatal Risk Program, a review of the Company's safety observation process, and engagement forums focusing on safety strategy and improved staff communication are ongoing.

Growth in Western Sydney

Endeavour Energy services some of the fastest growing communities in NSW. Our supply franchise area includes the North West and South West Priority Growth Areas, established by NSW Government in 2005 to accommodate 500,000 new residents over 30 years.

Endeavour Energy's area also services the Western Sydney Employment area, which was established by the NSW Government in 2005 to provide businesses in the region with land for industry and employment, catering for transport and logistics, warehousing and office space. Further, the site for a proposed second Sydney airport will be in Endeavour Energy's supply franchise area at Badgerys Creek. In addition the Western Sydney Employment area is to be expanded by 4,500 hectares to adjoin the airport site land and the South West Growth Centre.

The abovementioned developments, combined with such infrastructure projects as the WestConnex motorway, SouthWest and NorthWest rail links, and the associated growth of the region, provide a suite of opportunities for Endeavour Energy for long-term prudent asset and revenue growth.

Changing customer energy needs and changing technology

Australia's electricity landscape is likely to change significantly in the coming decades with the increasing use of embedded generation, development and uptake of economically efficient energy storage solutions, and the increasing adoption of electric vehicles combining to drive transformational change. As an example, today, approximately 12% of Endeavour Energy's customers have solar roof-top installations.

As a consequence, the role of the network is expected to change significantly with the increasing prevalence of the 'two-way' energy flow. The role of the traditional grid is evolving to enable customer-driven take up of new services, such as renewable generation, battery storage, electric vehicles and home automation.

These changes, combined with price signal impacts and energy efficiency improvements mean that customer usage patterns continue to change, with the network functions transitioning from a traditional "bulk supply to customer" model to a "connection sharing" model, similar to the way the internet functions.

This creates several challenges. The existing network design and the assets employed are from an era where the energy supply model was vastly different to that which exists today. It is no longer appropriate to simply replace assets that have reached the end of their useful life with like-for-like equivalents, but opportunities need to be taken to reshape the network design using modern technology assets more suited to changing customer end-use requirements.

Further, the traditional drivers of network expansion used to justify investment in infrastructure in accordance with traditional market rules (such as load growth) may not adequately reflect the need for network connectivity that future customers will require into the long-term.

Notwithstanding these changes, medium and long-term forecasts for our supply area continue to indicate stable growth in energy consumption and peak demand, largely fuelled by greenfield development (where limited network currently exists) and organic growth due to infill and old-area redevelopment.

The widespread use of embedded generation and the emergence of cost-competitive battery storage solutions also provide challenges and opportunities for the Company. Endeavour Energy's emerging network investment requirements need to bridge the different investment drivers of connecting new customers to new network whilst at the same time redesigning and re-developing the existing network to reflect the changing energy supply needs of our customers.

To meet this challenge Endeavour Energy is integrating these technological developments and changing customer requirements into our network investment planning considerations and evaluating opportunities presented from leveraging the current and potential future technological advances.

Operational efficiency

Endeavour Energy is committed to continuous improvement and demonstrating increasing efficiency beyond the regulator expectations for the benefit of our customers and other stakeholders.

However, the Australian Energy Regulator (AER) in its 2015 revenue determination proposed to substantially reduce our operating expenditure to unsustainable levels, which would have placed an unacceptable level of risk on our network operational capability. The Company successfully appealed against the AER's determination, which was subsequently set aside and with the AER being directed to make a new determination which to date has not been forthcoming.

Notwithstanding this, Endeavour Energy is committed to remaining focused on our ongoing efficiency improvement journey. The Company is responding through our various business transformation initiatives to the community's expectations of lower costs, greater operational efficiency and the maintenance of service standards, with performance and efficiency benchmarking continuing to be a tool employed to assess our performance.

Changing community expectations and asset management requirements

40% of Endeavour Energy's distribution network is in bushfire prone areas. Preventing network-related bushfire starts is therefore a high-priority asset management focus area. Recent coronial and civil court proceedings related to bushfire events in our supply franchise area and associated with other electricity supply utilities across Australia reveal changing community expectations and future related challenges pertaining to the presence of our network in the community setting.

Partly in response to this the technical regulator, IPART, requires substantially increased evidence that Endeavour Energy has sound and effective asset management strategies in place. Amongst other things this is expected to require the demonstration of consistency with, and potentially compliance with, the international asset management standard ISO 55001 as a NSW Distribution Licence Condition.

In light of this, Endeavour Energy is undertaking an Asset Management Transformation Program which has as one of its enablers the certification of our Asset Management system to the ISO55001 standard. This is being done not as an end in itself, but more as a mechanism to highlight areas of potential improvement in our asset management capability and maturity in order to better achieve the objectives of this network strategy in providing a safe, reliable and sustainable network.

National Electricity Market changes – the Power of Choice

The Australian Energy Markets Commission (AEMC) proposed a series of changes to the National Electricity Rules in November 2014, following recommendations by the Power of Choice review.

As a result, the rules governing competition in metering and related services will change from 1 December 2017 to give the overall responsibility for the provision of metering services to a new type of metering service provider known as a Metering Coordinator. Under the new arrangements, any party will be able to compete to provide metering services to retailers, subject to registration requirements. Amongst other things, the rule change is designed to facilitate a market-led deployment of advanced meters.

These changes will likely result in Endeavour Energy providing a decreasing share of metering services to small retail customers within our supply franchise area. This is likely to impact our ability to recover the costs of existing metering assets and may also impact other operational aspects such as access to metering data, network security, and load-control capability. This change will impact the management efficiency of these critical assets and will necessitate changes to many revenue and customer-interaction business processes.

Network Operational Systems Security and Integrity

Maintaining and strengthening the integrity of Endeavour Energy's information and communications system that control our network remains a high-priority due to the ever-increasing risk of system hacking and cyber-attack. The Company remains ever-vigilant in this regard, and this requires ongoing development in our cyber-security and business continuity plans affecting our network operational-technology assets.

Further, the changing demands on the functionality of the energy supply network requires greater dependence on automation, the capability to remotely interrogate equipment, enhanced network configuration control (down to the end-use customer level), and the ability to directly interact with customer installed equipment. This requires ongoing renewal and development of our network operational systems and places even greater importance on control system integrity and cyber security. Renewal and adaption of operational support and control systems combined with modern energy supply technologies will be required to address these challenges.

3.0 CORPORATE STRATEGY AND NETWORK OUTCOMES

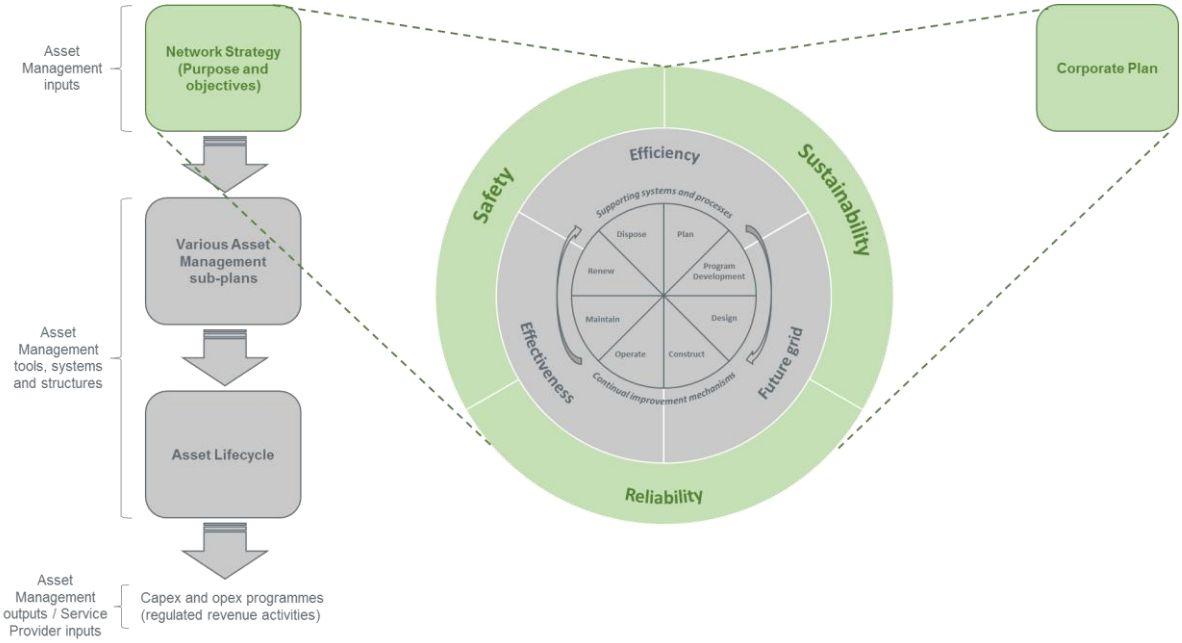
3.1 NETWORK STRATEGY FOCUS AREAS

The requirements of the Company (the "asset owner") articulated through the Corporate Strategy set the objectives for the network and define the direction for the Asset Manager managing the network and associated assets, also providing overriding direction to the Service Provider. The corporate strategy is structured around the three key objectives of safety, reliability and sustainability.

This Network Strategy provides the overarching requirements of the asset owner for the network, setting out the Purpose and Objectives as noted in Figure 1 below. This ensures

that Endeavour Energy's approach to asset management and service delivery is directed by the objectives that the Company has set for the network and to ensure that the strategic goals will be achieved.

Figure 1: Purpose and objectives for the network are reflected in the Network Strategy



Specifically it provides the direction for the various Asset Management strategic initiatives required to achieve the objectives of this strategy, and that are aimed at delivering the desired asset management outcomes using efficient, "fit-for-purpose" approaches. The outputs from the asset management process (in particular, the OPEX and CAPEX investment programs) also provide inputs to Network Services Division, the Company's asset management service provider, which undertakes activities in the "construct", "operate", "maintain", "renew" and "dispose" phases of the asset lifecycle.

Given this, the relevant strategic focus areas of the Company's approach to asset management required to deliver the Network Strategy are:

1. Asset management effectiveness, which aims to deliver the required network performance at least cost to customers (i.e. commercial network management);

2. Preparing the network for future grid requirements through the commercially efficient provision of network-connected energy services; and

3. Efficiency and service delivery, which aims to deliver workforce optimisation productivity improvements.

The Company has a fourth strategic focus area related to its delivery capability, which is to commercially grow the Company's unregulated revenue in the provision of traditional electricity asset services, network-connected energy services, and asset management services.

Whilst a central platform in achieving the corporate objectives regarding revenue growth, it is not central to achieving the objectives set for the Company's regulated network asset management and service delivery activities, and is therefore not part of this Network Strategy. The revenue growth aspects of the Network Services strategy are captured and reflected in the Commercial Strategic Plan.

Section 1.3 of this document outlines the Company's strategic outcomes of safety, reliability and sustainability. Endeavour Energy has a strong performance history regarding safety and reliability, and is effectively continuing its efforts in these areas. Endeavour Energy also performs well on sustainability measures, although increasing efficiency is a key industry-wide focus area, with pressure from customers and the Australian Energy Regulator (AER) to reduce the cost of service delivery to reduce the price to consumers.

Endeavour Energy's asset management purpose statement is summarised as "commercial network management", which captures the organisational goal of sustainable renewal and development of the network balanced with continually increasing efficiency. This combined with Endeavour Energy's "delivery excellence" approach achieves delivery capability and delivery improvement through focusing on three strategic focus areas of safety, competitiveness, and motivated people.

Benchmarking analysis undertaken by the Australian Energy Regulator (AER) during the 2014 determination placed the Company on the efficient frontier of Distribution Network Service Providers (DNSPs) within the National Energy Market (NEM). Further, it shows that Endeavour Energy sits at the lower-end of the cost curve with respect to its network operational costs.

Endeavour Energy aims to achieve its asset management objectives through a strategic approach to asset investment. This embodies "needs-based" network investment targeting the development of a network that meets the needs of the future in a commercially efficient way. This philosophy has underpinned its investment programs for several regulatory control periods. Examples of Endeavour Energy's "needs based" investment approach include:

- ***Growth investment to meet future electricity demand*** applied on an "in time" rather than "ahead of time" approach in line with the demands for new customer connections and associated impacts on "upstream" network capability. This includes the adoption of probabilistic investment planning methods to determine when incremental increase in capacity is economically justified and/or required to facilitate network connection of greenfield developments;
- ***Replacement based on asset need*** with a blend of wholesale replacement and piecemeal (component-by-component) replacement strategies adopted subject to site factors and with a view to meeting future network needs. The life-cycle management of some lower-value asset types ranges from pro-active renewal where type faults are identified or where risk factors warrant this, through to reactive replacement at the end of the asset's life as determined through asset inspection, maintenance, and defect rectification processes;
- ***Targeted reliability investment*** to address (poor) performance outliers in accordance with licence condition performance requirements;
- Actively seeking the ***use of demand/customer side solutions*** where appropriate. Demand Management is seen as a credible alternative to investment and not just a compliance activity, and Endeavour Energy is recognised as a leader in this area. Associated with this is the uptake of ***new technologies to create a future grid*** that supports the uptake of distributed energy resources;
- ***Operational Efficiency*** - the overall maintenance spend has reduced over the past 5 years as a result of more targeted maintenance activities as well as internal and external

benchmarking to refine the Company's maintenance approach. This has been achieved through several strategic initiatives, viz:

- Maintenance activities for sub-transmission assets are now primarily based on a risk and condition-based preventative approach. Historically, maintenance for this class of assets has been based on routine time-based maintenance intervals, but Endeavour Energy has been progressively transitioning to determining maintenance requirements based on utilisation and condition factors, and using risk and condition assessment techniques such as FMECA and RCM processes. 85% of sub-transmission asset types are now maintained using a risk-based approach based on FMECA.
- The maintenance approach for distribution assets is primarily inspection and condition based with some preventative maintenance activities undertaken when the expected failure mechanism is predictable and manageable. This too is moving to a more risk-based maintenance approach using FMECA and RCM processes. 45% of distribution asset types are now maintained using a risk-based approach based on FMECA.
- A risk-based vegetation management program targeting the achievement of hazard reduction outcomes. This includes annual pre-bushfire season inspections and hazard identification using sophisticated inspection processes such as LiDAR-based aerial patrols and high-resolution cameras in order to enable targeted hazard reductions and defect rectification.

These approaches underpin the network asset investment programs developed through our integrated planning methodologies, outlined in the following section, the expenditure requirements for which being captured in the Company's Strategic Asset Management Plan.

4.0 ACHIEVING THE NETWORK STRATEGY

Endeavour stands on a platform of sound asset management, engineering and network service delivery. We have a strong base of knowledge and we well understand the assets we manage, and have a strong record of delivery of our construction and maintenance programs. Our foundations are based on the three key principles of delivering a network that is Safe, Reliable and Sustainable.

We have moved from an environment of unsustainable asset management in the 1990's and early 2000's, transitioning through a revised approach to asset management in the 2000's into a catch up program from 2009 to 2015. Endeavour is now in a phase of consolidation and ongoing efficiency improvement in our asset management capability and outcomes, with our Commercial Network Management approach being key to our success.

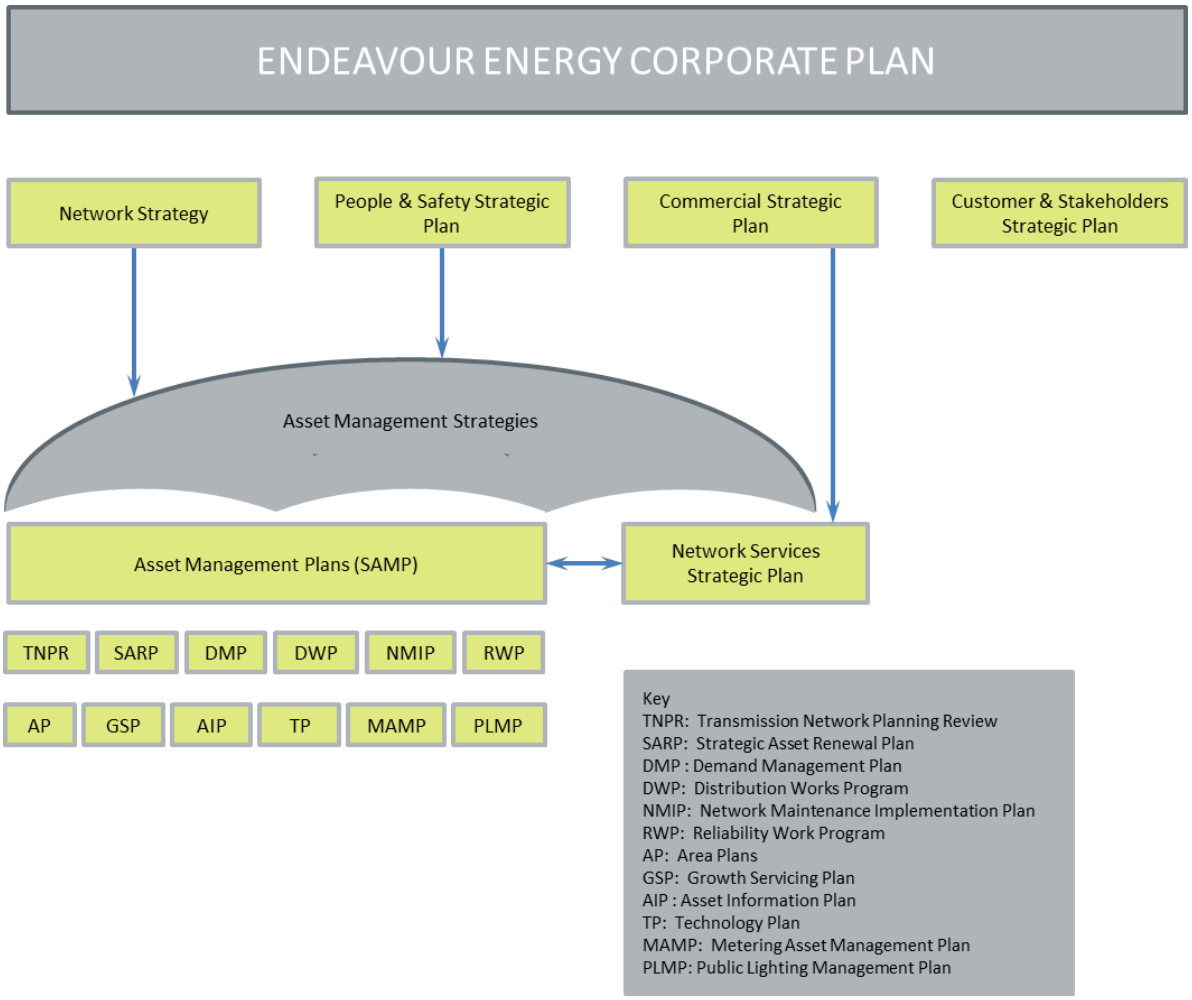
In this context, the vision for Endeavour Energy's asset management capability is Commercial Network Management, which is defined as:

"Delivering the desired asset management outcomes using efficient, "fit-for-purpose" approaches."

This is supported by a delivery excellence strategy focusing on delivery capability and delivery improvement.

Figure 2 below shows the relationship between the Network Strategy and the Company's corporate plan. It also shows the "line of sight" from the Company's corporate plan to the asset management strategies and associated supporting plans that are focused on achieving the objectives of asset management strategic initiatives and the Network Strategy.

Figure 2. Endeavour Energy's Strategic Planning Framework



4.1 STRATEGIC NETWORK OUTCOMES

Endeavour Energy constantly monitors and reviews performance in order to inform the Company on the effectiveness of the asset management activities, and to provide assurance to the Asset Owner regarding the achievement of its strategic goals for the network and the Company as a whole.

Consequently, at a high level, network and asset management performance is measured against these objectives i.e. safety, reliability and sustainability. Outcomes and performance objectives are measured against each of these elements as follows:

Safety

The organisational strategic goal for safety is “to deliver best practice safety performance for our employees, contractors and the community”.

To assess performance against this objective Endeavour Energy intends to achieve the position of being in the top performing quartile for the least number of injuries and fatalities to employees, contractors and the community (as they relate to network assets and related asset management activities) as well as lowering the incidence of controllable Significant Electrical Workplace Accidents (SEWAs) and other safety-related Reportable Incidents.

Reliability

The organisational strategic goal in relation to reliability is “to maintain the reliability, security and sustainability of the network”.

To measure performance against this objective Endeavour Energy will maintain current performance in the following areas:

- Reliability;
- Security of Supply (e.g. availability, utilisation, redundancy, etc.); and
- Sustainability (e.g. asset age profile, remaining life, health index, and risk profile, etc.).

Sustainability

The organisational strategic goal in relation to sustainability is “ensure our business is sustainable by making it efficient, affordable and competitive so that it can meet future challenges”.

To measure performance against this objective Endeavour Energy will **improve current performance** in the below areas (as they relate to asset management activities and the network assets):

- Efficient e.g. unit costs, other efficiency benchmarking measures, etc.
- Affordable e.g. contribution of asset management activities to electricity prices, etc.
- Competitive e.g. benchmarking of service delivery costs to other providers, etc.
- Community expectations, particularly in relation to the impact of our assets in the community setting that go towards impacting our social licence to operate our network.

4.2 ASSET MANAGEMENT STRATEGIC INITIATIVES

The Network Strategy describes Endeavour Energy’s “vision” for network outcomes that are required to be achieved through the Company’s asset management functions and processes. These are in turn supported by initiatives to effect change to “business as usual” asset management system (AMS) processes to enhance our asset management capability.

The vision for network outcomes is prefaced by acknowledging the challenge of adapting to anticipated changes to energy usage and subsequent changes to network requirements. Future requirements for the network are currently being shaped by technical changes as consumers increasingly adopt distributed generation and storage, and a potential wide-spread transition to electric vehicles.

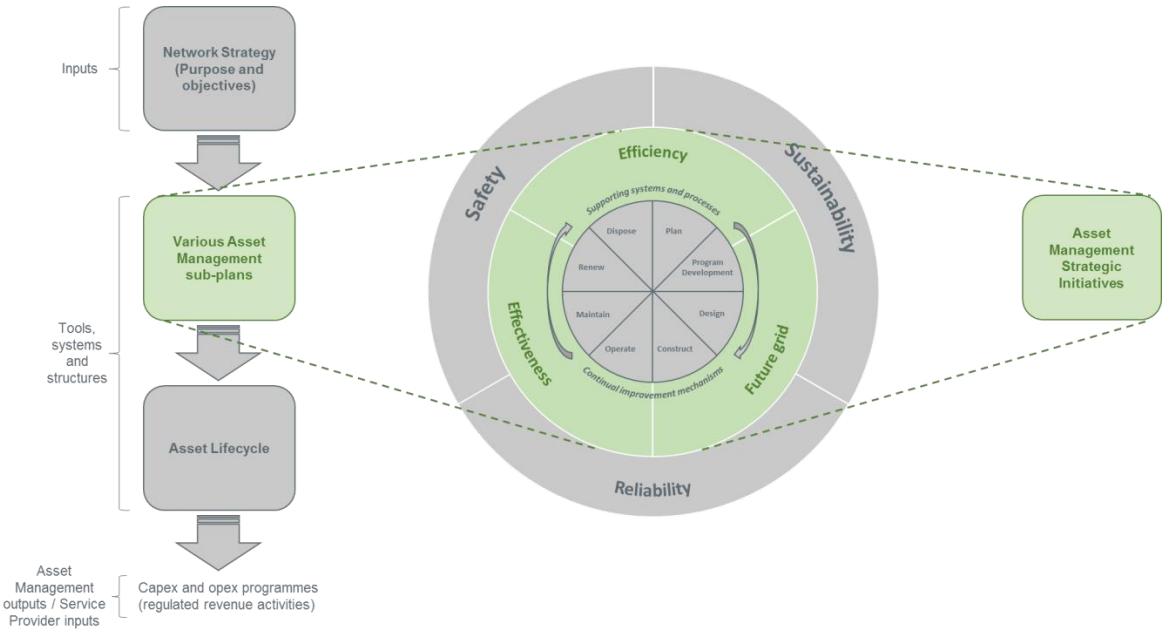
Preparing Endeavour Energy’s network to meet the challenge presented by these changes must be managed in the face of increasing efficiency expectations from industry regulators, customers and shareholders alike.

Given this business context, to achieve the objectives of the Network Strategy in the period within the next five years, the Company’s asset management focus will be directed by three key strategic initiatives, viz:

1. Asset Management effectiveness, which aims to deliver the required network performance at least cost to customers (i.e. commercial network management) through improved decision-making and more efficient service delivery
2. Future Grid - preparing and responding commercially to the future grid through the renewal and development of a network capable of the efficient provision of network-connected energy services as demanded by our customers; and
3. Efficiency and service delivery improvements, aimed at achieving productivity improvements through the optimisation the workforce profile to maximise response efficiency and lowering the cost to serve.

Figure 3 illustrates how the asset management strategic initiatives work in the asset management process to achieve the Network Strategy.

Figure 3: The asset management strategic initiatives and the asset management process



Predicated on our culture of safe, reliable and sustainable asset management, the asset management strategic initiatives are aimed at enhancing Endeavour Energy's "commercial" asset management approach. These are built on a foundation of historically sound asset management and engineering capability that has underpinned Endeavour Energy's business-as-usual asset management processes, combined with a highly skilled and experienced workforce that fully understand the assets under management.

The initiatives are further explained below.

4.2.1 ASSET MANAGEMENT EFFECTIVENESS

The key objective of the commercial network management approach is to deliver the required network performance outcomes at least cost to customers. In order to deliver on this strategic objective, actions over the coming years will be:

1. To continue to develop our maturity as asset managers through enhanced understanding of asset risk as the driver for capital investment and maintenance practices. This would require continued and enhanced application of Failure Modes, Effects and Criticality Analysis and other risk-based, outcomes-oriented approaches to effectively target asset management effort.

2. Ensuring that we have the "right" information to manage our assets and by managing asset information as an asset category in its own right. This will be facilitated by data field capture processes and capabilities to ensure that data is captured when it is created. This is not only efficient but improves accuracy and facilitates better-informed asset management decisions being made. Our Asset Information Strategy established the framework to guide activities in this strategic focus area.

3. Ongoing use of benchmarking to assess performance and capability, specifically:

    a. General business operational performance and efficiency
    b. Network outcomes, such as supply security, supply reliability, and commercially viable STPIS programs
    c. Commercial network management efficiency, focusing on more efficient deployment of capital and operating investment. This will require critical review of the standards that drive asset-engineering choices and will ensure that lowest life-cost, fit-for-purpose standards are set. This will include greater use of off-the-shelf solutions where appropriate.

As an instrument to facilitate and focus Endeavour Energy's asset management capability development it is planned to undertake ongoing capability maturity assessments. As part of this, and as one of the first steps along this journey, it is proposed to align our Asset Management System with the requirements of ISO55000, and achieve certification to ISO 55001 as an indication of this. This will provide insight into areas for ongoing development in order to consolidate a world-class asset management capability within Endeavour Energy.

4.2.2 FUTURE GRID

This focus area is aimed at preparing the network to commercially respond to the future electricity supply and connection requirements by providing network-connected energy services. The key issues that have emerged that are expected to impact the network over the short to medium term are as follows:

1. The uptake of embedded solar generation continues to rise, transforming the way customers utilise our network capability and interact with us. Connected customers are no longer passive users of electricity, but are instead producers of their own energy solutions. When coupled to the increasing affordability of battery storage, we are facing an unprecedented revolution in electricity supply.
2. The role of the network is changing to become a "neural network" rather than a supply network, ensuring that the various distributed generation and supply functions operate in an integrated way. This will drive network topology changes, traditional electrical technology supply needs, advanced connectivity, metering, and operational control requirements, integrated with telecommunications requirements.

The increase in embedded generation and battery storage can offer our business opportunities to use the existing grid in new and exciting ways. We are also looking to develop alternative energy-supply and network service offerings to customers. These factors may vary over time as technology and the network itself evolves, and as new energy generation, supply and management technologies emerge.

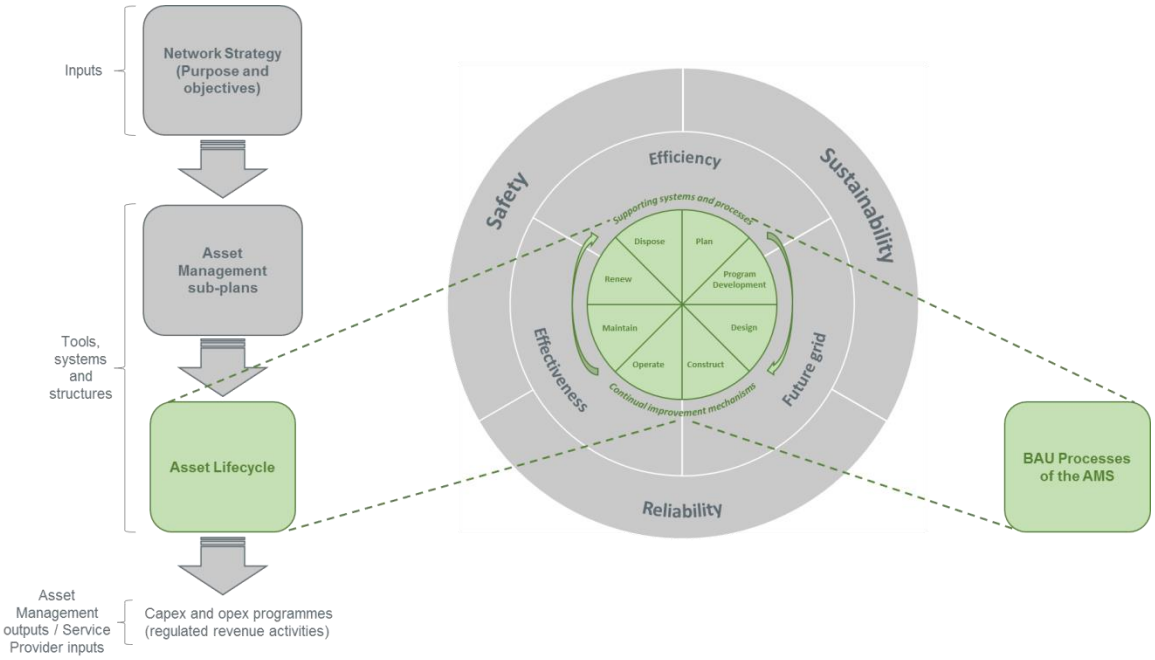
4.2.3 EFFICIENCY & SERVICE DELIVERY

The Company's Delivery Excellence initiative optimises the delivery of asset lifecycle activities, and encompasses:

- Delivery capability - the ability to deliver the work specified in the asset management sub-plans, on time and budget; and
- Delivery improvement - the initiatives required to improve the safety, reliability and sustainability of the delivery function.

This relationship is shown below in Figure 4 below.

Figure 4: The Service Provider Strategy implements strategic plans for efficiency in asset management service delivery



4.2.3.1 Delivery Capability

The delivery capability of the Network Services division is assured through the optimisation of its workforce profile to meet requirements, and the spread of resources throughout its franchise area to maximise response efficiency. Delivery capability is optimised through the Workforce Strategy and Field Service Centre Strategy.

The Network Services Workforce Strategy outlines how the work will be delivered including the use of contractors through blended delivery of core work (using contractors to deliver a portion of work that we deliver internally) combined with outsourcing non-core non-electrical work such as vegetation management.

Blended service delivery has the two key advantages of increasing efficiency to reduce the cost of service delivery through competitive tension and increasing flexibility to manage workload peaks and troughs.

The Field Service Centre strategy outlines how the existing Field Service Centres are located and organised to provide optimal overall capability in responding to network incident customer supply matters. Key elements of this strategy include the ongoing review of service area boundaries in line with asset and customer density changes and monitoring of customer response service levels in the growth centre areas.

The Productivity Strategy continues to build on the Company's proven project management t capability for major capital works and other capital programs, and works management. Going forward this includes improving accountability structures, resource utilisation initiatives, improved work-packet coordination, and ongoing project and resource management skills development.

4.2.3.2 Delivery Improvement

Endeavour Energy seeks to continually improve its delivery capability with current strategies to achieve this including increasing productivity through the Productivity Strategy (which will improve sustainability through reducing Opex and improving Capex delivery efficiency) and streamlining our incident response to improve reliability through the Fault & Emergency Strategy.

The plans for future productivity improvements contained in the Productivity Strategy centre around reducing the cost of service provision through increasing the volume of activities completed per full time employee. This is achieved through systematic consideration of how asset management activities are coordinated and executed, and implementing measures to continually improve productivity. It focuses on improving field force productivity through process re-engineering, "right-sizing" the field force, and reforming regional and central operations:

The Fault and Emergency Strategy focuses on optimising the management of response to network incidents having due regard for safety (staff, public and emergency services), customer service and reliability outcomes, and efficiency and cost reductions. It outlines the current Fault and Emergency profile, recent initiatives and presents opportunities for further review.

4.3 ACTIONS TO IMPLEMENT THE STRATEGY

In order to prepare Endeavour Energy for these challenges our asset management capability will need to be culturally embedded as the "way we do business". Commercial network management credentials will be the key enabler and platform for success.

Moving forward, Endeavour Energy is focused on introducing a more mature and information-based asset management approach to enable better asset decisions without materially compromising overall network risk or our position on the efficient cost curve. To enable this, there is a need to:

- Put in place any necessary processes, tools and skills to better understand our network asset risk profile for both individual asset types and their impact on overall network performance; and
- Effectively implement the resulting investment and maintenance programs and initiatives using the most efficient and appropriate resource model.

These business imperatives are the impetus for embarking on the Asset Management Transformation Program. In concert with this, and in order to realise some of the asset management transformation outcomes Network Services "Delivery Excellence" initiatives seek to deliver improvements in the delivery function.

Specific objectives and relevant key initiatives required to achieve the Network Strategy are developed, captured and implemented through the annual business planning processes. They may be found in the annual business plans developed for each of Endeavour Energy's business units.