

**National Public Sector Fleet Managers Conference** 

**Brisbane 3-4 November 2022** 



# Automotive will continue to focus on four disruptors for the next decade.....

- Autonomous Driving
- Connected Cars
- Electrified Vehicles
- Shared mobility

McKinsey and Company 2019 ACES worldwide consumer mobility preferences survey













But the biggest focus in Australia......
And for Fleet Managers



















#### Context

- 43% carbon reduction by 2030 now locked in legislation
- Key to the 2030 target is reducing 18% contributed by Transport
- Key to transport reduction is Electric vehicles (EVs)
- Key to electric vehicles is federally led, nationally consistent policy, regs, incentives and subsidies......
- · .....and Government / private fleets......













## Australia is escalating its transition to zero emission vehicles

- The government has released a National Electric
   Vehicle Strategy consultation paper
- Precursor to National EV Strategic Plan
- The Plan must include The opportunity is to bring government and industry together to meet community expectations























# Australia is lagging but has an ideal opportunity

- Europe is leading Global EV transition
- Norway is the leader, but at a cost:
  - 64.5% of new passenger vehicles sales in Norway were EV
  - 15% of Norway's vehicle fleet are EVs, in Oslo it is 50%
- Fast tracking has been achieved through a series of legislated measures since 1990 to reduce the cost of EVs, including:
  - Lower road taxes
  - Removal of import tax and VAT (25%)
  - 50% reduction on company car tax
  - Free parking, exemption for road tolls
  - An annual investment of \$2.9B total new vehicles 176,276 in 2021













# While behind Norway, other countries are gearing up

	Total passenger car sales	No. of BEVs sold	No. of plug- in hybrids sold	BEV % of annual car sales	BEV car fleet	BEV % of car fleet	Plug-in- hybrid % of car fleet
	2021	2021	2021	2021	2021	2021	2021
Norway	176,276	114,579	38,780	65%	460,734	15.9%	6.1%
Sweden	301,006	57,492	135,452	19.1%	120,343	2.6%	2.6%
Netherlands	324,710	64,027	32,471	20%	243,664	2.8%	1.6%
Germany	2,622,132	355,961	325,449	14%	600,000	1.2%	1.3%
UK	1,677,000	190,727	327,000	11.6%	352,292	1.1%	1%







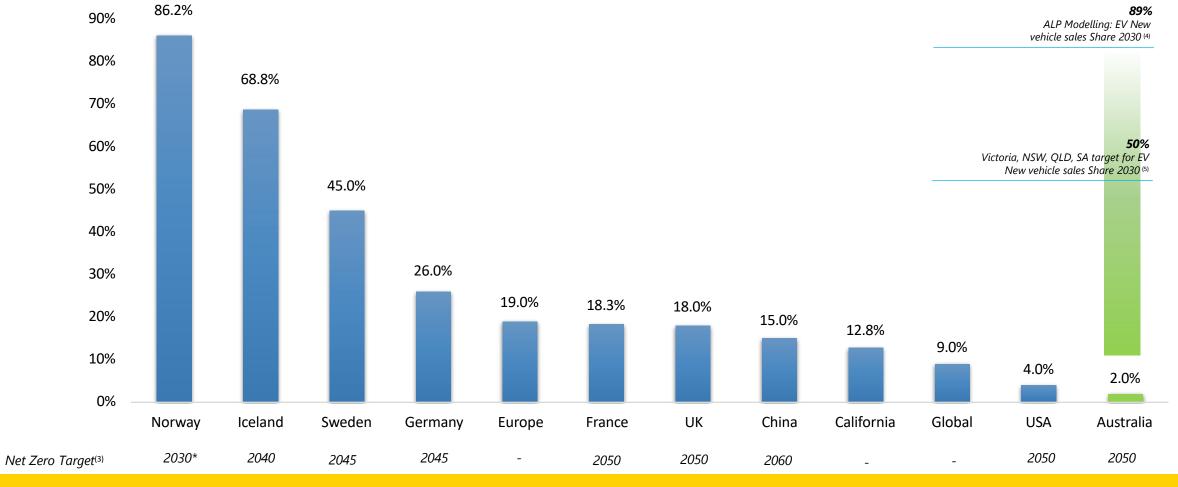






#### **Deloitte – World Rankings**

EV Share % 2021 (1)(2)



Source: (1) InsideEvs , (2) Medium, (3) Energy&Climate Intelligence Unit (4) The Driven (5) Royal Automobile Club WA













## Australia has some unique challenges a strategy will need to address

- The government's National Electric Vehicle Strategy consultation paper identifies the objectives of the strategy as:
  - Encouraging a rapid increase in demand for EVs
  - Increasing supply of affordable and accessible EVs
  - Establishing the systems and infrastructure to enable the rapid uptake of EVs.













## A national plan is the game changer in the drive to zero emission vehicles

- The Australian Government's strategy is the opportunity to align all states and territories and address our positional disadvantage
- The plan needs to be comprehensive:
  - incentives to offset the cost of electric vehicles
  - public and private infrastructure for charging and other fuel sources such as hydrogen
  - mandated emission targets for all new vehicles to maximise the reduction of emissions
  - establishing targets, supply chain constraints and power infrastructure
  - international fuel standards

















### The speed of electrification is contingent on available infrastructure

- Evidence from Norway indicates that with the growth of EVs range anxiety has been replaced by queue (charging) anxiety as demand for public charging infrastructure increase
- 80% of consumers want to charge at home which requires a program to build capacity
- In time bio-directional charging and power downloading will be a key ingredient plan NOW!!!!
- Learnings from Europe demonstrates:
  - Australia requires around one public charging station for every 10 EVs and charging banks of between six and eight chargers every 50 to 75 kms on major roads and highways
  - the installation of low capacity chargers has inhibited EV growth and they have commenced upgrading to more powerful (350 kw) charging facilities
- Australia can use and improve existing industry automotive businesses for the deployment of fast charging capability (350 Kw)
- Charging stations should have standard operating processes and should also not be brand specific













#### The cost of power is critical

- Significant increases in the cost of electricity are reducing the cost-benefit of EVs across Europe
- Variable and uncontrolled power costs will negatively impact the uptake and retention of EVs
- OEMs are investing in hydrogen as an alternative energy source, and in time, this may become an alternative
- Australia is well placed to exploit renewable energy to assist EV owners to reduce the cost of charging
- A program to utilise home power generation and power storage can improve the cost benefit of EVs
- Bio-directional power will become a game changer for EV owners













# The availability of EVs are critical to achieving an increase of EV sales

- Australia -
- Australia is a right hand drive market, which constitutes only 10% of international vehicle manufacturing
- Without intervention, this will restrict the type of EVs that are delivered to Australia
- To address this market limitation, governments should consider a regime of financial and non-financial incentives to improve their affordability
- The removal of taxes such as the luxury car tax, GST and State level stamp duties will improve price parity with ICE variants
- Incentives such as access to bus lanes, free toll charges also will make a difference
- Policy, incentivisation and infrastructure are the critical factors to encourage the supply
  of vehicles to the Australian market
- For Australia to be a leader it needs a clear framework to encourage vehicle supply













## And the pressure is on Government and Private Fleets

- Expect that you will be expected to live the plan
- Expect that targets once thought aspirational will become real
- Expect trouble in regard to the costs of rolling over fleets to EV
- Expect unrealistic demands and intolerance of excuses vehicle role, type, availability
- Expect pressure for earlier fleet turnover to grow the Used EV Market
- Expect to not be bored.....













#### Forward look: some trends in vehicle and technology Slide courtesy of the Society



Slide courtesy of the Society of Motor Manufacturers and Traders UK



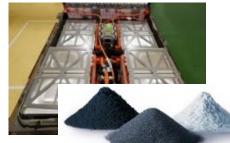
More affordable mass market EVs



Battery electric commercial vehicles



**Longer range BEVs** 



and Innovation in



800V architecture



Hydrogen fuel cell EVs and as a fuel



Smart
charging and
vehicle-togrid
Wireless
power
transfer



Productservice bundling

