

# Operational Expenditure (OPEX) Plan

## Planned Maintenance

2019-24

Supporting Document 11.3.3

# Opex Plan - Planned Maintenance

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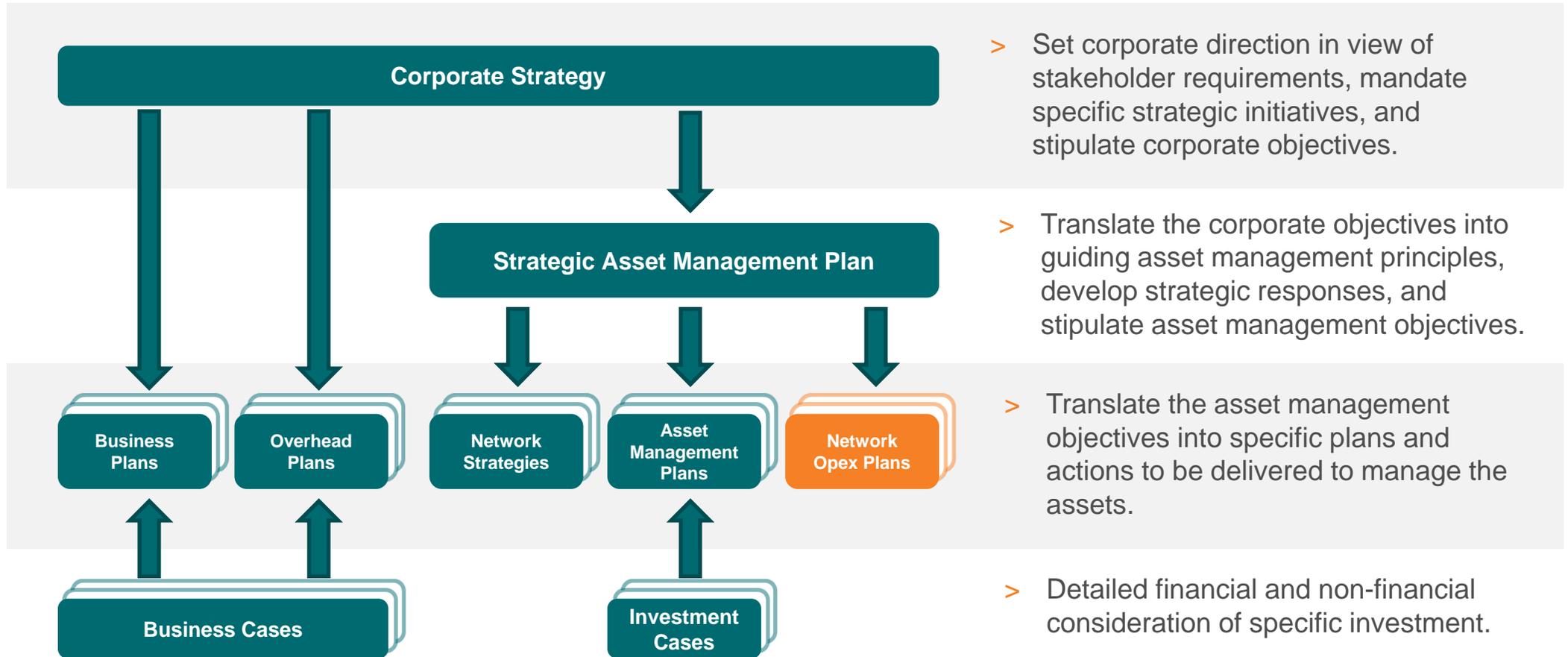
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# Document hierarchy and purpose



# Executive Summary – Planned Maintenance

**Planned (corrective) Maintenance** predominantly involves the planned rectification of asset condition defects (i.e. not emergency work).

Our Planned Maintenance approach varies based on:

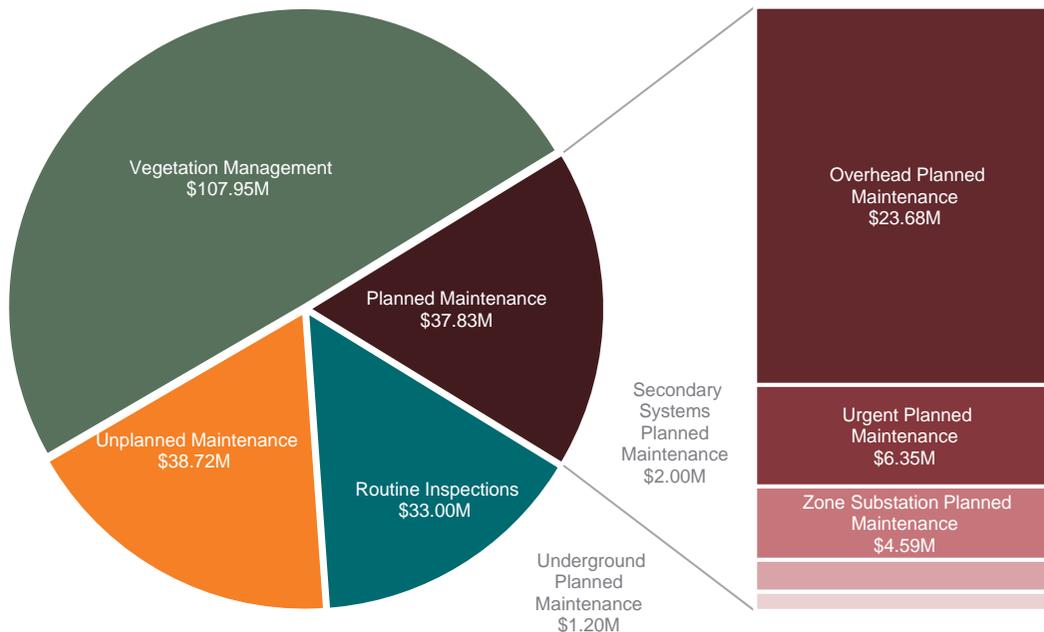
- > **Asset type**, considering potential safety and reliability risks;
- > **Severity of the defect**, generally assessed through a **routine inspection program**;
- > **Assets requiring specific skills or equipment**, such as Zone Substation or Secondary System assets

## REGULATORY PERIOD

	2014-19	2019-24
Avg. Spend	\$48.1M	\$37.8M
Avg. Hours	413,632	377,194

**TOTAL DIRECT OPEX (\$FY19)**  
Average \$217.5M per year

**THIS PLAN COVERS**  
17% (\$37.8M per year)



## Planned Maintenance Activities INCLUDE:

- > **Urgent Planned Maintenance**  
Urgent planned maintenance of overhead, underground, Secondary System and Zone Substation defects found through routine inspection activities.
- > **Overhead Planned Maintenance**  
Non-urgent planned maintenance of overhead line and pole defects found through routine inspection activities.
- > **Underground Planned Maintenance**  
Non-urgent planned maintenance of underground defects found through routine inspection activities.
- > **Secondary Systems Planned Maintenance**  
Non-urgent planned maintenance of secondary systems (communications and control).
- > **Zone Substation Planned Maintenance**  
Non-urgent planned maintenance of high voltage substation defects found through routine inspection activities.

# How does this affect customers?

- > Our proposed operating programs for Planned Maintenance have been informed by our customer engagement process and we have adapted or retained them where possible to reflect this feedback. Specifically, to deliver an affordable and reliable service, our forecast for Planned Maintenance seeks to minimise costs by taking a risk based approach.

## > How?

### Overhead & Underground Planned Maintenance

Overhead and Underground Planned Maintenance programs directly impact network performance levels, in line with feedback received through engagement with our customers, **we propose to maintain current network safety and performance levels** through continuous improvement of our existing Planned Maintenance programs.

Planned Maintenance is a key asset management technique used to restore an asset to it's required condition. It is carried out through programs planned around defect severity, safety and reliability consequences and delivery efficiency.

### Urgent Planned Maintenance

Urgent maintenance involves prompt response to higher severity defects (across overhead, underground, secondary system and zone substation assets). We **propose to maintain current network safety and performance levels** in line with feedback from our customers.

*Urgent planned maintenance involves asset defects that have a high consequence of failure and require urgent rectification. The continuous improvement of our non-urgent planned maintenance programs is intended to reduce the need for urgent maintenance.*

### Zone Substation & Secondary Systems Planned Maintenance

We **propose to maintain current network safety and performance levels** in line with feedback from our customers by continuing the current level of planned maintenance programs. Ongoing reviews using advanced reliability techniques will inform future changes to these program.

*These planned maintenance activities involve rectification of defects found on our high voltage substations and secondary system assets. These assets are closely linked to network performance and customer service levels due to the large volume of customers they supply.*

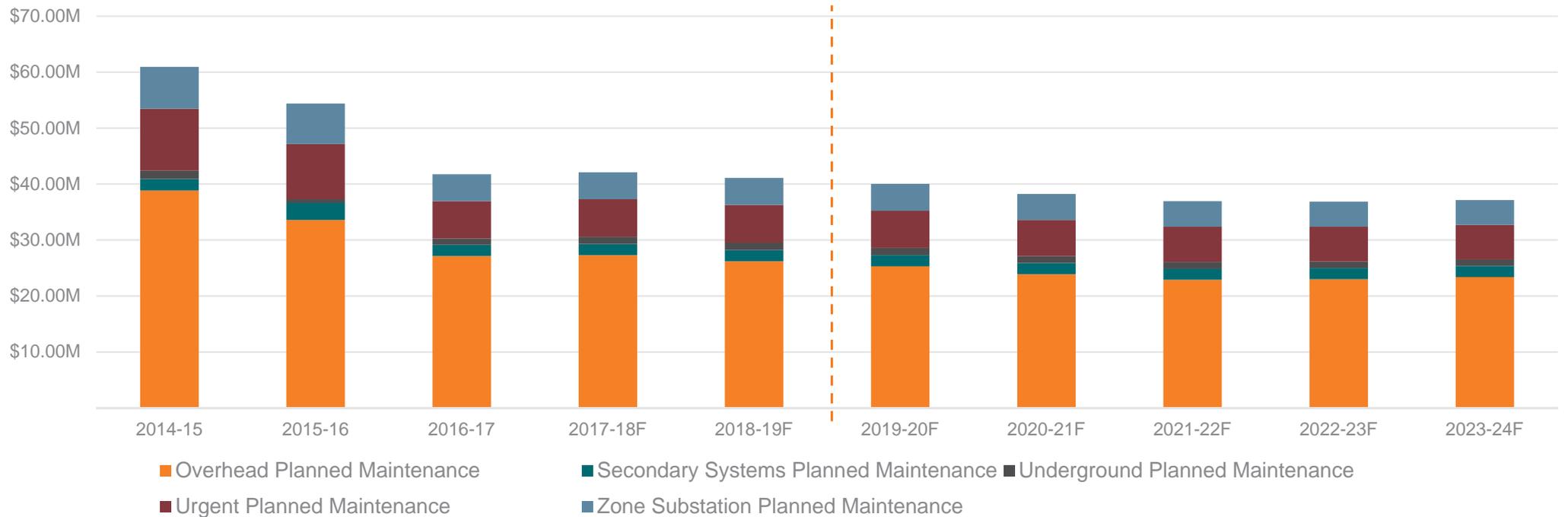
# Program Details - Planned Maintenance

- > Planned (corrective) Maintenance programs are the primary method for maintaining the serviceability and safety of Essential Energy’s distribution and subtransmission assets.

	Overhead and Underground Planned Maintenance	Urgent Planned Maintenance	Zone Substation and Secondary Systems Planned Maintenance
<b>Activity</b>	Non-urgent corrective maintenance of asset defects, generally detected through a routine inspection program.	Urgent corrective maintenance of asset defects.	Non-urgent corrective maintenance of complex or high value assets
<b>Objective</b>	To retain the asset in, or return it to, a serviceable condition.	To retain the asset in, or return it to, a serviceable condition.	To retain the asset in, or return it to, a serviceable condition.
<b>Frequency</b>	Planned around the routine inspection frequency, typically at periods between 4 – 6 years. The severity of the individual defects will determine the necessary timeframe within which the rectification needs to be completed.	Urgent defect rectification within 1 month of detection. The severity of the individual defects will determine the necessary timeframe within which the rectification needs to be completed.	Planned around the routine inspection frequency, typically at periods between 1 – 12 years. The severity of the individual defects will determine the necessary timeframe within which the rectification needs to be completed.
<b>Efficiency Gains</b>	Significant efficiencies are expected to be realised due to transformation of the work scheduling, packaging and prioritisation with the introduction of electronic work pack delivery and receipt.		

# Expenditure Profile – Planned Maintenance

		Urgent	Overhead	Underground	Secondary Systems	Zone Substation	TOTAL
% Direct OPEX Spend		2.9%	10.9%	0.6%	0.9%	2.1%	17.4%
% Planned Maintenance Spend		16.8%	62.6%	3.2%	5.3%	12.1%	100%
Average spend per year	(2019-24)	\$6.35M	\$23.68M	\$1.20M	\$2.00M	\$4.59M	\$37.83M
	(2014-19)	\$8.21M	\$30.61M	\$1.17M	\$2.23M	\$5.84M	\$48.06M
Average hours per year	(2019-24)	62,970	262,873	1,806	15,772	33,773	377,194
	(2014-19)	75,214	276,090	3,819	17,569	40,940	413,632



# Supporting documents

## OPEX Plan Documents

Document	Relevance to this document
OPEX Model - Direct Standard Control	Forecasting model based on historical performance and planned changes to opex activities.
OPEX Plan – Routine Inspections	Details the drivers behind the direct operational expenditure for each expenditure category.
OPEX Plan – Planned Maintenance	
OPEX Plan – Unplanned Maintenance	
OPEX Plan – Vegetation Management	
OPEX Plan – Indirect Expenditure	Outlines the drivers behind indirect expenditure
OPEX Approach	Summary of OPEX forecasting methodology and planned efficiency initiatives.

## Strategy Documents

Document	Relevance to this document
Strategic Asset Management Plan	Defines the general asset management principles and objectives which drive our network strategies.
CEOP8010 – Asset Inspection and Routine Maintenance	Provides an overview of each routine inspection program (except Zone Substation programs).
CEOP8011 – Technical Maintenance Plan Substations	Overview of Zone Substation maintenance programs.

# Supporting documents

## Key Legislative and Procedural Documents

Document	Relevance to this document
National Electricity Rules	Directs the development of operating expenditure forecasts and compliance with relevant obligations
CEOP4304.11 – Legislative & Obligations Register	List of legislative requirements and operational procedures.
National Electricity (New South Wales) Act 1997 (NSW)	An Act to make provision for the operation of a national electricity market, to consequentially amend certain other Acts; and for other purposes. Applies the National Electricity Law and National Electricity Rules.
Electricity Supply Act 1995 (NSW)	(a) to promote the efficient and environmentally responsible production and use of electricity and to deliver a safe and reliable supply of electricity, and (b) to confer on network operators such powers as are necessary to enable them to construct, operate, repair and maintain their electricity works, and (d) to promote and encourage the safety of persons and property in relation to the generation, transmission, distribution and use of electricity, and (e) to ensure that any significant disruption to the supply of electricity in an emergency is managed effectively.
National Energy Retail Law (Adoption) Act 2012 (NSW)	An Act to establish a national energy customer framework for the regulation of the retail supply of energy to customers; to make provision for the relationship between the distributors of energy and the consumers of energy; and for other purposes.
Work Health and Safety Act 2011 (NSW)	An Act to secure the health, safety and welfare of persons at work; to repeal the Occupational Health and Safety Act 2000 ; and for other purposes.
Essential Services Act 1988 (NSW)	An Act to protect the community from disruption to essential services; and for related purposes.

# Essential Energy

## CONTACT US

General enquiries 13 23 91  
Power outages 13 20 80  
[essentialenergy.com.au](http://essentialenergy.com.au)  
[info@essentialenergy.com.au](mailto:info@essentialenergy.com.au)



EssentialEnergyAU



essentialenergy



essentialenergytv



[engage.essentialenergy.com.au](http://engage.essentialenergy.com.au)