

ASEAN Energy & Utilities Digital Week Singapore EV Outlook

7th July 2021

General Updates for Q2-2021



Singapore aims to phase out petrol and diesel vehicles by 2040

"Our vision is to phase out ICE (internal combustion engine) vehicles and have all vehicles run on cleaner energy by 2040," Finance Minister ... Feb 18, 2020



Oct 2020 - Construction of Hyundai's EV manufacturing plant in Singapore begins



Hyundai Motor Group celebrated the groundbreaking announcement of the Hyundai Motor Group Innovation Center in Singapore with a virtual ceremony on October 13, 2020.

June 2021 - Tesla slated to open service centre in Singapore this July



Confidential

Where does Singapore currently stand?

Fuel Type	Cars	Taxis	Motorbikes	Goods & Other vehicles	Buses	Fuel Type Total
Petrol	567,971	23	139,904	5,197	14	713,109
Diesel	18,050	7,839	-	134,299	19,096	179,284
Fuel-Electric Hybrid	37,807	8,282	-	8	50	46,147 2
Plug-In Hybrid	501	-	-	-	-	3 501
Full Electric	1,151	133	2	90	34	1,410
Others	231	-	_	3	-	234
Vehicle Type Total	625,711	16,277	139,906	139,597	19,194	940,685 1

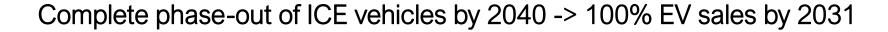
Key Takeaways:

- 1) Total vehicle population in SG stands at about 940k vehicles, with cars making up > 65% of total
- 2) Hybrids currently make up < 5% of total population, despite being introduced for almost 20 years
- 3) Full Electric and Plug-In Hybrids (PHEVs) currently make up about 0.2% of total vehicle population

Source: LTA Vehicle Population by Type of fuel used (June 2020):

https://www.lta.gov.sg/content/dam/ltagov/who_we_are/statistics_and_publications/statistics/pdf/M09-Vehs_by_Fuel

Announced Incentives to promote cleaner transport in SG



- 1. Diesel excise duty increased from S\$0.10 to S\$0.20 (2019)
- Vehicles Emissions Scheme (VES)* with rebates of \$10k or \$20k is extended to commercial vehicles, previously only for private vehicles
- 3. Early EV Adoption Incentive with rebates of up to S\$20k introduced
- 4. Road Tax revision for EVs (estimated reduction of 30-50% for most models)
- 5. Supporting EV Charging Infrastructure from 1,600 -> 60,000 chargers by 2030

Effective on 1st Apr 2021

Effective on 1st Jan 2021

How will the policy changes affect EV adoption?

	Fuel Type	Cars	Taxis	Motorbikes	Goods & Other vehicles	Buses	Fuel Type Total
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Key Takeaways:

- 1) Diesel excise duty increased from S\$0.10 to S\$0.20 (2019)
- 2) Early EV Adoption Incentive up to S\$20k introduced
- 3) Vehicles Emissions Scheme (VES)* is now also extended to commercial vehicles
- 4) Road Tax revision for EVs (estimated reduction of 30-50% for most models)
- 5) Supporting EV Charging Infrastructure from 1,600 -> 28,000 chargers** by 2030

Note:

^{*} VES for private vehicles is due to expire by end-2020, with possibility that it could be extended for one more year or removed completely (unlikely)

^{**} EV Charging infrastructure will be

Key Priorities for the EV Ecosystem in Singapore

Automakers & dealerships:

- 1. Increase EV model diversity for customers
- 2. Address EV charging needs of users (home, condo, public)
- 3. Invest in equipment for EV battery servicing and replacement & training

Fleet & Business Owners:

- 1. Commercial VES could potentially level the playing field for EV fleets
- 2. Explore partnerships with other businesses to support EV fleet charging

Property Owners & Developers:

- 1. Opportunity to offer destination-based EV charging options
- 2. Increase & retain retail footfalls via charging services
- 3. Invest in EV charging with an potential source of revenue

Energy & Utility Companies:

- Opportunity to offer a wide-array for charging options
- 2. Explore E-mobility subscription services for EV users
- 3. Prepare for smart-grid applications which require 2nd life EV batteries

Thank you

EVAS Presentation 2020-Q2