

Nissan Green Program 2010 (NGP2010)

ARB ITS-Davis
GHG Symposium

April 21, 2008
Robert Cassidy
Jack Sayed



Corporate Policy

Sincere Eco-Innovator

For the Earth and Future generations

Sincere

Aggressively address environmental issues to reduce real-world environmental impact

Eco-Innovator

Contribute to the development of a sustainable mobile society by providing innovative products for the customer

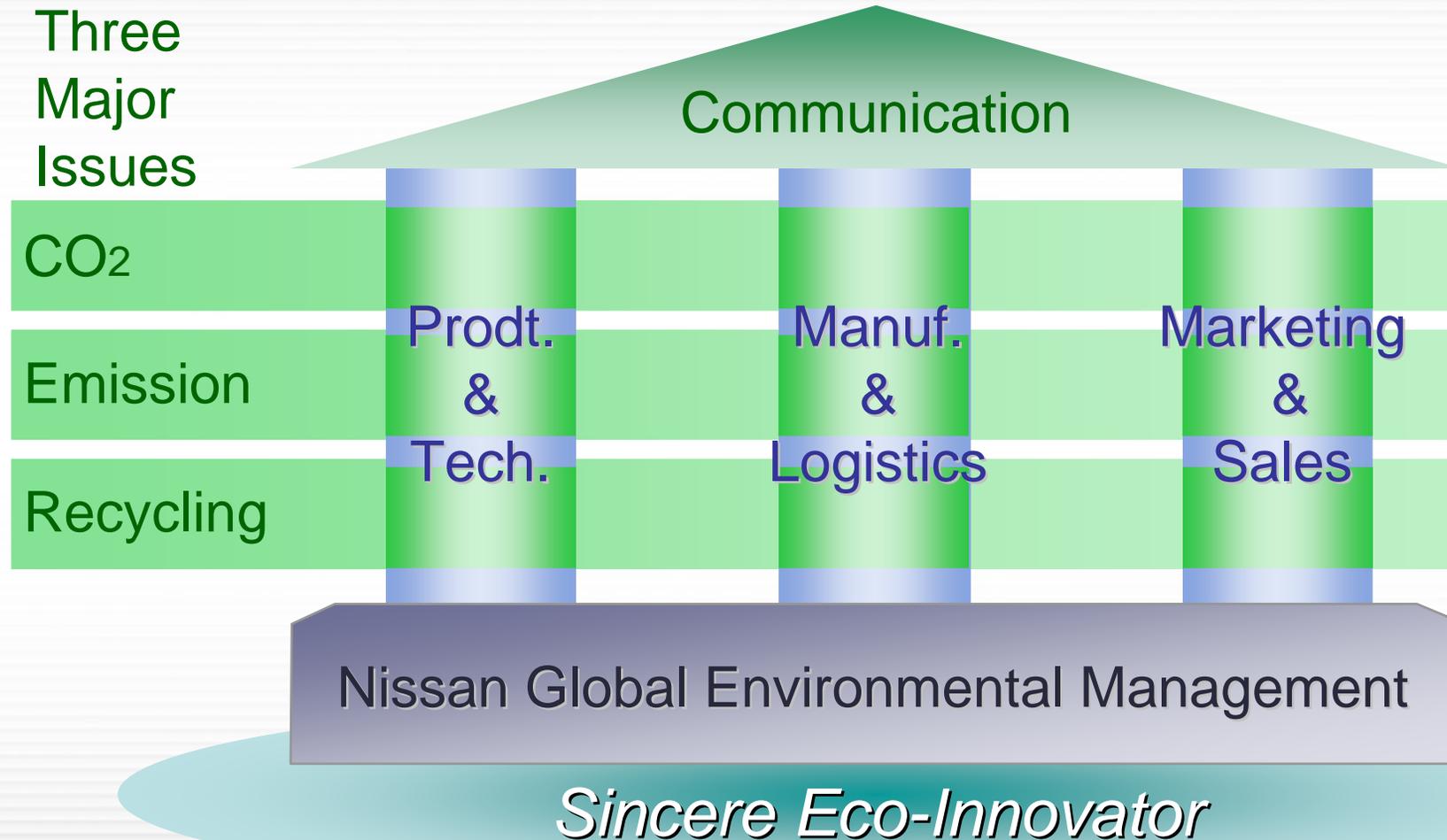
Vision

- Reducing environmental impact to stay within the Earth's natural ability to absorb these impacts



Framework of Global Environment Management

Stakeholders



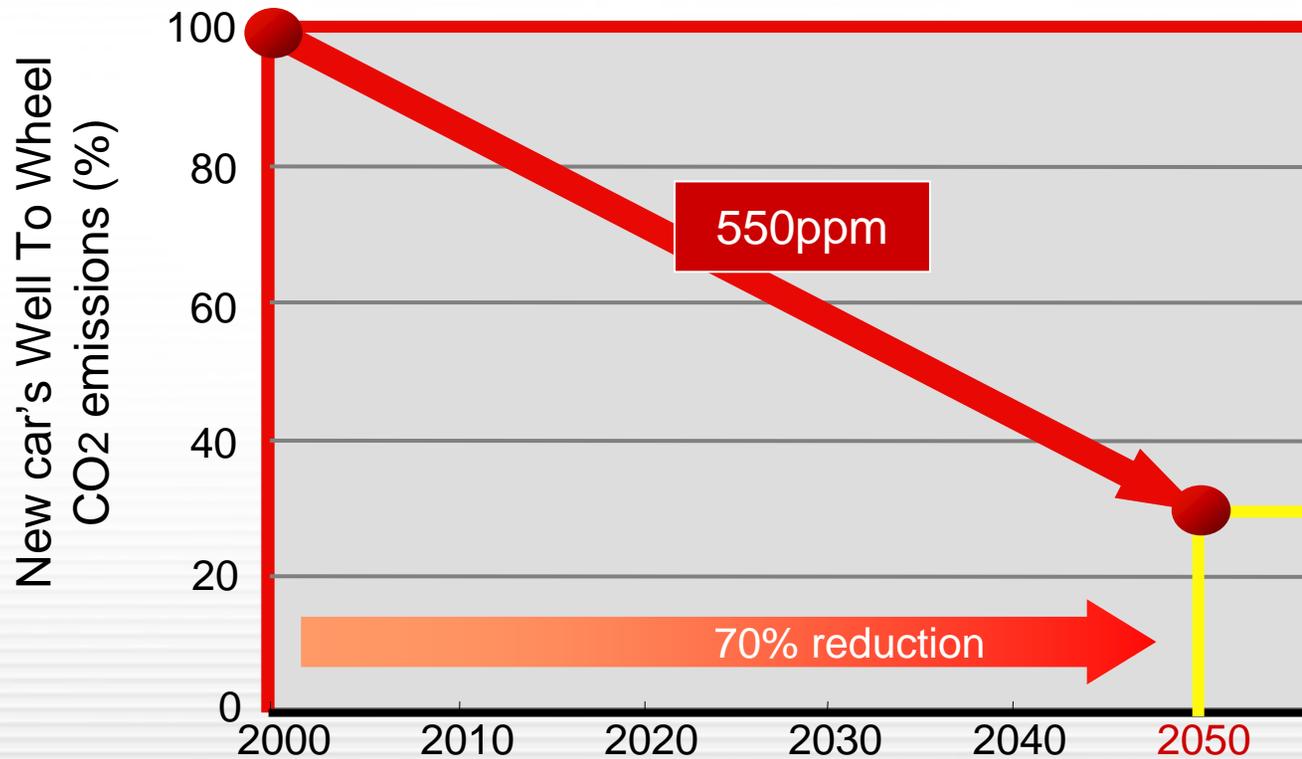
Ultimate Goals for Three Major Issues and 2010 Targets

Three Major Issues	Ultimate Goals	Field	NGP2010 Targets
CO ₂	Minimizing CO ₂ emissions	Prod.	Meet and exceed fuel economy regulations worldwide
		Manuf.	7% reduction from all Nissan plants (Global per-unit CO ₂ emission, compared with FY2005)
Emissions	Atmospheric Air Level	Prod.	Early compliance of future regulations worldwide
		Manuf.	Reduce VOC* ¹ emissions Global : Exceed regulations in each country Japan: 10% reduction (per unit, compared with FY2005)
Recycling	Recovery Rate 100% (Zero Waste)	Prod.	ELV* ² recovery rate Global: Promote activities to achieve 95% Japan: Achieve 95% (5 years ahead of future regulation)
		Manuf.	Plant resource recovery rate Global: "Best Level" in each country Japan: Achieve 100%

* 1 Volatile Organic Compounds, *2 End of Life Vehicle

Long Term Goal for Reducing CO₂ (1)

- To stabilize atmospheric CO₂ concentration below 550ppm (according to IPCC report*), CO₂ emissions from all new vehicles must be reduced by 70%

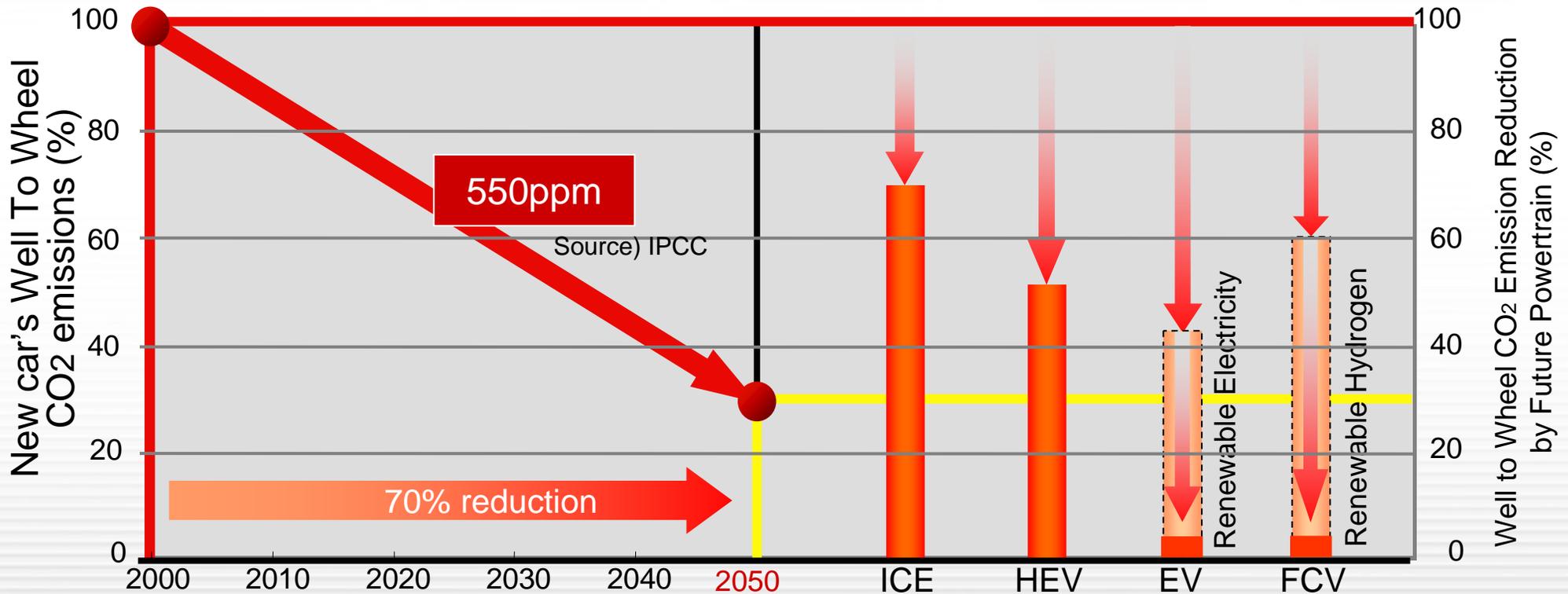


* IPCC 3rd Assessment report

Long Term Goal for Reducing CO₂ (2)

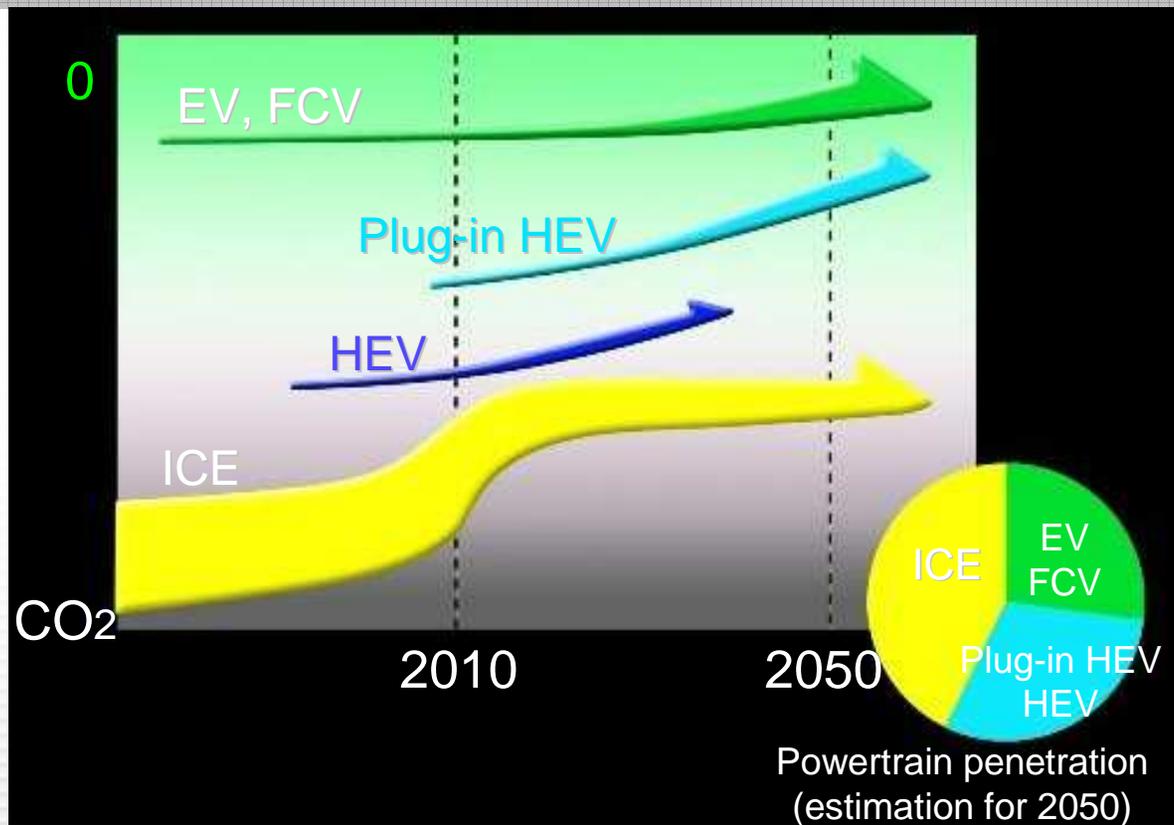
■ To reduce CO₂ emissions from all new vehicles by 70%, following measures are required.

- Short & mid term focus : Internal Combustion Engine (ICE) efficiency
- Long term focus : Electric Powertrains
Renewable energy (Collaboration with other sectors)



Nissan's Power-train Roadmap

- Short term : Expansion of high efficient ICE
- Mid and long term : Expansion of electric vehicles and maintain competitive advantages of core electric powertrain technologies
 - Selective introduction of HEV and early introduction of EV, FCV
 - Plug-in HEV development



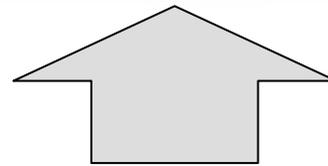
Development of Electric Powertrain Tech.

- Enhance development of core technologies
 - Motor, Battery and Inverter

Hybrid Electric Vehicle (HEV)

Fuel Cell Vehicle (FCV)

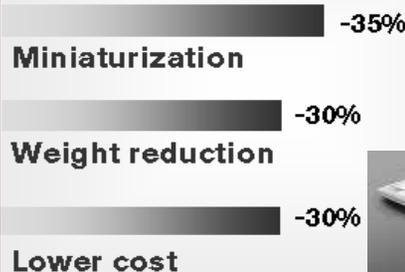
Electric Vehicle (EV)



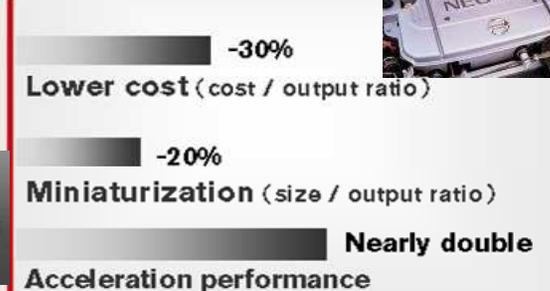
Technical Advantages



Super Motor



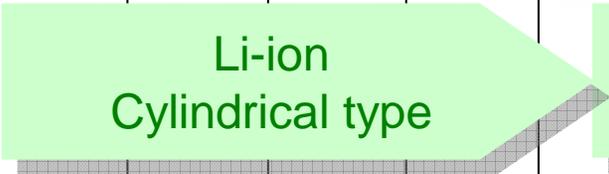
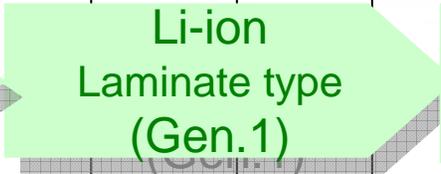
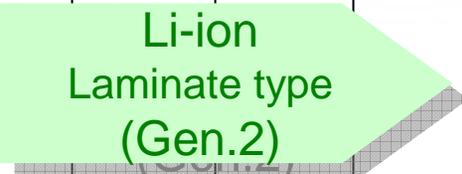
Compact Li-ion battery



Inverter

Lithium-ion Battery Evolution

- New battery in development; higher performance and lower cost
- Preparations underway for setting up new company that develops, manufactures and markets the new battery

	96	97	98	99	00	01	02	03	04	05	06-
Battery Type											
											
Vehicle Model											
	ALTRA EV		Tino HEV		Hypermini		FY03FCV		FY05FCV		

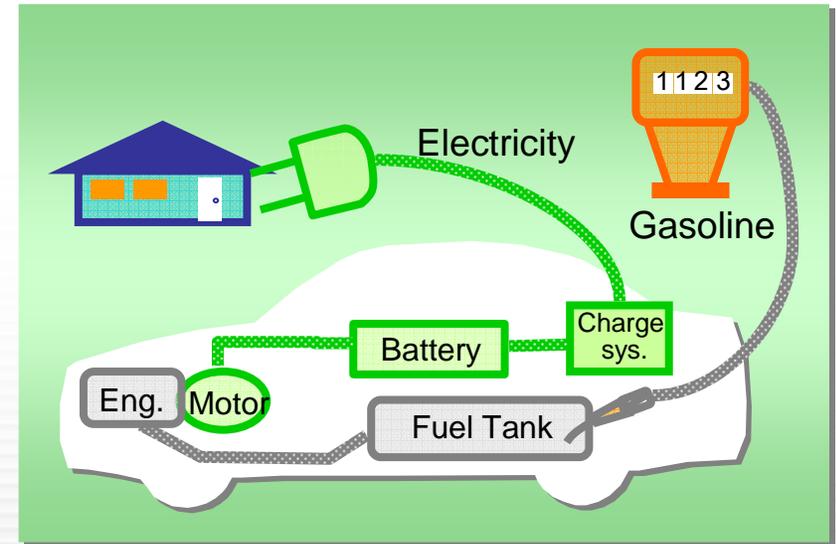
Hybrid Electric Vehicle (HEV)

■ Original Hybrid Electric Vehicle

Develop HEV with Nissan's original hybrid system to be introduced in the US & Japanese markets with a target of FY2010

■ Plug-in HEV

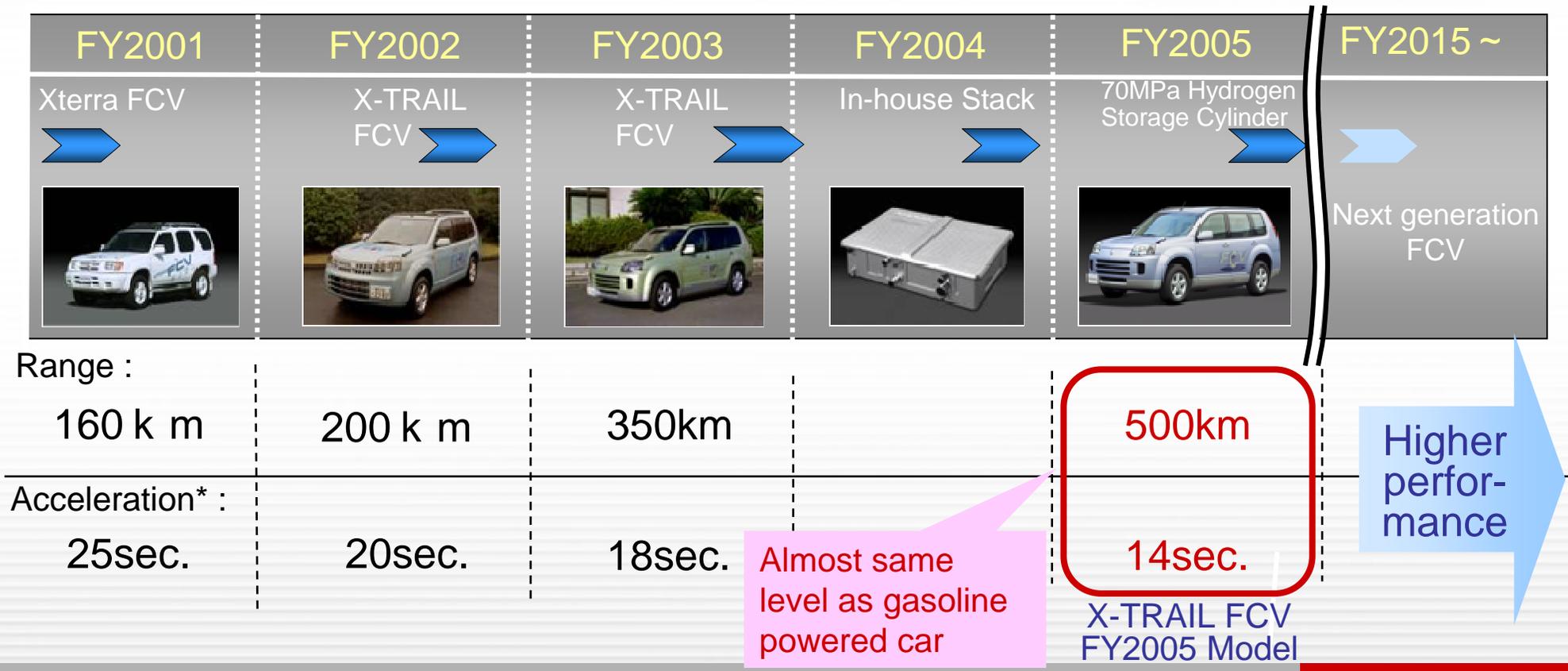
Acceleration of HEV development which has battery charging system that utilizes grid power.



Basic concept of Plug-in Hybrid

Fuel Cell Vehicle (FCV)

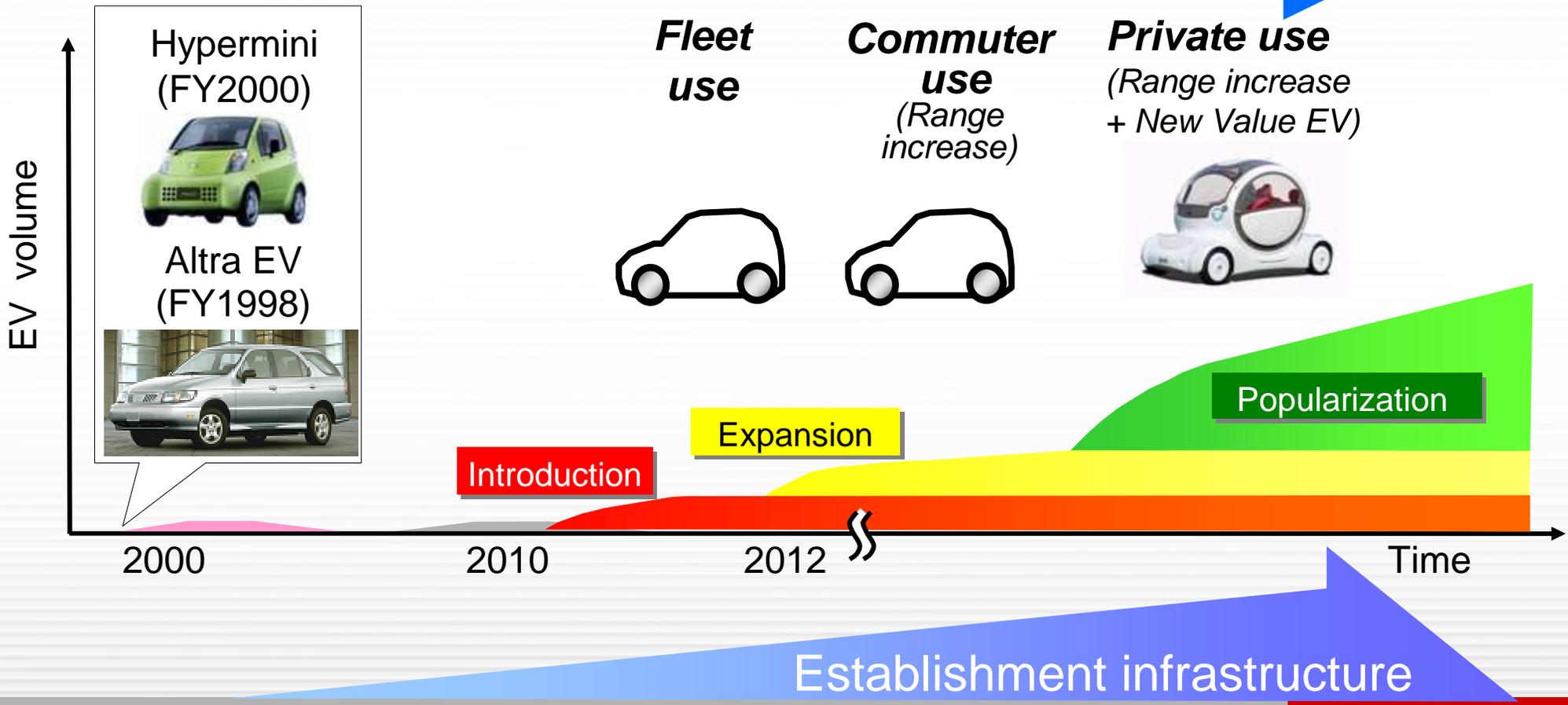
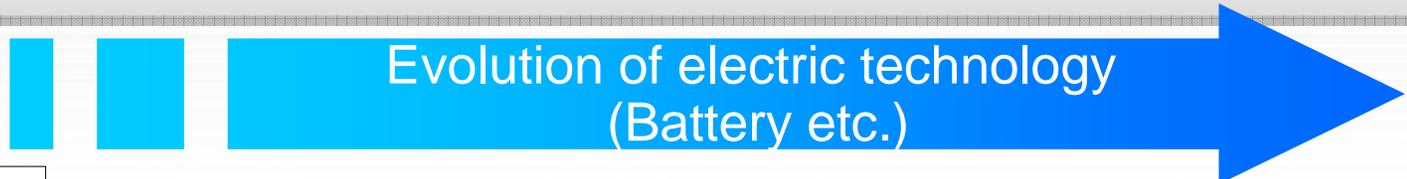
- Next generation FCV with improved in-house developed stack (beginning of next decade, starting from US and Japan markets)



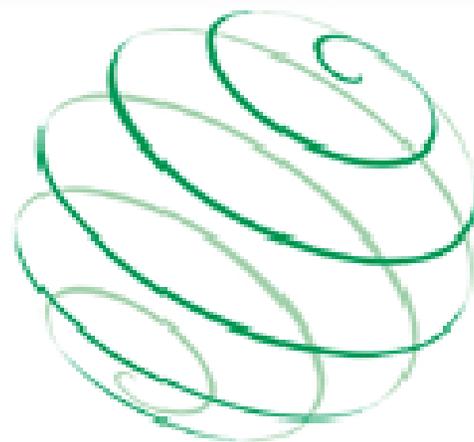
*time to 100km/h

Electric Vehicle (EV) Expansion Scenario (1)

- Launch BEV in late FY2010 in USA



* Collaboration with Gov. & Other sector



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