



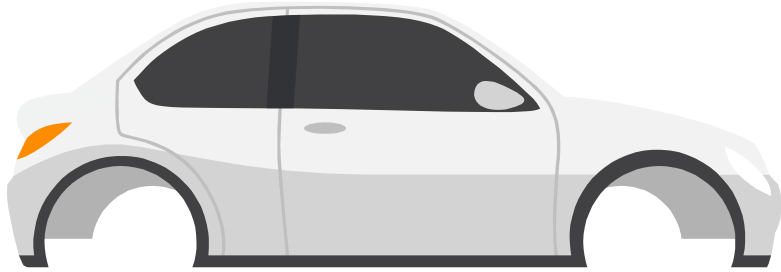
Electricity Consumption Data Collection of Battery Electric Vehicles in Chinese Taipei

Jen-Yi HOU

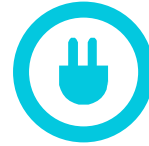
Vice President, Taiwan Research Institute

2023.09.14

Content



01



Background

02



Methodology &
Result

03



Way Forwards

I. Background^(1/2)

Increasing number of BEV registration



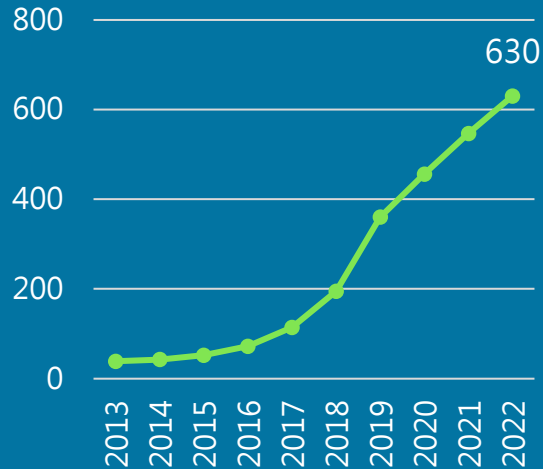
Data needed to reflect their EC

Motor Scooter

4.4%

of total registered motor scooters

Unit=1,000

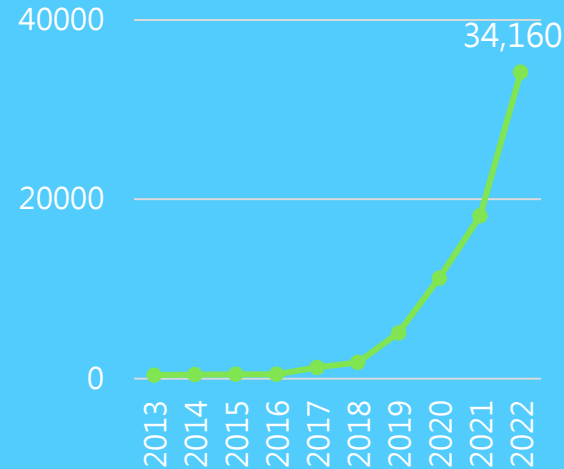


Sedan

0.5%

of total registered sedans

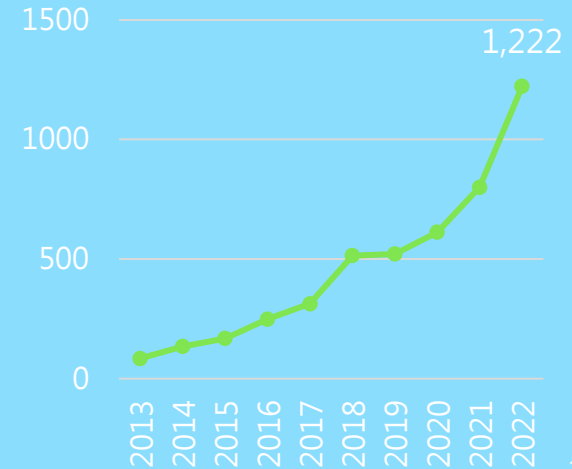
Unit=1,000



Bus

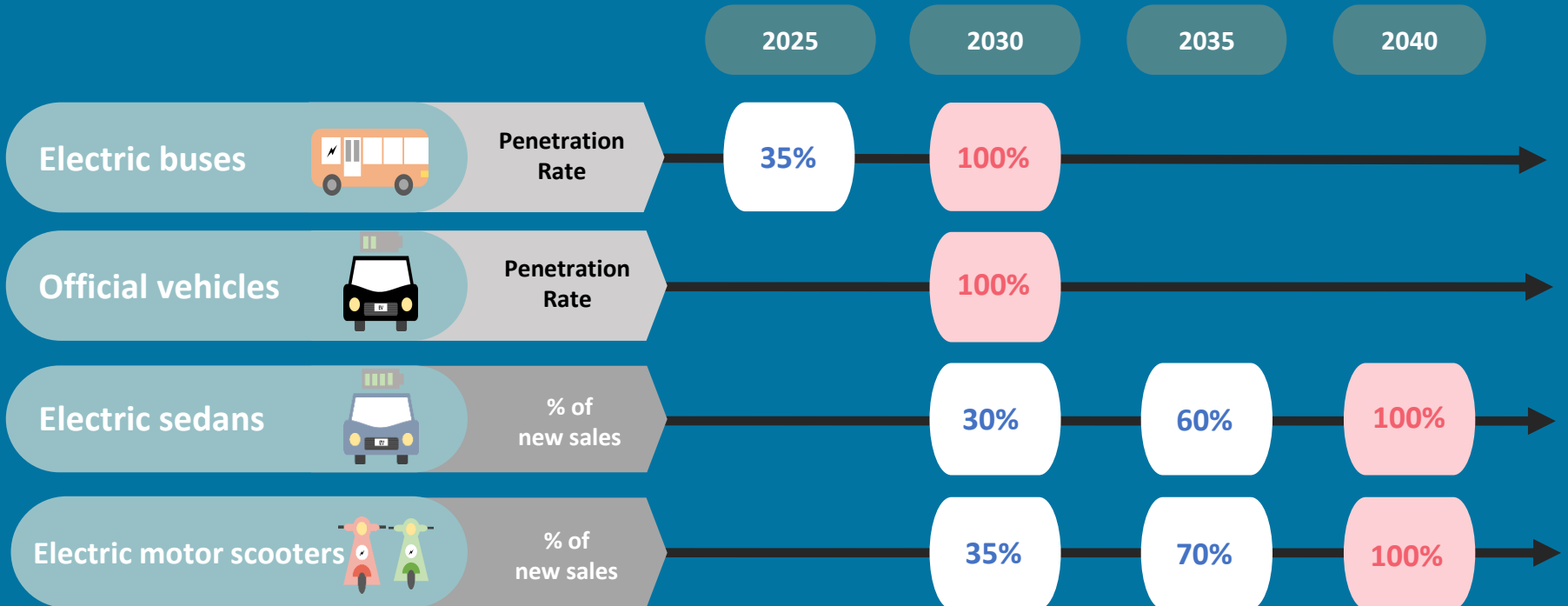
3.9%

of total registered buses



I. Background_(2/2)

Latest national target on electric vehicles ➡ Data needed to monitor progress



II. Methodology & Result_(1/6)

Statistical issues to be addressed

Estimation
of
**BEV Electricity
Consumption**

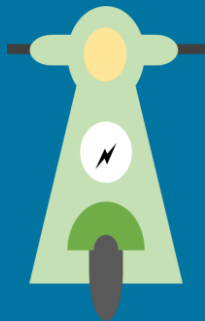
Reallocation
of
**BEV EC from
Sectoral EC to
Transport Sector**

II. Methodology & Result_(2/6)

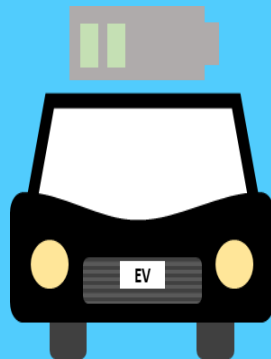
Methodology

Coverage of BEV

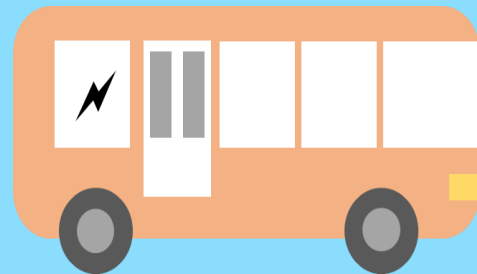
Motor Scooter



Sedan



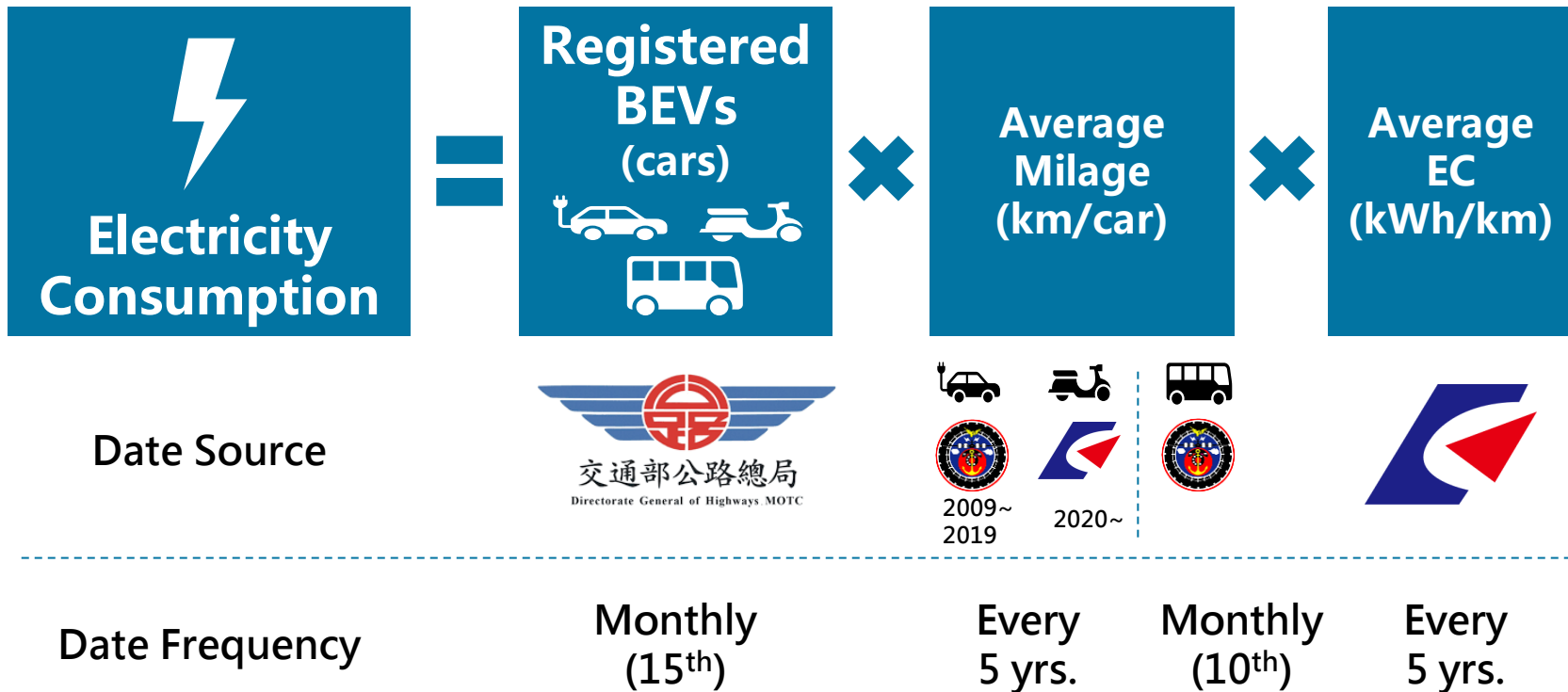
Bus



II. Methodology & Result_(3/6)

Methodology

Estimation of BEV Electricity Consumption



II. Methodology & Result_(4/6)

Methodology Reallocation of BEV EC from Sectoral EC to Transport Sector

According to EC survey on transport sector (conducted every 5 yrs.):

Unit: %	Motor Scooter	Sedan	Bus
Industry sector	0.11	5.82	
Service sector	82.14	43.56	100.00
Wholesale and Retail Trade	0.71	16.57	
Transportation and Storage	80.60	20.32	100.00
Information and Communication		2.82	
Professional, Scientific and Technical Activities		0.57	
Public Administration		2.22	
Human Health and Social Work Activities		0.64	
Arts, Entertainment and Recreation		0.43	
Education	0.05		
Others	0.79		
Residential sector	17.75	50.62	

II. Methodology & Result^(5/6)

Result

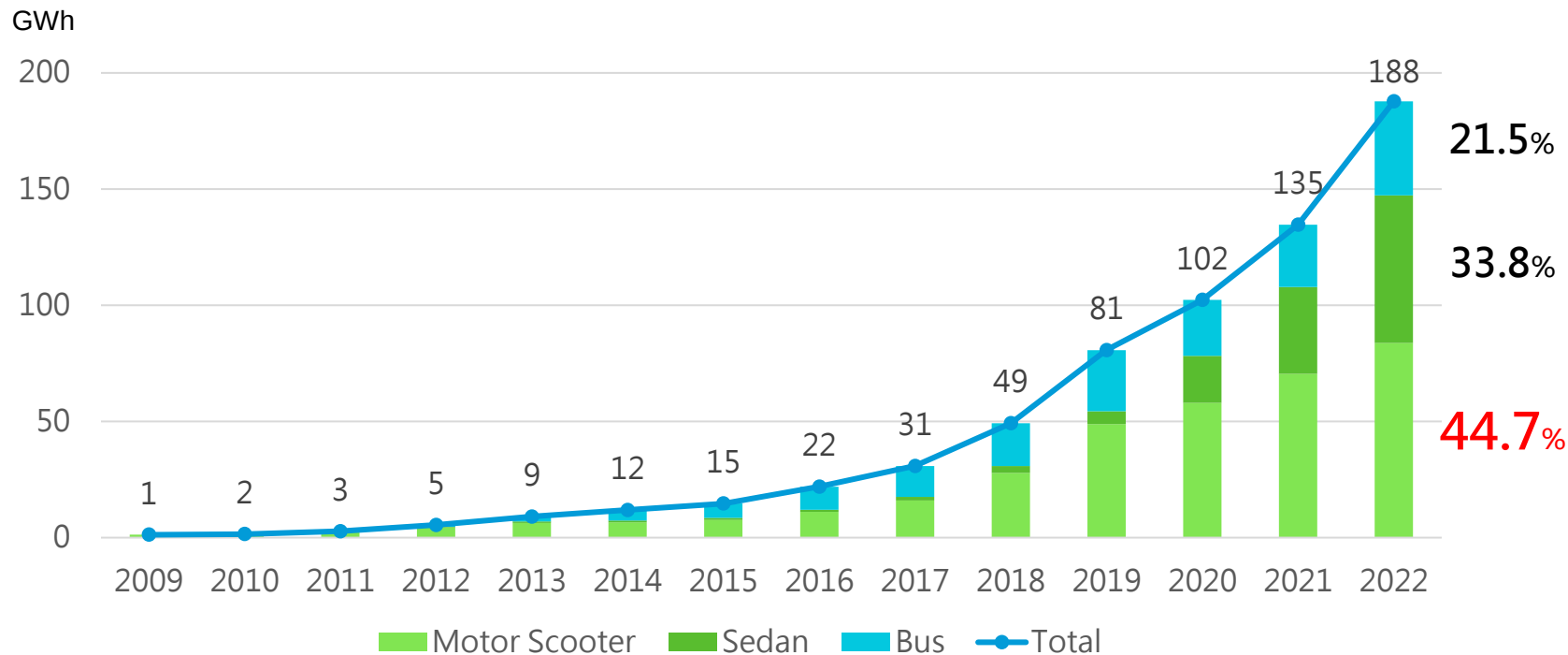
Total Energy Consumption of BEV

	BEV(1,000 kloe)				Transport sector(1,000 kloe)			Domestic Energy Consumption(1,000 kloe)	
	Motor Scooter	Sedan	Bus	Total (A)	Without BEV (B)	+ BEV (A)+(B)	Difference(%) $\frac{(A+B)-B}{B}$	+BEV (C)	Share of BEV(%) (A)/(C)
2009	0.1	0.0	0.0	0.1	12,695	12,695	0.001%	77,971	0.0002%
2010	0.1	0.0	0.0	0.1	13,112	13,112	0.001%	82,893	0.0002%
2011	0.3	0.0	0.0	0.3	13,297	13,297	0.002%	81,070	0.0003%
2012	0.4	0.0	0.1	0.5	13,022	13,023	0.004%	81,174	0.0006%
2013	0.6	0.1	0.2	0.9	13,010	13,010	0.007%	83,527	0.0010%
2014	0.6	0.1	0.4	1.1	13,142	13,144	0.009%	84,714	0.0013%
2015	0.7	0.1	0.6	1.4	13,448	13,450	0.010%	85,043	0.0017%
2016	1.1	0.1	0.9	2.1	13,835	13,837	0.015%	85,350	0.0025%
2017	1.5	0.1	1.3	2.9	13,688	13,691	0.022%	85,092	0.0035%
2018	2.7	0.3	1.8	4.7	13,313	13,318	0.035%	86,414	0.0054%
2019	4.7	0.5	2.5	7.7	13,401	13,408	0.058%	83,594	0.0092%
2020	5.5	1.9	2.3	9.8	13,503	13,513	0.072%	83,848	0.0117%
2021	6.7	3.6	2.6	12.9	12,803	12,816	0.100%	88,249	0.0146%
2022	8.0	6.1	3.9	17.9	13,109	13,127	0.137%	83,130	0.0216%

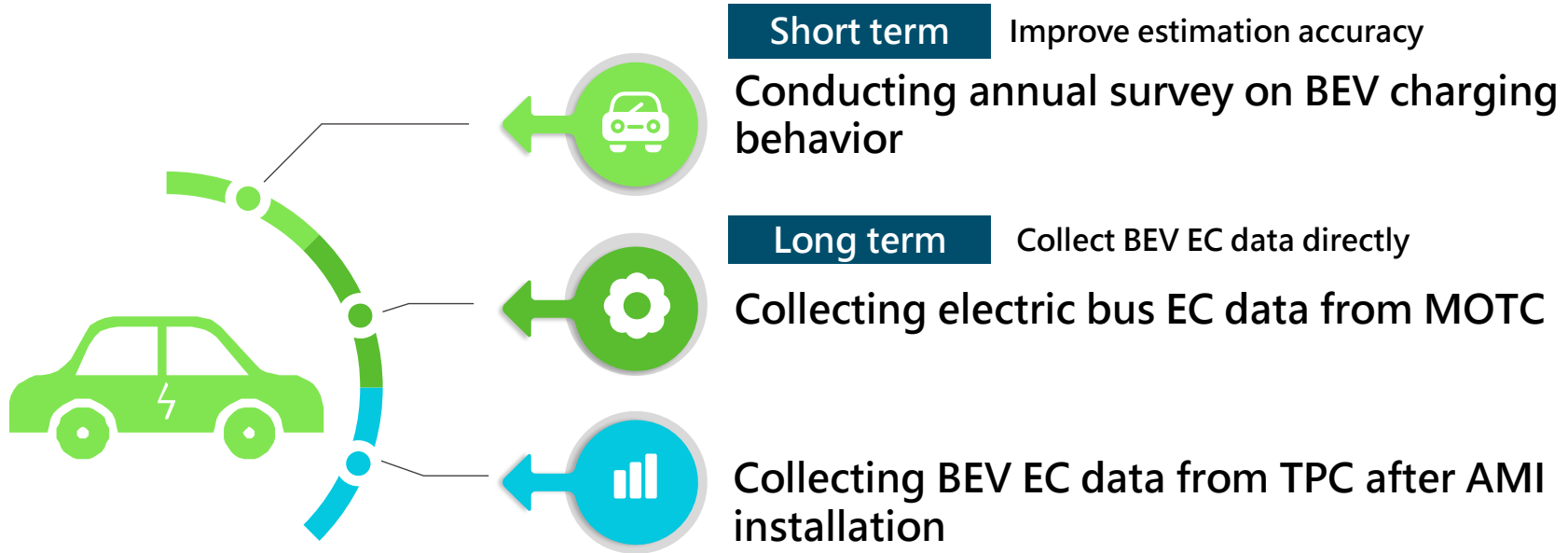
II. Methodology & Result_(6/6)

Result

Electricity Consumption of BEV



III. Way Forwards



Thank you for
your attention!