Jemena Gas Networks (NSW) Ltd

Fleet Asset Class Strategy

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Abbreviations

ABS	Asset Business Strategy
AIP	Asset Investment Plan
AMS	Asset Management System
ANCAP	Australasian New Car Assessment Program
APAIR	Asset Performance and Integrity Review
CoR	Chain of Responsibility
COWP	Capital and Operating Work Plan
ECMS	Enterprise Content Management System

Asset class snapshot

Asset sub-classes

- Commercial vehicles
- Material handling vehicles
- Passenger vehicles
- Mobile plant

Expenditure drivers

Asset management considerations

- Current or upcoming obsolescence
- Contemporary technologies and innovations
- Availability
- Emissions reduction

Performance

- Availability of on call service
- Fleet maintenance
- Rebuilds in line with OEM dates
- Annual vehicle registration paid
- Average monthly utilisation
- Vehicles per FTE
- Opex budget control
- Increasing percentage of alternate fuelled vehicles
- Purchase costs
- Whole of lifecycle costs

Emerging risks and opportunities

Key initiatives

- Quarterly meetings with manufacturers regarding availability
- Active engagement on alternative fuel vehicle development
- New technology and innovation trials as available
- Emerging safety initiatives

PART A: Strategy and asset management principles

1. Purpose of this document

The purpose of this ACS is to explain the approach and principal methods by which the fleet asset class contributes to delivering the JGN asset objectives, as defined in the JGN Asset Business Strategy (**ABS**) and driven by the overarching Jemena Network Strategy. The ACS is reviewed and updated annually and considers up to a 20-year outlook for the asset class.

Figure 1–1: Summary of JGN asset objectives and asset management principles

As shown in Figure 1–1, the Jemena Gas Networks Strategy sets out what we want to achieve with our assets (both gas and electricity) as Group. This then informs our JGN asset objectives, which outline what we want to achieve with our gas network assets. We then have a set of asset management principles, that inform the approach we will take to achieving our JGN asset objectives.

The role of the ACS is to bring these together and explain at a high level of **how** we will manage each asset class. From here we can develop the various business cases and works programs that form our annual work plan, budgets, and ongoing expenditure forecasts.

The Fleet ACS includes information about each asset sub-class, including:

- **Drivers for expenditure** – the key asset management drivers that inform why and when we invest in our fleet assets
- **Asset management considerations** – the important factors we consider when determining when and how to invest in our fleet assets
- **Asset performance** – information about performance, condition, and service levels
- **Emerging risks and priorities** – identified threats, opportunities, strengths and weakness that we need to be aware of and factor into our fleet asset management plans
- **Key initiatives** – taking all the above into consideration, the ACS provides a high level summary of key initiatives / asset management practices we will undertake to ensure our fleet assets meet the JGN asset objectives

The ACS also includes appendices containing contextual information on the asset class profile. This is the detailed information about the type, specifications, life expectancy and age profile of the fleet asset sub-class in service across the JGN distribution network.

1.1 Structure of this ACS

Main body

The main body of the Fleet ACS is structured into three broad parts, designed to allow the document to be reviewed and updated easily:

- **Part A: Strategy and asset management principles** – this section makes the link between the ACS and the overarching Jemena Network Strategy. It summarises the asset class objectives, expenditure drivers and governance process for managing the fleet assets.

  The information in Part A should be relatively static, only changing when there is a material change to the overarching Jemena strategies. While Part A should be revisited as part of the annual ACS review, it is unlikely to require significant updates, and should be reserved for a major review every five years.

- **Part B: Asset performance** – this section summarises the current performance and risk associated with the fleet asset class. Part B is essentially a summary of the critical information on asset performance, and from the relevant asset risk register for each asset class.

  The information in Part B should be high level only, with the finer detail on asset performance and risk available in the related asset performance reports and risk register. Part B should be reviewed and updated annually, to reflect the critical information.

- **Part C: Emerging issues and priorities** – this section summarises any risk or opportunities we need to be aware of when managing the asset class. This may include, for example; technical obsolescence; pending supply or specification changes; government policy; or technical developments/innovation.

  Part C should also include a high level summary of the current key initiatives or asset management approach being applied to the asset class. Part C does not need to go into detail on specific projects or costing (as this information is contained in the individual business cases and Capital and Operating Work Plan (**COWP**)), it just needs to provide the Asset Class Owner a high level view of the strategies we are undertaking.

  The information in Part C should be reviewed and updated annually, to make sure it still reflects the emerging risks, priorities and current projects.

Appendices

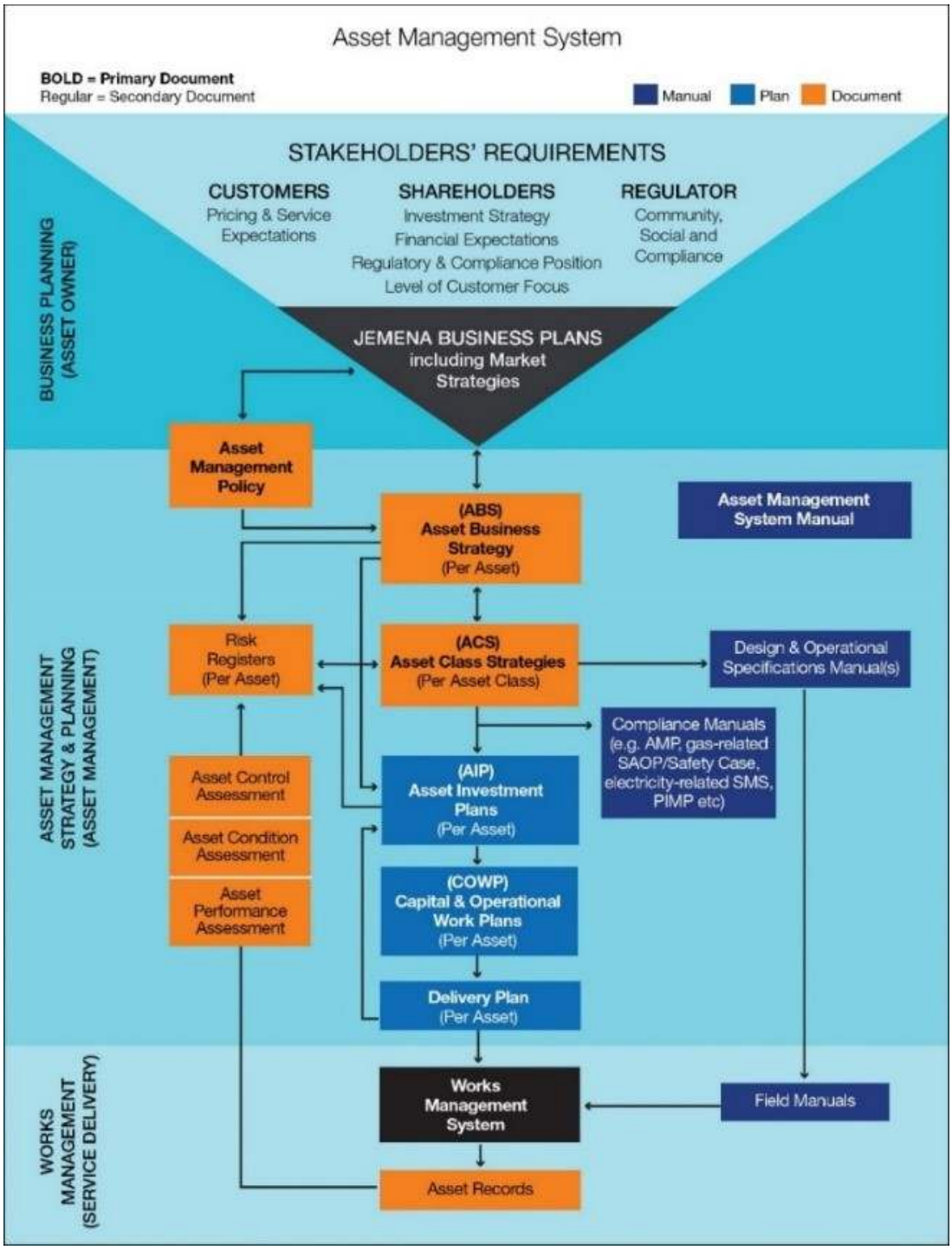
The ACS also includes appendices that contain additional exhaustive information on the asset class type, failure modes, lifecycle management, regulatory and legislative framework, and other information requirements. The information in these appendices is relatively static in nature and should not require an annual update. The appendices should be reserved for a major review every five years.

Much of the information contained in the appendices is drawn from other parts of our Asset Management System (**AMS**) (see Figure 1-2.). This information is collated in the ACS to provide a central source of useful and contextual data for the Asst Class Owner. It is also captured in the ACS here to provide line of sight across the AMS and demonstrate consistency with the holistic asset management good practice contemplated by the ISO 55001 asset management standard.

1.2 Asset management system

The relationship between the ABS and other documents within JGN's asset management system is illustrated in Figure 1-2.

Figure 1-2: JGN Asset Management System document hierarchy



A detailed description of JGN's asset management system and its constituent parts is available in the Jemena Asset Management System Manual and the Asset Management System Guidelines.

2. Roles responsibilities and assets covered

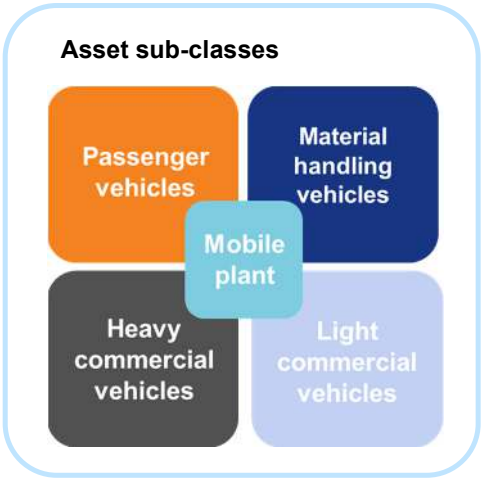
2.1 Roles and responsibilities

The Jemena Group owns, leases, hires and operates various fleet and plant that are built specifically to meet the requirements of its various businesses. Responsibility for fleet and plant is shared between the Group's Fleet and Plant Team and a contracted fleet management company.

Responsibilities for fleet and plant related activities include:

- budgeting, asset strategy, fleet criteria specification and endorsement of purchases and disposals within five-year forecasting periods;
- procurement, management and disposal of fleet and plant equipment; and
- fleet compliance, servicing and maintenance.

2.2 Description of assets covered



Jemena has five fleet asset sub-classes:

- passenger vehicles
- material handling vehicles;
- light commercial vehicles;
- heavy commercial vehicles; and
- mobile plant.

This Fleet ACS describes how these asset classes are managed from creation through to disposal, including the maintenance and replacement strategies that apply. It also includes a view of major asset management/renewal/replacement programs required over the next seven years, and a broader planning horizon of 20 years.

Table 2-1 summarises each fleet asset sub-class, what the assets do, and the different types of fleet assets.

Table 2-1: Summary of key measurement asset types

Asset sub-class	Description	Asset type
Commercial vehicles	These assets include: – Heavy commercial vehicles: These vehicles range from the 7.5 tonne GVM through to 22.5 tonne GVM. The majority of all the heavy commercial vehicles reside at the depots and are returned each day. – Light commercial vehicles: Specifications for these vehicles range from the off the shelf utility/van to a specific fit for purpose fit out. These vehicles are used to perform JGN's operations and maintenance roles, with more specific vehicles required for bespoke roles such as emergency management.	Construction/maintenance trucks – 7.5 tonne GVM truck fitted out with shelving / cupboards Large task trucks – 22.5 tonne GVM truck fitted out with a mounted crane and heavy duty tray, Gas Truck Utes Vans

Asset sub-class	Description	Asset type
Passenger vehicles	Passenger vehicles are assigned location-based pool vehicles that are used to conduct field activities, support field resources, corporate staff and project planners/managers. Vehicles assigned to a role for the purpose of emergency management or operations can return to primary residence to be able to respond to on call availability duties from time to time. Vehicles assigned to corporate staff and planners reside at the respective depots and are returned each day.	SUVs
Material handing vehicles	These vehicles are used to transport materials within depots, between depots and the field, and in the field for operations and maintenance. These vehicles are assigned to each depot as required.	Forklifts
		Trailers
Mobile plant	These vehicles are used to perform functional activities for operations and maintenance in the field.	Trailer-mounted compressors
		Excavators / digging equipment

The quantity of each type of asset in our network is continually changing. The number of each different type of asset at the end of the last calendar year is summarised in Part B of this ACS.

A detailed asset description, along with failure modes and our lifecycle management methodologies, is provided in Appendix B.

3. Strategy and asset management principles

3.1 Alignment of asset objectives

The fleet asset class objectives are designed to support the JGN asset objectives, which are detailed in the JGN ABS. We have established measures and targets against which we can measure our performance. Table 3-1 provides a line of sight between the overall JGN objectives, fleet objectives and shows the measures and targets for each.

Table 3-1: Fleet asset class objectives

JGN asset objective	Fleet asset class objective	Measure	Target
Meet customers service expectations	Ensure fleet is available for timely emergency response	Availability of on call service: • 24-hour servicing in place during operational periods • On call services in place during business hours on public holidays or shutdown periods	100%
	Manage fleet assets to ensure the safety of employees, contractors and the public	Fleet maintenance including recalls/defects completed in accordance with schedule +/- 1 month	100%
Maintain asset safety, reliability and compliance		Ancillary components for trucks are rebuilt in line with the manufacturer's rebuild dates	100%
	Maintain compliance with legislative/regulatory requirements	Annual vehicle registration paid	100%
Reduce capital investment intensity	Reduce the cost of investing in and maintaining fleet assets, without compromising risk	Light commercial and passenger vehicle average monthly utilisation within 15% of the median of the industry benchmarking	100%
Optimise operational spend		Opex budget control	Opex costs at or below allowance level
Facilitate net zero for JGN and our customers	Reduce fleet-specific greenhouse gas emissions	Increasing percentage of fleet procured is alternatively fuelled	Increasing year on year
Increase network competitiveness to remain sustainable and viable	Downward pressure on the cost of new fleet assets	Purchase costs within 15% of the median of the industry benchmarking	100%
	Achieve the lowest sustainable whole of lifecycle cost	Whole of lifecycle costs within 15% of the median of the industry benchmarking on similar type of vehicles/vehicle configuration	100%

3.2 Asset management principles

As detailed in the ABS and facilitating net zero strategies, the operating environment and stakeholder expectations are crucial inputs into how we operate and invest in the network. External factors, including regulations, technical standards, technological advances, and customer requirements are regularly evolving, which means we must regularly review and monitor the strategic drivers for investment.

The ABS identifies the following principles that influence how we manage our assets. A summary of how these principles relate to the fleet asset class is provided in the table below.

Table 3–2: How the ABS asset management principles apply to the fleet asset class

ABS asset management principles	Summary	Fleet ACS
Prioritise safety and service	Our priority is to make certain our assets are safe, provide the service or function our customers and staff need	Safety standards including ANCAP ratings are factored into our fleet purchase and replacement decisions. All passenger and light commercial vehicles selected are a minimum five star ANCAP rating. We maintain our fleet assets in line with OEM recommendations. This allows us to maintain safe fleet assets to protect those in and around our fleet assets, and ensure our fleet assets are available to maintain and grow the network, including in emergency situations.
Listen to our customers and stakeholders	We will listen to customer feedback and seek to offer them the network services they want, working within the regulatory and legislative framework set by our stakeholders	Fleet assets are critical to operating, maintaining and growing our network in line with customer and stakeholder requirements and expectations. The Fleet Team will regularly engage with Jemena operational staff and other fleet/plant users to ensure our assets are fit-for-purpose and that they provide the level of service required to conduct our work safely and efficiently.
Maximise asset value	Where possible we will seek to change the investment triggers for replacement/rehabilitation of assets such as meters, facilities, pipelines and network pressure mains, with a view to extending asset life where safe and prudent to do so	We have extended the time and distance travelled planned investment triggers. We will identify where fleet and plant asset lives can be extended via maintenance and condition based assessment – without compromising safety. We will continue to manage individual asset to maximise the life of the fleet as a whole including, for example, managing utilisation through rotation.
Net zero	We will pursue opportunities to use our assets, or connect new assets, to help reduce our own or our customers' emissions, where economically efficient to do so	Where a lower-emission vehicle is a practicable and more efficient solution, we will consider making the change as existing assets reach end of life. We continue to engage with manufacturers and vehicle dealers to understand availability of various technologies including alternative fuel types.

ABS asset management principles	Summary	Fleet ACS
		We also continue to assess the commercial proposition of new fleet asset types (see Appendices F and G).
Incremental approach	We will adopt an incremental approach to modernising and adapting the network, introducing new asset types as older assets fall due for replacement, avoiding large-scale, high-cost replacement programs where practicable	We will seek to introduce new technology or alternative fuelled vehicles via our business-as-usual fleet/plant replacement schedules. We continue to engage with manufacturers and vehicle dealers to understand availability of various technologies including alternative fuel types and will seek to adopt these new assets as they become commercial and technical viable for use in the network.
Use data to inform decisions	We will seek to inform our asset management practices with better data, for example using more sophisticated leak detection data to target mains and services replacement	We will use key metrics such as mileage, operational hours, frequency of use, and asset condition to inform fleet/plant investment and allocation. This data will be used to inform the types and volumes of fleet/plant we purchase, and where they should be deployed.
Pursue innovation	We will follow technological advancements and investigate how we can apply innovative solutions to ensure the gas network remains valued by customers	We will work with vehicle manufacturers and suppliers of alternative fuelled vehicles and ancillary equipment, to trial new technology as it becomes available to the industry. We will seek to adopt these new assets as they become commercial and technical viable for use in the network.

3.3 Expenditure drivers and asset management considerations

Fleet assets are necessary to support JGN's various business activities in a safe, reliable and cost effective manner. It is critical we have fit-for-purpose vehicles to provide services for JGN customers at the lowest sustainable cost. This means our vehicles must not only be safe and reliable, but also reduce greenhouse gas emissions where it is feasible, prudent and efficient to do so.

Investment in the fleet asset class is largely driven by the timely replacement of existing vehicles and mobile plant. However, we also need to consider the size and mix of work in the JGN works program. For example, growth in the network requires certain mobile equipment to facilitate network augmentation and additional connections, increased maintenance and repairs necessitates an increase in light commercial vehicles, an increase in the footprint of the network may require additional emergency response vehicles. The planning and delivery of JGN fleet is highly responsive to business needs. Our asset investment approach is therefore similarly agile.

Once fleet assets are in service, as prudent asset managers our role is to ensure these assets continue to function safely and remain fit for purpose. We replace or refurbish those assets we own in a timely manner and consider options for those assets we lease. Our aim is to manage our fleet and plant asset classes for the lowest practicably sustainable cost.

Figure 3–1 summarises the key drivers for expenditure in fleet asst replacement and/or refurbishment.

Figure 3–1: Drivers of expenditure in fleet asset replacement/refurbishment/re-leasing

These expenditure drivers are described further below:

- **Safe** – It is vital our fleet assets remain safe. When we invest in our vehicles and mobile plant assets, we consider a range of safety performance measures. Key considerations include function/role, frequency of maintenance and inspections, and performance in certain conditions (e.g. difficult weather and terrain). We also consider primary measures of safety performance such as the vehicle's Australasian New Car Assessment Program (**ANCAP**) rating, and safety features such as lane assist and reversing cameras. All passenger and light commercial vehicles selected are a minimum five star ANCAP rating.

  We replace fleet asset when they pose an unacceptable safety risk. This may be due to deterioration in asset performance, or a change in business requirements that increases the risk associated with that specific vehicle or mobile plant type.

- **Reliable** – Our fleet assets must be available to perform the required function/operational activity. This is critical for fleet/plant used in emergency response activities, where delay in rectification works could also pose an extreme safety risk. When replacing fleet or mobile plant, we consider the function/role of the asset, fuel type and availability, required range, and performance in certain conditions (e.g. difficult weather and terrain).

  We replace fleet asset prior to reliability – measured by unplanned maintenance and availability – deteriorates to the point that we are unable to meet business requirements.

- **Growth** – It is critical we are able to meet the fleet needs of the planned and unplanned work program. We use the JGN business plans (AIP, COWP) to establish a forward view of the type and number of fleet assets required. Availability of fleet assets has deteriorated in recent years, with supply chain issues causing shortages and lengthy lead times for procurement. Availability has become our biggest issue.

  While we seek to purchase vehicles in most instances, vehicle and mobile plant shortages coupled with emerging business requirements often mean we need to lease or hire assets over the short to medium term.

- **Enable net zero** – We have a responsibility under the Safeguard Mechanism and the Government's Net Zero 2050 targets to reduce our greenhouse gas emissions, and to use our network assets to help customers reduce theirs. Our fleet assets are critical to JGN reducing its emissions, and reducing the overall greenhouse gas footprint of the network. Where practicable and economically efficient to do so, we will make the switch to lower-emission fleet, based on a whole-of-life cost assessment.

Cost and affordability are always a factor. When incurring expenditure against these drivers, our aim is always to address the issue at the lowest practicably sustainable cost. Note this may not always mean the cheapest option.

In making our investment decisions we consider the longer-term use of the assets in question, along with a suite of additional considerations. For fleet assets, key considerations are:

- **Current or upcoming obsolescence** – can we obtain replacement parts, are the assets still supported by the original equipment manufacturer, and if so, for how long? How is the asset performing, is it still fit for purpose? What is the whole of life asset usage?
- **Contemporary technologies and innovations** – is a like-for-like replacement the best option? Is there an alternative vehicle or plant type or fuel that is a more efficient alternative? What is the re-sale value? What new developments are likely to emerge during the asset's useful like?
- **Availability** – can we purchase the assets required to meet business requirements? Is there an option to lease vehicles and mobile plant? What is the cost differential between buying and leasing assets?
- **Emissions reduction** – is there a lower-emissions alternative and is the incremental cost of this alternative a prudent and efficient option?

Taking these considerations, our expenditure drivers, and our asset objectives into account, we select the most prudent and efficient strategy for managing each class and sub-class of our fleet assets.

3.4 Asset strategies

Our strategic approach has been to purchase fleet and plant assets, rather than lease. This approach has been based on analysis demonstrating that purchasing represents a lower total cost over the lifecycle of vehicles in addition to the greater flexibility it provides to ensure we optimise fleet utilisation. Consequently, JGN owns the majority of its fleet and plant assets, except where the business has chosen to lease vehicles to deal with short-term requirements.

We have a model that compares outright purchases against lease and short term hire quotes. The model compares the whole of life costs for each scenario. A summary of modelling results to assess the costs of purchasing and leasing various vehicle types are attached as Appendix E. This represents the most efficient total cost option to meet current requirements. We regularly review procurement options of ownership vs leasing, and are prepared to modify this purchasing approach as the market changes. We will select the most prudent and efficient procurement approach in the prevailing market conditions.

We aim to standardise fleet and plant equipment to provide a safe and efficient working environment for our staff and help ensure all our customers receive a consistent level of service. We monitor and replace vehicles at optimal intervals to achieve the most efficient total cost, in turn ensuring only efficient costs are paid for by our customers.

We monitor and will seek to evaluate the development of new technologies in fleet and plant, and will utilise assets with new technologies where practicable and economic to do so. Fuel type is a key consideration with hybrid, electric and hydrogen powered electric vehicles gradually becoming a practicable and economic option.

The Fleet & Plant team have an aspiration to convert 25 per cent of its fleet to an alternate fuelled vehicle (EV, hybrid, hydrogen) over the next five years. Irrespective of the fuel of choice, the conversion to an alternate fuelled vehicle is that the new vehicle must be fit for purpose. We also need to assess our sites for suitability to install the appropriate re-fuelling options (e.g. number and output of EV chargers, home re-fuelling options).

The Fleet & Plant team are working closely with vehicle manufacturers and suppliers of alternative fuelled vehicles and ancillary equipment and have expressed interest in piloting new technology as it becomes available to the industry. We continue to have quarterly engagements with key manufacturers, and where an opportunity arises to trial new innovations, we engage internally to seek their endorsement and arrange a suitable time to conduct the trial.

Appendix B illustrates the whole of life comparison of a conventional passenger vehicle and 100% electric vehicle (**EV**).

3.5 ACS planning horizons

The ACS consider three forecasting horizons when planning, with the two-year COWP being the most accurate. The AIP taking a seven-year view, and a 20-year outlook to ensure planning for the long term benefit of customers.

Over time, planning profiles have been informed by the objectives outlined in the ABS as well as customer expectations, JGN's regulatory and operating environments, asset condition and risk. The forecast beyond two years is more subject to change as these factors evolve, and even more so beyond year seven[1]. Therefore, the forecast is indicative only and represents the projects required for this asset class to continue to support the JGN objectives.

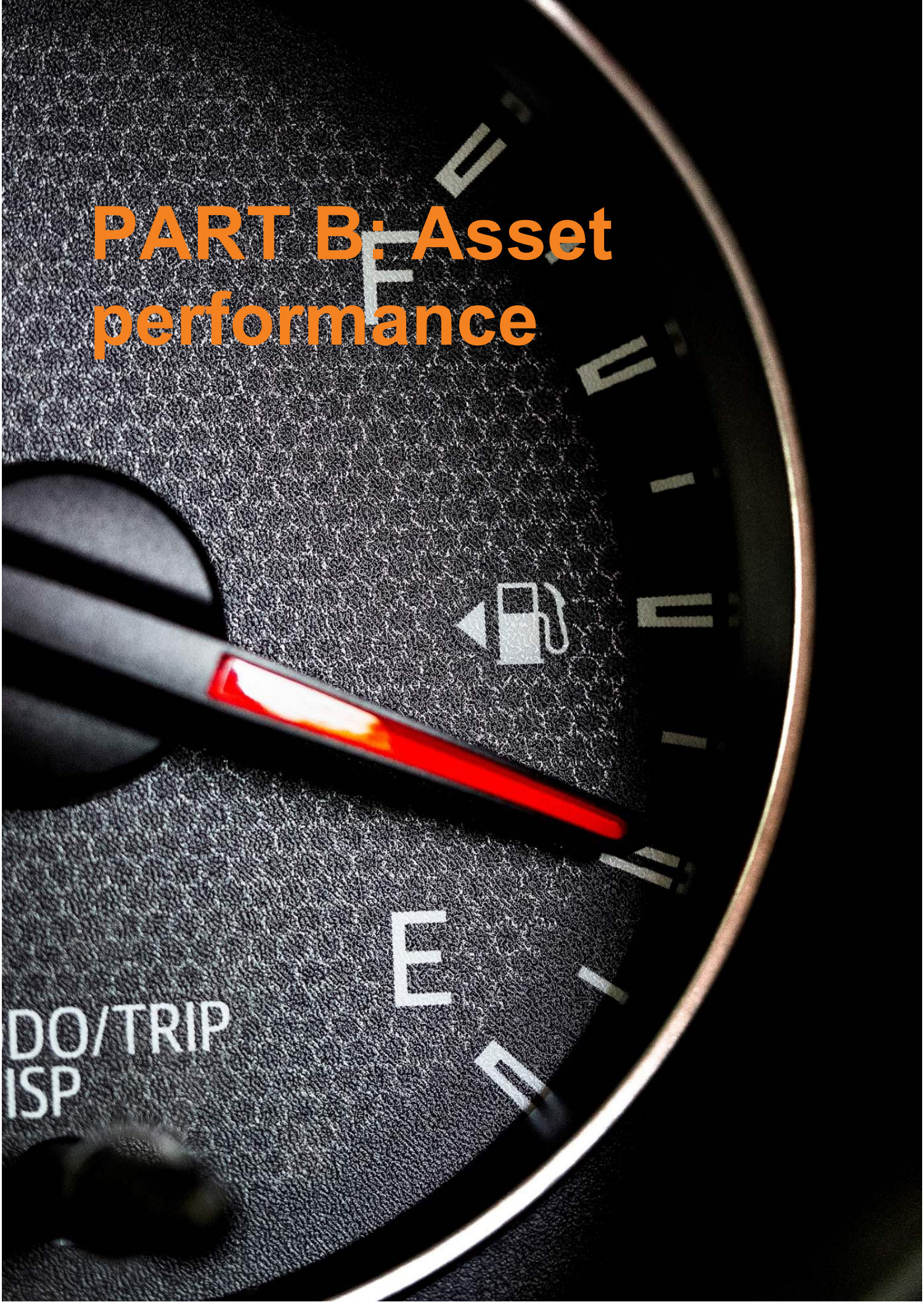
3.6 Governance

This ACS is reviewed to ensure ongoing alignment with the Jemena Business Plans and the asset objectives outlined in the ABS, and to account for any additional asset performance and risk information. Table 3-3 outlines the RASCI for this ACS.

Table 3-3: RASCI Governance Table for ACS

Element	Descriptor	Group/Person
Responsibility	Who is responsible for carrying out the entrusted task?	Fleet and Plant team
Accountable (Approval)	Who is responsible for the whole task and who is responsible for what has been done?	JGN Asset Investment & Analytics Manager
Support	Who provides support during the implementation of the activity / process / service?	Procurement team JGN Commercial Finance – Jemena Networks
Consultation	Who can provide valuable advice or consultation for the task?	Fleet and Plant Team HSE team
Inform	Who should be informed about the task progress or the decisions in the task?	EGM Jemena Networks

[1] Seven years is the planning horizon of the AIP.



PART B: Asset performance

4. Asset quantities

The volume of fleet assets used to operate, maintain and grow our gas distribution network is continually changing to reflect the volumes of vehicles and mobile plant required by the business at any point in time. Table 4–1 provides an overview of fleet asset quantities as at the end of the most recent quarter prior to developing this version of the ACS.

Table 4–1: Fleet asset quantities at 1 September 2023

Asset sub-class	Asset type	Number owned	Number leased/hired
Commercial vehicles	Construction/maintenance trucks	-	11
	Large task trucks	2	14
	Utes	74	85
	Vans	122	2
Passenger vehicles	SUVs	17	3
Material handing vehicles	Forklifts	11	2
	Trailers	37	12
Mobile plant	Trailer-mounted compressors	4	-
	Excavators / digging equipment	6	11

Source: JGN Fleet Capex Model

5. Asset performance

The purpose of this section is to provide details of the performance and integrity of fleet assets used to operate, maintain and grow the JGN.

Performance across the fleet asset class is generally good. We are currently meeting or exceeding all the fleet asset performance indicators as shown in Table 5–1.

Table 5–1: Performance measures of the fleet asset class

JGN asset objective	Fleet asset class objective	Measure	Target	Performance	
Meet customers service expectations	Ensure fleet is available for timely emergency response	Availability of on call service: • 24-hour servicing in place during operational periods • On call services in place during business hours on public holidays or shutdown periods	100%	Fleet management company/nominated breakdown providers support JGN outside of business hours, including over public holidays and shut down periods (e.g., Christmas, Easter, etc.) for all breakdowns.	
	Manage fleet assets to ensure the safety of employees, contractors and the public	Fleet maintenance including recalls/defects completed in accordance with schedule	100%	The most recent SG Fleet audit was completed, and compliance achieved was 95%. 100% of vehicle ancillary compliance dates have been verified. The achieved score is based on the vehicles actually in operation vs. the vehicles undergoing the mandatory rebuild/refurbishment. All recalls and defects are managed by the fleet management company and reported on monthly.	
Maintain asset safety, reliability and compliance		Ancillary components for trucks are rebuilt in line with the manufacturer's rebuild dates	100%		
	Maintain compliance with legislative/regulatory requirements	Annual vehicle registration paid	100%	All vehicle registrations are up-to-date, and therefore compliant	
Reduce capital investment intensity	Reduce the cost of investing in and maintaining fleet	Light commercial and passenger vehicle average monthly	100%	Performance is currently tracking within 15% variance of	

JGN asset objective	Fleet asset class objective	Measure	Target	Performance	
	assets, without compromising risk	utilisation within 10% of the median of the industry benchmarking		median mileage of vehicle type	
		Motor vehicles per full time equivalent (FTE) employee	Within 10% of the median of industry benchmarking.	The motor vehicles per FTE employee was 0.49 in 2022	
Optimise operational spend		Opex budget control	Opex costs at or below allowance level	Opex costs at or below allowance level	
Facilitate net zero for JGN and our customers	Reduce fleet-specific greenhouse gas emissions	Average emissions per vehicle	Increasing percentage of fleet procured is alternatively fuelled	Increasing year on year	 New
Increase network competitiveness to remain sustainable and viable	Downward pressure on the cost of new fleet assets	Competitive pricing is achieved by seeking a minimum of 3 quotes for each specifications	100%	Market testing is achieved by seeking 3 competitive quotes for each fleet & plant specification.	
	Achieve the lowest sustainable whole of lifecycle cost	Whole of lifecycle costs within 10% of the median of the industry benchmarking	100%	Whole of life costs per annum are currently tracking at within 10% of the industry benchmark median cost for each type of vehicle managed by the fleet management company.	

5.1 Continuous improvement initiatives

We monitor and will seek to evaluate the development of new technologies in fleet assets and will leverage the benefits of new technologies where practicable and economic to do so. An important continuous improvement initiative is our alternative fuels initiative, described in the following section.

5.1.1 Alternative fuels

Fuel type is a key consideration with hybrid, electric and hydrogen powered electric vehicles gradually becoming a practicable and economic option. We have an aspiration to convert 25 per cent of our fleet to an alternate fuelled vehicle (e.g., electric, hybrid, hydrogen) over the next five years and are taking a proactive role in determining when it makes sense for the business to do so.

We are working closely with vehicle manufacturers and suppliers of alternate fuelled vehicles and ancillary equipment and have expressed interest in piloting new technology as it becomes available to the industry.

Appendix G provides an example of the whole of life comparison that we will continue to undertake for our fleet asset classes and sub-classes.

6. Current asset condition, risks and controls

The purpose of this section of the ACS is to provide a high-level overview of asset condition, and to highlight the highest priority risks associated with each sub-class. This section is indicative only and is designed to provide an annual snapshot of the key asset condition and risk issues that need to be managed.

The condition and risks associated with our fleet over the medium-to-long term can have a direct impact on the quality of services we provide to customers. For example, we ensure all vehicles are fit for purpose and fitted with the appropriate tools and equipment to allow high-priority incidents or supply outages to be addressed quickly.

6.1 Condition assessment

The current overall condition of the fleet asset class is moderate, but varies by fleet type and can fluctuate over time. We aim to manage fleet and plant in line with our target risk ratings.

Our objective is to ensure we have fit-for-purpose, safe and legislatively compliant vehicles to support day-to-day operations. However, we currently have some passenger, heavy commercial and light commercial vehicles that are in a poorer condition than our target condition rating. This is due to the supply constraints emerging from the COVID-19 pandemic, meaning some replacement parts and assets have been unavailable.

Our fleet expenditure aims to maintain an efficient level of asset performance risk over the next five years. Because fleet are generally heavily use assets, exposed to a variety of different conditions and risks, the overall condition of our fleet can fluctuate within a short period. This heavy use and exposure drives the relatively high frequency that fleet items are turned over (compared with network assets).

Fleet and plant assets are serviced regularly and inspected prior to use for any defects or issues. Information on specific asset condition is recorded in the relevant prestart/logbook. Our fleet management company provides information on specific asset performance through regular reporting.

6.1.1 Life expectancy

The life expectancy of fleet and plant assets varies depending on the asset type. For example, passenger vehicles are typically replaced at the earlier of five years or 150,000 kms depending on assessment of whether the vehicle can be driven safely. Heavy commercial vehicles with ancillary items such as cranes are typically replaced or rebuilt prior to ten years, in line with Australian Standards[2].

All vehicles regardless of whether a time or distance-based replacement threshold exists, are subject to an individual condition assessment prior to any replacement or rebuild decision being made. Vehicles replaced based on kilometres travelled will be rotated between people to promote even wear and tear.

To forecast required replacement expenditure for each vehicle type, the average annual kilometres travelled is calculated for each asset class. This is then used to calculate a forward projection of the expected distance travelled by each individual vehicle over the forecast period, thus determining the time at which each asset will fall due for replacement.

The replacement cycles for the different vehicle types are in Appendix D. These replacement cycles have been developed to reflect the most efficient replacement cycle based on the way that these vehicles are used on our small, mostly urban network, where vehicles are likely to make a higher number of relatively short trips in heavy traffic (compared with a larger network covering a rural area).

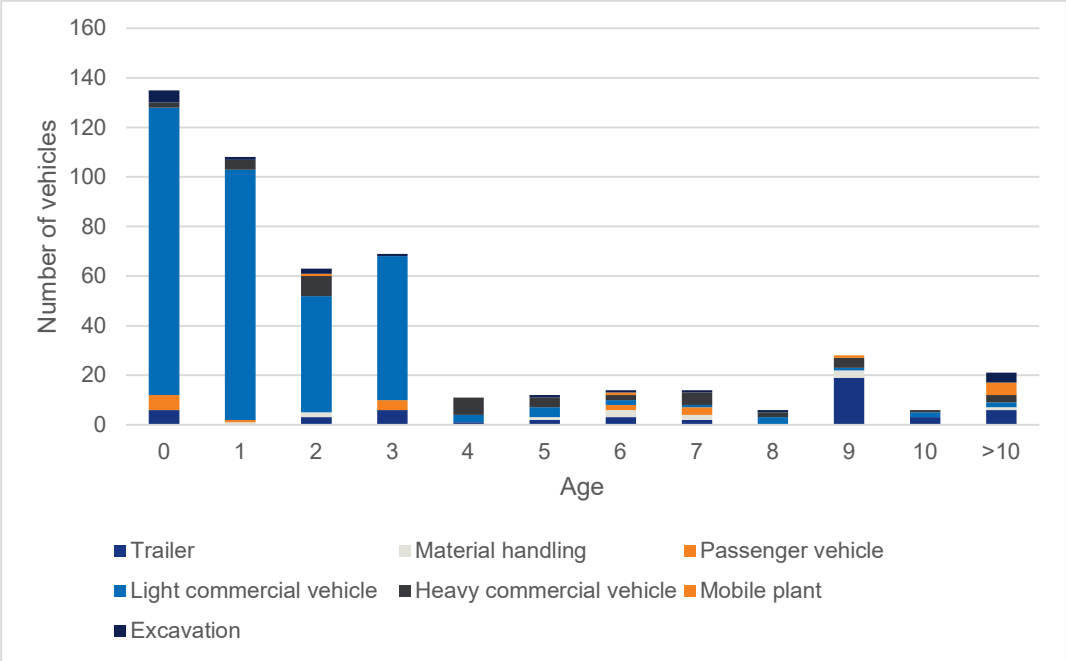
Priority is given to the replacement of all non five-star passenger, sports utility and light commercial vehicles irrespective of the age and kilometres travelled.

[2] Australian Standards AS1418 – Crane, Hoist and Winches and AS2550 - Crane, Hoist and Winches – Safe Use.

6.1.2 Age profile

The age profile of fleet varies by vehicle type. Fleet and plant assets are replaced or rebuilt periodically. The current age profile of our fleet assets is show in Figure 6–1.

Figure 6–1: Fleet asset age profile



Source: JGN Fleet Capex Model

6.1.3 Utilisation

Fleet and plant assets are used by operational personnel to construct, inspect, maintain and replace network assets. Fleet assets also play an important role in incident response.

Utilisation is a key condition indicator for fleet and plant assets. It is usually measured by hours worked, or distance travelled in a nominated timeframe. Knowledge of actual utilisation in kilometres or engine hours (levels and usage pattern) enables the Fleet Management Team to plan and schedule:

- servicing based on manufacturers' recommended service intervals (planned maintenance); and
- replacement and acquisition.

More information on these activities is provided in Appendix D.

Where low utilisation is identified, we assess whether the low utilisation is acceptable and it is still economical to own the vehicle or plant and equipment item, or whether the item should instead be provided through short term hire. This decision is dependent on availability of a suitable short term hire option, geographic location and the specialist nature of the work the item is required for.

6.2 Risks and controls

The primary types of risk that impact fleet/plant assets are:

- long manufacturer/supplier lead times;
- fleet/plant not delivered on time;

- fleet/plant not delivered to required specification;
- cost variation in procurement due to fleet/plant specification changes;
- mechanical failure or breakdown;
- for electric vehicles, insufficient battery life and remaining charge to complete daily jobs;
- third party impacts and accidents;
- inappropriate asset use (human error);
- fleet/plant does not comply with regulatory or legal obligations or technical standards; and
- inaccurate data records.

Risks related to measurement assets are captured in the risk register in the Enterprise Content Management System (**ECMS**). Current risks and controls that were identified as not at target levels in the most recent formal safety assessment are presented in Table 6–1 on the following page.

Annually the fleet team review the asset risk register and ensure risks are being acted upon or capturing any new risks.

Table 6–1: Current fleet risks and controls identified as not meeting targeted levels (Extract from risk register)

Type of Risk	Description of Specific Asset Sub-Class Risk	Likelihood	Consequence	Target Risk Rating	Current Risk Rating	Control
Operational	Fleet/plant not delivered on time	Unlikely	Minor	Low	Low	Delivery scheduled and quality managed and monitored regularly to ensure agreed lead times are met. Provide new vehicle orders in advance to meet the manufacturers lead times. Provide performance feedback to the respective vendors.
Operational	Fleet/plant not delivered to specifications	Unlikely	Minor	Low	Low	Detailed specifications provided to the vendor with each official order. Vendors required to sign JGN's specification documents to confirm that they understand JGN's requirements. Conduct mid build inspections to verify the builds are to specifications.
Operational	Fleet/plant not maintained to recommended manufacturers service intervals	Unlikely	Minor	Low	Low	Reporting from contracted fleet management company highlights all vehicles that have not been maintained to the recommended intervals and advise the respective fleet users of the findings.
Financial	Increase in capital costs due to specification changes during vehicle build/acquisition	Unlikely	Minor	Low	Low	Extensive consultation sessions with operational staff and end users are occurring to ensure that the specifications are fit for purpose. JGN end users sign JGN's specification documents to confirm that the document clearly articulates their requirements. Matching of truck and Crane lifecycles - when a new crane is procured, it is generally only installed onto a new truck chassis to avoid misalignment in replacement timeframes requiring increased swapping of chassis and crane assets in future (increased cost and time vehicle out of service).

Type of Risk	Description of Specific Asset Sub-Class Risk	Likelihood	Consequence	Target Risk Rating	Current Risk Rating	Control
Safety	Third party impacts (accidents)	Possible	Serious	Moderate	Moderate	Operational vehicles are fitted with appropriate safety features, including high visibility markings and lighting. All operational fleet/plant users are required to hold appropriate licences at all times and undergo competency checks periodically. Traffic management is utilised where appropriate. This is the responsibility of the relevant personnel undertaking works.
Safety Reputational	Inappropriate use of assets (human error)	Possible	Serious	Moderate	Moderate	All operational fleet/plant users are required to hold appropriate licences at all times and undergo competency checks periodically.
Financial Operational	Asset becomes obsolete (no longer fit for purpose) due to changes in regulatory or technical requirements	Unlikely	Minor	Low	Low	Jemena Fleet & Plant team monitors changes to relevant Australian Standards and regulations. Fleet/plant specifications are modified accordingly. Periodic asset replacement/rebuilds in line with Australian Standards.

Part C: Emerging issues and priorities

7. Emerging risks and priorities

This section highlights the key emerging and priorities for the fleet asset class. This is not an exhaustive list, and any new risks or priorities that emerge during the year should be captured in the asset class risk register, and then documented in the following year's ACS and captured in the ECMS.

An emerging focus for fleet management is Chain of Responsibility (**CoR**), which provides a framework for managing and preventing health and safety breaches. CoR is similar to Workplace Health & Safety laws.

CoR includes the following areas of focus;

- ANCAP safety rating on vehicle procurement;
- mass management (for vehicles > 4.5 tonnes gross);
- driver fatigue management;
- speed management; and
- load restraint.

We regularly review our capabilities and risk levels in each of these areas and will conduct assessments through a workshop process (aligned to a Workplace Health & Safety risk workshop) to identify controls and processes required.

A summary of the current status of these risks and risk management activities is provided below.

7.1 Gas Emergency Response

On the evening of Wednesday 2 November 2022, the APA gas pipeline from Young to Lithgow ruptured where it crossed the Macquarie River south of Bathurst. The drop in pressure caused an Automatic Line Break Valve (ALBV) on the APA pipeline some 30 km upstream from Bathurst to shut, affecting Jemena's gas distribution to four communities downstream of this ALBV.

This event required the full activation of Jemena's response capability for an extended period, approaching the limits of capacity within this sector. The scale, complexity and severity of the event resulted in a multi-agency response with a complex stakeholder risk profile, resulting in pressure and a high workload for the crisis management team.

Post incident reviews were conducted on Jemena's crisis response and a series of recommendations have been made, including a review of the requirement for an additional command vehicle to support incident and emergency response. At present JGN has a command caravan which requires to be towed to site. The review of the response revealed that response could have been improved if there was another mobile command centre available, and if it were a vehicle it would be accessible to more staff since towing the command caravan is a limited skill set.

7.2 ANCAP rating

The ANCAP is an independent vehicle safety authority that has published thousands of independent safety ratings for new vehicle makes, models and variants since 1993. Vehicles are given a safety rating of 0-5 stars. The star ratings indicate the level of safety a vehicle provides the occupants and pedestrians. The higher the rating, the greater the safety feature levels are for the vehicle, make and variant.

ANCAP ratings are taken into consideration when assessing the replacement of passenger vehicles, SUVs and LCVs. Priority is given to the replacement of all non 5-star vehicles irrespective of the age and kilometres travelled, noting that lesser rated vehicles are not typically available on the market.

7.3 Mass management

Increased focus is required to manage the issue of overladen HCVs and LCVs. Our aim is to implement measures to help prevent HCVs and LCVs being loaded beyond their maximum capacity.

Initial actions have included putting gross vehicle mass (**GVM**) decals on all vehicles and procuring portable and fixed weight scales for our operational depots.

7.4 Driver fatigue management

This area is currently managed by controls such as policies, procedures or scheduling. As technology advances, systems such as eye-tracking technology that detects signs of drowsiness and then alerts drivers are possible solutions. While the technology requires further refinement, there is the potential for these driver fatigue systems to be installed in HCVs within the next 2-5 years.

7.5 Speed management

JGN is currently considering the acquisition of telematic devices for fleet assets. Telematic devices provide visibility of driver behaviour, namely speeding analytics. While JGN will initially install these devices on selected fleet assets, future specifications may include the installation of these devices for all new fleet assets if JGN's trial of the technology demonstrates that it is successful at mitigating this risk.

7.6 Load restraint

Current WHS legislation focuses on the hazards associated with working at height including from the back of vehicles. Fall restraint devices are required where an employee is required to access a fleet item and there is a risk of falling from one level to another. These requirements are considered and installed at the production or procurement stage.

8. Projects and asset management initiatives

8.1 Ongoing projects and initiatives

This section provides a high-level overview of the key asset management and initiatives underway. The full list of projects can be found in the Asset Investment Plan (**AIP**) and the Capital and Operating Work Plan (**COWP**).

Table 8–1 presents a summary of the predominant types of projects that are being undertaken by JGN networks to meet the requirements of the Fleet ACS.

Table 8–1: Summary of ongoing fleet asset class key programs and initiatives

Sub Category	Program	Description
Replacement	Annual fleet replacement program	Replace fleet assets as they reach end of life
Operating costs	Running costs, maintenance etc	Manage and monitor fleet running costs that consists of, Fuel, tolls, maintenance / repairs, registration
Growth	Business Growth	Acquire fleet and plant to support the business growth

8.2 New projects and initiatives

This section provides a high-level overview of new initiatives designed to help address emerging risks and meet our asset objectives. Projects/initiatives in this section will commence within the next 6 years.

Further information on these new/proposed initiatives is available in the COWP and in the individual businesses cases.

Table 8–2: Summary of new fleet asset class key projects and initiatives

New project / initiative	Description (what and why)	Capex	Opex	CI
EV chargers	Emissions reduction initiatives such as EV chargers, alternate fuelled vehicles			Y
Picaro	Gas detection vehicles - Looking to increase by 5 extra vehicles			Y
IVMS	In vehicle Management System – Improve fleet utilisation			Y

Appendix A
Regulatory and legislative environment

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Table B1–1 summarises the key legislative requirements and technical standards relating to fleet and plant assets. These requirements are factored into our asset management strategies and help inform the investments and operating activities we undertake.

Table B1–1: Summary of Key Legislative Requirements and Technical Standards Relating to the Fleet Asset Class

Legislative Requirement / Technical Standard	Summary of Requirements
Work Health and Safety Act 2011 No 10 / Work Health and Safety Legislation 2017	Work Health and Safety Act 2011 No 10 / Work Health and Safety Legislation 2017
SafeWork NSW	– Covers requirements for vehicle licensing, construction standards, vehicle mass and dimension, load restraint, towing, etc. – Codes of Practice
Heavy Vehicle National Law (NSW) 2013 / Heavy Vehicle Regulation 2013 and National Heavy Vehicle Regulator (NHVR)	Covers requirements for vehicle licensing, construction standards, vehicle mass and dimension, load restraint, towing, etc.
AS/NZS 1418.10:2011 Cranes, Hoists and Winches Part 10: Mobile Elevating Work Platforms	Outlines standards for maintaining and using these types of plant/vehicles, including specified intervals for inspections and rebuilds.
AS 2550.10-2006 Cranes, Hoists and Winches – Safe Use	Outlines standards for maintaining and using these types of plant/vehicles, including specified intervals for inspections and rebuilds.
National Greenhouse and Energy Reporting Act 2007	Covers the obligations for reporting and disseminating company information about greenhouse gas emissions, energy production, energy consumption and other information, and includes the obligations to reduce emissions under the safeguard mechanism.
National Gas Rules (**NGR**)	Governs access to natural gas pipelines and elements of broader gas markets. They set out broad requirements for economic value tests that must be considered in relation to efficient capital and operating expenditure.

Appendix B
Asset overview

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B1. Introduction

Jemena owns and operates various fleet and plant items that are built specifically to meet our operational requirements when providing distribution services to customers. Fleet and plant assets are managed in accordance with JGN's Fleet Asset Management principles.

B2. Risk

The primary types of risk that impact fleet/plant assets are:

- long manufacturer/supplier lead times;
- fleet/plant not delivered on time;
- fleet/plant not delivered to required specification;
- cost variation in procurement due to fleet/plant specification changes;
- mechanical failure or breakdown;
- for electric vehicles, insufficient battery life and remaining charge to complete daily jobs;
- third party impacts and accidents;
- inappropriate asset use (human error);
- fleet/plant does not comply with regulatory or legal obligations or technical standards; and
- inaccurate data records.

B3. Criticality

Using the corporate risk framework, the criticality of fleet/plant as an asset class is rated as minor. While this rating applies to the asset class as a whole, the criticality of different types of fleet may vary to some extent. For example, specialist operational vehicles such as EWPs are more critical to operating and maintaining the network than passenger vehicles.

Given the cost, availability and relative flexibility of fleet/plant assets (as opposed to physical network assets), the overall criticality of fleet/plant assets to the safe, reliable and affordable provision of gas services by JGN is low.

B4. Failure modes

The following table outlines the typical failure modes for fleet and plant assets, and the controls in place to help prevent failure.

Table B4–1: Secondary Failure Mode Assessment

Asset	Failure Type	Failure Mode	Controls
Fleet and heavy plant	Operational	Mechanical breakdown through wear and tear	Preoperational checks. Scheduled maintenance / services. Periodic asset replacement / rebuilds.
	Operational	Third party hits (accidents)	High visibility markings, safety features.

Asset	Failure Type	Failure Mode	Controls
			Driver training / licensing requirements. Traffic management (where appropriate).
	Operational	Inappropriate use of assets (human error)	Driver training / licensing requirements. Manufacturer instructions.
	Regulatory	Technical / regulatory obsolescence	Fleet audits. Monitoring relevant Australian Standards and Legislation. Periodic asset replacement / rebuilds.

Current risks associated with fleet and plant assets, many of which are related to the above failure modes, are summarised in the following section.

Appendix C
Overview of ANCAP considerations

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C1. Overview of ANCAP ratings system

ANCAP is the Australasian New Car Assessment Program - a car safety performance assessment programme based in Australia and founded in 1993. ANCAP specialises in the crash testing of new Passenger, Sports Utility Vehicles and Light Commercial Vehicles sold in Australia and the publishing of these results for the benefit of consumers. Accordingly, it sets the industry standard for vehicle safety ratings.

ANCAP star ratings indicate the level of safety a vehicle provides for occupants and pedestrians in the event of a crash, as well as its ability, through technology, to avoid or minimise the effects of a crash. These independent safety ratings are used to compare the relative safety between vehicles of similar mass.

ANCAP safety ratings are determined based on a series of internationally recognised, independent crash tests and safety assessments – involving a range of destructive physical crash tests, an assessment of on-board safety features and equipment, and performance testing of active collision avoidance technologies.

Vehicles are evaluated against four key areas:

1. Adult Occupant Protection
2. Child Occupant Protection
3. Vulnerable Road User Protection
4. Safety Assist

A range of tests and assessments are conducted within each area, with vehicles required to meet minimum score thresholds for each star rating level. The overall star rating of a vehicle is limited by its lowest performing area of assessment.

Appendix D
Lifecycle management

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D1. Vehicles and mobile plant

We manage the life cycle integrity of assets as outlined in section 7 of the Jemena Asset Management System Manual.

D1.1 Acquire assets

We forecast demand for fleet assets based on forecast network activities as set out in the JGN AIP. This includes details of the activities including work type and quantity and therefore the resources (including fleet) required to deliver the program of work.

The Jemena Procurement Policy for delegated financial authority (**DFA**) approval is applied for the purchase of fleet and plant. JGN's requirements for its mix of different vehicle types are generally constant over time. Unless an assessment of future operational needs deems a particular asset to no longer be necessary, in which case it is disposed of and a replacement is not procured, all fleet, plant and equipment due for replacement are replaced with like for like units once a condition assessment on the individual asset demonstrates that the asset has reached the end of its useful life. For example, a heavy commercial vehicle is replaced with a new unit of similar specifications and characteristics.

It should be noted that manufacturers lead times for some specialised heavy commercial vehicles have blown out to 24 months and will require the Jemena Fleet & Plant Team to make a commitment via an official purchase order prior to the budget period in which the vehicle will be delivered. Funds will only be released post-delivery.

D1.2 Asset operation and maintenance

Fleet maintenance is conducted by a contracted fleet management company. All fleet, plant and equipment is maintained in line with the manufacturers recommended service intervals. All fleet, plant and equipment that are registered with the respective state road traffic authorities are to be maintained in a roadworthy condition. Specialised plant and equipment such as cranes must be maintained and rebuilt in line with the relevant Australian Standards[3]. All fleet maintenance costs are reviewed and managed by the Fleet Management Team.

Table D1–1: Summary of JGN Fleet and Mobile Plant, Maintenance and Replacement Cycles

Vehicle Type	Purpose	Maintenance Cycle	Replacement
Heavy commercial vehicle	The vehicles outlined within this category range from the 5 tonne GVM through to 22.5 tonne GVM. The majority of all the heavy commercial vehicles reside at the depots and are returned each day. • Construction/Maintenance Trucks – (7.5 tonne GVM truck fitted out with shelving/cupboards) • Large Task Trucks – (22.5 tonne GVM truck fitted out with a mounted crane and heavy duty tray) • Gas Emergency Response – Crane Trucks • General Tray Trucks	Every 3 months	Replaced at 10 years based on condition of vehicle. All heavy commercial vehicles that have cranes attached must be replaced at 9 or 10 years but prior to the 10 year anniversary as stated within the Australian Standards (Australian Standard 1418.10 – Crane, Hoist and Winches & 2550.1 Cranes Hoist and Winches – Safe Use). As per the large EWPs, these vehicles will be assessed for their suitability to undergo the mandatory 10 year rebuild. Crane borer vehicles are rebuilt at 10 years and replaced with a new unit prior to the next

[3] Australian Standards AS1418 – Crane, Hoist and Winches and AS2550 - Crane, Hoist and Winches – Safe Use.

Vehicle Type	Purpose	Maintenance Cycle	Replacement
			regulatory 15 year rebuild time (10 years + 5 years).
Light commercial vehicle	The light commercial vehicle specifications range from the off the shelf utility/van to a specific fit for purpose fit out.	Serviced as per manufacturer's instructions	Earlier of five years and 150,000 km, following an individual condition assessment.
Passenger vehicle	Passenger vehicles are assigned to Operational Manager as site based pool vehicles that support field resources, corporate staff and project planners/managers. Vehicles assigned to a role for the purpose of emergency management or operating can return to primary residence to be able to respond to on call availability duties from time to time. Vehicles assigned to corporate staff and planners reside at the respective depots and are returned each day.	Serviced as per manufacturer's instructions	Earlier of 5 years and 150,000 km, following an individual condition assessment.
Trailers	The trailer specifications range from general 7x5 box trailers to heavy duty pole trailers that are coupled behind the crane borers.	Serviced as per manufacturer's instructions	Every 15 years
Mobile plant	Mobile plant comprises of yard cranes, backhoes, excavators, bobcats, trailer-mounted compressors/generators and fork lifts. These units are assigned to respective depots.	Serviced as per manufacturer's instructions	Trailer mounted compressors / generators replaced after 10 years. Fork lifts, yard cranes, excavators, bobcats and backhoes are assessed after a five year period to determine if the plant life can be extended for another five years and replaced after 10 years.

D1.3 Asset replacement / disposal

Assets are replaced subject to ongoing performance and condition assessments. Prior to a decision being made on whether to replace an individual fleet asset, the vehicle is subject to a condition assessment to determine whether it actually requires replacement, or whether alternative options (such as maintenance or rebuilds if applicable) may allow for the asset replacement to be deferred if it remains able to efficiently and safely meet our operational requirements.

Similarly, when assessing fleet replacement requirements we regularly assess whether there are opportunities to downsize (i.e. not replace) our fleet if any assets are surplus to operational requirements (or whether alternative options like short term hire of that type of vehicle/plant may be more efficient).

Fleet assets are typically disposed of due to the following events:

- when condition assessment demonstrates that an asset has reached the end of its useful life; or
- when an asset is no longer required, written off or not repairable.

Once any fleet, plant and equipment has been replaced, the Jemena Fleet & Plant Team arranges for the retired unit to be picked up and sent to public auction. The auctioneers provide a valuation.

The Fleet Management Team seeks approval in accordance with the current DFA to release the vehicle for sale. DFA approval is obtained via an Asset Master Data Amendment Request Form. Once the fleet or plant has been sold, the Jemena Fleet & Plant Team processes the final sales documents/cheques and advises the Jemena Fixed Asset Accountant and Fleet Management Team.

The vehicle is removed from the asset register after the sale has occurred. Passenger and light commercial vehicle auctions occur weekly. HCV, plant and equipment auctions occur monthly. All net sale proceeds (less costs) are returned to our customers in the form of a reduction to JGN's Regulated Asset Base.

Appendix E
Information requirements

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E1. Fleet information requirements

Jemena's Asset Management System (**AMS**) provides a hierarchical approach to understanding the information requirement to achieve our business objectives at the asset class. In summary, the combination of Jemena's Business Plan, the JGN ABS and this ACS all provide the context for and determine the information required to deliver the JGN fleet asset class objectives.

From our asset class objectives it is possible to identify at a high level, the business information systems content required to support these objectives (see Table E1–1).

Table E1–2 identifies the current and future information requirements to support the asset class's critical decisions and their value to the asset class.

All of the information required by the fleet asset class is available within Jemena's current business systems.

Table E1–1: Fleet Asset Class Objectives and Information Requirements

Asset class objective	Jemena information sources
Manage fleet assets to ensure the safety of employees, contractors and the public	• Group Strategy • JGN ABS • JGN AIP • JEM HR PO 0663 Motor Vehicle Policy • Jemena Compliance and Risk System (JCARS) • JEM AM MA 0001 AMS Manual • SAP Fleet Module
Ensure fleet is available for timely emergency response	• JGN KPI reporting
Maintain compliance with legislative/regulatory requirements	• Jemena Compliance and Risk System (JCARS) • JGN KPI reporting
Reduce the cost of investing in and maintaining fleet assets, without compromising risk	• Group Strategy • JGN ABS • JGN AIP • JEM HR PO 0663 Motor Vehicle Policy • JEM PO 0026 Procurement Policy • JEM PO 1600 Scrap Materials Policy
Reduce fleet-specific greenhouse gas emissions	• Group Strategy • JGN ABS • JGN AIP • JEM HR PO 0663 Motor Vehicle Policy • JEM PO 0026 Procurement Policy • JEM PO 1600 Scrap Materials Policy
Downward pressure on the cost of new fleet assets Achieve the lowest sustainable whole of lifecycle cost	• Group Strategy • JGN ABS • JGN AIP • JEM HR PO 0663 Motor Vehicle Policy • JEM PO 0026 Procurement Policy

Table E1–2: Fleet Assets Critical Decisions Business Information Requirements

Critical Business Decision	Current Information Usage	Information Requirement	Value to Asset Class (High, Medium, Low with justification)
Whether to own or lease fleet assets. Could vary by fleet asset type.	Preference to own or lease based on fleet principles (fit for purpose and lowest cost per kilometre over the asset's lifecycle).	Model to compare current costs of asset lease and ownership for all fleet asset types. Data for input includes purchase cost, salvage value, lease cost, financing costs, capital requirements, tax implications.	High. Without this information it is impossible to make an informed decision on the optimum fleet strategy.
What type of fuel technology (diesel, petrol, hybrid, electric, hydrogen etc.) should our vehicles use?	Information is obtained on current fleet operating costs and from vendors/other external providers on alternative capital/operating costs, to determine which fuel technology represents the lowest total lifecycle cost. Jemena has acquired hybrid fleet. Jemena has an aspiration to convert 25% of the Group's fleet to an alternate fuelled vehicle within the next five years.	Continue to assess costs of traditional and new vehicle fuel types regularly as technologies continue to develop and new information becomes available, to ensure that all future decisions allow for the lowest total lifecycle cost. Costing to include any ancillary expenditure (e.g. battery charger installation) required to ensure the viability of the new vehicle's fit for purpose is preserved.	High. Ensuring vehicle fuel type chosen minimises total fleet lifecycle costs is critical to meeting our customers' expectations around energy affordability, and may also have impacts on vehicle operational availability.
When to expand or contract the size of the fleet.	Information is provided by JGN's AIP and business units to determine the optimal size of the fleet based on network activities which need to be performed.	Accurate forecast of fleet volume requirements for the next 10 years (or 20 year strategy as mentioned at the beginning) for each fleet asset type. Specification of redundancy required for each asset type and location.	High. The wrong number of fleet assets or a sub-optimal mix of fleet asset types will result in either insufficient resources or unutilised assets.
What is the optimal age to replace fleet assets? When can the life of fleet assets be safely extended?	Annual assessment/review of individual vehicles to be replaced.	Inputs include Australian Standard requirements, ANCAP Safety Ratings, individual vehicle condition assessment, age, profile of maintenance costs and purchase costs for each fleet asset type.	Medium. Replacement at sub-optimal point will result in higher lifecycle asset cost.
What is the optimal maintenance cycle for fleet assets?	As per the manufacturers recommendations and Australian Standards requirements.	Vehicle manufacturer make and model to determine optimal maintenance profile. Inputs include historical age profile of maintenance costs and purchase costs for each fleet asset type.	Medium. Maintenance at sub-optimal point will result in higher lifecycle asset cost.

Appendix F
Analysis of procurement options

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F1. Procurement options analysis

The table below shows results of total cost of ownership analysis for purchasing and leasing for each type of vehicle required by JGN. The types of key input data used in this analysis and their sources are set out in the table below.

Table F1–1: Assessment input data and source

Input data	Source
Vehicle purchase price	Written quotes obtained from dealers based on JGN's current specifications (required vehicle options, equipment etc.).
Vehicle lease price	Written quotes obtained from leasing companies based on JGN's current specifications.
Vehicle maintenance and running costs, including cost of emissions where relevant	Under purchase scenario – Fleet team estimate based on information including known running costs for similar vehicles recorded in Jemena's fleet management system or from Jemena's fleet management company. Under lease scenario – maintenance and running costs are the responsibility of the lessor, and are therefore built into the quoted lease price. Any vehicle operating costs which do not differ between the purchase and lease scenario, such as road tolls, insurance etc., are excluded from this analysis for simplification purposes.
Sale proceeds upon disposal (portion of initial cost)	Fleet team estimate based on information including recent auction proceeds (net of sale costs) for similar vehicles owned by Jemena.

The table below summarises the results of the total cost of ownership analysis under both the purchasing and leasing scenarios for each type of vehicle required by JGN during the next regulatory period. All NPV results are presented in real 2022 dollars.

Table F1–2: Cost analysis

Vehicle Type	Assessment Period for Analysis	NPV of Total Ownership Costs ($'000)		Lowest Cost Procurement Approach
		Purchase	Lease	
Passenger Vehicle	5 years	32.2	36.7	Purchase
Light Commercial Vehicle	5 years	73.7	79.8	Purchase
Heavy Commercial Vehicle	10 years	172.5	240.5	Purchase
Plant (forklift)	5 years	24.9	32.8	Purchase

Appendix G
Comparison of whole of lifecycle vehicle costs

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G1. Comparison of conventional vs electric SUV options

The table below summaries the whole of life cost measured by cent per kilometre travelled and is based on the vehicles travelling an estimated 30,000 kilometres per annum.

Table G1–1: Whole of lifecycle costs of SUVs

Vehicle type	Cent per kilometre	Considerations
Fully electric SUV (Medium)	$0.59	8 months Manufacturer lease time. Includes recharging costs. Initial outlay is more expensive than the conventional SUV and Hybrid variant. **Zero emissions.**
Hybrid SUV (Medium)	$0.45	24 months Manufacturer lead time**. Co2 ratings of 109g/100 kms.**
Petrol SUV (Medium)	$0.54	9-12 months Manufacturer lead time. **Co2 ratings of 192g/100 kms.**

Appendix H
Recently completed continuous improvement initiatives

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H1. Asset life extension

A key initiative identified in 2019 was to change our approach to managing our passenger vehicle fleet by increasing the planned asset life from 4 years or 120,000 kms to 5 years or 150,000 kms. This affects our planning and procurement, but actual replacement decisions are still made on a case by case basis using an assessment of the performance of the vehicle.

This change in planned passenger vehicle replacement timing also ensures JGN compares favourably against its peers in the utilities industry, in line with our fleet asset class objective of achieving the lowest sustainable cost of fleet management.

JGN's fleet management company, SG Fleet, provided an industry comparison of planned replacement lifecycles for passenger vehicles used across other Australian utility businesses to guide this decision. It is included in Table H1–1.

Table H1–1: Planned passenger vehicle replacement cycles in other businesses

Company	Passenger Vehicle
Essential Energy	60 months/150,000 km
Ausgrid	48 months/150,000 km
Powerlink	48 months
Ergon	48 months/100,000 km
Energex	36-60 months
SA Power Networks	60 months/150,000 km
JGN	60 months/150,000 km

Source: SG Fleet

Furthermore, where passenger, heavy commercial and light commercial vehicles are in a poorer than target condition, we are taking corrective action to replace the most degraded items of fleet to ensure that we continue to maintain our asset class objectives.

We have identified individual vehicles requiring replacement and their replacement has been planned for in 2023 and 2024.

This initiative will contribute towards each of our fleet asset class objectives.