# TASMANIAN GOVERNMENT ELECTRIC VEHICLE WORKING GROUP

## TERMS OF REFERENCE

TASMANIAN CLIMATE CHANGE OFFICE

#### WORKING GROUP

Electric Vehicle Working Group (the Working Group)

#### STATUS

Version I.4 – November 2019

#### **REVIEW NOTES**

This is the instrument of authorisation for the Working Group.

The Terms of Reference will be reviewed as required. Revisions will be version controlled and distributed to Working Group members.

#### AUTHORITY

The Working Group is established under action 3.2 of Climate Action 21: Tasmania's Climate Change Action Plan 2017-2021 to "establish an electric vehicle working group to develop a coordinated approach".

#### PURPOSE

The purpose of the Working Group is to provide advice on developing a coordinated approach to support the uptake of electric vehicles in Tasmania.

#### SCOPE

For the purpose of the Working Group, the term 'electric vehicle' refers to plug-in hybrids and battery electric vehicles, unless otherwise specified (see Attachment I below for definitions). Electric vehicles include cars, buses, trucks, trains, aeroplanes, boats, bicycles, motorbikes and scooters.

#### ROLE

The role of the Working Group is to:

- identify and explore barriers to electric vehicle uptake;
- review relevant policy and regulatory settings relating to each barrier;
- identify priority areas of action to support electric vehicle uptake;
- understand the impact of electric vehicle uptake on Tasmania's electricity sector;
- assess approaches to support the rollout of electric vehicle charging infrastructure in Tasmania; and
- investigate ways to improve electric vehicle data collection.

In doing so, the Working Group will explore the social, environmental and economic benefits of electric vehicles, and consider the impact of increased uptake on existing industry sectors. The Working Group will also share knowledge and facilitate communication between key industry partners.

The role of the Working Group will include providing advice on how to best utilise the Government's committed funds to support electric vehicle uptake.

#### REPORTING

The Working Group reports to the Department of Premier and Cabinet's Tasmanian Climate Change Office (TCCO).

#### MEETING FREQUENCY

The Working Group will meet approximately once every two to three months, commencing in October 2017, for a period of 18 – 24 months.



Members will be consulted out-of-session as required.

#### MEMBERSHIP

The Working Group members are listed below:

#### Chair

Director TCCO is responsible for convening and conducting the Working Group meetings. If the designated Chair is not available, an alternative representative from TCCO will be responsible for convening and conducting that meeting.

#### Members

The Working Group will comprise of:

- Australian Electric Vehicle Association
- Aurora Energy
- Department of Health
- Department of Justice
- Department of Premier and Cabinet (TCCO)
- Department of State Growth (Office of Energy Planning)
- Department of State Growth (Tourism and Hospitality Supply-side)
- Department of State Growth (Safe Mobility and Innovation)
- Department of Treasury and Finance
- Hydro Tasmania
- Local Government Association of Tasmania
- Metro Tasmania
- Royal Automobile Club of Tasmania
- Sustainable Living Tasmania
- Tasmanian Automobile Chamber of Commerce (TACC)
- TasNetworks
- University of Tasmania

#### Guidelines for proxies

Members of the Working Group can nominate a proxy to attend a meeting if the member is unable to.

#### SECRETARIAT

Secretariat and administrative support provided by TCCO.

### Role and responsibilities of the Secretariat

- Coordinate, schedule and manage the administration of meetings, including secretarial support to record minutes;
- Prepare and disseminate meeting papers, including agendas, minutes and relevant information;
- Act as a primary point of contact and liaison between members of the Working Group and TCCO.

#### Meeting papers, agendas and minutes

Meeting papers and agendas to be circulated at least three business days prior to each meeting.

Minutes shall be provided to members, in confidence, no later than two weeks following each meeting.

#### Communications and confidentiality

Members of the Working Group shall not make any media statements nor publish details of the Group's activities without the agreement of the Chair.

Working Group members maintain the confidentiality of Working Group discussions.

Information on the Working Group will be communicated to the public via the Tasmanian Climate Change Office website at www.climatechange.tas.gov.au

Tasmanian Climate Change Office GPO Box 123, HOBART TAS 7001 Phone: 03 6232 7173 Email: climatechange@dpac.tas.gov.au Visit: www.climatechange.tas.gov.au



#### ATTACHMENT 1

### Types of electric vehicles

Hybrid electric vehicles

Hybrids (HEVs) use a battery-powered electric motor to supplement a conventional internal combustion engine. The electric motor is powered via a small battery, which is charged through regenerative braking and/or using excess engine capacity. (Regenerative braking is where the electric motor assists in slowing the vehicle and utilises a portion of the energy normally converted to heat by the brakes.) The electric motor eliminates idling emissions and enables the vehicle to operate with zero emissions at low speeds. At higher speeds, the vehicle switches to the combustion engine (United States Department of Energy 2016). Examples include the Toyota Prius, Toyota Camry Hybrid, the Honda Civic Hybrid and the Lexus Hybrid.

#### Plug-in hybrid electric vehicles

Plug-in hybrids (PHEVs) are similar to HEVs in that they combine an electric motor with an internal combustion engine. However, PHEVs utilise a larger battery that can not only be recharged through regenerative braking or from the engine, but can also be plugged into an external charging outlet (United States Department of Energy 2016). When the battery is low or when more power is required, the combustion engine replaces the electric drive (Climate Council 2015). Examples include the Mitsubishi Outlander PHEV, BMW i8 and Holden Volt.

#### Plug-in battery electric vehicles

Unlike HEVs and PHEVs, battery electric vehicles (BEVs) are fully electric and rely solely on a rechargeable battery to store energy for the electric motor (Climate Council 2015). They do not have an internal combustion engine, fuel tank

or exhaust pipe, thus produce zero exhaust emissions. Similar to HEVs and PHEVs, BEVs can also recharge their batteries through regenerative braking. (A few models offer a small petrol generator as an optional extra to extend range by recharging the battery.) Examples include the Tesla Model S, BMVV i3, Mitsubishi i-MIEV and the Nissan Leaf.

#### Fuel-cell electric vehicles

A relatively new concept, fuel-cell electric vehicles (FCEVs) generate electricity using compressed hydrogen, instead of storing and releasing energy like a battery. This generated electricity then charges the on-board battery pack and/or powers the vehicle's electric motor. This whole process emits only water vapour. Though it should be noted, extracting hydrogen from a water molecule (eg natural gas) can be an energy-intensive process that generates greenhouse gas emissions if renewable sources of energy are not used. The Hyundai ix35 Fuel Cell is the first FCEV to be permanently imported into Australia (Hyundai 2016). In addition, three Toyota Mirai FCEVs have been delivered to Australia as promotional vehicles (Toyota Australia 2016).