

# © New Motor Vehicle Board Roundtable

Russell Vare  
Nissan North America



Nissan Confidential

Zero Emission

# © The Case for Change

600 Million vehicles worldwide reaching 2.5 billion by 2050



## Nissan is committed to Long-term CO<sub>2</sub> Reduction

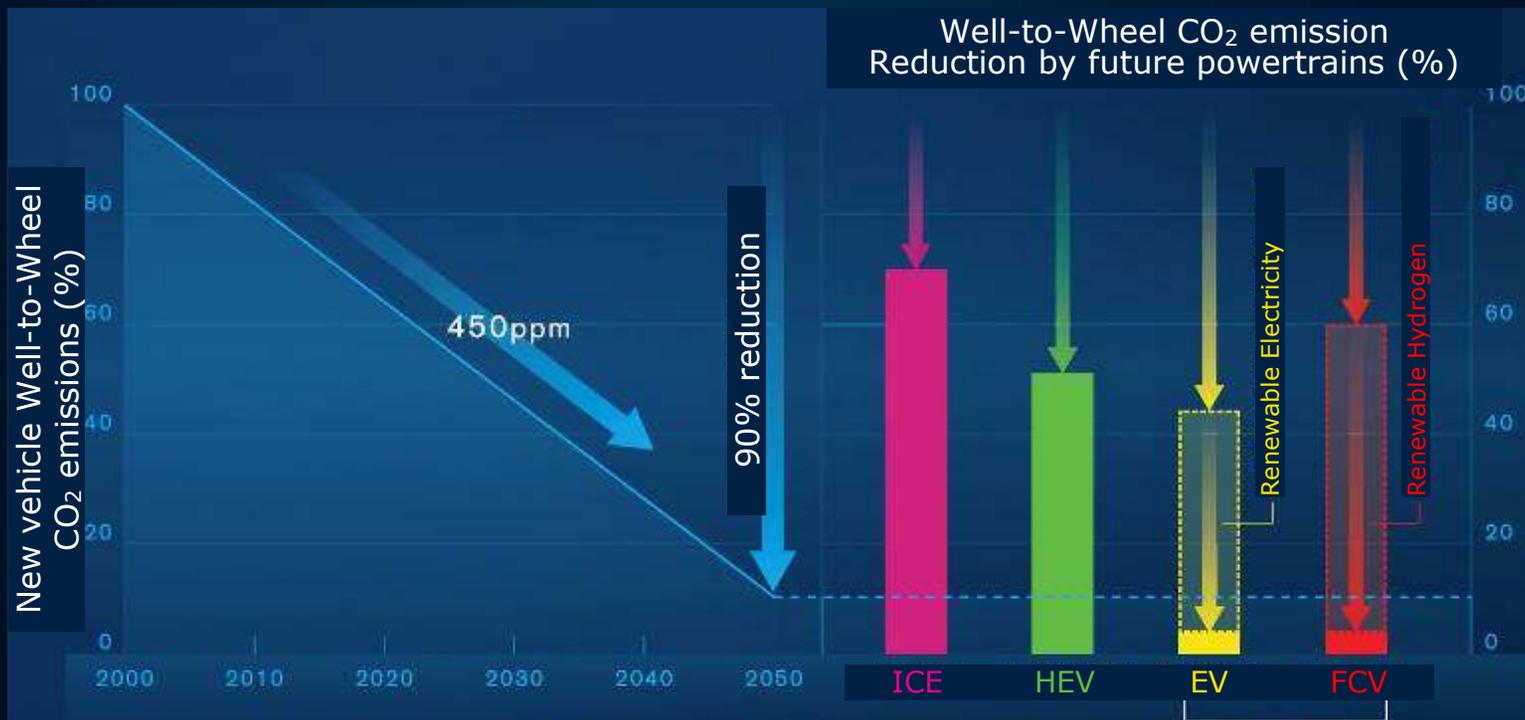
- 90% Reduction by 2050 (from 2000 levels)
- This cannot be done without lots of Zero Emissions vehicles on the road

# Long-term targets for CO<sub>2</sub> reduction



Intergovernmental Panel on Climate Change (IPCC) 4th Report

- To keep global temperature from rising more than 2 degrees Celsius, we need to keep CO<sub>2</sub> concentration below 450ppm.
- Nissan estimates that, to achieve 450ppm, we need to reduce CO<sub>2</sub> emission from all new vehicles by 90% by 2050 (vs. 2000)
- Nissan believes EV is one of the solutions to achieve CO<sub>2</sub> reduction objectives.



- 90% reduction is a trial calculation to keep CO<sub>2</sub> emission at 450ppm level
- According to calculations, to stabilize atmospheric CO<sub>2</sub> concentration below 450ppm, CO<sub>2</sub> emissions (Well-to-Wheel) from all new vehicles must be reduced by 90% in 2050 (compared to 2000).
- Well-to-Wheel CO<sub>2</sub> emissions include CO<sub>2</sub> emissions from power generation, power supply, and vehicle operations

# © Nissan LEAF – Product Highlights



- Zero emission
- Affordable
- Lively acceleration
- Quietness
- 100-mile range appropriate for daily use
- Advanced intelligent transportation (IT) system



<b>Size</b>	<b>5-door hatchback</b>
<b>Capacity</b>	<b>5 Adults</b>
<b>Range</b>	<b>100 miles (US LA4)</b>
<b>Top Speed</b>	<b>90 mph</b>
<b>Battery</b>	<b>Laminated Lithium-ion</b>
<b>Capacity/Power</b>	<b>24 kWh/over 90kW</b>
<b>Motor</b>	<b>High-response synchronous AC Motor (80kW/280Nm)</b>
<b>IT System</b>	<b>Integrated Communication System</b>



## ◎ Making Zero-emissions Affordable



**2011 Nissan LEAF – MSRP starting at \$32,780**

- Cost to consumer = **\$25,280** after \$7,500 Federal tax credit
- Or **\$349/month** lease
- Additional incentives: California, Hawaii, Colorado, Georgia, Tennessee also have rebates up to **\$5,000** state level incentives
- Tax credit **up to 30%** available toward installing of personal charging dock

# © Consumer Demand



Zero Emission

Drive Electric Tour, Santa Monica, CA



## © 2011 Nissan LEAF Reservations

### Handrasiers

- 300,000+ Nissan LEAF website registrations

### Reservations

- 20,000 reservations (\$99.00)

### Orders and Deliveries

- 7 states in current launch market – expanding later this year
- Deliveries began Dec, 2010 – ramping up





# © Challenge: Bridging the Gap

## Early Adopters

"I make choices that help the world ..."



## Pragmatists

Participate – as long as it's easy, affordable, and convenient



Open-minded to new ideas, but slow to adopt  
Must be able to integrate "Green" into lifestyle

Asks "Why not?" instead of "Why?"

Green Evangelist

# © California Programs and Infrastructure Activity



## •State of California

- \$5,000 ARB CVRP Rebate
- CEC legacy infrastructure upgrades and new infrastructure cost-share

## •Sacramento

- ChargePoint America (Coulomb)

## •Bay Area

- EV Project - ECOtality + BAAQMD
- BAAQMD \$5M in infrastructure grants
- ChargePoint America (Coulomb)

## •Los Angeles

- EV Project - ECOtality + LADWP  
*Residential only*

## •San Diego

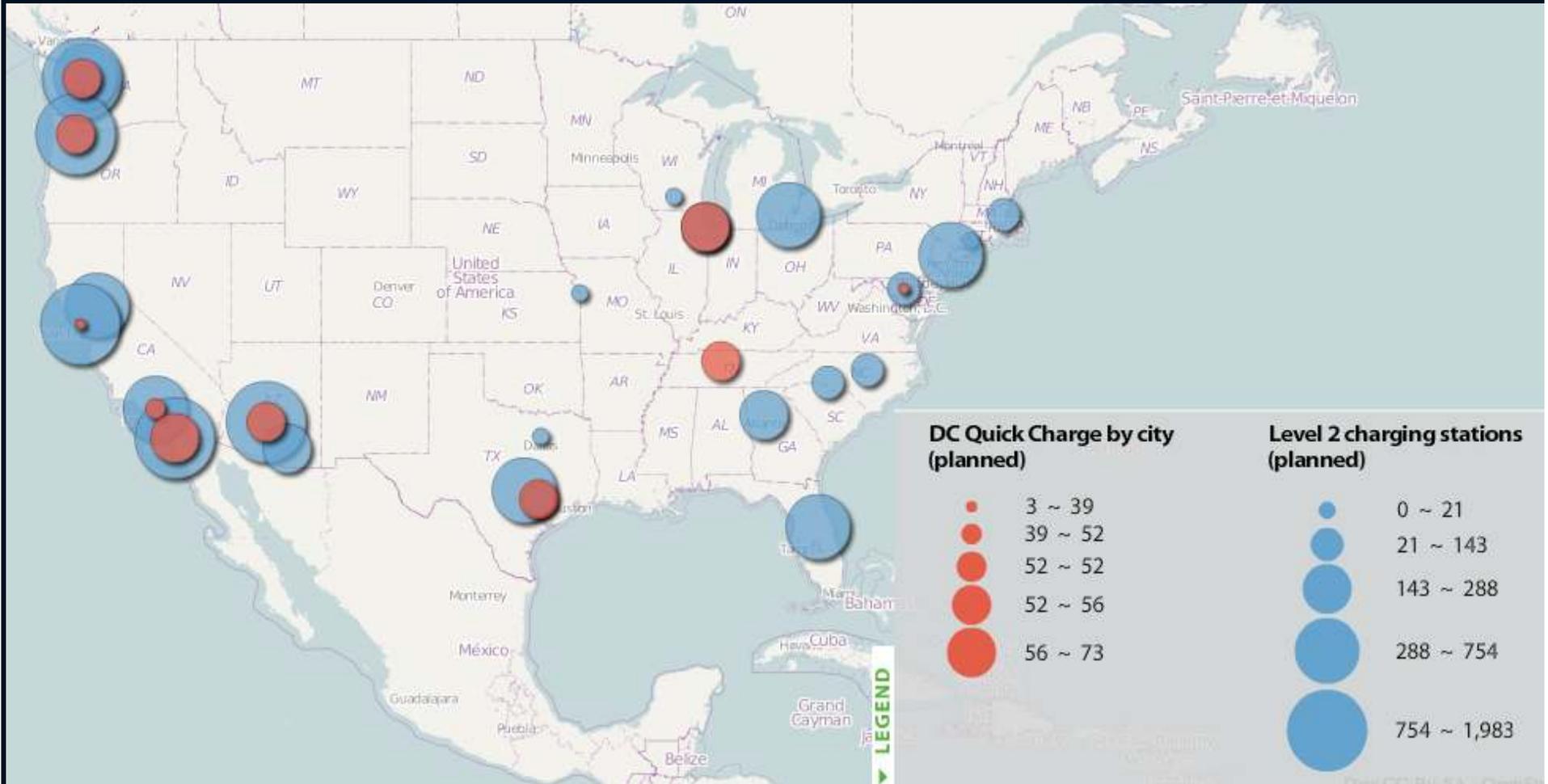
- EV Project – ECOtality + SDG&E  
*Residential, Public L2 and DC QC Infrastructure*



# Planned Public Level 2 Chargers By 2012



13,000 Public Charging Stations



**Source:** data from program announcements, press releases, news stories, public testimony, etc.

# Ⓞ Dealership Investment



Zero Emission

ABC Nissan, AZ



# EV DEALERSHIP ESSENTIAL TOOL KIT

**Three categories** (Examples only. Does not include complete kit)

## Safety

**Insulating Gloves**   **Insulation Sheet**



**Insulating Shoes**   **Safety Glasses**



**Insulating Cover**   **Flash Proof Clothing**

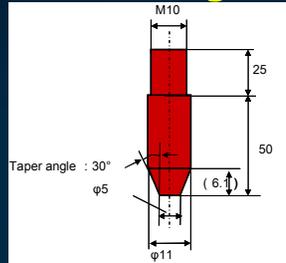


**Service Bay Fencing**

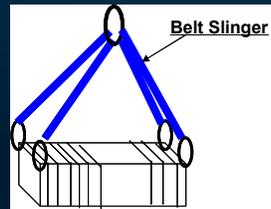


## Battery Repair

**Locating Pin**   **Discharge/Charger**



**Module Slinger**



**Diagnostic Cable**



**Multi Meter**



**Consult III Plus**



## General Service

**Insulated Hand Tools**



**Lifting Hoist**



**Lifting Table**



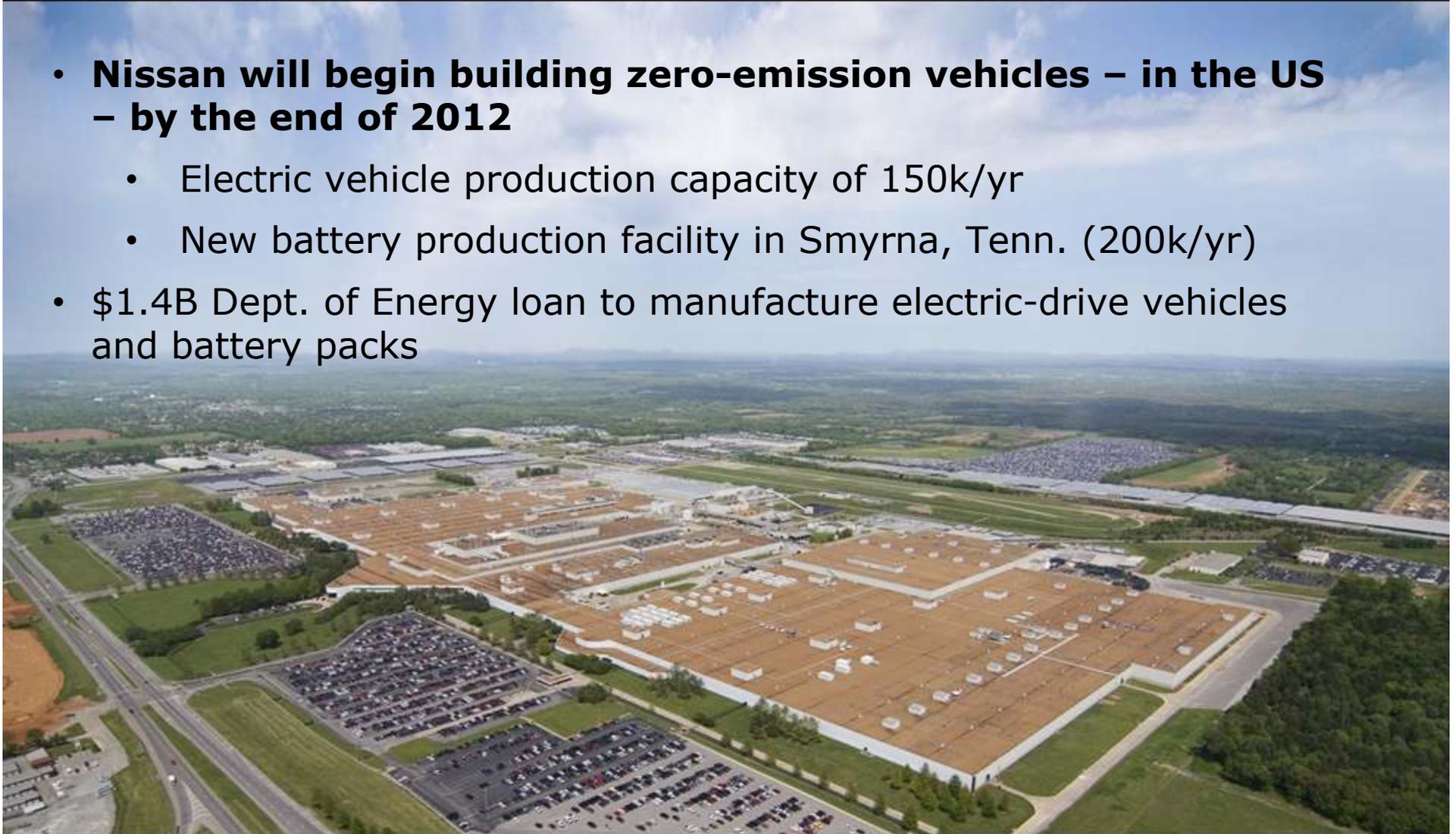
**Fork Lift**



# LOCALIZED PRODUCTION



- **Nissan will begin building zero-emission vehicles – in the US – by the end of 2012**
  - Electric vehicle production capacity of 150k/yr
  - New battery production facility in Smyrna, Tenn. (200k/yr)
- \$1.4B Dept. of Energy loan to manufacture electric-drive vehicles and battery packs



**Zero Emission**



# Scale is key to Global Mass Marketing



Ground-breaking  
27th



employee kick-off  
May 14th



# © Future EV Lineup



## e-LCV



The practical zero-emission LCV.

## The Urban Commuter



Perfect for city life and providing a new driving sensation like a bike with its tilting cabin and sleek agility.

## INFINITI premium compact EV



Progressive styling and high performance, compact luxury sedan



Nissan  
**LEAF**

the new car



*Thank you for your attention*

Zero Emission