

# First Things First – Charging the Way



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## Rules of Engagement

- Please join the webinar on mute with your camera OFF, which should be maintained during the presentation.
- Participants will be invited to ask questions. Please raise your hand using the icon on Teams or simply turn on your camera or use the chat function.
- The presenters may invite you by name to contribute to the session. Where possible, when responding, please turn on your camera so the participants know who is speaking.

## Objectives for the Webinar

- Working with webinar participants to explore development of an EV Transition Plan
- First Things First
  - where do we start what do we do first?
- Topics
  - Transition Plan
  - Understand Council Business Needs
  - Selection Criteria and Weightings
  - Small Plant
  - Charging Infrastructure

**Most Councils have committed to Zero Emission Targets and are considering their approach to ZEF**

# Introduction

## Grant Andrews

- 45 years experience working in the motor vehicle industry
- Combined with 30 years consulting to Local and State Government
- Passionate about financial modelling and innovation



## John Ravlic

- Associated with Local Government for over 30 years as an executive and consultant
- Passionate about developing best practice service delivery to meet community needs

	Conventional	Hybrid	Plug-in hybrid	Electric	Hydrogen
Source of energy					
Consumption					
Tailpipe emission					

# Journey Towards Net Zero Emission Fleet

## Where do we start?

- Start with a plan - Transition Plan!
- Most fleet decisions are medium to long term decisions (five to ten years)
- Changing fleet decisions mid-term
  - financial loss and
  - service inconvenience
- The Plan will guide
  - Strategic direction and
  - decision making towards Zero Emission Fleet

ZEF Pilots need to align with the Council's Transition Plan

### Benefits of Leasing Zero Emission Fleet

- Full Cost Transparency
  - Scheduled maintenance included
  - Repairs billed separate to lease
- No risk of residual value

### Understand Your Council's Business Needs

- What assets are in operation?
- What assets need replacement in the next 12-18 months?
- Consider PH/EV replacement options
- If no direct replacement options are available consider deferring replacement

# Considerations

## Transition Plan will:

Capture your Council's strategic direction towards Zero Emission Fleet as a direct response to state government EV initiatives, detail your Council's role in:

- generating demand for EVs in order to make them more affordable
- incentivise community take-up of EVs
- planning and rolling out corporate and community charging infrastructure

### Private Use – Light Fleet

- Councils shouldn't be in the business of providing vehicles for private use
- Encourage Novated Leasing
- Council paying allowance for employee to bring own vehicle to work
- Incentivise employees to drive EVs

## Selection Criteria and Weightings

Once your council has adopted Net Zero Emission Fleet Targets:

- you can't consider EV replacements under the "old" ICE rules
- your selection criteria and weightings must align against your strategic direction
- your selection criteria and weightings must align against your Zero Emission Fleet Targets

### Selection Criteria

- Whole of Life Costing
- Safety – Five Star Rating
- Environmental
  - Fuel Consumption
  - Zero Emission Production Plant
  - Use of recyclable materials
    - Battery as well as plastics

# Community Charging Infrastructure

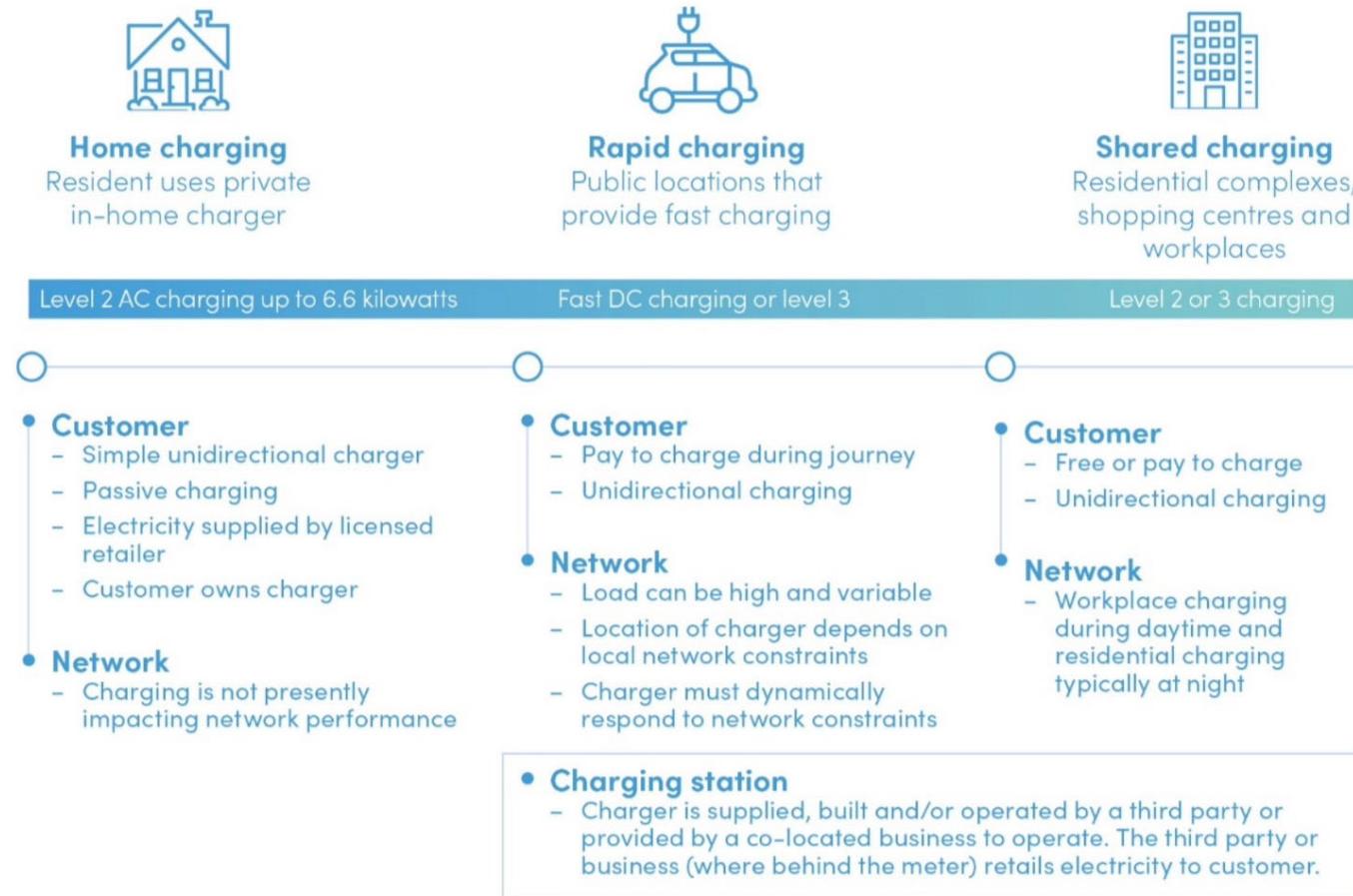


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Andrew is an EV enthusiast whose career has spanned a diverse range of industries, including banking, digital media and education, both in Australia and abroad.

As City Relations Manager at JOLT, Andrew is responsible for creating partnerships with local Councils and private entities to roll out an innovative network of zero-cost fast electric vehicle chargers across Australia.

# EV Charging



# Charge, Speeds, Types, Applications and Costs

Common Name	Power Level	Charge Type	Power	Time to charge 100km of range	Application	Cost Per Station <sup>37</sup>	Apperance	Typical location			
Slow charging	Level 1	Wall socket	2.3 kW	8 hrs or more	Home charging	Installation only		Any location with a normal power point: apartments, houses, buildings			
AC fast charging	Level 2	AC charger	3.5 kW	5 hr 43 min	Dedicated or scheduled charging	\$2,000 - \$10,000		Houses, buildings and parking lots.			
			7.4 kW	2 hr 42 min	Heavy duty dedicated or scheduled charging						
			22.1 kW	54 min							
DC fast charging or rapid charging	Level 3	DC wall charger	25 kW	48 min	Multi-purpose charging, opportunity charging	\$5,000 - \$20,000		Public roads, petrol stations and parking lots			
Tesla super-charging		DC charger	50 kW	24 min	Public journey enablement, Heavy duty opportunity charging	\$75,000 - \$400,000					
			100 kW	12 min							
			120 kW	10 min							
Ultra-fast charging			< 350 kW	less than 10 min							
											

\*For vehicle with driving energy efficiency of 20 kWh/100 km

# Reducing the Carbon Footprint

## Reporting and Monitoring

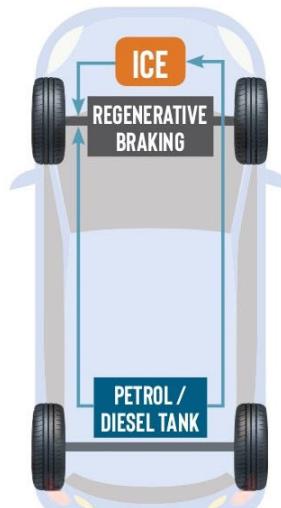
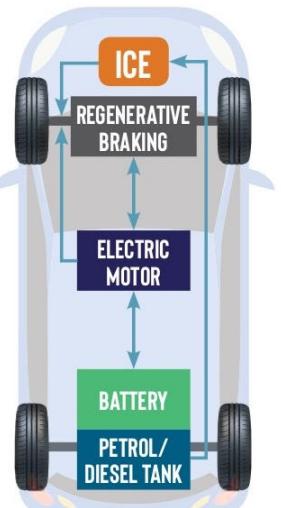
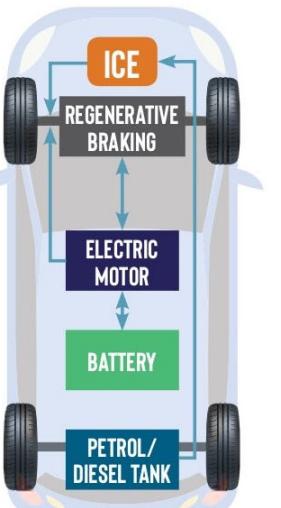
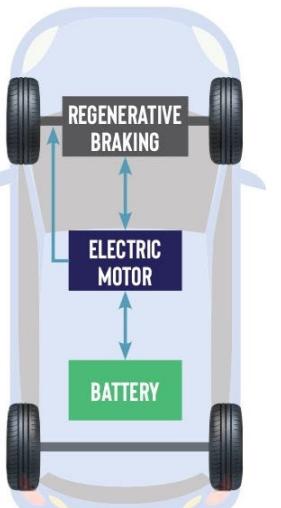
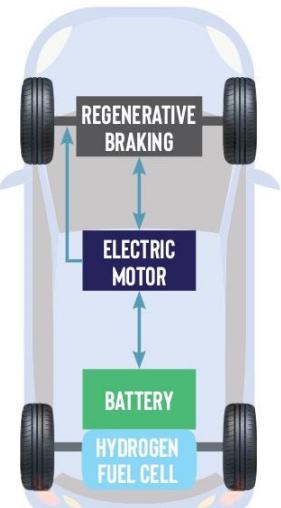
- Commit to Zero Emission Fleet Targets
- Track your fleet emissions
  - report and monitor regularly
- Use regular data flow to —
  - track emissions
  - identify required carbon offset
  - confirm direction
  - identify issues
  - inform decision making



# From Conventional to Hydrogen Vehicles

	Conventional	Hybrid	Plug-in hybrid	Electric	Hydrogen
Source of energy					
Consumption					
Tailpipe emission					

# Tailpipe Emissions

ICE	HEV	PHEV	BEV	FCEV
 <p>Opportunities to utilise biofuels such as E10, B5 and B10 to reduce particulates (20-30%), GHG emissions reduction (1.5-5%).</p>	 <p>Strong transitional option with broadening availability in the passenger segment.</p>	 <p>Electric range of 40-50 km may reduce emissions and be more practical in some instances in the coming few years. If regularly driven more than 50 km the emissions benefit reduces significantly.</p>	 <p>Can be zero carbon emissions and zero NOx if charged with renewable energy. Most practical zero emissions option in the next 10 years.</p>	 <p>Can be zero carbon emissions and zero NOx. Technology is expensive over the coming decade. May work sooner in heavy vehicle applications.</p>

# Summary

- EVs are here - you cannot ignore them!
- The least you can do is put together a Transition Plan
- Your Transition Plan will guide your strategic direction
- Leasing PH/EV
- Respond to the State Government EV Strategies
- Align PH/EV against Council business needs
- Align replacement selection criteria and weightings against emission reduction targets.

## Community Charging Infrastructure



# How can we help?

- Using the chat function please let us know how we can help you

HOW CAN WE HELP?

