



31 January 2023

# Attachment 5.10 - Fleet strategy

Ausgrid's 2024-29 Regulatory Proposal

Empowering communities for a resilient,  
affordable and net-zero future.



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## Document governance

### Purpose of this document

The purpose of this document is to explain our Fleet Strategy and present our capital expenditure forecasts for the 2024-29 regulatory period. The intention is to submit this document to the Australian Energy Regulator as part of our Regulatory Proposal for the 2024-29 regulatory period.

### Related documents

Document	Version	Author
Fleet Strategy (ELT Slide Pack)	V1.0	Damon Taylor and Tim Kynoch
Fleet Capital Expenditure: Light Commercial Vehicle Business Case	V1.1	Damon Taylor
Fleet Capital Expenditure: Elevated Work Platform Business Case	V1.0	Damon Taylor
Fleet Capital Expenditure: Crane Borer Business Case	V0.2	Damon Taylor
Fleet Capital Expenditure: Heavy Commercial Vehicle Business Case	V0.2	Damon Taylor

### Document history

Date	Version	Comment	Person
25/8/2021	V1.0	Initial version for presentation to ELT	Tim Kynoch
19/2/2022	V1.1	Final version for internal consumption	Tim Kynoch
25/2/2022	V2.0	Formatting changes and additional supporting information for external consumption	Isaac Katz
4/1/2023	V2.1	Minor updates	Damon Taylor

### Approval(s)

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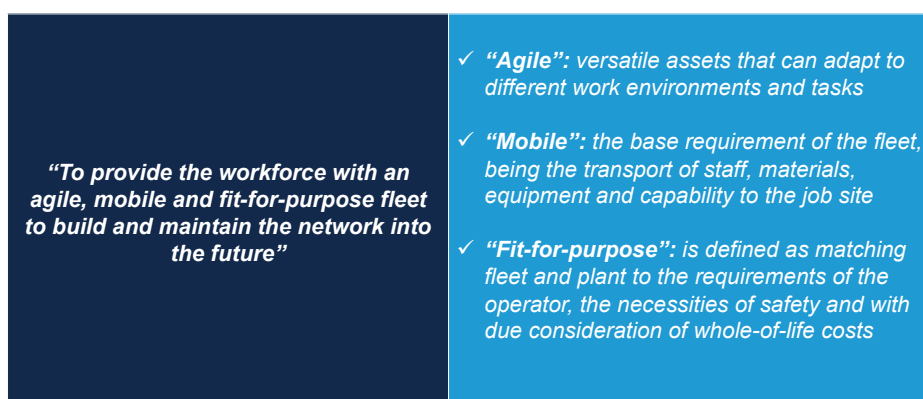
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## Executive summary

This Fleet Strategy aims to align fleet asset management and acquisition strategy with Ausgrid's future requirements to deliver better customer outcomes. The strategy will deliver:

- Increased safety;
- Improved mobility and capability for field staff;
- Improved efficiency, sustainability and cost of the fleet; and
- Staff involvement in platform selection and the fleet procurement process.

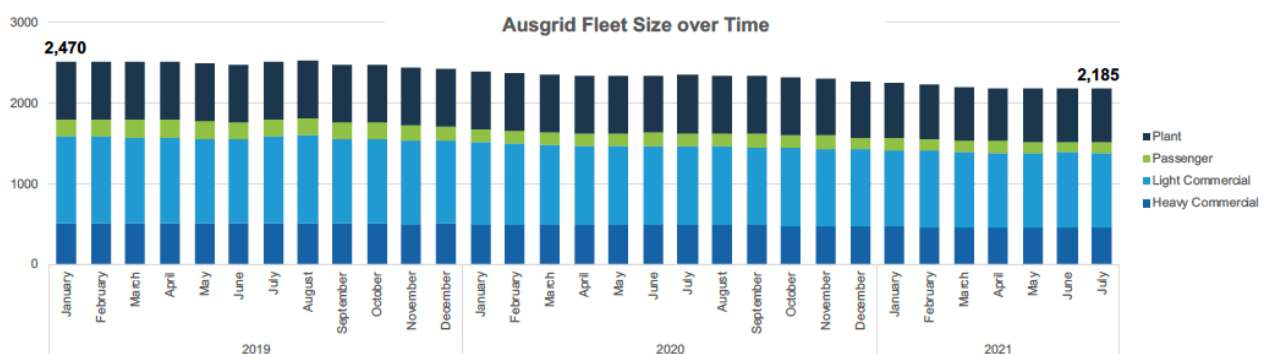
Our mission for this Fleet Strategy is set out below.



**Figure 1: Fleet Mission Statement**

The organisation has a wealth of experienced operators with extensive knowledge of the requirements and challenges of working in the field. Their feedback is key to ensuring success as changes are implemented across the business.

In 2019, we undertook a further review to right size our fleet portfolio to reflect expected reductions in work volumes, and associated FTE reductions, overlaid with current utilisation to determine the optimum fleet portfolio. As shown in Figure 2, this review has produced a further reduction of approximately 12% in the total fleet size. By July 2021, the size of our fleet was less than half its size in 2012.



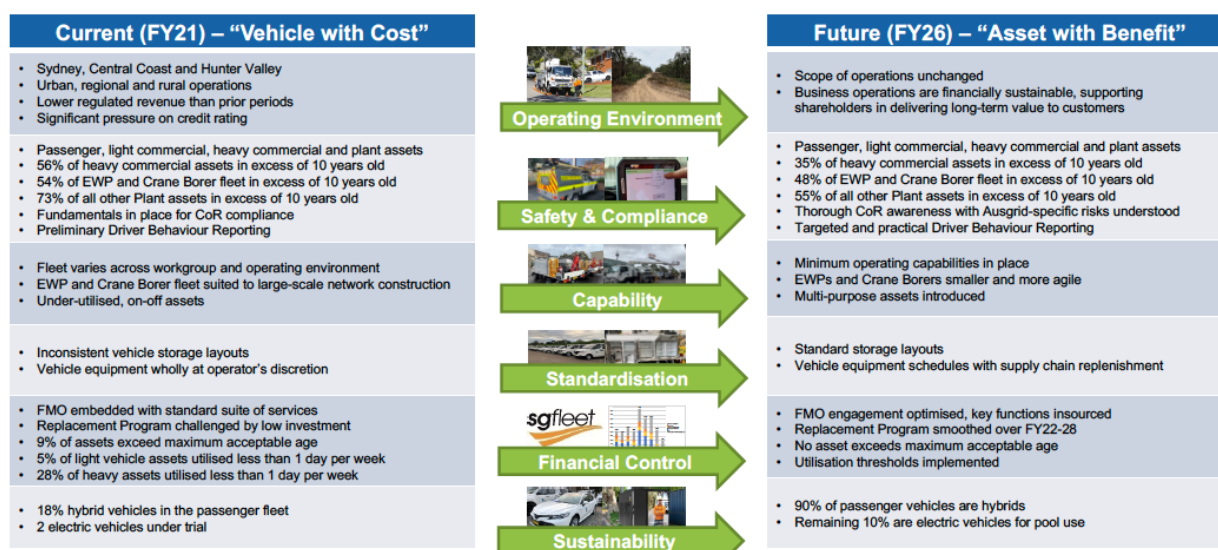
**Figure 2: Recent reductions in fleet size**



A reduced fleet size means lower total life cycle costs for our customers, as fewer assets require replacement and maintenance. While further modest reductions in fleet may be attainable, the exercise in right sizing our fleet assets is now complete.

Looking forward, this Fleet Strategy is focused on delivering productivity, compliance and safety improvements by enhancing our capability in the field. To achieve this outcome, we plan to improve our understanding of the business needs across our diverse operating environment and change the mix of fleet and plant assets where appropriate to enhance our capability. By taking this approach, we will change the perception of fleet from “Vehicle with cost” to “Asset with benefit”.

Figure 3 below captures our Fleet Strategy ‘on a page’, showing how we plan to transition from the current to future state.



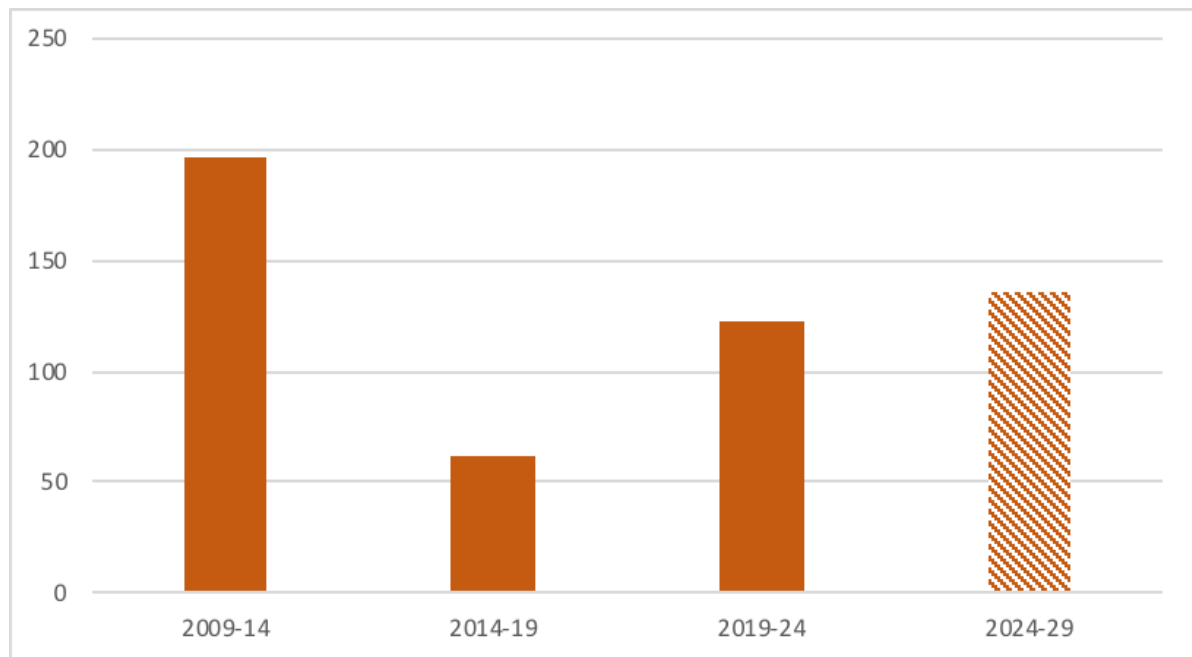
**Figure 3: Fleet Strategy – ‘On a page’**

Our strategy is to implement these changes as opportunities arise, consistent with keeping strong downward pressure on our fleet costs. In much the same way that our right-sizing of the fleet in the previous period will embed lower future costs in our forecasts, the delivery of the Fleet Strategy will deliver better safety outcomes and productivity improvements over time.

In assessing our fleet capital expenditure requirements for the 2024-29 regulatory period, we have:

- modelled the costs of replacing fleet based on standard asset lives, informed by safety considerations and industry best practice;
- considered the extent to which our Fleet Strategy will deliver capital expenditure savings over time;
- reviewed our expenditure profile to ensure the planned replacement volumes can be delivered efficiently.

Figure 4 below shows our forecast capital expenditure for fleet alongside our actual and estimated capital expenditure in the three previous regulatory periods.



**Figure 4: Historical and forecast fleet capital expenditure (\$m FY24)**

Our total fleet capital expenditure forecast for the 2024-29 regulatory period is higher than our estimated capital expenditure in the previous 5 years. This increase is driven by the historical expenditure profile, as the assets replaced in the 2009-14 regulatory period become due for replacement.

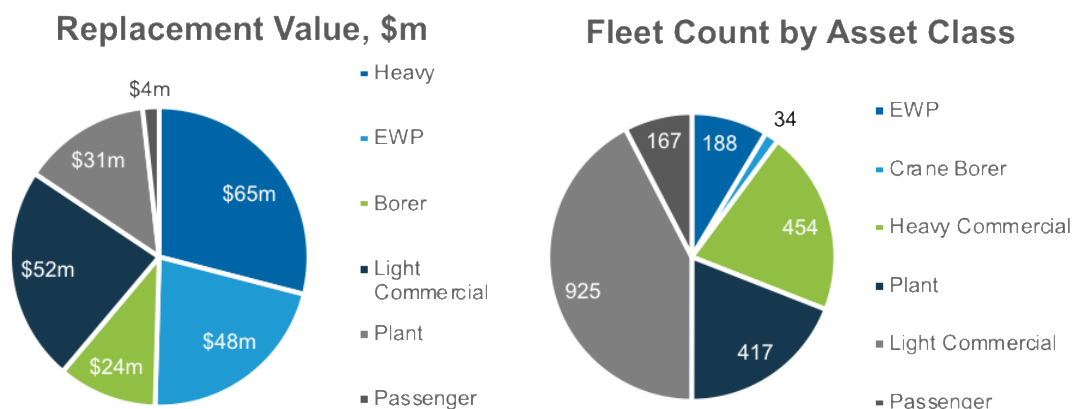
## 1. Fleet metrics

### Key points

- The Ausgrid fleet comprises 2,185 vehicles and plant with a total replacement value of approximately \$224 million.
- Within the 6 asset classes of EWP, Crane Boreers; Heavy Commercial; Plant; Light Commercial and Passenger vehicles, there is a wide range of different assets required to address the needs of the business and the diverse operating conditions (discussed in Chapter 3).
- The age profile of the fleet assets is uneven, which reflects the pattern of historical capital expenditure. The Fleet Strategy must address the safety risks associated with aging assets, while also smoothing the profile of future replacement capital expenditure to manage affordability issues.

The purpose of this Chapter is to provide high level metrics on our current fleet as background and context for the Fleet Strategy. In particular, it is important to understand the scope of the assets and activities in order for the Fleet Strategy to deliver improved service and cost outcomes for electricity customers and enhanced safety outcomes for our staff.

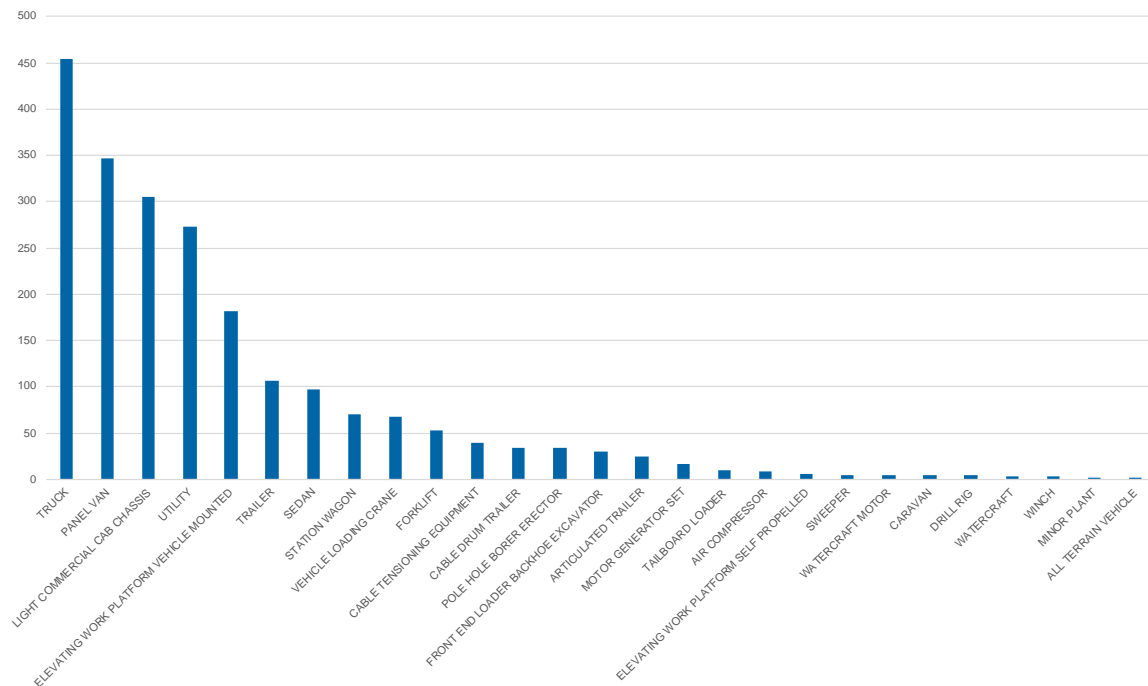
Figure 5 below shows that the total replacement value of our fleet is approximately \$224 million comprising 2,185 vehicles and plant.



**Figure 5: Replacement value and fleet count**

Figure 6 provides a more detailed breakdown of the asset classes to show the broad range of vehicles and plant that is employed to service Ausgrid's network. The large number of different vehicle and plant types reflects the diverse operating environment in which Ausgrid operates, which is discussed in Chapter 3, and the range of tasks undertaken by our field crews.

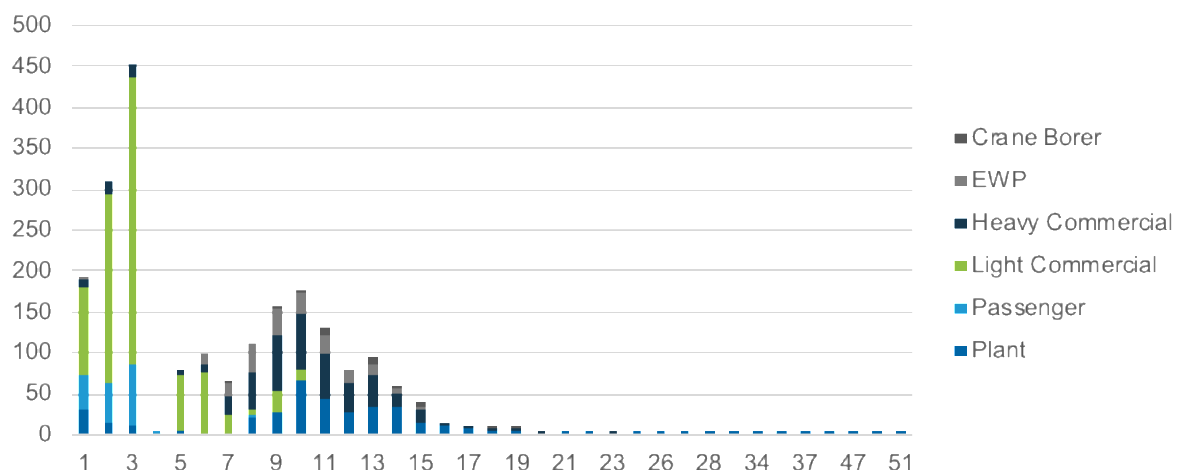




**Figure 6: Number of assets for each category of fleet**

Figure 7 shows the age profile of the fleet, which highlights two important observations:

- The age profile is uneven as a result of historical capital expenditure decisions. As a consequence, the replacement profile will also be uneven as the number of assets reaching end of life varies over time.
- There are a small number of assets that exceed 20 years of age, with some assets being as old as 50 years. While these assets are serviceable, there are potential safety risks associated with operating assets that are well beyond their technical life.



**Figure 7: Number of assets for each category of fleet**

The Fleet Strategy must address the challenges associated with this age profile, which require the safety risks associated with ageing assets to be proactively managed. In addition, future expenditure profiles should be smoothed to manage replacement peaks and

troughs that would be implied by a purely age-related replacement program. These matters are considered further in Chapter 11, which sets out our capital expenditure plans for the 2024-29 regulatory period.

## 2. Stakeholder engagement

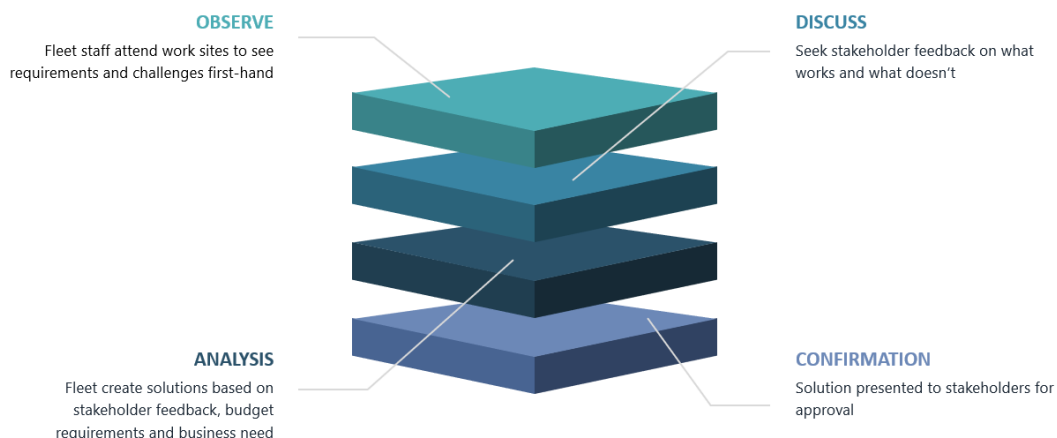
### Key Points

- The complexity and diversity of the business needs across the different service areas makes internal stakeholder input essential to developing an optimal fleet replacement program.
- Fleet has developed an engagement process to ensure that the needs of the business are fully understood and reflected in our capital expenditure plans.
- While this engagement process is internally focused, the objective of our fleet strategy is to meet the needs of electricity customers prudently and efficiently.

Stakeholder input is integral to Fleet achieving its strategic objectives. It provides staff with an avenue to be heard, highlights information that may otherwise be overlooked, and opens lines of communication to assist in change management.

Fleet requires significant stakeholder engagement to create a bottom-up build process for the Future Fleet replacement program. Fleet is engaging teams on the job to observe work practices, consult with all relevant staff and provide input into the Future Fleet program, as shown in Figure 8 below. While the engagement process is internal, the focus of our attention is ultimately on electricity customers. Specifically, we must ensure that our approach minimises the total life cycle of our fleet assets, while ensuring that we have the capability to maintain or improve service performance.

### STAKEHOLDER ENGAGEMENT PROCESS



**Figure 8: Fleet Stakeholder Engagement Process**

Fleet will engage sub-function management to begin the build process and will require those managers to ensure the correct voices are involved in the process. Fleet does not have the capacity to engage every individual in the business. Sub-function managers must therefore ensure they engage and involve their teams to ensure the right information is brought to the

discussion. Fleet is acutely aware that on-the-job observation provides an opportunity to see equipment and problems in action, allowing better understanding, discussion and resolution.

Future Fleet proposals will be based on capability, utilising the knowledge and expectations of Field Managers, Portfolio Managers and Supervisors. These capability statements will then form the basis for Capability Proposals, to be endorsed at the EGM level, ensuring business need and financial approval controls are followed. Capability Proposals will balance team size, capability needs, and operator preference to produce a suitable asset solution.

Fleet has already commenced this engagement process, which has identified opportunities to enhance the capabilities of field staff and vehicle users, while also reducing the size and cost of the Ausgrid fleet. While the engagement process will be on-going, we have captured the identified opportunities and extrapolated these across the business to prepare our capital expenditure plans for the 2024-29 regulatory period.

### 3. Operating environment

#### Key points

- The Ausgrid fleet requirements vary significantly across our service area, reflecting the diversity in the operating conditions and the challenges they present.
- The diversity in operating conditions reinforces the importance of internal stakeholder engagement (discussed in Chapter 2) to understand the business requirements. It also highlights the perils of simplistic benchmarking to guide replacement decisions.
- The operating environment creates particular challenges in terms of minimum fleet requirements and lower utilisation rates. Despite these issues, there may also be opportunities to drive better outcomes, particularly in relation to safety and productivity.

#### 3.1. Description of the physical environment

The Ausgrid fleet operates in a variety of environments, with differing challenges in geographic spread, terrain, geology, hazard profiles, population density and access restrictions. The most significant change in terms of geography is between the urban environment of Sydney CBD and suburbs, the regional areas around Newcastle and the rural regions in the Hunter Valley.

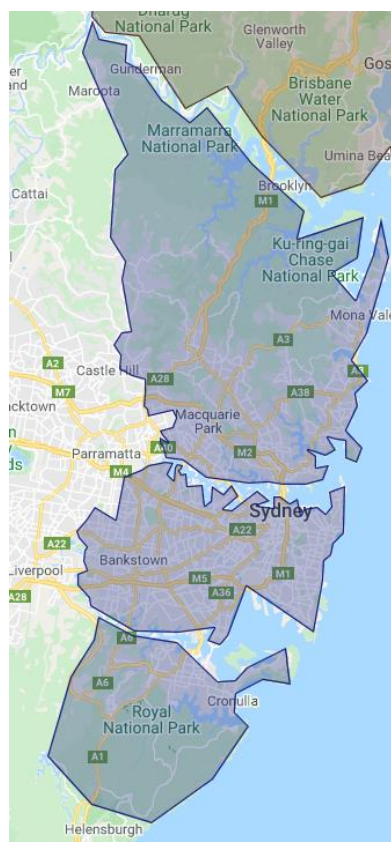


Figure 9: Sydney urban areas

There are 5 levels of requirement for Ausgrid's fleet when considering operating environment:

- **Urban:** covers the geographic area from southern Sydney to the Hornsby depot. Most urban areas require a high level of mobility with a smaller footprint to allow for traffic to flow around work sites and minimise the safety issues caused by assets near work areas. Vehicle height restrictions become pertinent in these areas, as well as the turning circle requirements for heavy plant.
- **Regional:** covers the geographic area from Hornsby to Wallsend, predominantly in the Central Coast region. This area varies greatly in terms of sparsely populated rural towns and urban centres within northern Sydney and Newcastle. There is a requirement for both dense urban mobility and rural off-road access.
- **Rural:** the Hunter Valley region from Cessnock to Muswellbrook. This is mostly rural zoning with difficult access requirements, including steep and unstable terrain, private (unrated) bridges, water crossings and soft ground. Issues with asset recovery and risk of rollover are greatly increased in this region.
- **Dual constraints:** sections of the organisation are required to work in both busy urban areas and difficult off-road terrain. For instance, overhead transmission teams are required to work on service wire in urban areas, which require the smallest possible footprint. This team also has responsibility for 33kv transmission lines in limited access areas, such as Oxley Falls, with little in the way of formed tracks, and including water crossings and steep terrain.
- **Water:** watercraft management includes challenges of both fresh and saltwater systems. Ausgrid vessels only operate in sheltered water, sea state 0 or 1 and good weather, however there are significant and complex operational considerations for watercraft. Marine operations are limited under the commercial operations certificate issued by the maritime regulator, and training qualifications are specific and difficult to obtain. Ausgrid has been granted an exemption to most commercial requirements and must be careful to operate within the strict parameters of these exemptions.

Urban work is focused on service wire maintenance, metering, streetlight replacement, overhead conductor maintenance, and underground cable jointing. The combination of overhead service wire, low voltage (**LV**) and high voltage (**HV**) conductor maintenance requires a high level of agility for EWPs.

Urban areas require small, manoeuvrable assets that can access narrow streets, minimise traffic disruption and reach service wires, streetlights, and underground pits. Consideration must be made for EWPs to function safely on steep to level grades in a range of weather conditions from heavy rain to extreme heat.

Operator feedback indicates a desire for the smallest footprint possible for crews to be able to keep out of traffic lanes, minimise the need for traffic control (and subsequent cost), and allow mobility within tight streets with dead ends, parked cars and minimal clearance height. Figure 10 below shows a typical urban street where the available space to conduct work is constrained.





**Figure 10: Dee Why overhead installation**

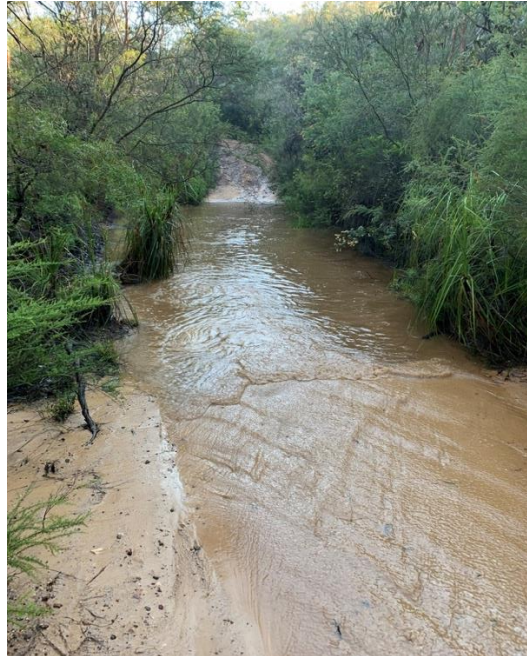
Regional areas have a very different risk profile with traffic being a much lesser concern than terrain, with regional crews spending much of their time working in steep, muddy and difficult terrain away from formed or sealed roads. Some asset locations have steep grades, creek crossings and narrow access gates that demand assets able to address these access challenges, as illustrated in Figure 11 below. Heavy plant is ill-equipped to access this type of track.



**Figure 11: HV spans in Brunkerville**

Rural crews have similar challenges to regional crews, with some additional complexities due to the sparse population and large service area. Private bridges present a major concern because they are not engineered to take the weight of heavy EWP or crane borer

platforms. From a safety perspective, it is preferable to be able to ford these creeks and bypass the bridges entirely, or to erect a mobile bridging platform that can move with the crew as required. A similar challenge arises where natural rainwater collection requires vehicles to ford through 1-3ft deep pools covering soft sand, causing difficulty for heavy assets and plant, as illustrated in Figure 12 below.



**Figure 12: Access track for Oxford Falls 33kV feeders**

Our rural crews must also manage challenging terrain, with steep and rocky access tracks that have little to no track maintenance, as illustrated in Figure 13 below.



**Figure 13: 33kV feeder lines in the Oxford Falls area**

### **3.2. Implications for Ausgrid's Fleet Strategy**

The diversity in Ausgrid's operating environment reinforces the importance of internal stakeholder engagement, discussed in Chapter 2, to understand the business needs for each service area. As already noted in that earlier discussion, our capital expenditure plans are informed by Capability Proposals which will reflect the operating conditions in addition to the forward work program in that service area.

The diverse operating environment also strongly cautions against simplistic benchmarking of fleet performance, using measures such as utilisation, to determine replacement decisions. For example, specialised fleet equipment may need to be deployed relatively infrequently to cross a flooded track or to bypass a bridge, but remains an essential asset to deliver the required network activities. In such cases, the procurement decision focusses on the buy or lease options to achieve the lowest total lifecycle cost.

While it is important to listen to the delivery teams to understand their fleet requirements, our review has also identified the value that can be provided through a centralised process for making fleet procurement decisions, including by:

- enabling procurement decisions to be prioritised between service delivery teams having regard to overall budget constraints and the urgency of their respective needs;
- delivering cost savings through competitive tender process and leveraging negotiating positions with manufacturers; and
- achieving an appropriate degree of fleet standardisation over time which is expected to lead to savings in maintenance costs.

Given the above observations, our strategy considers the impact of diverse operating conditions on each delivery team's fleet requirements while also maintaining a centralised approach to fleet replacement and procurement decisions.

## 4. Strategy Overview

### Key Points

- The Fleet Strategy has been developed around 6 complementary themes: Safety and Compliance; Capability; Standardisation; Financial Controls; Sustainability; and Assurance.
- Collectively, the successful delivery of this strategy will change the perception of fleet assets from 'vehicle with cost' to 'asset with benefits'.
- This change in outlook is intended to refocus capital expenditure replacement decisions to an outcome-based approach that seeks to deliver the required work at the lowest life cycle cost, while providing a safer working environment for our staff.

This Chapter provides an overview of our Fleet Strategy, which comprises 6 elements, as shown in Figure 14 below. As explained below, each of these elements provides scope to deliver efficiency savings; improve the outcomes for electricity customers; and enhance the safety of our staff.



Figure 14: Key principles and objectives

### • Safety and compliance

By upgrading vehicles, bringing in new equipment and adapting work practices, Ausgrid can raise safety standards when performing work in the field. Over 20% of vehicle and plant assets have outdated safety features, and new technology is available to enhance driver safety while also providing increased efficiency.

- **Capability**

By rebuilding our base level of fleet at the operator level, Fleet can create capability bricks across the business to enable our staff to perform required work more efficiently and effectively. In addition, modular vehicles that can change purpose and be used for multiple roles will allow for better utilisation and lower costs while improving the productivity and efficiency of field crews.

By transitioning vehicle custodians from heavy vehicles to light commercials, and ensuring teams have the right number of vehicles for staff, Ausgrid can increase the productivity of the workforce by allowing staff to begin on site, reduce travel time, and work individually wherever possible.

- **Standardisation**

Plant training remains an obstacle for field teams. The need to familiarise operators on such a range of equipment results in a large annual training burden and a small pool of competent operators. By standardising our equipment, we can ensure more staff are available for network operations and reduce model variation, which will in turn decrease the parts costs, training costs, labour costs and administration currently incurred in maintaining the fleet.

- **Financial control**

By ordering off-the-shelf equipment, leveraging volume and negotiating with suppliers, Ausgrid can increase the value delivered by our capital expenditure and reduce the on-going operating costs.

By favouring direct relationships and negotiations with our external partners and only using intermediaries when absolutely necessary, Ausgrid can increase the value derived from contracted services. Insource/outsource decisions need to be scrutinised and re-evaluated regularly to optimise end-to-end fleet management and service delivery.

- **Sustainability**

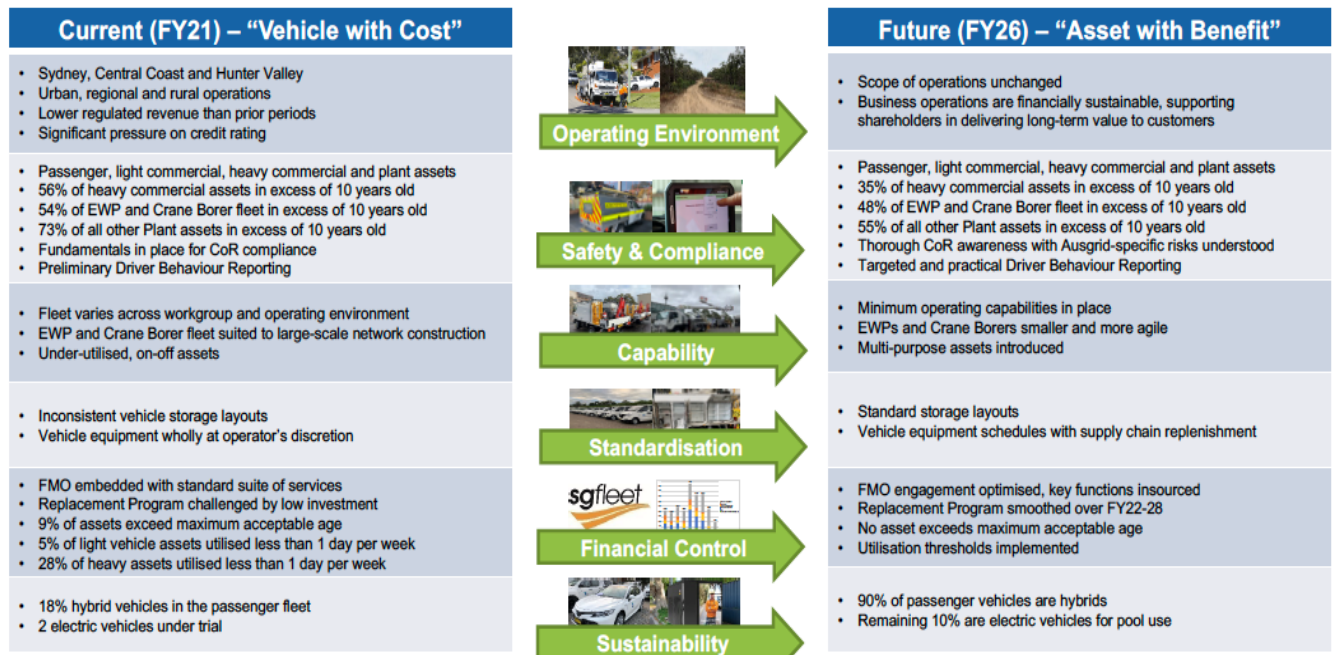
By increasing the proportion of hybrid and electric vehicles, Fleet can reduce the emissions output attributed to Ausgrid operations.

- **Assurance**

By moving toward proactive management, Ausgrid can provide assurance updates to the wider business and continue to ensure that we comply with our obligations.

Figure 15 below provides a summary of the deliverables that we propose to achieve from the 'current state' to the 'future state' in a 'Strategy on a page' snapshot.





**Figure 15: ‘Strategy on a page’**

As shown in Figure 15, at the highest level the Fleet Strategy is intended to change the perception of fleet from ‘vehicle with cost’ to ‘asset with benefit’. This change is much broader than changing the ‘internal messaging’ regarding the value that fleet can deliver. Instead, it is intended to drive efficiency improvements by taking an outcome-based focus to our replacement capital expenditure decisions.



## 5. Safety & Compliance

### Key points

- Safety must be the first consideration for all decisions made in Fleet due to the high-risk activities that driving and operating motor vehicles, and particularly heavy plant, represent.
- Fleet is targeting a number of safety improvement initiatives, which recognises that aging assets tend to exhibit increasing safety risks in addition to employing outdated safety features. Safety and compliance considerations should therefore drive targeted investments in asset replacements.
- Systems also have an important role to play in reducing safety risk. Systems to monitor driver behaviour have already been introduced, with further improvements targeted through initiatives to promote improved behaviour. Third party systems, such as Plant Assessor, can also improve safety through pre-start checks, records and comprehensive interactive risk surveys and risk assessment reports.
- Fleet has also identified a number of operating expenditure initiatives to improve safety and compliance, such better documentation, enhanced safety operating procedures and targeted training.

Safety is a key priority for Ausgrid and therefore an important focus for our Fleet Strategy. Fleet has identified several risks that should be addressed in this Fleet Strategy, including:

- Fleet assets are increasing in age and approximately 9% of the fleet is currently outside the planned operating life, resulting in higher repair costs and unpredictable incidents;
- Safety technology is rapidly evolving, and 5% of the light vehicle fleet is outside the recommendations of Australasian New Car Assessment Program (**ANCAP**) fleet purchasing guidelines;
- Light vehicle fit-outs lack safety features, particularly for night work;
- Off-road access remains a problem for field staff, and this capability needs to be improved to increase productivity; and
- Difficult access to network assets needs to be addressed to reduce high potential incidents and resulting costs.

In the remainder of this Chapter, we explain our approach to safety and compliance through targeted investment in our assets and systems, in addition to improving documentation, procedures and training.

### 5.1. Vehicle Safety

Opportunity exists to increase both safety and cost efficiency by prioritising replacement or retirement of the oldest assets, which in turn reduces the age profile of the fleet. This will update assets with new safety features such as autonomous emergency braking and improved crash protection while also unreliable assets with higher maintenance costs.

Some fleet assets are over 20 years old, and in the worst cases 50 years old, which results in higher operating costs for maintenance and recovery due to the frequency of breakdowns. Fuel costs are also inflated due to older, inefficient powertrains remaining in operation for decades past their optimum life. Breakdowns result in both asset downtime and safety incidents such as wire rope failures, burst hoses, and equipment failure. To support the level of capital investment required, fleet capital expenditure will need to be re-examined in partnership with Finance, with vehicle lifetimes demanding a similar review.

In line with the replacement process and to improve the adoption of safety technology and reduce vehicle-related incidents, new vehicle specifications will generally require ANCAP 5 vehicles. If multiple suitable vehicles are available within a class, other value factors will determine the preferred asset for purchase.

## **5.2. In-Vehicle Monitoring System (IVMS)**

Ausgrid has implemented IVMS across the entire fleet of vehicles. Aimed at promoting safe driving through safety aids and driver reporting, the IVMS introduced tools such as an emergency duress button, driver warnings, dashcam, reversing cameras and electronic pre-start checks.

Data gained so far from the IVMS has been used effectively to assist with incident investigations, customer complaints and to establish preliminary driver behaviour reporting, however the customer-facing software platform deployed to IVMS head units has suffered from extensive stability issues which have hampered the program's overall success.

The IVMS solution selected and deployed by Ausgrid is overly complex in terms of the potential functionality and puts significant strain on vehicle systems that are not designed to support it. As such, the vehicle itself has been adapted to the IVMS instead of paring it back in order to match the limitations of the vehicle.

Staff have noted constant issues with battery drain due to the number of systems in the IVMS suite which include:

- Control unit and GPS tracker used as the basis of the system;
- Forward facing dash-cam, with removable power cable and data storage card;
- Interface tablet, with built-in Wi-Fi, Bluetooth, and card reader;
- Duress button (additional pendant for heavy vehicles) and duress receiver;
- Swipe card reader;
- GPS/GSM antennae;
- Wireless reverse camera for heavy vehicles; and
- Iridium connection for certain remote location vehicles.

These power management issues have introduced additional maintenance spend through the need to increase battery capacity, replace dead batteries, roadside assistance fees, installation of battery isolator switches and fitting of voltage regulators.

Fleet will re-examine the capability needs of Ausgrid's IVMS solution with a specific focus on a simple, user-friendly experience for vehicle drivers, reduced overall complexity and decreased strain on vehicle power sources.



**Figure 16: PinPoint Works running on Garmin head unit**

### 5.3. Driver Behaviour Reporting

Recognising that driver behaviour can have a significant influence on both the likelihood and consequence of a motor vehicle accident, organisation-wide driver behaviour reporting has been established. At present, driver behaviour reporting is available to Level 4 managers, however, is not supported by an explicit call to action by line management.

To promote safe driving, Fleet will develop reporting to give individual drivers the tools to better understand and improve their driving habits. Line management will be provided with similar reporting showing the overall driver behaviours of their team, allowing safety conversations to take place. Driver behaviour results will be monitored, with identifiable trends reported to the ELT regularly.

### 5.4. Off-road and difficult access

Off-road driving is one of the most significant areas of concern for Ausgrid field crews. Without consistent training in off-road driving techniques, staff face a high risk of vehicle rollovers, terrain slippage and injury or death. Heavy assets are required to operate in difficult terrain, with an increased risk during storm response events where areas of high-water levels or soft ground are present. A review of off-road driver training and implementation of a common program across all off-road drivers is required.

Rural field staff have experienced serious safety issues where access to network assets involves difficult terrain. Instances of rollovers, snapped cables, bridge collapse, and other incidents have highlighted a need for alternative access ideas. Fleet will investigate this capability gap to allow rural and regional teams to ford wet and dry creeks, bypass unrated private bridges, and handle steep or undulating terrain to minimise the risk to work crews and reduce safety incidents. Alternative assets such as remote-control or tracked platforms will be explored to exploit new technology for increases in safety.

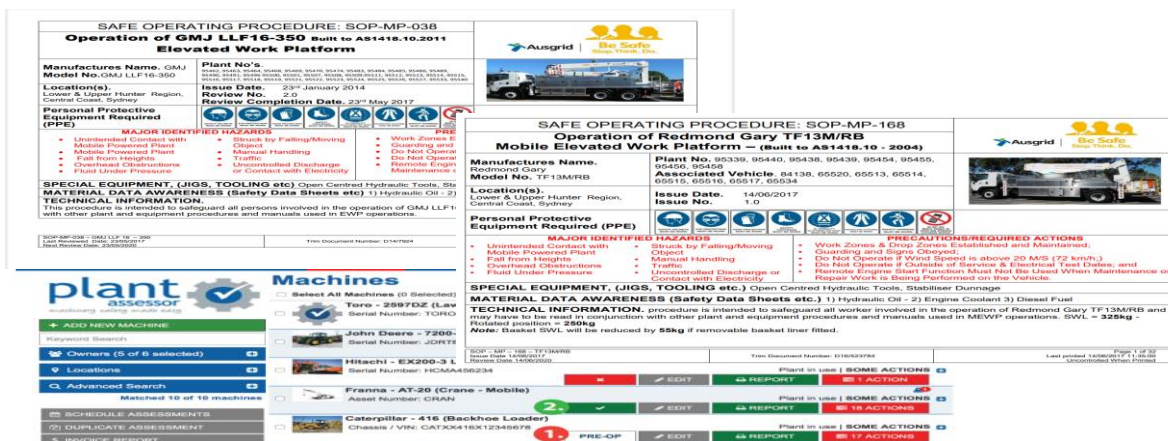


**Figure 17: Site in Narara (customer property) where a 100T crane became bogged following sustained wet weather**

## 5.5. Risk Assessments and Safe Operating Procedures

New plant and equipment introduced must be accompanied by a risk assessment and a safe operating procedure (SOP). This safety documentation ensures that staff are trained to correctly use the equipment, any safety hazards are identified, and injuries are avoided.

Since the FY20 restructure, resourcing pressure has caused a gap in completion and updating of safety documentation, and both a lack of new documentation and a backlog of reviews has developed.



**Figure 18: SOPs for Ausgrid's most common EWP's (left) and Plant Assessor interface**

To respond to this gap, Fleet is working with the Health & Safety team to improve the use of a third-party system, Plant Assessor, for managing plant risk. This includes risk assessments, pre-start checks, and standard operating procedures, to assist with identification of the outstanding backlog and allow completion of required works either internally or through use of third-party subject matter experts.



## 5.6. Chain of Responsibility

As an operator of heavy vehicles, Ausgrid, its executives and management have obligations under the Heavy Vehicle National Law (**HVNL**) Chain of Responsibility (**CoR**) regime. The distinct requirements of HVNL require it to be managed separately from Ausgrid's Health & Safety Management System, with compliance essential to ensure network operations are able to continue.

Risks requiring management exist in several areas:

- Record-keeping and governance;
- Staff lacking knowledge of their position in the CoR;
- Vehicle maintenance and defect control;
- Overweight and oversize vehicles;
- Unrestrained loads;
- Speed; and
- Fatigue.

In October 2018, the HVNL was amended, altering the focus of compliance systems to become more proactive and more aligned with Work Health & Safety laws by establishing a duty to ensure safety. The revised laws, covered under the CoR regime, imposed a greater emphasis on positively managing the risks and hazards associated with transport activities. Importantly, they now also hold executive officers personally responsible for ensuring that their corporations comply with that safety duty.

The CoR is the basis of heavy vehicle legislation. It ensures that each party is aware and accountable for the decisions they make for the business and the exposure to risk is managed at a personal level.

While Ausgrid has in place a solid platform for the management of its CoR obligations and risk, it must maintain vigilance and ongoing education and awareness or risk safety incidents, legal action, increased costs, lower vehicle availability, and failure of network maintenance tasks.

Fleet is targeting the following key actions:

- **Training**

To ensure a thorough understanding of CoR obligations, both as an organisation and as individuals, all Ausgrid staff who have the capacity to control or influence heavy vehicle operations must complete a mandatory CoR Fundamentals training package every year.

Ausgrid plans to greatly increase the scope of this training package through the introduction of role-specific modules for consignees, consignors, loaders/unloaders, loading managers, operators, packers and schedulers. An Executive Officers module

has recently been developed and deployed, with the rollout of remaining role-specific modules expected to be complete by June 2022.

In addition to role-specific training, Ausgrid has placed a specific emphasis on instruction and training on load restraint through the in-house development of a Load Restraint training module using real life examples. This module has been updated on the back of newly drafted Safe Operating Procedures (**SOPs**) that have been developed for the load restraint of poles on a trailer and jinker, the load restraint of streetlight standards in a tipper, and the load restraint of cable drums.

- **Education and Awareness**

Ausgrid engaged former Managing Director Chain of Responsibility for the NHVR, Michael Crellin, to conduct a CoR Education and Awareness session with the ELT in 2021. Aimed at refreshing the Executive's knowledge of CoR legislation, the session was also an introduction to a planned third-party review of Ausgrid's CoR assurance activities. When completed, this review will identify areas of both strength and weakness, allowing an action plan to be developed to guide continuous improvement over the medium term.

To further increase awareness and education at the ELT and "Head of" level, CoR mock trials are also proposed. These sessions will develop Ausgrid leaders' understanding of their personal and organisational accountabilities, specifically with respect to what is expected in terms of a statutory safe system of work and CoR compliance. Ausgrid-specific scenarios will be used to ensure that learnings are meaningful and the insights actionable.

- **Administration**

As part of efforts towards continuous improvement, Fleet is investigating the implementation of a "fleet app" to support both fleet custodian administration activities (custodian detail changes, defect reporting, ordering replacement fuel cards, etc.) and CoR activities such as mass management and load restraint. A similar app has already been developed by Essential Energy and is used to good effect, and it is planned that the implementation of such a tool will further bolster the Ausgrid's management of CoR risk.

- **Speeding**

Fleet has already established preliminary Driver Behaviour Reporting specific to heavy vehicles, which it provides to Ausgrid's Operations Executive and Leadership teams monthly as part of its Heavy Vehicle Compliance Report.

This reporting will be improved as part of establishing organisation-wide Driver Behaviour reporting, allowing targeted conversations on speeding, harsh acceleration and harsh braking in heavy vehicles to take place between managers and individual heavy vehicle drivers.



- **Other Parties in the Chain**

Ausgrid utilises a blended delivery model for much of its network maintenance and construction. According to HVNL and the CoR regime, these delivery partners and, in particular, their heavy vehicle operations are subject to the same legislative obligations as Ausgrid itself.

Ausgrid's primary means of managing these obligations and the risks inherent in non-compliance is in ensuring acceptance within commercial obligations and ongoing contract management, including site and heavy vehicle audits as required. To this end, Fleet is working with the Contract Delivery team to develop a heavy vehicle specific inspection sheet such that a regular program of audits can be both implemented and monitored.

### **5.7. Crane Borer Operation**

Ausgrid has experienced a number of incidents where the load management systems installed on crane borer assets have triggered overload alarms. Feedback from operators has been mixed, with many stating that overload alarms are triggered during normal pole operations. Yet by overloading crane borers, the operator significantly increases the risk of rolling the unit over or causing significant structural damage to the asset.

To address this risk, Fleet has undertaken to upgrade load management systems on all crane borer assets in FY22. Operational procedures for the operation of crane borer assets have also been developed, clearly outlining the information required for the safe use of crane borer platforms and the specific operating principles of the attached load management systems.

The Crane Borer Operational Procedures will be implemented using face-to-face workshops with Field Operations operators, allowing thorough discussion of the following key points:

- Pre-job planning;
- Definition and consequences of an overload;
- Site conditions;
- Understanding load charts;
- Electronic load management; and
- Dunnage requirements.

### **5.8. Summary of actions and timeframes**

The table below summarises the actions that arise in relation to the safety and compliance initiatives described in this Chapter and the function support required to deliver those initiatives.

Our initiatives to deliver the safety and compliance improvements have already commenced. Our overall timeframes for delivering these initiatives is set out in the figure below.

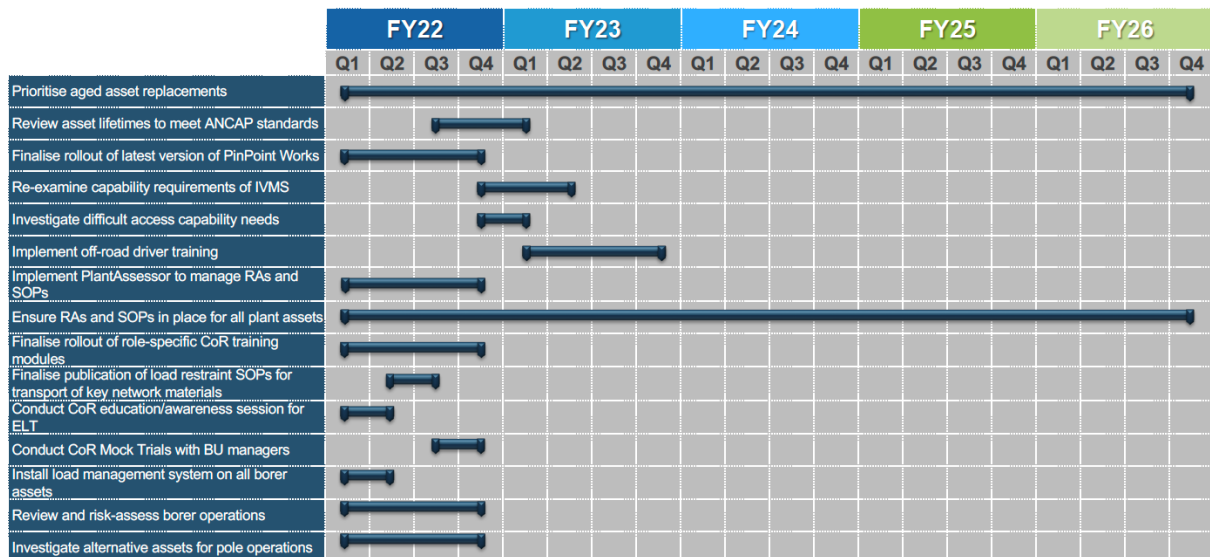


Figure 19: Timeframes for delivering the safety and compliance initiatives

## 6. Capability

### Key points

- Ausgrid must change its view of Fleet from a “vehicle with cost” to an “asset with benefit”.
- Fleet requirements need to be based on capability, rather than staff numbers, utilisation, or preferences, to change the way we do business and posture for future growth.
- With increased capability, Ausgrid will be able to:
  - Address the fleet needs of the business at the operator level, building fleet requirements from the bottom-up;
  - Ensure assets are available to meet contingency challenges;
  - Reduce operating costs by lowering the number of assets and increasing utilisation;
  - Identify opportunities to optimise assets via pooling, reductions and reallocations;
  - Standardise platforms to leverage volume pricing and simplify the procurement process; and
  - Achieve lower operating costs in recovery, transport and maintenance.

This Chapter explains how we ensure that Fleet has an outcome-based focus, so that opportunities to improve cost and service performance are actively pursued and embedded in our business as usual practices. As explained in the remainder of this Chapter, we will enhance our capability through the following initiatives:

- Future fleet program;
- Shared assets;
- Future EWP program;
- Future borer program;
- Future Light Vehicles;
- Multi-purpose assets;
- Heavy vehicle and plant maintenance;
- Self-recovery; and
- Contingency.

### 6.1. Future Fleet Program

Fleet has created a transformation program entitled Future Fleet to address the needs of field teams and create a new fleet asset base from the bottom up. The program will combine stakeholder input, data analytics, optimisation opportunities and standardisation, to create a

capability-based, fit-for-purpose, economical fleet to match the future needs of operations. The program will achieve this by:

- Using capability as the priority factor, instead of preferences, ratios, or utilisation;
- Allowing direct staff input to equipment needs;
- Producing documented capability bricks by team within regions and aligning the assets required;
- Dividing the requirements into full time and part time requirements; and
- Creating a fleet Minimum Level Operating Capability (**MLOC**) program with business approval.

Completing a full review will allow Fleet to provide a level of detail that has not been available to the business previously. Fleet expects that this review will identify opportunities to achieve savings, improve service performance and deliver better outcomes for electricity customers.

MLOC will be split into 2 major sections - full time requirements and loan requirements.

- Full Time Capability (**FTC**) will consist of assets required for frequent use as part of regular tasks. An example is a utility vehicle for a field supervisor to be able to move around and supervise different sites during a shift, a purpose-built van for an Emergency Services Officer to be able to complete response tasks, or an EWP used for an overhead team to repair poles.
- Loan Capability (**LC**) will consist of assets needed for regular use, but not often enough to justify full-time holding for a sub-function. An example would be a box trailer needed once a week to haul stores and equipment, or an excavator needed a few times a month to dig an access pit.

## 6.2. Shared Assets

Opportunity exists within Ausgrid to create efficiencies through increased light vehicle pooling for corporate users, and heavy vehicle sharing arrangements for field staff. Increased pooling will boost the utilisation rate while maintaining capability and reducing the number of assets in the fleet.

Pooling trials have been conducted in the past but have failed due to a lack of ownership around pooled assets and increased breakdown rates over time. By creating sharing agreements within regions, ownership will remain with the primary users but allow availability to other teams, avoiding the problem with availability and serviceability while creating efficiencies and savings.

Depot distances must be considered for heavy vehicle and plant sharing to be effective; if a round-trip to collect an item of plant takes 3 hours, the solution is unlikely to be suitable for field teams. Pairing this initiative with the multi-purpose vehicle concept will also allow for additional flexibility in field operations.

### 6.3. Future EWP Program

The EWP remains the workhorse of overhead Field Operations crews and the most important asset type in the fleet. Discussions with Field Managers have highlighted a requirement for smaller, more agile platforms in the EWP fleet, and is reflected in the lower utilisation rates of 22m EWPs, and the mothballing of the 28m EWP fleet. The current EWP fleet is predominately made up of basic assets with minimal features, allowing very little flexibility or agility for field crews. New platforms can provide greater safety, reach, and agility for better access to network assets, increased productivity and higher utilisation.

A smaller EWP with extended reach capability and a reduced footprint is sought by field teams in urban areas, while regional and rural crews require medium and large assets to provide flexibility of access to a variety of network assets. Smaller platforms have advantages for urban regions where traffic flow becomes a problem, as larger platforms either protrude into or take up the entirety of a traffic lane, making traffic control necessary. This increases costs for traffic management contractors, administration of road occupancy licenses, and the operating costs due to holding larger assets.

Selection of new EWP assets is underway in FY22 with the requirement to reduce the number of models across the EWP fleet, with capital expenditure requirements being refined with Finance to smooth the procurement curve across the next decade and allow for increased capability for Ausgrid staff.

Future platforms will address the needs of the business by:

- Examining market offerings and focusing on technology improvements;
- Providing increased agility and manoeuvrability for field work;
- Reducing the footprint of the assets; and
- Improving off-road access capability.



**Figure 20: Fleet Showcase presentation of Nifty-Lift EWP (left) and Nifty-Lift EWP in operation (right)**

#### 6.4. Future Borer Program

Crane Borer assets are the primary platform for pole maintenance, and closely follow EWP's in terms of Ausgrid critical capability. Field staff continue to experience issues with pole extraction, despite several methods being tried over the last few years. Fleet has noted issues with grabs bending or breaking when the grab has been used to shake or pull the pole, as well as limiters being overridden when crane capacity is reached. Field teams have reported the difficulties of pole jacks and Fleet will need to determine if these are a worthwhile investment or alternatives should be sought.

Safety incidents around the wind-up method of stowing the Kelly bar have prompted other network providers to specify a different stowage system. Fleet will evaluate these new systems and, if suitable, adopt this tech change into future Borer specifications.

The limitations of the current Borer platforms present both a safety and a capability problem for field staff, as current platforms reach the capability limit of the equipment, causing overload safety issues. Borer platforms are also exceptionally large and cumbersome, with difficulty accessing tight areas.

To resolve these risks, future platforms need to be able to satisfy the requirements of each region while providing a stable, powerful platform to install and remove poles safely and efficiently. This will be addressed by:

- Evaluating current market offerings and examining alternative work practices;
- Testing alternative options for pole installation and removal; and
- Assessing options for multi-purpose platforms, such as skid-steer loaders and heavy excavators, to perform multiple tasks related to boring and pole manipulation, reducing labour effort for urban and rural tasks and delivering efficiency benefits.



**Figure 21: Ozzy 6/10-16 Crane Borer**



## **6.5. Future Light Vehicles**

Light commercial assets are the backbone of the Fleet, accounting for some 40% of fleet numbers. Since FY20, field teams have requested downsizing from heavy vehicles into light commercials in order to increase their mobility and allow staff to improve efficiency through starting a shift on site. Smaller vehicles also provide simpler access and increase productivity while reducing operating costs.

As part of the ongoing fleet replacement program, opportunities to downsize from heavy to light assets and reduce asset operating costs will be identified and implemented as a priority.

## **6.6. Multi-Purpose Assets**

A lack of flexibility exists in the current heavy asset portfolio, resulting in underutilised vehicles. Truck platforms currently have primary systems and fit outs installed directly onto the tray of the truck, with most trucks having no flexibility in their use profile. The ability to skid-mount or container-mount heavy asset systems onto a flatbed base compatible with twist locks will allow for several benefits:

- Trucks can be replaced at any time, without the need to replace the fit-out, resulting in lower capital expenditure requirements;
- Fit outs can be given an expected life beyond that of the truck;
- Trucks with low utilisation can change purpose by swapping the fit-out in minutes;
- Dedicated flatbed trucks will not need to be purchased; and
- Multiple trucks with single purposes can be combined into a single multi-purpose asset.

As part of Fleet's wider focus on mobility and flexibility, this approach allows field teams to repurpose heavy assets for multiple roles depending on the task required. A heavy vehicle could carry a winder platform one day, then repurpose to a stores truck or plant transport role the next, by quickly and easily changing the body system with a forklift or attaching a trailer. This system currently exists with certain wire-winding systems and can be expanded for other assets by building new fit-outs into containers and skid platforms. As these assets are engineered and implemented, capability can be increased while lowering the number of overall assets.

Potential assets identified for pod- or trailer-based systems include:

- Crew trucks;
- Generators;
- Cable stands and tensioning units;
- Oil equipment;
- Stores trucks; and

- Contingency/emergency response modules.

Other benefits include optimised asset numbers where pooling or sharing of common assets can occur, simpler and cheaper maintenance on fitout platforms over dedicated trucks, and asset hire reductions by purchasing modules instead of vehicles.



**Figure 22: Pod prototype – light plant transporter**

## 6.7. Heavy Vehicle and Plant Maintenance

Ausgrid currently utilises a blended delivery model for heavy vehicle and plant maintenance, with three internal garages providing maintenance for the highly specialised plant and equipment such as EWPs and crane borers. A network of service providers is leveraged for the more standard heavy commercial vehicle assets and simpler maintenance tasks.

In April 2021, a diagnostic review of Ausgrid's end-to-end provision of specialised heavy vehicle and plant maintenance was conducted by a third-party consultant, KPMG. The review aimed to determine whether Ausgrid should insource or outsource heavy vehicle and plant maintenance with due reference to value, capability and risk.

The following activities were conducted to support this objective:

- Understand current heavy vehicle end-to-end maintenance costs, performance and future requirements;
- Identify both short- and longer-term service, cost and working capital improvement opportunities; and
- Identify the roadmap required to execute and operationalise the improvement opportunities.

Following completion of its review, KPMG's base recommendation was that Ausgrid's heavy vehicle and plant maintenance should remain insourced. In summary, its findings were:

- Ausgrid maintenance should remain insourced as it is now, with processes to be optimised to reduce the current maintenance cost baseline.

- Ausgrid should assess how many HV and P&E assets can be decommissioned, review fleet management cost opportunities and identify future working capital (inventory) improvement opportunities.

While the case for further significant fleet reductions requires review with due regard for Field Operations resourcing, capability and future work programs, KPMG's findings present a case for investment in both skills and resource within Ausgrid's internal garages.

The following fleet maintenance optimisation initiatives are either in-train or have been identified for immediate action:

- Implementation of operational key performance indicators (**KPIs**);
- Towing and transport cost reduction;
- Invoice rationalisation;
- Reduce EWP electrical testing bottlenecks;
- Investigate additional fibreglass capability;
- Investigate heavy vehicle service packaging (moving away from time and cost);
- Implement electronic workflow management system (BlueWorx); and
- Implement an inventory management solution.

## **6.8. Self-recovery**

Asset self-recovery is still an issue with field teams and is especially problematic for the regional and rural areas. The removal of the ability for teams to self-recover has resulted in crew and vehicle down-time increasing, which adversely affects the cost of network maintenance. The ability to self-recover a stranded vehicle is essential for practical off-road work, and a project is underway to restore this capability across Field Operations to reduce down-time wherever possible. Implementation should be through the provision of business-wide, approved training programs, to create consistent techniques, common equipment, and safe working procedures.

## **6.9. Contingency**

Ausgrid must be able to respond to unexpected events that impact the network. The most common events are storms, however recent years have also seen other major disasters such as fires and floods. Ausgrid may also face events such as terrorism, black-start, and mass breakdowns on aged network assets. These events require fleet assets to address in every circumstance.

As part of our contingency planning, it is important to note that a shortage of assets will result in crews needing to hire replacement equipment at close to 50% more than the cost of an owned unit to avoid a failed network maintenance task. Under-fleeting is a much higher cost to the business than over-fleeting, as an underutilised asset has a minor cost when compared to underutilised staff (due to wasted labour/task failure) or a hired replacement

unit. With the monthly cost of a hired asset being 45% higher than that of an owned asset, the value derived from a small number of additional assets in the fleet is clear and will ensure that spares are available in the event of a breakdown. The small additional cost of the fleet held in contingency will far outweigh costs incurred from protracted customer outages, stranded labour, overtime, and rescheduling.

In addition, certain roles in the power worker stream have the ability to supplement other teams by performing a different role during extreme events or incident response. This capability assists in speedier response, increased staff resourcing, and lowers the need for contracted staff. To take advantage of these capabilities, supplementary roles will be considered when completing the entitlement program and designing new asset specifications.

### 6.10. Summary of actions and timeframes

The table below summarises the actions that arise in relation to the capability initiatives described in this Chapter and the function support required to deliver those initiatives.

Our initiatives to enhance our capability have already commenced. Our proposed timeframes for completing these initiatives is set out in the figure below.

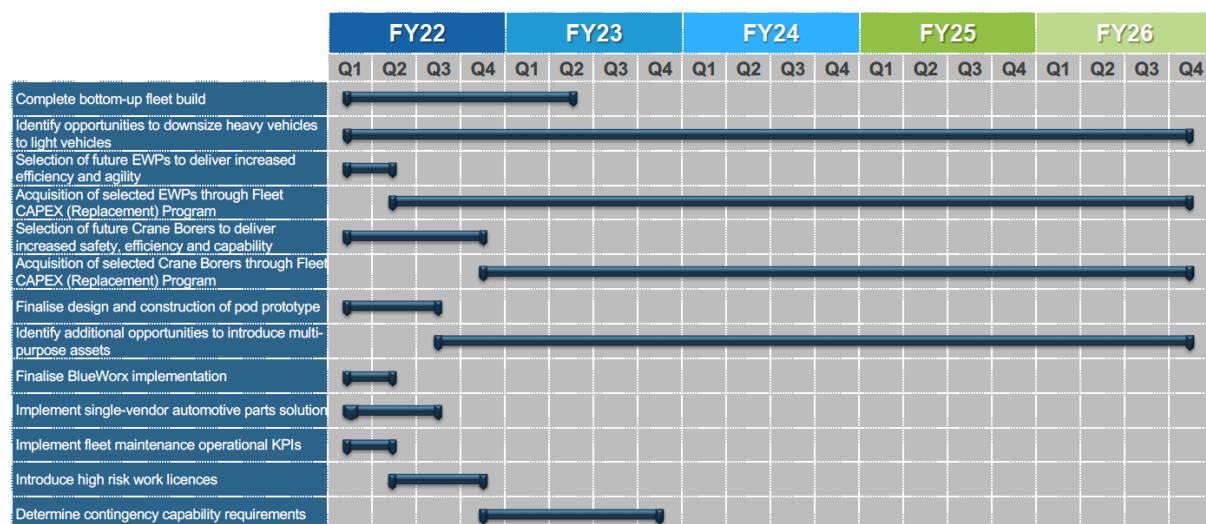


Figure 23: Timeframes for delivering the capability initiatives

## 7. Standardisation

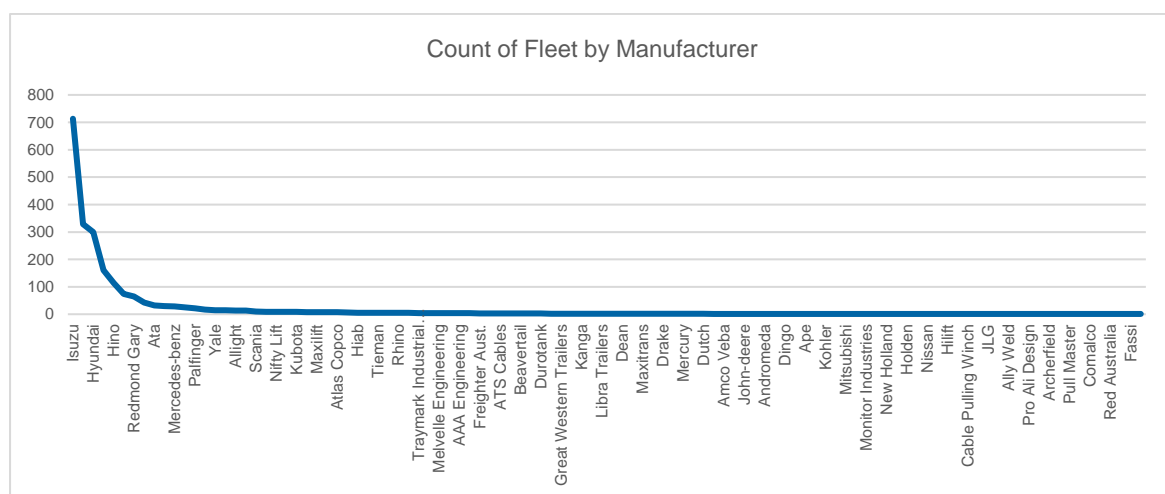
### Key points

- It is important that assets are 'fit for purpose', which means matching the specification to the needs of the business as far as practicable. It is equally important that the choice of asset has regard to the operational benefits of standardisation.
- It is evident from the wide variety of existing fleet assets that there are potential benefits by increasing our focus on the benefits of improved standardisation.
- Our strategy recognises that change should be made over time, so that replacement decisions are not brought forward in order to achieve standardisation.

The fleet profile currently consists of approximately 250 different vehicle and plant models, of which over 100 are unique, one-off assets. This high model count increases the variation of parts, contractors, and training needed to operate and maintain the fleet. There are currently:

- 13 different light vehicle body variants;
- 40 light commercial vehicle variants;
- 63 heavy commercial vehicle models;
- 67 heavy commercial fitout variants;
- 39 vehicle loading cranes models; and
- 182 elevated work platforms with 17 model combinations.

This range of different vehicle types provides an opportunity to streamline the number and variation of vehicle makes and models in order to reduce the associated costs. Fleet aims to reduce as many one-off assets out of the fleet as possible and create common platforms for all major equipment.



**Figure 24: Ausgrid fleet assets by manufacturer**



## 7.1. Vehicle Standards

Fleet will create standard asset platforms through design consultation with end-users and create a fit-for-purpose, agreed build standard for each major work group with specific needs. For example, the completion of the Underground Cable Jointer Truck standard will become the future standard for urban cable jointers, allowing heavy underground cable to be carried while also providing a work platform for underground teams with the ability to lift joints. This will allow for bulk asset orders to be placed with manufacturers, enabling price negotiation through volume, as well as labour efficiencies by using equipment to speed up the tasks performed in the field, and common work practices.



**Figure 25: Cable Jointer Truck standard finalised in 2020**

Additional benefits of standardisation include fewer overall parts required, leading to less vendor management, administration and lower invoice volume. Maintenance turnaround can decrease as less variation in procedures and faults will enable simpler, faster maintenance.

Fleet will compile standard layouts for EWPs, Borers, and various other equipment as part of the standardisation process. This will allow all work groups to maintain a level of equipment common to each asset and ensure standard work practices flow through the wider business.

## 7.2. Complete Vehicle Schedules

Each asset within the Ausgrid fleet requires a set of additional equipment to support network maintenance and construction tasks. For instance, an EWP for live line work requires live line sticks, additional PPE, drapes and pipes. There is currently no consistent layout, equipment list, or method of procurement for the additional items needed for an asset, and



as such there is a variation in standards across the fleet. This provides an opportunity to increase productivity and efficiency by standardising the equipment required for each vehicle, compiling this into an approved vehicle set, and facilitating stock demands through the Ausgrid supply chain.

Fleet will create standardised equipment lists for each asset, taking account of users' views, along with details for purchasing those items. The introduction of standardised equipment lists will reduce variations in procurement methods, reduce labour costs and allow preferential pricing to be utilised.



**Figure 26: Standard equipment storage configuration for Nifty-Lift EWP during the fitout process**

### 7.3. Training

Standardisation of models, especially across the plant fleet, will reduce the training hours and courses for field staff as well as creating cost efficiencies on staff labour hours. A smaller number of platforms will also increase safety by giving the field team common equipment that operators are familiar with, instead of unique items of equipment that staff do not use as often and may require a refresher before use.

### 7.4. Summary of actions and timeframes

The table below summarises the actions that arise in relation to the standardisation initiatives described in this Chapter and the function support required to deliver those initiatives.

Our standardisation initiatives have already commenced. Our proposed timeframes for completing these initiatives is set out in the figure below.

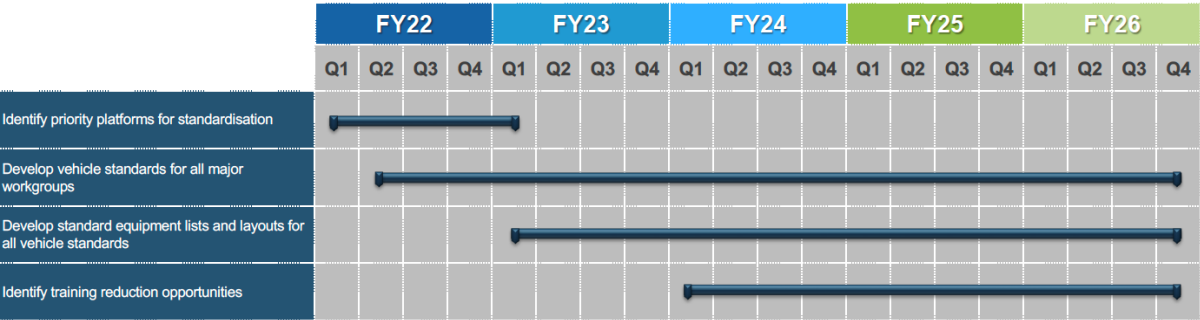


Figure 27: Timeframes for delivering the standardisation initiatives

## 8. Financial Control

### Key points

- Fleet remains focused on identifying opportunities to manage costs and deliver savings, providing that these can be achieved without compromising safety, productivity or service performance.
- The identification of cost savings is particularly important in order to offset cost increases in other cost categories. The principal areas where savings can be achieved are:
  - Optimise the Fleet Management Organisation relationship;
  - Maximise manufacturer and dealership discounts;
  - Reduce plant hire expenditure;
  - Improve management of motor claims and contracted repairers; and
  - Bulk maintenance arrangements.

Fleet's core focus is management strategies that reduce direct costs in vehicle-related expenses but also indirect costs that flow-on to the wider business. As explained in this Chapter, we have explored cost efficiency opportunities in relation to:

- Fleet Management Organisation;
- Asset acquisition;
- Asset rebuilds
- Mobile plant hire;
- Motor claims;
- Light vehicle maintenance; and
- Fleet utilisation.

### 8.1. Fleet Management Organisation

Ausgrid appointed FMO *sgfleet* in July 2017 to support a hybrid model of fleet management, with *sgfleet* managing the basic administration of light vehicle maintenance, fuel cards, registration, tolls and infringements and Ausgrid maintaining overarching strategic control, engineering and heavy vehicle and plant maintenance.

The engagement of an FMO allowed Ausgrid to realise both administrative efficiencies and cost savings. While these outcomes were beneficial, there have also been lessons learned with respect to how an FMO is best integrated into the Ausgrid business to maximise their effectiveness.

Administration is a clear strength for both *sgfleet* and FMOs in general. Through leverage of economies of scale, activities such as vehicle registration, tolls, and infringements are all

managed smoothly and with minimal issues. These offer a genuine boost to Ausgrid's internal efficiency and productivity.

In recognition of Ausgrid's experience with *sgfleet* as its FMO over the last four years, a modified operating model for fleet management is proposed. To reduce risk and increase control over asset rebuilds and commissioning, a change to the FMO scope of work for vehicle acquisition and major inspection management will be investigated as part of Ausgrid's market exercise.

In future, Ausgrid will directly manage quoting and negotiation, pre-delivery inspections, commissioning and the development of risk assessments and safe operating procedures by insourcing these key strategic activities. To maximise the commercial value obtained from its FMO, Ausgrid will also insource fuel card administration, vehicle disposal management and insurance administration/claims management from *sgfleet* and Zurich respectively.

The fuel card administration service performed by *sgfleet* currently costs Ausgrid approximately \$50,000 per annum and with only 450 fuel cards processed and consolidated billing already offered, does not represent good value. Similarly, vehicle disposals are currently conducted without registration, which does not maximise disposal pricing through registration transfer, nor are better prices sought for maximum returns. Insourcing this service would allow this change, as well as the pursuit of other avenues of disposal, both of which could significantly increase sale proceeds.

The proposed operating model continues to represent a hybrid model of fleet management and so FMO services are still required to deliver Ausgrid's Fleet Strategy, and to manage the day-to-day administration of the fleet. Accordingly, a procurement exercise for fleet management services will commence in FY22 to support adoption of a new operating model that maximises operational efficiency and commercial value in FY23 and beyond.

## **8.2. Asset acquisition**

Manufacturers have a varying combination of several price discounts:

- Fleet/government discount;
- Volume rebate;
- Additional client-specific discount; and
- Dealer discount.

To capture and realise the discounts on offer, Fleet is creating Master Pricing Agreements with key manufacturers. These agreements provide access to NSW State Government pricing and additional rebates depending on the manufacturer and outcome of negotiation. In combination, this is representative of an approximate 17-25% discount against retail price.

In addition to these discounts, Ausgrid is aware that many dealerships have rebate agreements in place with a number of FMOs in order to maintain their status as a preferred supplier. Anecdotally, this rebate is between 1% and 2% of the vehicle purchase price and

as such, is representative of an approximate saving of \$50,000 per annum across a passenger and light commercial vehicle acquisition program of 100 vehicles.

### **8.3. Asset rebuilds**

EWP and Borer assets are subject to Australian Standard 1481.10 and AS2550.10, requiring a major overhaul at the 10-year period. This overhaul can be close to half the purchase cost of a new asset, and while this allows the asset to be extended by 5 years, this is not necessarily the best financial or operational outcome.

The benefits of rebuilds are lower capital expenditure for a life extension of 5 years, extending heavy plant and trucks from a 10 to 15-year life. However, this tends to have detrimental effects due to the age of the truck chassis, which is not overhauled and often subject to increased breakdowns. Fleet will conduct a thorough analysis as to the cost versus benefit of rebuilding assets and recommend the continuation or cessation of this practice.

### **8.4. Mobile plant hire**

Mobile plant hire represents a large cost to the business however is also necessary to reduce asset ownership and training requirements. There is nonetheless inconsistency in the business practices used to access hired assets, the appreciation for and management of associated risk, and knowledge of what owned assets exist and are available to complete the required task.

To reduce unnecessary asset hire, Fleet will develop network-wide visibility of shared plant assets and, if possible, integrate this information with Field Operations' scheduling tool, MyWork.

Ausgrid's Mobile Plant Hire Panel of Contracts expired in 2021 and following a 12-month extension, will be the subject of a new sourcing project. The key focuses for this procurement will be network coverage, asset capability, risk management, and ease of use. Given many Ausgrid staff are not aware that these contracts exist, the new procurement will also be backed by an enterprise-level communications plan, change management and training as required.

With EWP platforms one of the most commonly hired assets due to breakdowns and a desire to avoid task failure, Fleet will review the required level of assets to maintain capability, including contingency, to reduce the need for costly hire and recommend the correct level of holdings for the organisation. This will include assets for FTE allocation as well as replacement assets for rebuild schedules.

Fleet has also found several long-term hire assets within the business as part of site audits and will conduct a policy review on whether asset hire is prudent, or a business case should be made for purchase. Historically, insufficient guidance has been provided on asset hire, particularly for long-term requirements, and Fleet will create a reference for staff to enable simple justification to be made for asset hire or full-time allocation.

### 8.5. Motor claims

Asset damage and repair claims management currently costs Ausgrid \$0.5-1m annually in operating expenditure.

Fleet has sought to change the claims provider through the Ausgrid broker, however there are limitations to the insurance-related options. A determination around the overall business motor insurance needs, level of self-insurance, and catastrophic events policy will need to be made. Fleet will engage with Treasury to complete this in FY22.

### 8.6. Light vehicle maintenance

Consultation with field teams has noted difficulties managing light vehicle servicing due to the variation in practices across the network area. Some business functions use on-site servicing, some use dealerships, and others use various approved workshops to conduct light vehicle maintenance. The variation creates an increase in vehicle down time, can be disruptive to planned work, and require unproductive labour time to deliver and collect vehicles.

Fleet will conduct a market exercise for a light vehicle servicing program via *sgfleet*-contracted providers. Contract requirements will include on-site servicing or a delivery and collection service, allowing staff to work from a depot when vehicles are being maintained and negating the additional travel requirements. Vehicle down-time will be minimised through this process and volume discounting will be able to be negotiated, lowering overall maintenance costs.

### 8.7. Fleet utilisation

During depot visits, stakeholder discussions, and observation days, Fleet has noted multiple unused and underutilised assets:

- A medium bus was retained for the requirement to conduct a single trip per week, where the task revolved around use of the asset, rather than changing the task to remove the need for the asset;
- A depot had 2 Bobcats on hand with 1 only being used to sweep the yard - Fleet consulted with stakeholders to reallocate one of these Bobcats and replace an excavator on permanent hire at another depot used for spoil management; and
- An underutilised forklift was used to replace an asset on long-term hire, halving the operating cost while preserving the capability.

Fleet will undertake a structured analysis of asset holdings to identify those needing revalidation and update business cases for retention. By combining this with the fleet entitlement build process, further efficiencies can be identified, and overall costs reduced.

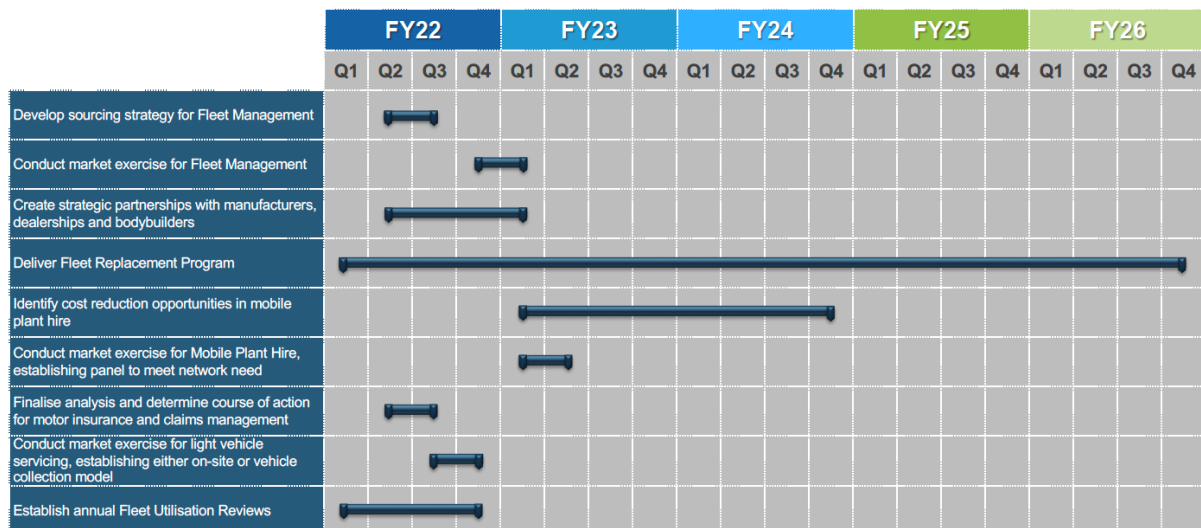
Average fleet utilisation sits at 30% due to the difference in usage statistics between heavy and light vehicles. Vehicle falling under this threshold over a 2-year period will be reviewed to establish ongoing business need.



### 8.8. Summary of actions and timeframes

The table below summarises the actions that arise in relation to the financial control initiatives described in this Chapter and the function support required to deliver those initiatives.

Our financial control initiatives have already commenced. Our proposed timeframes for completing these initiatives is set out in the figure below.



**Figure 28: Timeframes for delivering the financial control initiatives**

## 9. Sustainability

### Key points

- Ausgrid will actively consider sustainability issues in determining its approach to electric vehicles.
- Fleet will also consider how emission standards may affect our procurement decisions.

In line with the Sustainability Policy, Fleet has a responsibility to seek ways to reduce our carbon footprint wherever possible within the operations of assets and plant. Opportunities to improve our carbon output exist in:

- Reduced emissions through alternative drive systems
- Lower fuel consumption
- Elimination of waste

### 9.1. Electric & Hybrid Vehicles

The adoption of Electric Vehicles (**EVs**) provides the greatest opportunity for Fleet to reduce emissions. Several areas of the business are focusing on electric vehicle products, and Fleet has been approached for input into EV policy, preferences, and opportunities. While there is interest from the wider business to increase EVs in the fleet, the benefits to doing so are outweighed by the cost.

EVs have a procurement cost approximately 50% higher than a comparable internal combustion engine (**ICE**) vehicle, though costs are slowly decreasing as production begins to ramp up. The operating cost of Ausgrid's own EVs average over 40% higher than Ausgrid hybrid vehicles, due to higher insurance costs, higher breakdown rates and lack of maintenance options, resulting in expensive maintenance bills. Combined with lower resale prices, EV costs present a commercial risk.



Figure 29: Ausgrid electric vehicle (Renault Zoe) purchased in 2019

Hybrid vehicles however are progressing well in the Australian market, with sales increasing in Australia by 73% between FY19 and FY20, compared to EVs declining 8% YoY (source: VFACTS data Nov 19-Nov 20). With the strong resale value of hybrids in the Australian market, they provide a benefit to Ausgrid emissions with a 50% lower CO2 output than a comparable ICE vehicle, while also representing an excellent commercial opportunity.

Fleet will address emissions targets and EV use for each major category of vehicle, as follows:

- For passenger vehicles, Fleet will replace all assets with hybrid vehicles at end-of-life, along with a small percentage of EVs for pool use. Fleet will aim to invest in a 10% EV ratio of passenger vehicles by FY25, provided the charging systems can be made available at all suitable depots. All other passenger vehicles are to be hybrid engines, giving Ausgrid a sustainability gain while also maximising the commercial opportunity.
- Light commercial vehicles remain a challenge for Ausgrid. Fleet will seek to implement a pilot program by FY24 to identify a workgroup to be equipped with EV assets to trial the suitability of such vehicles and create the change through the business. This plan is subject to a mass-production light commercial EV being available in the market that fits Ausgrid specifications.
- Heavy asset electrification is still a difficult prospect and Fleet does not recommend moving to EV drivetrains for these assets during the FY22-26 period. However, due to the aging nature of this section of the fleet, options will be explored to replace passive filtration systems in vehicles over 10 years to reduce the emissions of these assets. Fleet will continue to monitor the heavy vehicle EV offerings and consider a trial if a suitable model becomes available.

## **9.2. Emissions Standards**

The Department of Infrastructure is currently reviewing the impact of Euro 6 and VI standards for Australia. Fleet will investigate the possibility of implementing these standards proactively as part of the procurement process to reduce emissions across the fleet.

## **9.3. Summary of actions and timeframes**

The table below summarises the actions that arise in relation to the sustainability initiatives described above and the function support required to deliver those initiatives.

Our assurance initiatives have already commenced. Our proposed timeframes for completing these initiatives is set out in the figure below.

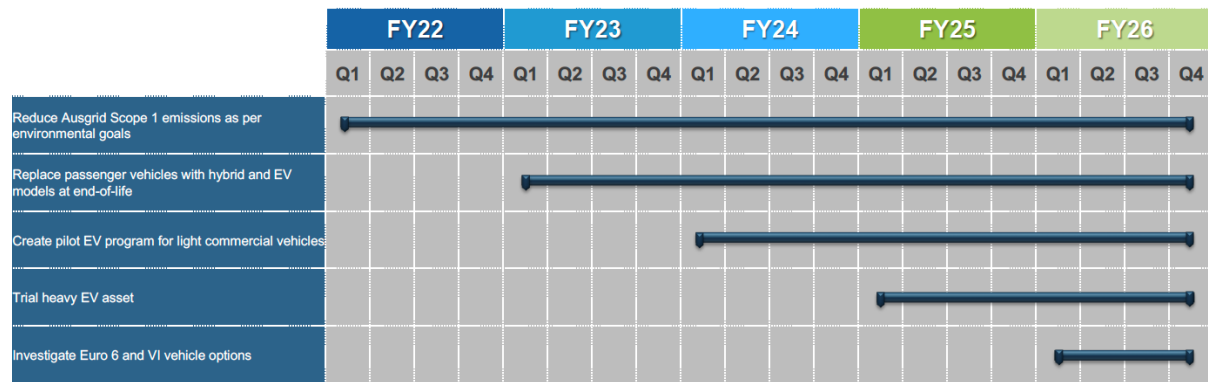


Figure 30: Timeframes for delivering the assurance initiatives

## 10. Assurance

### Key points

- Underpinning all elements of this strategy is Fleet's intent to move towards proactive management of the portfolio. In doing so, Ausgrid can provide assurance updates to both the Executive and wider business that we are complying with our obligations.
- A key initiative is to manage fleet assets in accordance with the principles in ISO 55000, which will drive improvements in our systems and processes and bring the management of fleet assets in line with management of network assets.
- Fleet recognises the importance of monitoring our performance compared to our peers. Our assurance will therefore include an increased focus on benchmarking to analyse and understand differences in performance, and introduce performance improvement initiatives where these are warranted.
- To validate the effectiveness of our safety systems, ensure financial control, and identify latent risk, Fleet must move towards a program of regular audits.

Underpinning all elements of this strategy is Fleet's intent to move towards proactive management of the portfolio. In doing so, Ausgrid can provide assurance updates to both the executive and wider business that we are complying with our obligations; managing our assets effectively; and monitoring our performance relative to our peers.

In relation to assurance initiatives, this Chapter discusses:

- ISO 55000 – Asset Management;
- Benchmarking;
- Audits;
- Drivers Licences;
- Asset Master Data; and
- Data Products.

### 10.1. ISO 55000 – Asset Management

Ausgrid manages network assets in accordance with the principles laid out in ISO 55000. In principle, Fleet assets are no different to network assets and should be managed to the same standard to bring Ausgrid's assets under a common practice.

By aligning with ISO principles and maintaining a focus on the value the asset can bring rather than the asset itself, Ausgrid can change the way fleet assets are viewed within the business to align asset management objectives with organisational objectives. Ausgrid must change its view of Fleet from “a vehicle with cost” to “an asset with benefit”.

Fleet will move towards an asset management approach in line with the ISO principles involving:

- Closer integration of Fleet asset management with other areas of the organisation: Field Operations, Finance, and ICT.
- Redesign of the supporting Fleet management system around asset management principles to an assurance model, with regular auditing and continuous improvement.
- Clearly define roles, responsibilities and objectives for the Fleet team. Staff are empowered to make better decisions and given delegations to allow this to occur.
- Policies, plans and processes are rewritten to reflect the changes within the business, the recent structure changes, and allow better decisions to be made.
- The fleet information system is opened to the rest of the organisation to allow decision-making in all other business units.

## **10.2. Benchmarking**

Benchmarking has significant limitations, given the significant differences in operating environments across distributors as evidenced by the diversity across Ausgrid's service territory, which we discussed in Chapter 3.

Despite the limitations in benchmarking, Fleet recognises the importance of monitoring our performance compared to our peers. Our assurance will therefore include an increased focus on benchmarking to analyse differences in performance. Fleet therefore proposes to introduce benchmarking reporting so that we can understand differences across our network and between Ausgrid and our peers, and introduce performance improvement initiatives where required.

## **10.3. Audits**

To validate the effectiveness of our safety systems, ensure financial control, and identify latent risk, Fleet must move towards a program of regular audits. Strong auditing can identify fraud, control risk, and find new ways to save costs. An improved assurance model will be developed in partnership with the Governance team in FY22.

A full internal audit of the Fleet function was completed in early FY22, with minimal actions resulting from the review.

## **10.4. Driver Licences**

Fleet is investigating a license validity system provided by Roads and Maritime Services. This system enables Ausgrid to be aware of driver license status at any point and close the risk of unlicensed drivers in Ausgrid assets.

## **10.5. Asset Master Data**

SAP Plant Maintenance is Ausgrid's primary data system for all fleet assets. Fleet has been working to improve the quality of data held in our system following its migration from legacy fleet management system, FigFleet. This involves a significant rework of the existing data structure and audit of the information held. Due to the difficulty of accessing this data, most field teams run their own list of vehicles, duplicating effort.



Ongoing maintenance of this data remains a challenge. On/offboarding of assets as well as allocation changes can be daily requirements, which are manually keyed into the system requiring a significant labour effort. Work is underway to streamline the data held, and at least partly automate the updating process, and make this available to field staff to facilitate timely decision making.

## 10.6. Data Products

Fleet has increased reporting capabilities in Power BI, initially producing the Heavy Vehicle Compliance report and Fleet Utilisation Tool. These have both allowed the general consumption of fleet data into decisions made by the business and are available to all users. Fleet will begin a training program for these reports in FY22 to ensure managers can maximise the use of these reports.

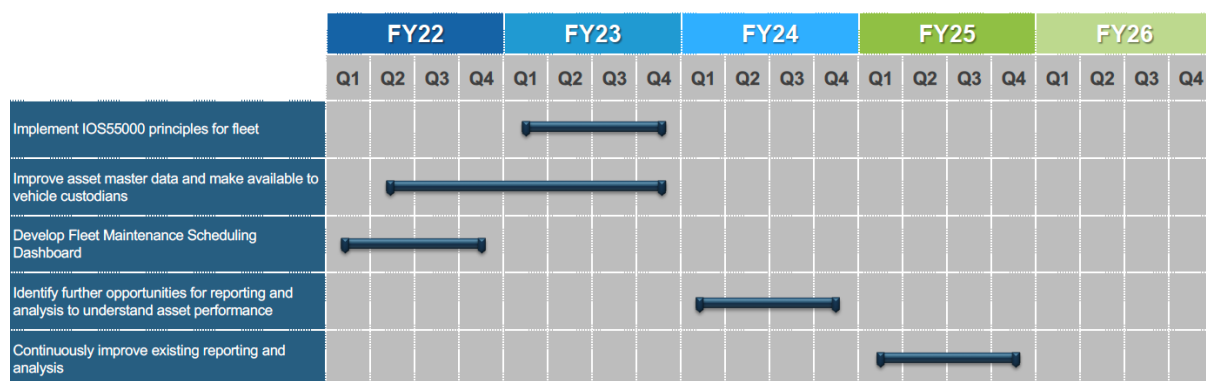
Fleet has implemented a new maintenance management system, BlueWorx, that will allow an improved, detailed view of asset condition and provide the opportunity to plan preventative maintenance outside of the manufacturer's recommendations. This will lead to fewer failures in the field and impact to operations.

There is scope to advance analysis of asset performance based on condition, use and cost. This will allow Fleet to highlight underperforming assets, drive decisions on replacement, inform the fit for purpose discussion and allow better decisions around the useful life of Fleet assets.

## 10.7. Summary of actions and timeframes

The table below summarises the actions that arise in relation to the assurance initiatives described above and the function support required to deliver those initiatives.

Our proposed timeframes for delivering these initiatives is set out in the figure below.



**Figure 31: Timeframes for delivering the sustainability initiatives**

## 11. Fleet capital expenditure forecasts

### Key points

- Our fleet capital expenditure forecasts for the 2024-29 regulatory period reflect the output from our replacement cost model, which is driven by the asset lives and up-to-date quotations for new replacements.
- We have also considered how the Fleet Strategy is likely to affect our future capital expenditure requirements. While the overall impact is uncertain, we consider it appropriate to include an efficiency factor in our forecasts.
- We have also smoothed the 'raw' expenditure forecasts from the replacement cost model, having regard to the delivery and cost impacts that may result from ramping up replacement volumes in particular years.
- Our total fleet capital expenditure forecasts for the 2024-29 regulatory period are higher than our estimated capital expenditure in the previous 5 year period. This increase reflects the historical pattern of fleet capital expenditure, which was substantially higher 15 years ago and those assets are now reaching the end of their technical lives.

This Chapter provides:

- an overview of our forecasting methodology to determine our fleet capital expenditure requirements; and
- our forecast fleet capital expenditure for the 2024-29 regulatory control period.

The forecasts reflect our best estimate of prudent and efficient expenditure requirements, having regard to our Fleet Strategy and the efficiency improvements that we expect to achieve.

### 11.1. Capital expenditure forecasting methodology

A key objective of our Fleet Strategy is to minimise the total lifecycle cost of our fleet requirements, having regard to our safety and compliance obligations. The proposed program will benefit our operations and customers by:

- focusing on lifecycle costs which will assist in achieving lower overall costs in the longer term; and
- promoting productivity and optimal work practices by providing the workforce with the vehicles and plant that are safe and fit for purpose.

Capex for fleet and plant is forecast by estimating age-based retirements of existing assets. The standard age and mileage for owned vehicles we have adopted ranges from:

- 5 years / 150,000 km life for cars and station wagons;
- 6 years / 150,000 km for light commercial cab/chassis, panel vans and utilities;
- 15 years / 250,000 km for trucks; and

- 15 years for elevated work platforms and cranes, which includes a life extension at 10 years.

In adopting this data, we had regard to the replacement approach adopted by our peers, which is summarised in the table below.

Company	Passenger Vehicles	Light Commercial Vehicles	Heavy Commercial Vehicles & Plant
Essential Energy	60 months / 150,000 km	60 months / 150,000 km	10-15 years
Powerlink	48 months	48 – 84 months	8-10 years
Ergon	48 months / 100,000 km	150,000 km	10-15 years
Energex	3 or 5 years	60 months	10-15 years
SA Power Networks	60 months / 150,000 km	60 months / 150,000 km	10 years (EWP) 15 years (crane)
Powercor	60 months / 150,000 km	60 months / 150,000 km	10-15 years (EWP) 10 years (HCV)
Downer	36 months / 90,000 km	36 months / 90,000 km	7-10 years
Jemena	60 months / 150,000 km	60 months / 150,000 km	10-15 years (EWP) 10 years (HCV)
<b>Ausgrid</b>	<b>60 months / 150,000 km</b>	<b>72 months / 150,000 km</b>	<b>15 years</b>

**Figure 32: SGFleet comparison of vehicle replacement planning thresholds**

Appendix 1 provides a detailed summary of our replacement data for each type of fleet asset.

In relation to the costs of replacing assets, we have undertaken an extensive exercise to obtain up-to-date quotes for the majority of replacement vehicles and plant. This exercise reflects a substantial improvement on the use of historical data, which had become significantly outdated. The latest replacement cost estimates have been included in the replacement model to produce the capital expenditure forecasts.

While principally an age-based replacement model, we have also considered:

- how best to reflect the impact of the initiatives presented in this strategy document in our future capital expenditure requirements;
- opportunities to smooth the expenditure requirements over the 5 year regulatory period, having regard to the challenges associated with ramping up replacement volumes; and

- the potential risks of delating replacement, having regard to the criticality of the asset in accordance with our criticality matrix in Appendix 2.

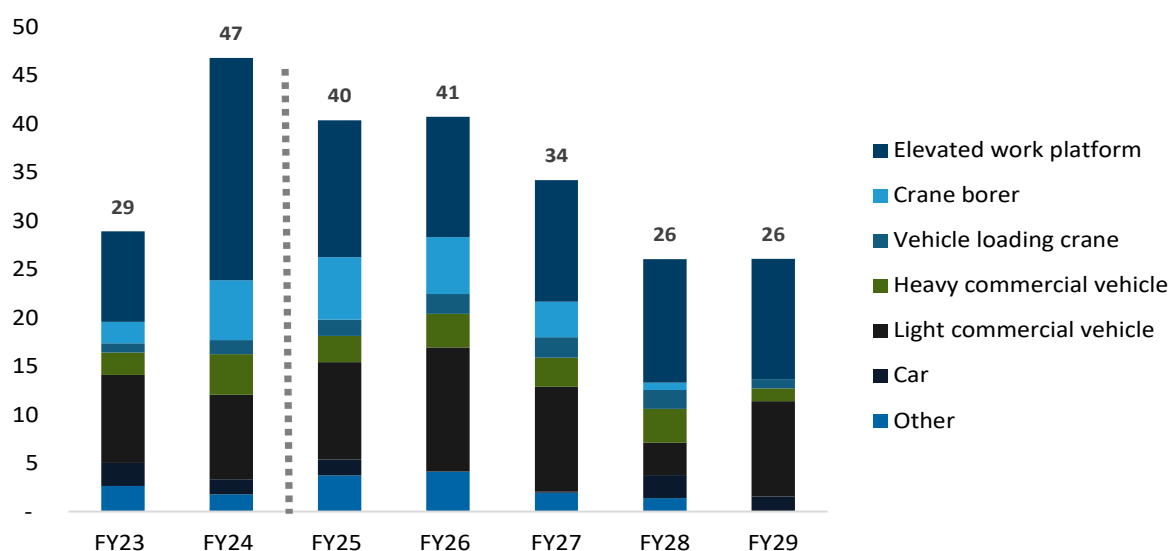
In relation to the impact of the strategy initiatives on our future capital expenditure requirements, we recognise that a number of strategies are focused on delivering cost savings. For example, KPMG identified an opportunity to increase asset utilisation by decommissioning some HV and P&E assets.

By contrast, our safety and compliance initiatives indicate a need for increased capital expenditure to replace assets that are operating beyond their technical lives and present an opportunity to reduce safety risks. For other initiatives, such as capability, it is too early to assess the overall impact on our capital expenditure requirements for the 2024-29 regulatory period, but early indications suggest that the impact is likely to be cost neutral. The expectation, however, is that the mix of fleet will change in order to enhance capability from its current state.

In preparing our capital expenditure requirements, Fleet is also mindful of the key objective to change the perception of fleet from a 'vehicle with a cost' to an 'asset with benefits', which highlights the need to focus on the value added by fleet asset rather than its cost. Nevertheless, Fleet considers it appropriate to provide a 'top down' efficiency target of 1% per annum applied to the 'raw' modelled forecasts for the 2024-29 period. While this saving may not be achievable in practice, it reasonably reflects the budget pressures that Ausgrid is experiencing across its business.

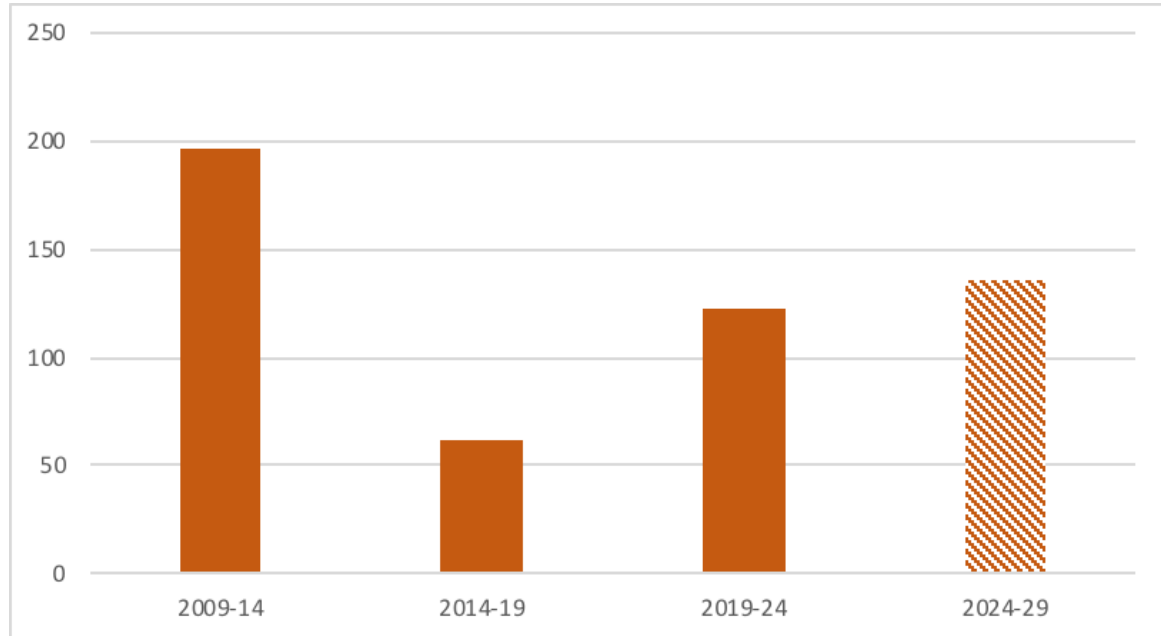
## 11.2. Capital expenditure forecasts

The figure below shows our fleet capital expenditure forecasts over the 2024-29 regulatory period. For context, it also shows our estimated fleet capital expenditure for the financial years 2022 to 2024.



**Figure 33: Actual and forecast fleet capital expenditure**

While the forthcoming regulatory period shows an increase compared to recent expenditure levels, this outcome reflects the profile of historical capital expenditure, as explained in Chapter 1. The figure below provides a longer time series, which illustrates that the forecast capital expenditure for the 2024-29 regulatory period is consistent with much higher replacement capital expenditure 15 years earlier, which now require replacement.



**Figure 34: Historical and forecast fleet capital expenditure (\$m real FY24)**

## 12. Strategy execution and deliverability

### Key points

- The success of the Fleet Strategy depends on its successful execution and the active management of deliverability risks.
- Fleet has identified the assistance required from other business functions to achieve the successful execution of the strategy.
- It is recognised that replacement volumes are increasing over the 2024-29 regulatory period, which exposes Ausgrid to deliverability risks. The capital expenditure smoothing already incorporated in our forecasts will assist in managing this risk.
- Fleet will actively review the actual replacement volumes to ensure that the target replacement volumes are achieved at the lowest total cost.

A robust execution process, involving feedback from multiple functions, business approval and effective communication, will ensure the success of the program. The strategy will also need to consider deliverability risks, ensuring that these are actively managed to ensure that the 'future state' described in this document is achieved.

### 12.1. Process and business support requirements

The following process will be used to deliver the Fleet Strategy:

- Engage stakeholders for input and feedback;
- Create new standards, entitlements, and procedures;
- Gain approval at multiple levels;
- Prioritise funding; and
- Deliver new assets.

To achieve the goals of the strategy and drive change across the business, Fleet requires support from a number of business functions, as set out in the table below.

Business Function	Description of required support
<b>Field Operations</b>	<ul style="list-style-type: none"> <li>• Design input for night safety improvements</li> <li>• Determine contingency capability requirements</li> <li>• Review of driver training standards</li> <li>• Capability requirements for difficult terrain</li> <li>• Future EWP and Borer selection input</li> <li>• Opportunities for heavy vehicle downsizing</li> <li>• Identify priority platforms for standardisation</li> </ul>



Business Function	Description of required support
	<ul style="list-style-type: none"> <li>• Create vehicle standard equipment lists</li> <li>• Identify cost reduction opportunities in plant hire</li> <li>• Make determination on rebuilds</li> <li>• Trial heavy EV asset</li> <li>• Re-examine capability requirements of IVMS</li> <li>• Investigate options for OS/OM waivers</li> </ul>
<b>Network Delivery Services</b>	<ul style="list-style-type: none"> <li>• Conduct market exercise for light vehicle servicing</li> <li>• Implement contractor mass management controls</li> </ul>
<b>Asset Management</b>	<ul style="list-style-type: none"> <li>• Determine contingency capability requirements</li> <li>• Reduce Ausgrid Scope 1 emissions</li> <li>• Create pilot LCV EV program</li> <li>• Trial heavy EV asset</li> </ul>
<b>Health &amp; Safety</b>	<ul style="list-style-type: none"> <li>• Design input for night safety improvements</li> <li>• Review of driver training standards</li> <li>• Future EWP and Borer selection input</li> <li>• Re-examine capability requirements of IVMS</li> </ul>
<b>Finance</b>	<ul style="list-style-type: none"> <li>• Create audit plan</li> <li>• Determine course of action for motor insurance</li> </ul>
<b>People</b>	<ul style="list-style-type: none"> <li>• Review of driver training standards</li> <li>• Establish recovery training program</li> <li>• Identify training reduction opportunities</li> <li>• Implement driver licence management</li> </ul>

**Figure 35: Required support to execute Fleet Strategy**

## 12.2. Rollout Plan

Rollout of the Future Fleet plan will be similar to the current process of prioritising funding to the assets that are most needed, balancing bulk purchases where possible with budget limitations to determine asset priority.

The majority of the Future Fleet plan will be enacted as assets naturally reach the end of life, to prevent unnecessary additional expenditure. Where a financial benefit can be gained, assets may be retired or replaced early provided the required business justification has been determined.

### **12.3. Deliverability risks**

Fleet recognises that any strategy or project has deliverability risks that must be actively managed in order for the targeted objectives to be achieved. In relation to the Fleet Strategy, it is recognised that the substantial increase in replacement volumes in the 2024-29 regulatory period requires active management to ensure that Ausgrid is not exposed to supply chain risks and/or unacceptable increases in replacement costs. Fleet is also mindful that deferred replacement of vehicles and plant potentially exposes the business and its staff to unacceptable safety and compliance risks.

Fleet notes that the capital expenditure smoothing exercise described in the previous chapter has considered the potential deliverability risks. In addition to this smoothing exercise, Fleet will actively manage the actual replacement volumes and take the opportunity to bring forward or defer replacements where such action will assist in meeting the overall objectives of the Fleet Strategy at the lowest total cost.