Vince White General Manager, QFleet

Department of Energy and Climate



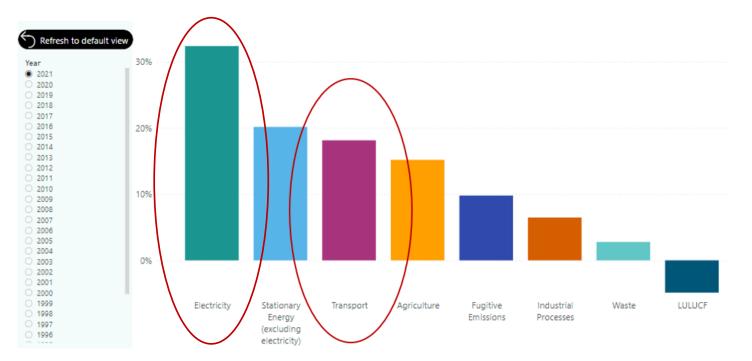


- 1. Queensland Government ZEV Strategy
- 2. QFleet EV Strategy
- 3. QFleet EVs
- 4. Electric Vehicle Charging Infrastructure Program
- 5. Electric Vehicle Charging Infrastructure lessons learnt
- 6. What you will need to do.

Emissions by sector

The graph below displays annual emissions by sector from 1990 to 2021.

The data can be viewed by year, showing how each sector's impact on total emissions have changed over time.









Driving towards our goals



70% renewable energy by 2032

We will deliver on our \$4 billion commitment to Queensland's energy transformation by providing clean, affordable and reliable energy for all Queenslanders.



Zero net emissions by 2050

We will achieve this target by investing in people, programs and infrastructure as part of our commitment to addressing climate change.

100% of eligible government passenger vehicles to be

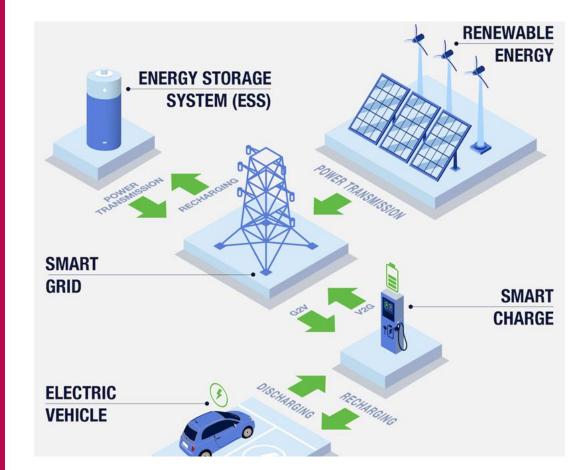
zero emission by 2026 We will continue transitioning our fleet to

zero exhaust emission vehicles, resulting in significant savings for Queensland taxpayers.

ГØЪ

ZEV ready government buildings by 2026

We will install charging infrastructure for fleet vehicles in government owned and leased buildings with a focus on sites the public can also use.

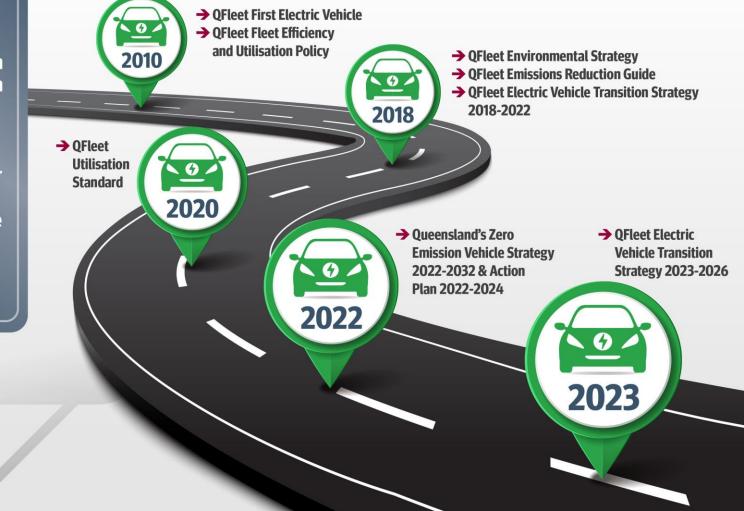




QFleet's emissions reduction journey | 2010 – 2023 and beyond

The Queensland Government has made a strong commitment towards the introduction of zero exhaust emission vehicles. Through the introduction of the Queensland Energy and Jobs Plan, we will deliver infrastructure and investment in renewable energy to meet our 50 per cent renewable energy target by 2030.

QFleet's transition of the government's fleet to electric vehicles includes:







Fleet size: nearly 11,000 vehicles

Annual turnover: \$150M

Commercialised business unit

Transitioning to Net zero

QFleet



QFleet

• 1,000 active

Target to have 3,000 EVs by 2026

 All eligible passenger vehicles (excluding police, emergency services, fire)

Transitioning to Net zero

EVs

EV Charging Infrastructure EVs

- QFleet \$3,000 rebate
- Qld Electric Superhighway
- 180 7KwH chargers
- Complex!

Transitioning to Net Zero

EV Charging Infrastructure



New York 1900

New York 1915

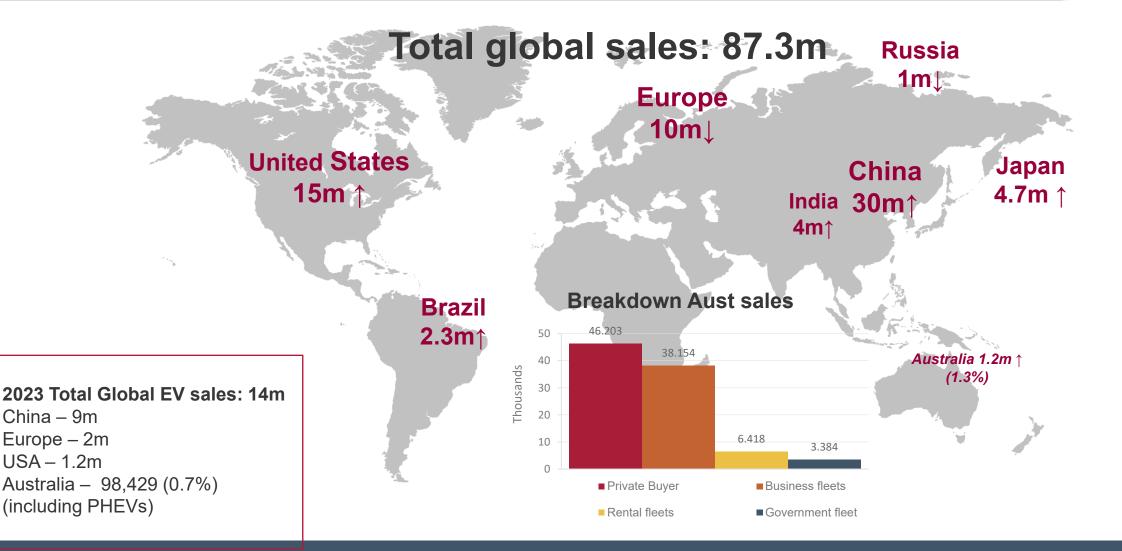




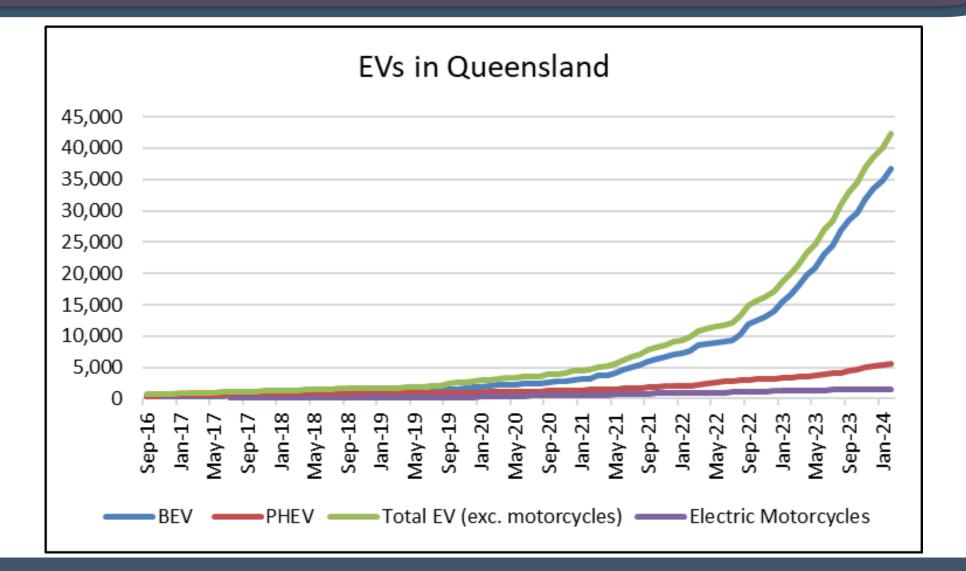
Sydney 1900

Sydney 1915

Global motor vehicle sales 2023 (volume)



Electric vehicles in Queensland



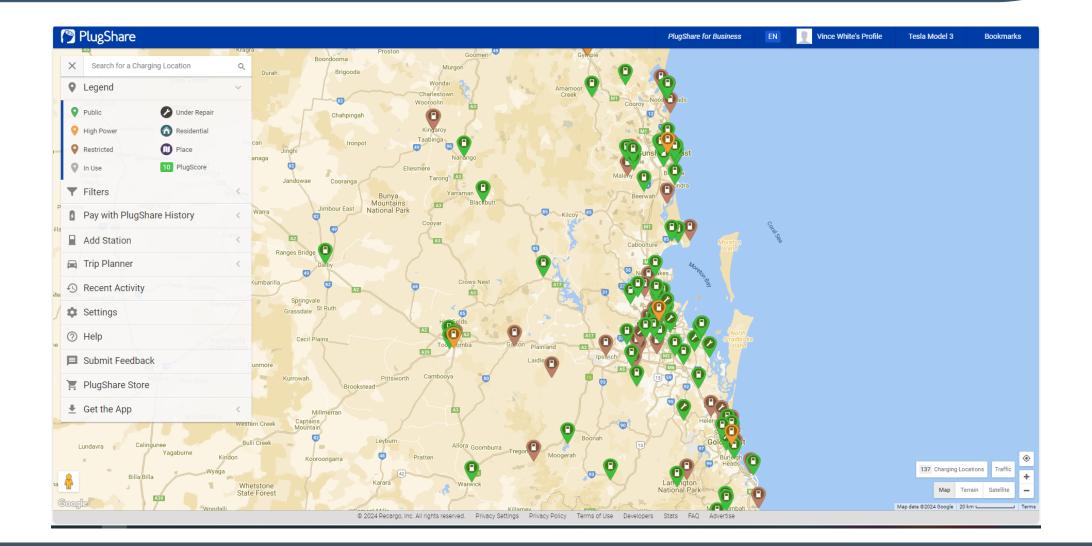


Driving towards net zero

Fleet operators have significant upfront capital costs to purchase and deploy the electric vehicles and associated charging infrastructure. This won't stop them buying EVs, but it will require them to develop a careful electrification transition strategy.



Plugshare charging map – SEQ



Electric Vehicle Charging Infrastructure

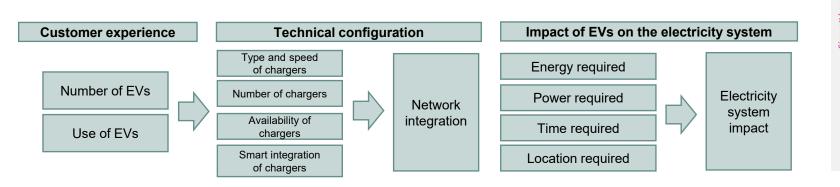
ACTION 2.5: Integrate Queensland's zero emissions vehicles

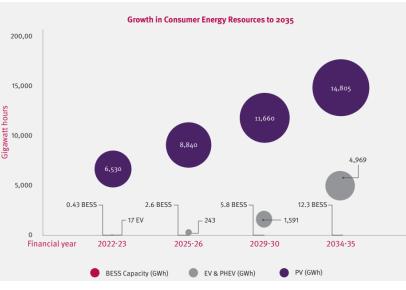
The Queensland Government will invest **\$12 million** for charging infrastructure and trials to support efficient integration of electric vehicles into the electricity system and **\$30 million** to make government buildings zero emission vehicle (ZEV) ready.

This \$42 million commitment is on top of already significant commitments, including \$45 million for rebates towards new electric vehicle purchases and \$10 million to support more public charging options. This action will also support the replacement of government fleet vehicles (to seed the second-hand electric vehicle market) and updates to regulations and tariffs.

ZEV strategy targets

- ✓ 50% of new passenger vehicle sales to be zero emissions by 2030 and 100% by 2036.
- ✓ 100% of eligible Queensland Government Fleet passenger vehicles to be zero emission by 2026.
- Every new TransLink funded bus added to the fleet to be a zero-emission bus from 2025 in south east Queensland and from 2025-2030 across regional Queensland.
- ✓ Net zero emissions by 2050.





Program status – January 2024



Program challenges





Rapid DC chargers

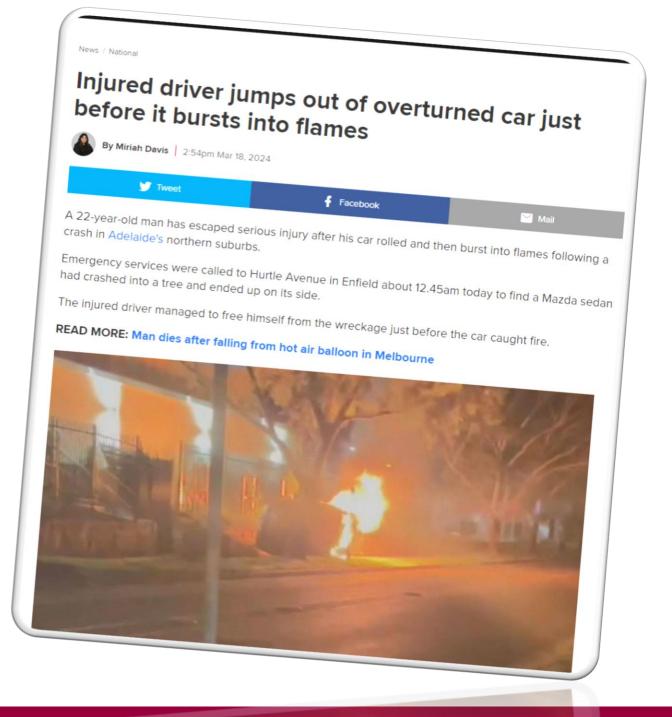


Behavioural change



Availability of contractors

Fire Safety



Learnings and tips – cables



Cable length



Avoid cable trip hazard



Learnings and tips – installs



Learnings and tips – leased premises

Lease renewal



Complex buildings or infrastructure

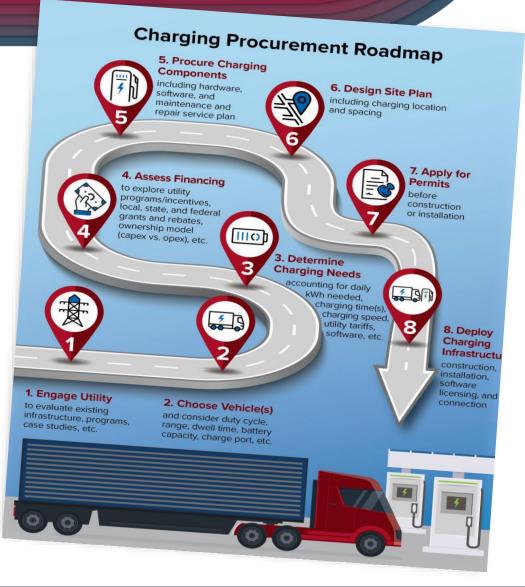


Have a Plan B

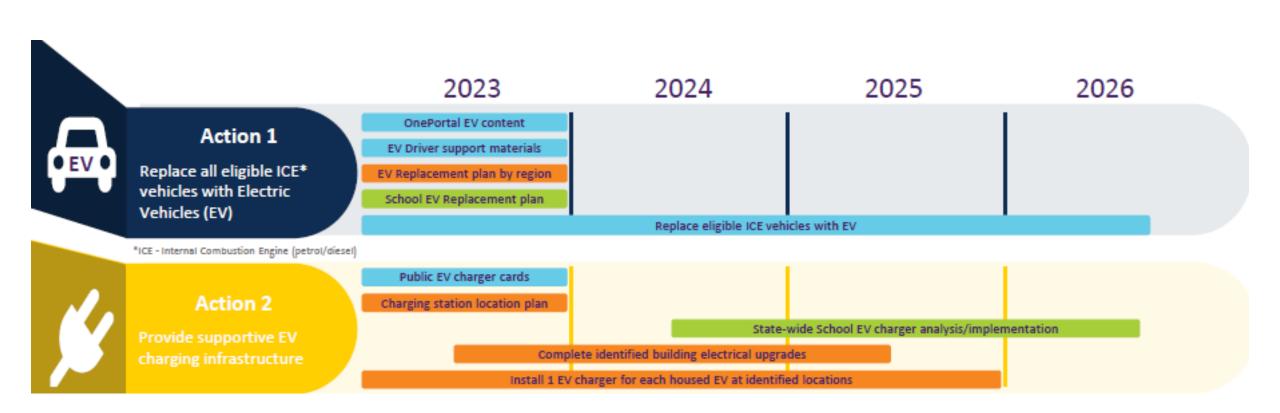


How?

- Develop a prioritised electric vehicle charging infrastructure rollout plan in buildings where the charging infrastructure will be located
- Explore complementary pathways to support net zero transport that can be considered for buildings' electric vehicle charging infrastructure readiness
- Plan and lead collaborative working sessions and workshops with building occupants, fleet and facility contacts, building owners and building owner's facility managers
- Carry out supporting background research (building electrical supply, capacity, access, fire safety, risk assessment, electric vehicle charging infrastructure locations (number, type, etc), government approvals/permits/code requirements)
- Develop a plan that can be used as an assessment framework in identifying priority EV charging locations
- Develop:
 - a prioritised rollout plan
 - Funding assessment
 - Technical guidelines
 - Procurement guidelines/panel
 - Code of Conduct.



How continued...



Queensland Government

Oueensland Government

ZERO

| Queensland's |
|----------------------|
| Zero Emission |
| Vehicle Strategy |
| 2022-2032 |

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| Contents | |
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| Priority 4: University 5: Partnerships, innovation and priority 5: Partnerships, innovation and plans Action plans | ***** |
| Priority 5: Teaming Queensland's Zero Emission Action plans Keeping track of progress | |
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| Glossary | |
| Abbreviation | |
| References | |
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Island's Zero Emission Vehicle Strategy 2022–2032

Targets

To support Queensland's 50% renewable energy target by 2030 and renewable energy target by 2030 and zero net emissions by 2050, we have set targets to stimulate investment and provide consumer confidence to transition to ZEVs in Queensland.



Every new TransLink funded bus added to the fleet to be a zero emission bus from 2025

in South-East Queensland from 2025–2030 across regional Queensland

C 100% zero emission

C

100%

of eligible QFleet passenger* vehicles to be zero emissions vehicles by 2026

C)

50%

of new passenger*

vehicle sales to be zero emission vehicles by 2030

200,000 passenger* zero emission vehicles by 2027

of new passenger* vehicle sales to be vehicles by 2036

*Passenger vehicles include light passenger vehicles and SUVs

Queensland's Zero Emission Vehicle Strategy 2022–2032

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| | Building Name | Marybor ough | Mareeba Precinct | Mike Ahern | Carpark (for 123 | QBuild Southwe | Queensla nd State | Rockham pton | Townsvill e | William McCorma |
| | Name | Governm | recinct | Building | Wharf | st Qld | Archives | Governm | - | ck Place |
| | | ent | | | Street | Office | | ent | ent | |
| | | Office | | | office) | and | | Precinct | Office | |
| | | Building | | | , | Depot | | | Building | |
| | Address | Lennox Street (Cnr Alice Street), Maryboro ugh | 28 Peters Streets, Mareeba | 12 First Avenue, Maroochy dore | 147 Richmond Street, Maryboro ugh | 120 Mort Street, Toowoom ba | 469 Compton Road Runcorn | 149 Bolsover Street (Block E) | 187 Stanley Street, Townsville | 5b Sheridan Street, Cairns |
| Date | Tenure | QGAO Owned | QGAO Owned | QGAO Owned | QGAO Owned | QGAO Owned | QGAO Owned | QGAO Owned | QGAO Owned | QGAO Owned |
| 1 October 2023 | Sunday | Owned | Owned | Owned | Owned | Owned | Owned | Owned | Owned | Owned |
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| 15 October 2023 | Sunday | | | | | | | | | |
| 16 October 2023 | Monday | | | | | | | | | |
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| 18 October 2023 | Wednesday | | \$ | | | | | | | |
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| 15 NOVember 2025. | | | | | | | | | | |

Electric Vehicle Charging Infrastructure Program

Electric Vehicle Charging Infrastructure Program (Cont'd)

| Electric Vehicle Charging Infrastructure Program | Jan-24 | Feb-24 | Mar-24 | Apr-24 | May-24 | Jun-24 | Jul-24 | Aug-24 | Sep-24 | Oct-24 | Nov-24 | Dec-24 | Jan-25 | Feb-25 | Mar-25 | Apr-25 | May-25 | Jun-25 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Project Initiation: Define project scope and objectives. Identify stakeholders (building owners, tenants, eletricity providers, EV operators). Identify and where possible obtain necessary approvals and permits | | | | | | | | | | | | | | | | | | |
| 2. Needs Assessment: Assess the building's maximum electricity demand. Determine the number and type of charging points needed (current and future). Carpark location, access to serices and fire safety assessment Estimate costs and funding sources. Develop an EV tranisition plan Develop an EV charging strategy to align with the EV plan | | | | | | | | | | | | | | | | | | |
| 3. EVCI Supplier Selection : Research and select an EV supplier or operator. Obtain preliminary advice on installation requirements | | | | | | | | | | | | | | | | | | |
| 4. Design and Planning: Collaborate with the chosen supplier to design the charging infrastructure. Plan the electrical supply upgrade (if needed). Consider energy management systems (EMS) for load control Communication plan for the building occupants, EV fleet end users | | | | | | | | | | | | | | | | | | |
| 5. Installation Timeline : Create a detailed timeline for installation. Specify milestones, such as obtaining permits, completing electrical upgrades, and installing EVCI | | | | | | | | | | | | | | | | | | |
| 6. Installation Execution: Coordinate with contractors for physical installation. Ensure compliance with safety standards. Conduct load testing and commissioning. FAQs, code of conduct and other information, induction and trianing materials | | | | | | | | | | | | | | | | | | |
| 7. Monitoring and Maintenance: Implement an energy management system (EMS) for ongoing monitoring. Regularly inspect and maintain EV charging stations. Address any issues promptly. | | | | | | | | | | | | | | | | | | |

Three key takeaways

| Develop | Develop an electric vehicle charging infrastructure plan (facilities and fleet) |
|---------|---|
| Develop | Develop and EV transition plan (fleet) |
| Align | Align the two! (facilities and fleet). |

Want to know more about QFleet?

For more information about partnering with QFleet, please email <u>qfleet@epw.qld.gov.au</u>.

To learn more about QFleet visit <u>www.forgov.qld.gov.au/qfleet</u>

Q&As



Where can I find public electric vehicle charging stations?

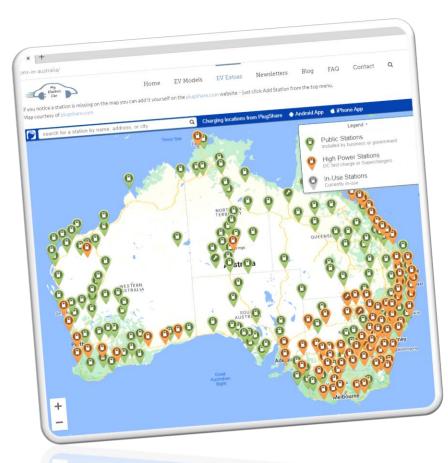
- There are a range of EV charging locations available across Queensland with more stations gradually coming online at a range of locations including at shopping centres, car parks, workplaces, and tourist attractions. Find the full list on <u>PlugShare</u>.
- You can charge your electric vehicle along the Queensland Electric Super Highway (QESH).
- You can check the status of the QESH charging site locations on the interactive google map or through the <u>Chargefox App</u>.
- You may also like to enquire whether your workplace offers the ability to recharge your vehicle.
- Further information on the location of other charging stations can be found on <u>PlugShare's</u> website and app, a global EV charging station app.

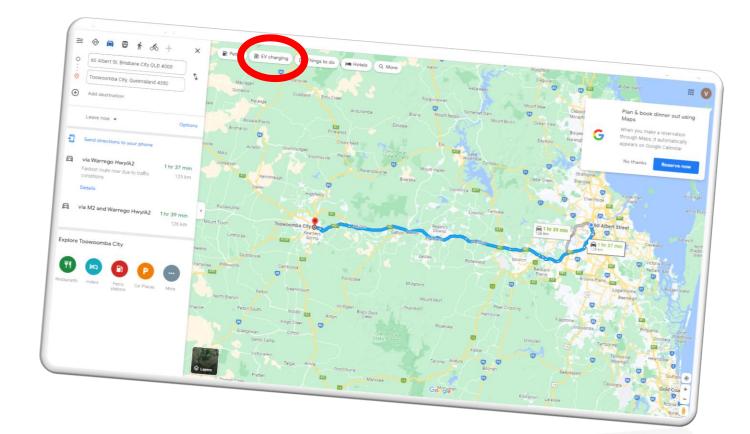
What is the Queensland Electric Super Highway?

- The Queensland Electric Super Highway (QESH) worth \$10 million includes a network of 55 fast charging stations allowing a person to charge an electric vehicle from Coolangatta to Port Douglas and from Brisbane to Toowoomba.
- It is one of the showpiece actions in *The Future is Electric: Queensland Electric Vehicle Strategy* designed to reduce range anxiety by increasing access to public fast-charging stations.
- View the full list of Queensland's Electric Super Highway charging locations by visiting <u>www.qld.gov.au/transport/projects/electricvehicles/superhighway</u>



Where can I find public electric vehicle charging stations?





By searching for EV chargers on Google Maps.

By viewing the plugshare.com

Electric vehicle charging

