

KOREA'S EV VISION & NEW CHALLENGES

Sep. 2021.



A close-up, low-angle shot of the rear left side of a dark blue electric vehicle. A blue charging cable is plugged into the car's charging port, which is illuminated with a red light. The car's rear wheel, featuring a multi-spoke alloy design, is visible in the lower-left corner. The background is dark, and the car's body panels have a glossy finish.

CONTENTS

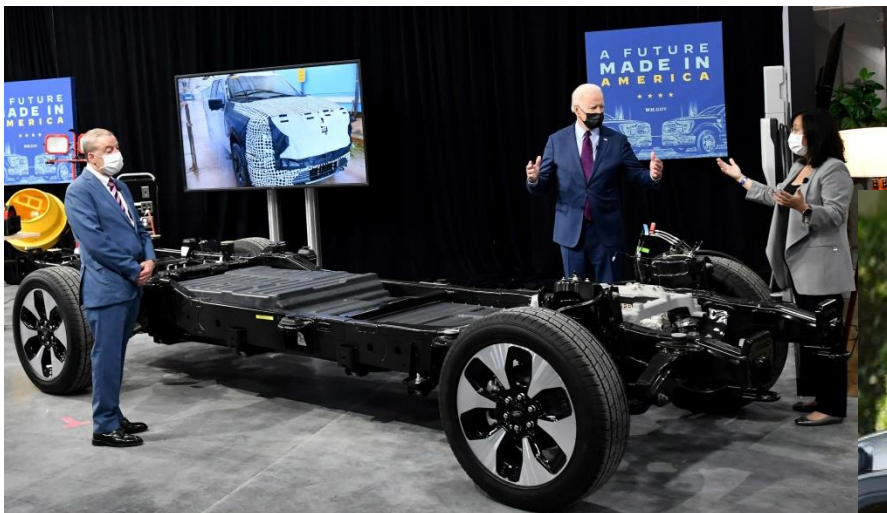
I Background

II Korea's EV Vision



III New Challenges



Q&A

“US to set EV sales goal of 50% by 2030”



- Eco Friendly Vehicle → ZEV(Zero Emission Vehicle)

-  Plans to exclusively offer EV by 2035
-  Plans to invest \$35.3 billion by 2025 to expand its EV models

-  Plans to increase investment in EV to \$30 billion by 2025
-  Plans to invest \$12 billion for EV and battery factories

Source : electricdrives, 매일경제



Auto History in Korea

I . Background

1960s~1970s

Developing independent auto tech



1980s~1990s

Contributing to Korean Economy Miracle



2000s~2010s

Leading Global Auto Industry



2020s ~

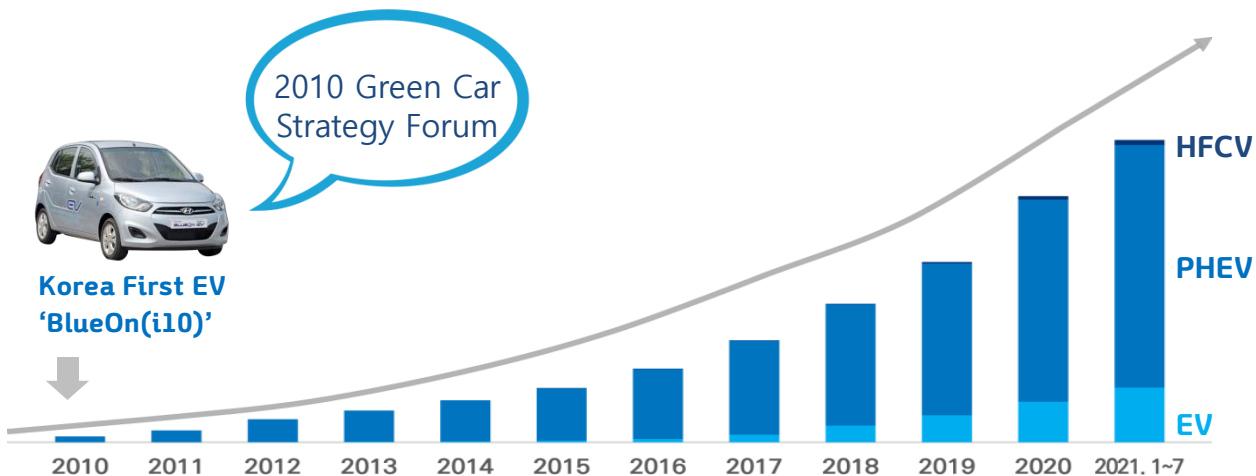
Preparing for the future



Source : DAUM 자동차, 연합뉴스, 광주일보, 현대모비스, 조선비즈

Korea's EV, late but ready

I. Background



Source : Ministry of Land, Infrastructure and Transport

"Ready for the future"

- World 2nd EV only Platform -



E-GMP(2020.12)

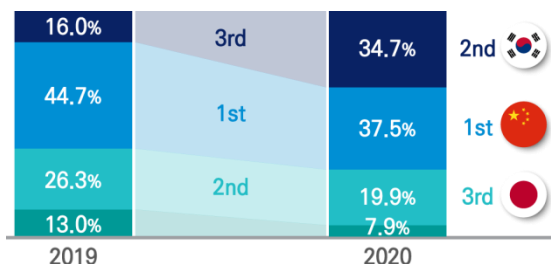
Our Goal in 2030

I . Background

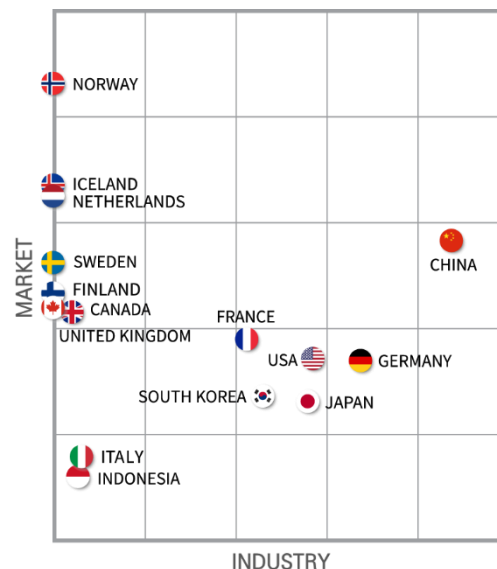
4th in Global EV sales

Company	2019	2020	%
1 Tesla	304,783	442,334	15%
2 Volkswagen	123,152	381,406	13%
3 GM	94,889	222,116	7.5%
4 Hyundai-KIA	124,114	198,487	6.7%
5 Renault-Nissan	143,884	194,158	6.6%
6 BYD	218,532	179,295	6.1%
7 BMW	127,618	173,202	5.9%
8 Daimler	45,054	168,858	5.7%
9 GEELY	125,896	157,125	5.3%
10 PSA	7230	109,987	3.7%
Total	2,034,886	2,943,172	100%

2nd in Global EV Battery market



Ranked 5th in Global EV Competitiveness



Future Vision

No.1 Future Car Competitiveness in 2030

Global Market share 10%

EV+HFCV Market Share 33%

World 1st Commercialization of Level 5 Driving Automation on major roads

by 2027

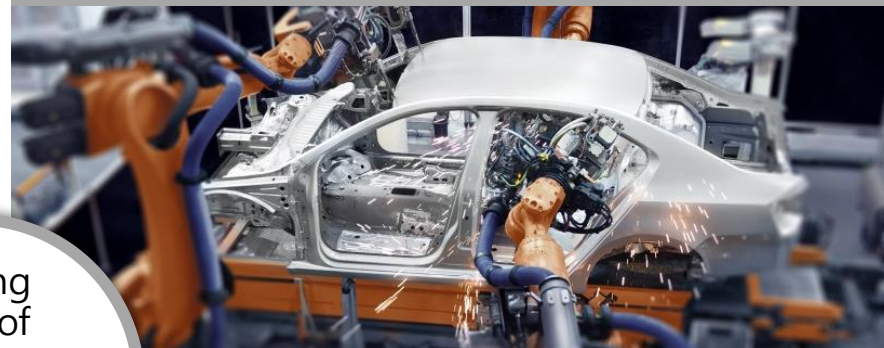
Our Pride

II. Korea's EV vision

Global TOP Battery Production Capacity

1	15.1	CATL(China)
2	9.8	LG Energy Solutions
3	8.0	Panasonic(Japan)
4	3.2	BYD(China)
5	2.5	Samsung SDI
6	2.4	SK Innovation
7	1.3	CALB(China)
8	1.0	AESC(China)
9	0.9	Guoxuan(China)
10	0.6	PEVE(Japan)

50yrs of Know-How



Strong
Will of
**Government
&
Business**

5G, High Innovation Tech



Excellent Up & Downstream Ecosystem



Source : Hyundai Mobis

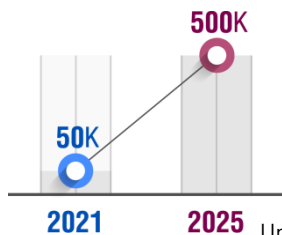
Our EV Ecosystem

II. Korea's EV vision

EV-Everywhere Charging Station

Living Base(Residence,Work)
50K(Now) → **500K(2025)**

Moving Base(Highway)
8,900(Now) → **15K(2025)**



Reasonable Price

Battery Lease | Increase sales(Economics of Scale) | Subsidy

1/2 of Original Price

Purchasing Price : Approximately 18 million won + Lease Fee



Sep. 2021. Battery Lease pilot program launch

Market Demand Expansion

(Public) 100% Obligation EC,HFCV | (Private) Eco-car Program

91
Agencies

산업통상자원부
40개

국토교통부
25개

환경부
11개

중소벤처기업부
11개

기획재정부
4개

Agency

EV, HFCV
PHEV



Agency CEO

EV, HFCV

High-End EV

Major Function	Now(2021)	Goal(2025)
Mileage	400 km	600 km
Electrical Efficiency	5.6 km/kWh	6.5 km/kWh
Energy Density (Battery)	250 Wh/kg	350 Wh/kg

CO2 & Transportation



Transport Emission **16.2%**

Road 73.5%, Aviation 11.7%, Shipping 10.5%



Transport Emission **14.2%**

Road 93.75%, Shipping 3.06%, Aviation 1.67%

CBAM(Carbon Border Adjustment Mechanism)



- Purchasing a certificate as much as the amount of carbon in export products
- Fully functional from 2026
- Steel, aluminum, fertilizer, cement, electricity



- 'Polluter Import Fee' is under review



- ✓ By 2030, the share of ICE vehicles in urban areas cut in half and phase out by 2050



- ✓ Target to achieve 33.3% of sales of EV & HFCV by 2030



- ✓ Target to achieve 50%~70% of sales of EV & HFCV by 2030



- ✓ As of 2020, 56% of total car sales are EV
- ✓ Ban on sales of ICE by 2025



- ✓ Plans to go all electric by 2035, phase out gas and diesel engines



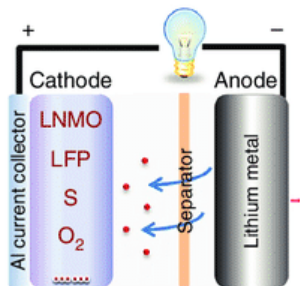
- ✓ Plans to go all electric by 2030
- ✓ End diesel truck sales by 2040

“Lower the Price & Longer Mileage” >>> “New Materials & New Circulatory System”

Li-S

High Efficiency

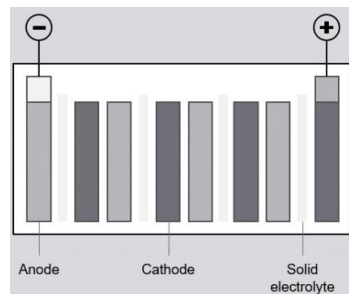
2,000km Driving by Single Charge



Li Metal

Strong Durability

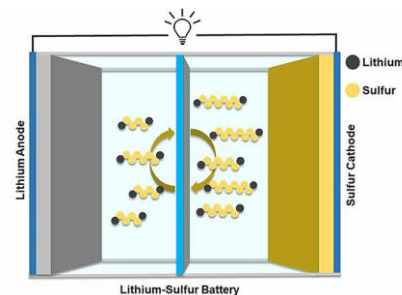
800km Driving by Single-Charge



All Solid State

Outstanding Safety

800km Driving by Single-Charge

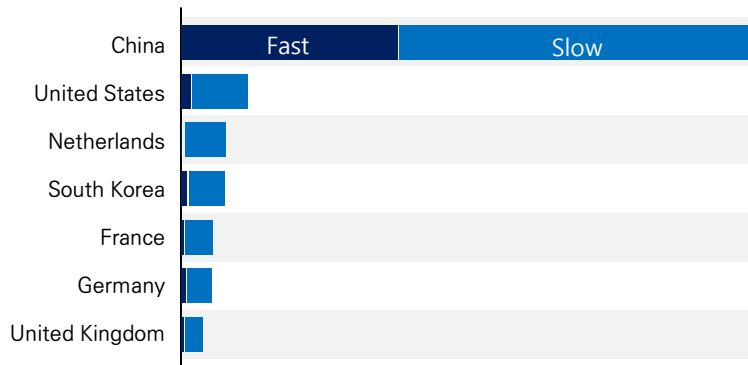


Source : Published in: Mara Johnson-Groh; Scilight 2019, 320004 (2019) DOI: 10.1063/1.5122197 Copyright © 2019 Author(s)

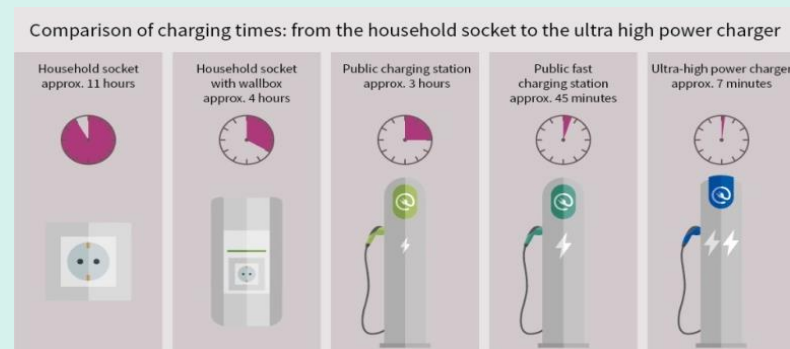
Upgrade Charging System

III. New Challenges

① Sufficient Charging Station



② Fast Charging Infrastructure



③ V2G(Vehicle-to-grid)



Source : Statista, Infineon, autofutures

④ Future Charging Technology



Beyond EV : E-mobility

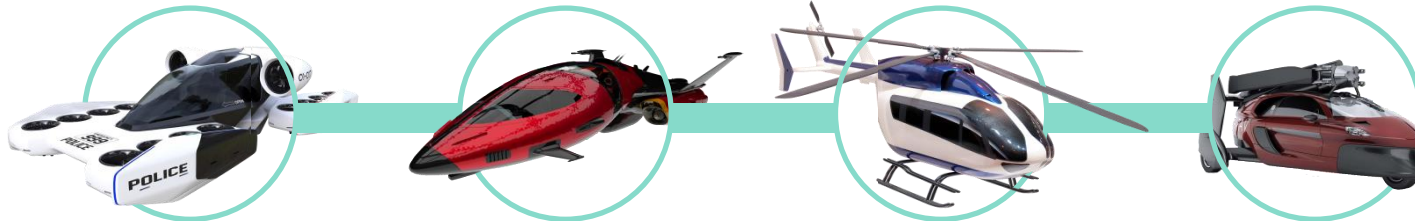
III . New Challenges



Personal mobility Vehicle



Urban air mobility



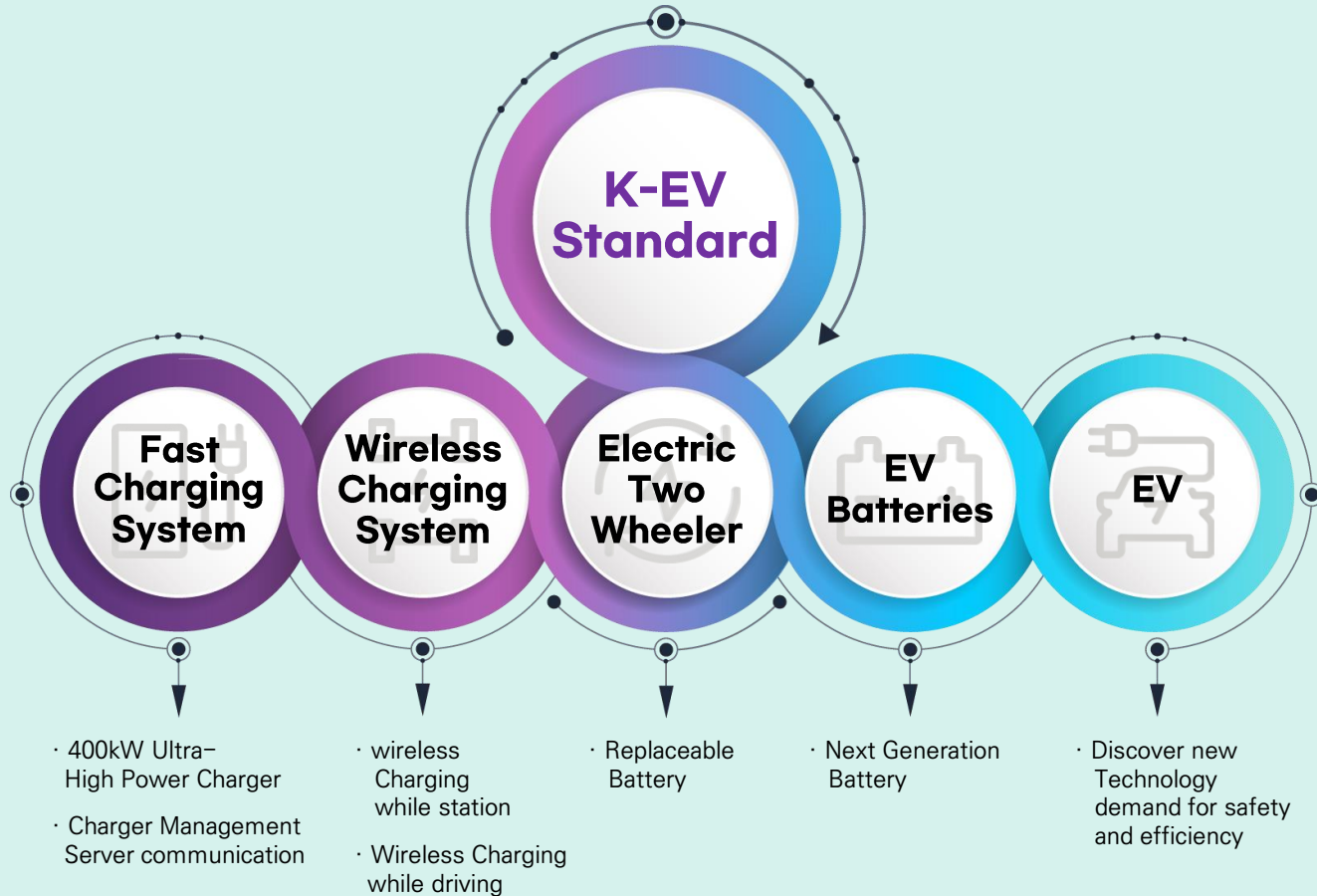
Source : RENAULT WISY COUPE, 킹송, 토모루, Hoversurf, pal-v

Purpose Built Vehicle & Hub



Setting the Right Standard

III. New Challenges



대한민국의 미래, 내가 바꾼다

포스트 코로나 시대, 국가발전 프로젝트를 공모합니다.
 민간 주도의 경제혁신 · 사회발전 아이디어를 들려주세요.
 셋별 같은 아이디어에 1억원과 "(사업시행시) 초기지분"이!



6.7(월) ~ 9.24(금)

공모주제

- ① 국가적 의제 해결 프로젝트
- ② 민간이 주도하는 프로젝트

참가자격

참가단위 개인 또는 팀 (개인·팀은 통합 시상)
 부 문 기업 (기업 구성원 또는 팀)
 일반 (자영업자, 국민 등)
 대학 (국내외 대학(원) 교수·학생)

공모일정

6. 7 ~ 9. 24 접수
 10월중 1차 심사 (서류심사)
 10월말 ~ 11월중순 2차 심사 (기업인 멘토링)
 11월말 3차 심사 (국민 오디션 개최)

응모방법

공모전 홈페이지에 업로드 및 접수
[\(http://nationalproject.korcham.net/\)](http://nationalproject.korcham.net/)

사상내역

시 상	인 원	비 고
대상	1	1억원
최우수상	3	각 3천만원
우수상	3	각 1천만원
입선	3	각 3백만원

* 프로젝트가 실제 시행될 경우, 로열티로 초기 자본을 제공할 예정입니다.
 (회사 설립 규모와 자금 소요계획에 따라 심사 및 경영 과정에서 지분 부여 규모를 결정한다)

문의사항

운영사무국 T 02-6050-3492~6
 (평일 10시 ~ 18시)

E-mail : teywoo@korcham.net