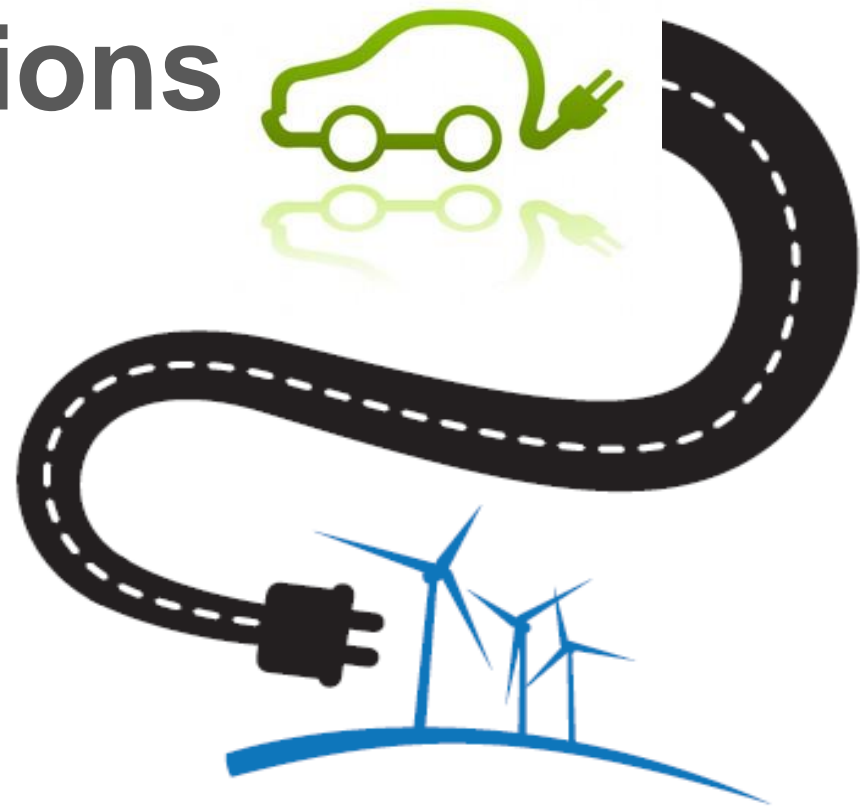


Transition to Zero Emissions Fleet



Purpose

- Understanding the need to reduce emissions from fleet operations;
- Acknowledging the devastating environmental and social impact of fossil fuel combustion on local communities and the natural world;
- Recognising the inefficiencies associated with continued use of internal combustion engines;
- Progressively moving renewable energy into the fleet fuel space
- Setting a path to zero emissions fleet operations



Background

- Successful participation in the Vic EV trial



Moreland City Council

Report on electric vehicle trial: Pre-drive & post-drive data 2012



Prepared by the Council Planning and Performance Branch







Electric Vehicle – Fleet Feasibility Study



Electric Vehicle Fleet Feasibility Study

transport | community | industrial & mining | carbon & energy



Prepared for:

Moreland City Council

Client representative:

Stuart Nesbitt

Date:

7 August 2014
Rev00

sustainablethinking[®]

Feasibility Study – Base case comparison

- Whole of life cost of ownership analysis



VS



Results: *“The benefit cost ratio for the adoption of Nissan LEAFs in the Moreland City Council fleet in place of Hybrid Camry’s at 7% discount rate was 1.48 indicating a sound investment” – Pitt & Sherry 2014*



Fleet EV's

- Successfully operating EV's in Councils fleet since 2013



Council Vehicle Policy Revision 2018

- Zero emissions vehicle purchasing priority
- Max 100gms CO₂/km emissions limit applied
- Recognition of higher ZEV purchase costs
- Diesel passenger vehicles banned

Compliant Vehicle Examples Table (Vehicles currently available in order of priority for each category)

| Make | > Model | Body Type | Seats (Large, Medium, Small) | *Emissions (Max 100gCO ₂ /km combined) | Category - Passenger or Light Commercial Vehicle (P or LCV) |
|------------|------------------|-----------|------------------------------|---|---|
| Hyundai | <u>Ioniq</u> | Hatch | 5M | 0 | P |
| Nissan | Leaf (Q3 2019) | Hatch | 5M | 0 | P |
| Hyundai | Kona (Q2 2019) | Wagon | 4S | 0 | P |
| Mitsubishi | Outlander PHEV | Wagon | 5M | 44 | P |
| Toyota | Prius | Hatch | 5M | 80 | P |
| Toyota | Prius C | Hatch | 5S | 90 | P |
| Toyota | Corolla Hybrid | Hatch | 5M | 96 | P |
| Renault | <u>Kangoo ZE</u> | Van | 2S | 0 | LCV |
| Nissan | Navara NP300 | Utility | 2 or 4M | #169 | LCV |
| Mitsubishi | Triton (diesel) | Utility | 2 or 4M | #201 | LCV |
| Isuzu | D/Max (diesel) | Utility | 2 or 4M | #203 | LCV |



*Passenger vehicles mandatory emissions standard per Green Vehicle Guide

#LCV – Diesel allowed with lowest CO₂/km combined at the time of procurement

>Vehicle examples will vary and the lowest emissions order of priority should be assessed at the time of procurement



Fleet Transition Underway

- Eleven additional EV's on order



Charging network developed

- Developed a network of public EV charging stations owned & operated by Council



ZapnGo!

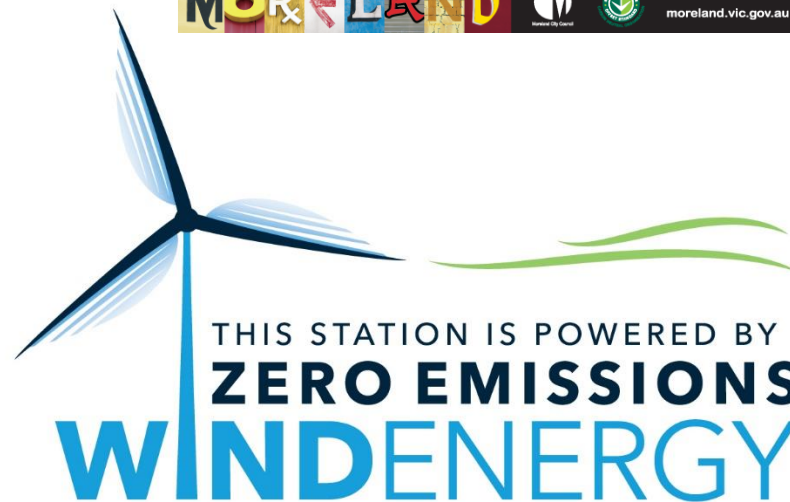
Victoria's first EV **FAST** charge station!



WELCOME TO MORELAND CITY COUNCIL

HOME OF VICTORIA'S FIRST
PUBLIC ELECTRIC VEHICLE

FAST CHARGE STATION



Council EV charging network

- 9 free public charging stations
- 10 private stations (Council EV's)
- Additional 50kW fast charge station Q2 2019



EV's in Planning

– What about EV infrastructure in planning?

Transport

- To ensure that the built environment is designed to promote the use of walking, cycling and public transport, in that order.
- To minimise car dependency.
- To promote the use of low emissions vehicle technologies and supporting infrastructure.

- a) *An improved response to the 'Transport' objectives of Clause 22.08, including:*
- Bicycle parking for staff and end-of-trip bicycle changing facilities for staff.*
 - A dedicated electric vehicle charging car space and charging capacity for staff (a minimum 32A single phase sub circuit to allow for future electric vehicle charging).*



EV Charging at new Council Facilities

Transport

Fuel Efficient Transport

- Allowance for at least 2 single phase sub-circuits (32 Amp capacity) on switch board to allow for e-vehicle recharging.
- Where deemed suitable, as a means of future proofing, allowance for at least 1 three phase sub-circuit (80 Amp capacity) to allow for DC fast recharging for e-vehicles.
- Dedicated parking is to be provided for electric vehicles as well as associated charging infrastructure commensurate to the size of the project.





Moreland City Council



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