



# The Future of EVs in Thailand

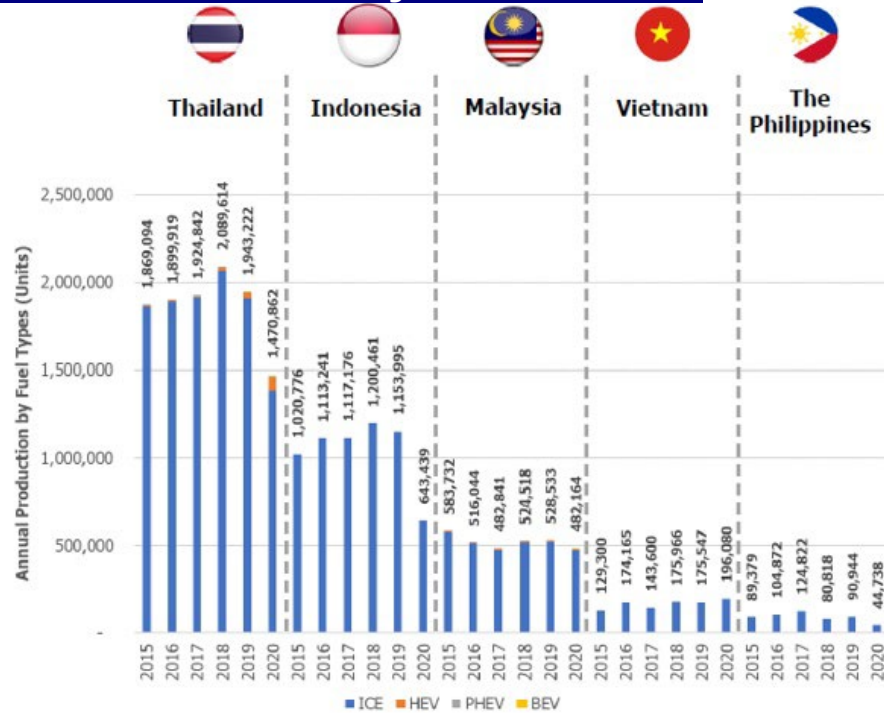
Society of Automotive Engineers of Thailand

Somphote Ahunai

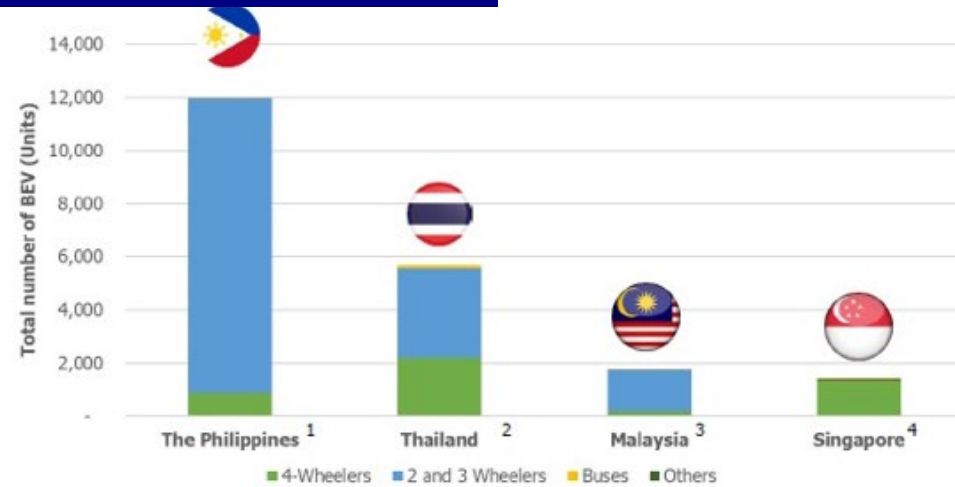
CEO of Energy Absolute PCL.

# Competition among ASEAN countries

## Annual Production by Fuel and EV



## Total number of BEV



Source:

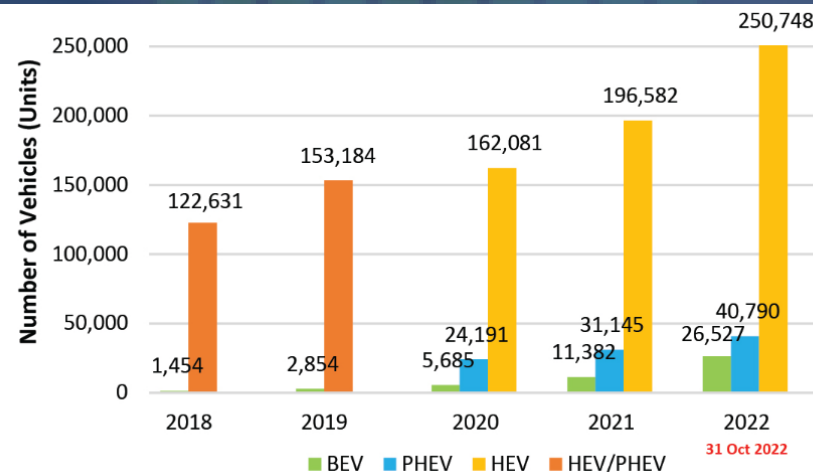
<sup>1</sup> Land Transportation Office, as of 2019

<sup>2</sup> Department of Land Transport, as of December 2020

<sup>3</sup> Electric Vehicle Association of Malaysia (EVAM), as of May 2019

<sup>4</sup> Vehicle Population by Type of fuel used, as of June 2020

## Thailand's accumulated Number of xEV Registration



# Competition among ASEAN countries



## Thailand

- 30@30 Policy

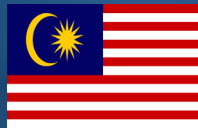
aims to produce ZEV at 30% by 2030



## Indonesia

Target 2025 : 400,000 units      2035: 1 Million units

- Government negotiating with Tesla invest Battery factory
- Hyundai setup EV factory (1,550M.USD)
- LG Energy Solution invest Battery factory (9,000M.USD)
- Toyota EV invest plan (1,800M.USD)



## Malaysia

Target 2030 : Selling EV for 15% of all car sales.



## Philippines

- Exemption of import tax on motor vehicles
- Financial support and various benefits for investors in electric vehicles



## Vietnam

- Target 2030 - 2040 EV Produce 3.5 million unit/year
  - Promoting its use mainly through tax policy
- VinFast aims to produce 950,000 electric vehicles per year by 2026.



## Laos

Target 2020 : >30%

- Kolao Group : Ready to produce and assembly EV



# Focused Issues

- **New Trend (Electrification)**
- **Non Tariff Barrier**
  - Global Warming
  - Deglobalization
- **Limited of Supply**
  - Raw Materials
  - Skilled Human Resources
  - Electricity & Infrastructure
- **Technology**
- **\*\*\*\*\* Government Policy \*\*\*\*\***
  - Economies of Scale
  - Purchasing Power





# Never Return Crossroad

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- ✓ **Vision & Direction**
- ✓ **Strategy?**
- ✓ **Fast and Effective Decision?**
- ✓ **Must do it \*\*\*\*\***
- ✓ **More than 900,000 workers are improving their quality of lives** and have better employment. The industry will improve or are we facing a new round of social crisis?





# Transformation in Transportation Sector





Land

Commercial Car



Passenger Car



Motorcycle







# Marine

Battery + Motor



Short Distance

Long Distance



Bio-fuel / Hydrogen



Battery + Engine (Hybrid)  
Short Distance



Long Distance  
Bio Fuel or Hydrogen



Air





Battery / 3rd Rail  
Short Distance

Long Distance  
Bio Fuel / Hydrogen



**Rail**



# Why prefers **Bio Fuel** to Hydrogen?

**Cheaper**

**Immediately Convertible**

**Safer**





**Bio Fuel and Battery  
is the best solution for Thailand.**



# Moving toward Net Zero Ecosystem

Fast Charge Battery  
Up to 4C  
with Long life cycle



15 mins to 80%  
At any Battery Capacities

80%



**Ultra Fast Charge**  
the solution for Commercial Vehicle

Fully Integrated  
EA' s ECOSYSTEM with  
**Ultra Fast Charge  
Technology**



High power DC charger  
Up to 380 kW per charger

Parallel Charge  
Supported in all EVs





# Mass transit



# Logistics



# *Sustainable Aviation Fuel (SAF)*



**Bio-Jet fuel**

*At present,  
300 million tons of jet fuel per year.*

*2040 SAF Blending mandate level in Europe  
at **50%** (% total jet fuel consumption)*





**Thank you.**

