QFLEET EMISSIONS REDUCTION GUIDE

For the Queensland Government motor vehicle fleet





Table of contents

Introduction 2
Purpose
Key Elements 4
Key Element 1: Vehicle selection 5
Key Element 2: Vehicle maintenance
Key Element 3: Vehicle allocation/deployment7
Key Element 4: Vehicle operation 8
Key Element 5: Alternatives to driving10
Key Element 6: Additional considerations11
Phased implementation model
Summary14
QFleet's commitment
What agencies can do16
Related resources17
Further reading

Introduction

Climate change is an important global issue and here in Queensland we have already begun to experience changes in temperature, rainfall, sea levels and extreme weather events.

In response, the Queensland Government is taking action to manage the risks to our economy, infrastructure and communities to make the state more resilient to the climate change effects that cannot be avoided.

At the same time, the government has made a commitment to play its part in the global effort to limit warming to below two degrees. Steps need to be taken to reduce the causes of climate change, now and into the future, so that the impacts can be limited as much as possible.

The government's plan to transition Queensland to a zero net emissions future is set out in *Pathways to a clean growth economy – Queensland Climate Transition Strategy*.¹

The government cannot do without its vehicle fleet. It is an essential resource for the delivery of government programs and the provision of services to the people of Queensland. However, vehicle tailpipe emissions contribute significantly to the climate problem. Whenever an internal combustion vehicle is driven, it produces greenhouse gases.

In May 2018, the Honourable Mick de Brenni MP, Minister for Housing and Public Works, Minister for Digital Technology and Minister for Sport, released two strategic documents to improve the environmental profile and performance of the government fleet:

- QFleet Environmental Strategy for the Queensland Government motor vehicle fleet ²
- QFleet Electric Vehicle Transition Strategy for the Queensland Government motor vehicle fleet ³.

There are many actions that agencies and individual officers can put in place to avoid, reduce and minimise their fleet's emissions, and so contribute to achieving the goals identified in these strategies.

The *QFleet Emissions Reduction Guide for the Queensland Government motor vehicle fleet* (the Guide) provides practical steps that agencies can take towards a greener, more sustainable fleet.

Everyone can and should play a part. The CEO who makes decisions about departmental vehicle policy; the senior officer who authorises vehicle selection and vehicle utilisation decisions; the fleet manager who determines vehicle deployment; the agency carpool coordinator who allocates vehicles to tasks and the driver who sits behind the wheel – each can influence the environmental impact of their agency's vehicles.

Agencies are encouraged to share QFleet's commitment and embrace the spirit of the Guide, to help build and strengthen a culture of fleet environmental sustainability.

QFleet also invites agencies to share their ideas about how else the fleet's emissions can be reduced.

While this Guide has been developed focusing on those budget sector agencies that comprise the majority of QFleet's customers, it can also serve as a model for other fleet managers in both the public and private sectors.

¹ www.qld.gov.au/environment/assets/documents/climate/qld-climate-transition-strategy.pdf

² www.hpw.qld.gov.au/SiteCollectionDocuments/QFleetEnvironmentalStrategy.pdf

³ www.hpw.qld.gov.au/SiteCollectionDocuments/QFleetElectricVehicleTransitionStrategy.pdf

Purpose

The way we choose and use government vehicles has a direct effect on fuel consumption, greenhouse gas emissions, air quality, safety and cost. As public sector employees, we have a responsibility to minimise the various negative impacts of our vehicles.

This Guide is designed to assist agencies to put QFleet's environmental strategy and electric vehicle transition strategy into practice and contribute to the achievement of their stated goals.

The aim of the Guide is to inform the development of agency-specific emission reduction policies and plans of action. It outlines practical and effective steps that can be taken to improve fleet environmental outcomes without compromising safety or operational efficiency. Successful implementation also has the potential to yield savings for fuel, maintenance and lease costs. The Guide consists of:

- **Key Elements** outlining actions that may be adopted and adapted by each agency.
- Phased Implementation a model to incorporate the key elements into a cohesive agency fleet management framework.

Use of this Guide is optional. However, agencies are strongly encouraged to take a planned, measured and demonstrable approach contributing to the Queensland Government's stated commitments to (a) demonstrate government leadership by reducing its own emissions from government operations⁴, and (b) transition the government's vehicle fleet to electric vehicles⁵.



Key Elements

A vehicle's emissions output depends largely on the type of fuel it uses (e.g. fossil fuel, biofuel, electricity) and the amount of fuel it consumes.

There are several other factors that will influence a fleet's environmental performance. These include:

- vehicle standards of maintenance
- the way vehicles are managed and driven
- total travel distances
- rethinking the need to use vehicles
- technologies that reduce vehicle emissions.

There are six Key Elements that form the basis of this Guide:



These key elements and their components can be used by all agencies, in full or in part, and at all levels including:

- whole-of-fleet
- by region
- off-road locations e.g. sand/beach
- within specialised service delivery programs
- within vehicle pools (agency-specific or shared).

While each key element contributes to emission reduction, they are intended to be integrated to deliver optimal environmental outcomes.

Key Element 1: Vehicle selection

Aim to lease the lowest-emission vehicles that will meet the agency's business transport needs safely and efficiently. Treat every vehicle replacement as an opportunity to improve the fleet's environmental profile. For example, consider the following:

- Bearing in mind the current utilisation of the vehicle being replaced, is there a problem with moving to a smaller model?
- If the same size vehicle is necessary, is there a hybrid or electric alternative?
- Considering current needs, is there a requirement to replace the vehicle at all?

Financial considerations should include whole-of-life fuel costs.

The fleet should consist of a selection of vehicles best suited to perform the full range of expected transport needs. However, not every vehicle is required to undertake every task.

For example, for an office where daily tasks include short to medium distance round-trip journeys, transporting one or two staff and minimal items, the inclusion of a small plug-in electric vehicle might be a perfect fit for the office pool. (Refer to Key Element 6: Additional considerations – Plug-in electric vehicles). Conducting a comprehensive annual review of agency fleet requirements will help to prepare a vehicle replacement program and identify opportunities to shift to lower-emission vehicles.

Agency vehicles are acquired based on the demonstrated need to pursue normal day-to-day government business. As detailed in the Public Service Commission policy *Use of Government Owned Motor Vehicles and Parking of Private Vehicles on Official Premises*⁶ — a vehicle must not be retained or replaced for providing staff with personal commuting or home garaging, nor should home garaging privileges influence the type of vehicle selected.

QFleet can provide advice, guidance, reporting and access to tools for the vehicle selection process. QFleet's online vehicle selection and ordering tools [Fleetscape and the Client Access System (CAS)] include *Green Vehicle Guide*⁷ emissions data for all vehicles offered under 3.5 tonnes GVM. QFleet's client services team can assist with comprehensive fleet reviews and vehicle replacement programming.



6 www.forgov.qld.gov.au/documents/policy/use-government-owned-motor-vehicles-and-parking-private-vehicles-official-premises

7 www.greenvehicleguide.gov.au

Key Element 2: Vehicle maintenance

Keep vehicles well maintained—they will be more efficient, safer and more reliable.

Vehicle maintenance, in terms of emissions management, falls into two broad categories:

- 1. Scheduled servicing and maintenance (performed by an approved provider).
- Regular checks and basic maintenance (performed by the driver or fleet/pool manager).

Detailed information can be found in the vehicle owner's manual, service logbook and the *QFleet Driver Companion*⁸.

Scheduled servicing and maintenance

Ensure each vehicle is serviced regularly according to manufacturer recommendations and the service logbook. Regular servicing contributes to optimal driving, safety and environmental performance. Remember, the cost for all scheduled servicing is included in QFleet's fully maintained operating lease rates.

Regular checks and basic maintenance

Several basic checks should be performed at regular intervals for safety, and for operational and environmental performance reasons e.g. engine oil, fluid levels and evidence of leaks.

Tyres

Check tyre pressures regularly (while they are cold). Fuel consumption and emissions are increased due to poor wheel alignment and underinflated tyres.

Weight

The heavier a vehicle is, the more energy is needed to move it. Remove unnecessary items from the boot, cargo area and roof racks until they are needed. Also consider water tanks and additional fuel tanks might not always need to be full.

Aerodynamic drag

Remove detachable exterior fixtures such as roof racks (when not in use) to decrease aerodynamic drag. Wind the windows up and use the ventilation system or air conditioner when driving at highway speeds to improve energy efficiency.



Vehicle allocation/deployment

Share or pool vehicles wherever possible so that the lower-emission vehicles are always available for use.

Key Element 3:

Logbooks should be maintained for all vehicles and all journeys. The data gathered is essential for effective fleet management and to inform replacement decisions.

CEOs and other responsible officers are required to manage home garaging and other personal use of vehicles in accordance with the Use of Government Owned Motor Vehicles and Parking of Private Vehicles on Official Premises⁹.

Carpooling

Carpooling (or sharing) involves the identification of a number of vehicles for use by multiple users. This might involve a small number of vehicles in a branch office, numerous vehicles shared broadly across an agency, or a larger pool shared across multiple agencies.

The agency should have a centrally managed carpool vehicle allocation system in place, supported by documented procedures and electronic or hard-copy logbooks.

When allocating or choosing a pool vehicle for a journey, personal vehicle preference is not a priority. Staff should instead select the lowest emission vehicle that will perform the required task safely and efficiently.

In addition, it is a good idea to plan journeys and share trips to minimise overall vehicle use and distances travelled. Inter-agency vehicle pooling and sharing is encouraged where agencies share a building or precinct. A system might also be established to make staff aware of available seats on a trip to identify possible ride sharing opportunities.

QFleet offers free access to, and instruction in the use of, the Utilisation Management System (UMS) – an online tool that assists the effective daily allocation and management of pooled vehicles. The UMS also captures usage data to assist in fleet reporting and management.

QFleet car sharing

QFleet's car sharing service is available in the Brisbane CBD, and will expand to the greater Brisbane area and selected regional locations.

This innovative service provides staff in participating agencies access to vehicles from a centralised pool for short-duration hire using an online self-service booking system. The shared fleet includes lower-emission vehicles, some of which are plug-in electric models.

In-vehicle technology enables the calculation of hire costs for agency billing, based on hours and distance travelled. Fleet management reports can be tailored to agency needs, including FBT.

Key Element 4: Vehicle operation

Simple driving choices and techniques can have a real impact on emissions reduction. Drivers can minimise fuel consumption and emissions with little effort.

The following driving tips and techniques reduce emissions, improve safety and reduce vehicle wear and tear.

Choose the low emissions option

When booking (or allocating) a pool vehicle, select the most fuel-efficient vehicle for the job. Low emission options such as plug-in electric vehicles and petrol/electric hybrids are good choices.

Setting off

Modern vehicle engines do not need to be 'warmed up' or 'revved' when starting. This burns additional fuel unnecessarily.

Drive defensively, not aggressively

Driving smoothly and avoiding heavy acceleration and hard braking will consume less fuel and produce less emissions.

If the vehicle is equipped with a fuel economy gauge, use it to monitor current and average fuel usage.

Observe speed limits and speed advisory signs

Apart from safety concerns, speeding uses more fuel and increases emissions. For example, RACQ¹⁰ advises that travelling at 120km/h in a 100km/h speed zone is not only dangerous and illegal, it can increase fuel consumption, and consequently emissions, by up to 25 per cent.

Read the road

Be alert and attentive to anticipate and respond early to traffic and road conditions.

Ease off the accelerator rather than braking, apply power gradually to cope with inclines, and adjust speed, gears and driving line for curves and corners. All these actions reduce a vehicle's emissions.

Use the cruise control feature if available

Switching to cruise control enables a vehicle to automatically maintain a steady, constant speed. In most cases this will apply the accelerator and brakes more smoothly and efficiently when needed, reducing fuel consumption and emissions.

If a vehicle is fitted with an 'Eco' button or setting, engage the feature whenever appropriate.

Switch off for prolonged periods of delay

If stopped in heavy traffic or at road works, switch off the engine if it is likely to be stationary for some time. Many car manufacturers are now introducing automatic idle-shut-off technology to their new vehicles.



Refuelling

In 2017, the Queensland Government released the *Increasing the use of ethanol blended fuel in the Queensland Government vehicle fleet* (retail fuel purchases policy)¹¹. This policy requires all government petrol vehicles to be refuelled using E10 (ethanol blended fuel) where it is practical to do so:

- if the vehicle is compatible with E10; and
- if E10 is available at the service station where the fuel is intended to be purchased or at a suitable alternative service station.

This policy has been introduced by government to support the development of a sustainable, internationally competitive biofuels industry and help Queensland transition to a clean energy economy. It applies to the drivers of all vehicles owned and/or operated by Queensland Government agencies.

Most petrol-fuelled government vehicles are E10 compatible, but drivers should check prior to refuelling either by referring to the vehicle's manual, by contacting QFleet, or visiting https:// e10ok.initiatives.qld.gov.au. The E10 OK website can also assist in locating the nearest E10 service station.



Most QFleet petrol vehicles can use E10 Check the vehicle owner's manual, contact QFleet, or visit the E10 Ok website.

Key Element 5: Alternatives to driving

Using a vehicle less frequently is an effective way to reduce exhaust emissions. Alternatives to driving a government vehicle, or whether transport is even necessary, should be considered for each intended journey.

Alternatives include video and teleconferencing. If travel is required, public transport or walking may be viable options.

Buses

Bus travel can be a practical transport solution, particularly around town and city centres.

In the Brisbane CBD, the Brisbane City Council's City Loop and Spring Hill Loop bus services¹² provide free and frequent daytime and early evening public transport, Monday to Friday.

Airtrain (Brisbane)

For travel between the Brisbane CBD and Brisbane's domestic and international airport terminals, the Airtrain¹³ provides a frequent, costeffective and reliable service. It is recommended that officers travelling for Queensland Government business purposes consider using the Airtrain during the service operating hours. Some agencies may have a policy to use the Airtrain service in preference to taxis or airport parking.

Walking

A walk to and from a meeting can be a healthy and refreshing alternative to driving. Some agencies actively promote the walking option in support of a healthier workplace.

In some instances, walking can even be a more time efficient option, rather than arranging and collecting a vehicle, driving through CBD traffic and finding a car park.

Communication technology

Technology provides numerous alternatives to face-to-face meetings, including telecommuting, teleconferencing, using applications such as Skype for Business and internal social networking channels such as Yammer.

13 www.airtrain.com.au

Key Element 6: Additional considerations

Eco-driving

The way a vehicle is driven can affect its emissions.

Agencies should incorporate a vehicle emissions reduction component into driver induction and training programs. Often referred to as 'ecodriving', such training focuses on the driver responsibilities and behaviours referred to in Key Element 4.

Eco-driving instruction complements driver safety training. Most internally delivered driver induction and training can be easily modified to include the features of Key Element 4.

If external providers are engaged to deliver specialised driver safety training, they should be asked to include an eco-driving module in the program and training resources.

Plug-in electric vehicles

The *QFleet Electric Vehicle Transition Strategy for the Queensland Government motor vehicle fleet* outlines a proactive leadership approach to increasing the number of electric vehicles in the government fleet.

The strategy supports *The Future is Electric*¹⁴ — the Queensland Government's plan to prepare and position Queensland to capture the benefits and opportunities of electric vehicles and encourage consumer support.

The range of available electric vehicles suitable for use in the government fleet is small but growing.

At the same time, they are becoming more cost competitive, while the necessary recharging infrastructure is expanding, led by the rollout of the Queensland Electric Super Highway¹⁵.

Electric vehicles are particularly well suited to centralised carpools, where vehicles are allocated on a task-by-task basis and can be recharged between trips. One way to determine if electric vehicles are a good fit for the pool is to check the utilisation data. This will reveal how often vehicles undertake round-trip journeys that are within an electric vehicle's driving range.

Plug-in electric vehicles are already a key feature of QFleet's innovative and expanding car sharing fleet.

Agencies are encouraged to:

- take advantage of electric vehicle evaluation opportunities
- consider the inclusion of electric vehicles in their fleet mix
- consider the installation of electric vehicle recharging facilities at agency car parking locations.

In-vehicle Monitoring Systems and Fleet Optimisation Services

In-vehicle Monitoring Systems (IVMS), also known as 'telematics', consist of hardware installed in the vehicle to track and monitor use, and a communication device to transmit and receive information. Fleet managers or supervisors can see the data in real-time.

¹⁵ www.qld.gov.au/transport/projects/electricvehicles/future/super-highway



Fleet Optimisation Services (FOS) are services provided by fleet analytical specialists to review the IVMS data gathered and report on utilisation and trends on a fleet, sub-fleet or individual vehicle basis.

IVMS and FOS can provide valuable information and data to inform fleet composition and utilisation decisions.

QFleet has established a whole-of-government common use arrangement for the supply of IVMS and FOS (QF0716) that is available from the Queensland Contracts Directory¹⁶. The arrangement also includes a buyers guide, buyers factsheet and panel user guide that can help an agency determine if IVMS/FOS is suitable for their needs.

There is no obligation to use a provider listed on the panel. All costs associated with the engagement of IVMS/FOS providers are the responsibility of the relevant agency.

Carbon offsetting

Even with the best of intentions and after proactive intervention, an agency's vehicle emissions will not be eliminated. At this point, carbon offsetting action is an option to address those emissions that cannot be avoided.

Offsetting is the process of removing or counterbalancing atmospheric carbon emissions. Methods include tree planting, carbon farming, landfill methane capture/destruction and investment in renewable energy generation projects.

For some methods, such as tree planting, offsetting can take years to be fully effective, while the trees gradually absorb carbon from the atmosphere as they mature.

The priority therefore should be to prevent carbon from entering the atmosphere in the first place, by taking all reasonable steps to reduce and minimise fleet emissions as outlined in this Guide.



Phased implementation model

Applying the Key Elements

Vehicle requirements and utilisation vary widely across government – from large, modified four-wheel-drive vehicles operating in remote terrain, to city office pool vehicles only driven locally.

To achieve optimal and sustained agency fleet emission reductions it is necessary to gain the support and cooperation of CEOs, senior management, agency fleet managers and individual drivers. The suggested phased implementation model is a process that can effectively incorporate the key elements into the integrated management of an agency's fleet.

QFleet acknowledges that some agencies may already have directives, practices and actions in place to reduce fleet emissions. In these instances, this model may be used to update, strengthen or revitalise those initiatives.

Phases of implementation

Phase 1 — Fleet review and profiling

Examine in detail the agency's environmental profile and annualised emissions (refer to QFleet's commitment on page 15) to identify where initial changes might be prioritised. It is recommended that this process be conducted annually. The data will also provide a quantitative measurement and baseline for tracking improvement.

Phase 2 — Key element evaluation

Explore the key elements thoroughly and identify components that can be applied to the agency fleet.

Phase 3 — Policy and supporting documents

Review (or develop where necessary) agency fleet policy, procedures, guidelines and work instructions to incorporate the key elements into agency practices and culture.

Phase 4 — Whole-of-fleet planning

Use the key elements and fleet review results to inform the preparation of annual whole-of-agency fleet replacement programs. QFleet can assist in this process.

Phase 5 — Monitor performance

Examine subsequent environmental profile and annual emissions reports (quarterly is recommended) to monitor environmental performance in terms of both fleet composition and emissions.



Summary

Thoughtful vehicle selection, responsible driving attitudes and behaviour, planning and considering alternatives all play a part in achieving and maintaining high standards of fleet environmental performance. Success is more likely if these are underpinned by documented agency policy and procedures and supported at all levels.

The recommended aims of a **best practice fleet emissions reduction program** are outlined in the table below.



QFleet's commitment

To support agencies in their emissions reduction journey, QFleet has committed to:

- include low-emission vehicles in the range offered for lease
- retain high standards of vehicle safety across all models
- offer a broad selection of vehicles, across all categories, to continue to meet agencies' genuine fit-for-purpose requirements
- continue to provide training in the use of QFleet's fleet management tools that support this Guide e.g. Fleetscape, CAS and UMS
- provide emissions data, sourced from the Green Vehicle Guide, for vehicles listed in Fleetscape and CAS
- continue to engage with manufacturers, so that as suitable electric vehicle models become available, agencies are given the opportunity to evaluate and lease
- provide regular, high level, agency-specific fleet environmental information including environmental profile summaries and annualised fleet emissions data

- offer additional fleet environmental advice and assistance including vehicle selection, fleet replacement program planning and fleet analysis
- advise agencies about future changes to Queensland Government policies and directives related to vehicle emissions and environmental matters
- include electric vehicles in QFleet's car sharing fleet.

If implementing this Guide results in a significant reduction of kilometres travelled by particular vehicles, QFleet can renegotiate the terms of a lease or assist in transferring a vehicle to another agency.

What agencies can do

Agencies are encouraged to ensure that their fleet profiles are as environmentally responsible as possible, with emissions playing a key part in vehicle selection (without compromising operational efficiency or safety). This can be achieved progressively and for the long term by:

- planning a sustained shift to lower-emission vehicles
- using each vehicle replacement decision as an opportunity to reduce fleet emissions
- considering plug-in electric vehicles for inclusion in the fleet mix
- including an eco-driving component in staff induction and driver training
- ensuring scheduled vehicle servicing and daily/ weekly maintenance checks are performed
- reviewing in-house vehicle pooling and sharing practices, including aggregation between offices and across agencies
- making use of QFleet's car sharing service (where available)
- when allocating a pool vehicle, selecting the lowestemission vehicle that will safely and effectively perform the required task
- identifying and reducing the unnecessary use of government vehicles, including adherence to the Use of Government Owned Motor Vehicles and Parking of Private Vehicles on Official Premises policy
- encouraging alternatives to the use of a government vehicle whenever practical
- reviewing and promoting in-house vehicle/fleet management policies and procedures that support emissions reduction and communicating them effectively across the agency
- prioritising fleet emission minimisation and avoidance in the preparation of annual fleet replacement programs.

QFleet will assist agencies to improve their fleet environmental performance, from individual vehicle selection advice to whole-of-fleet replacement forecasting and analysis.

Climate change poses risks to Queensland's economy, ecosystems, infrastructure and communities. By taking a strategic approach to reducing greenhouse gas emissions, agencies can assist in achieving longterm benefits for the state. Everyone who authorises, approves, selects, allocates or drives a government vehicle has a part to play.

Related resources

QFleet Environmental Strategy for the Queensland Government motor vehicle fleet, Queensland Government www.hpw.qld.gov.au/SiteCollectionDocuments/QFleetEnvironmentalStrategy.pdf

QFleet Electric Vehicle Transition Strategy for the Queensland Government motor vehicle fleet, Queensland Government www.hpw.qld.gov.au/SiteCollectionDocuments/QFleetElectricVehicleTransitionStrategy.pdf

QFleet Driver Companion, Queensland Government www.hpw.qld.gov.au/SiteCollectionDocuments/QFleetDriverCompanion.pdf

QFleet Fleet Efficiency and Utilisation Policy for the Queensland Government Motor Vehicle Fleet, Queensland Government www.hpw.qld.gov.au/SiteCollectionDocuments/QFleetFleetEfficiencyPolicy.pdf

Green Vehicle Guide, Australian Government www.greenvehicleguide.gov.au/

Use of Government Owned Motor Vehicles and Parking of Private Vehicles on Official Premises, Queensland Government www.forgov.qld.gov.au/system/files/documents/official-motor-vehicles-use-and-private-parking-policy_0.pdf?v=1492752274



Further reading

Leasing vehicles from QFleet – Terms and Conditions Available from agency fleet managers

QFleet Road Safety Manual for the Queensland Government Vehicle Fleet www.hpw.qld.gov.au/SiteCollectionDocuments/RoadSafetyManual.pdf



For more information

qfleet@hpw.qld.gov.au
(07) 3008 2633
GPO Box 293, Brisbane Qld 4001
qfleet.qld.gov.au

