



NISSAN **LEAF**

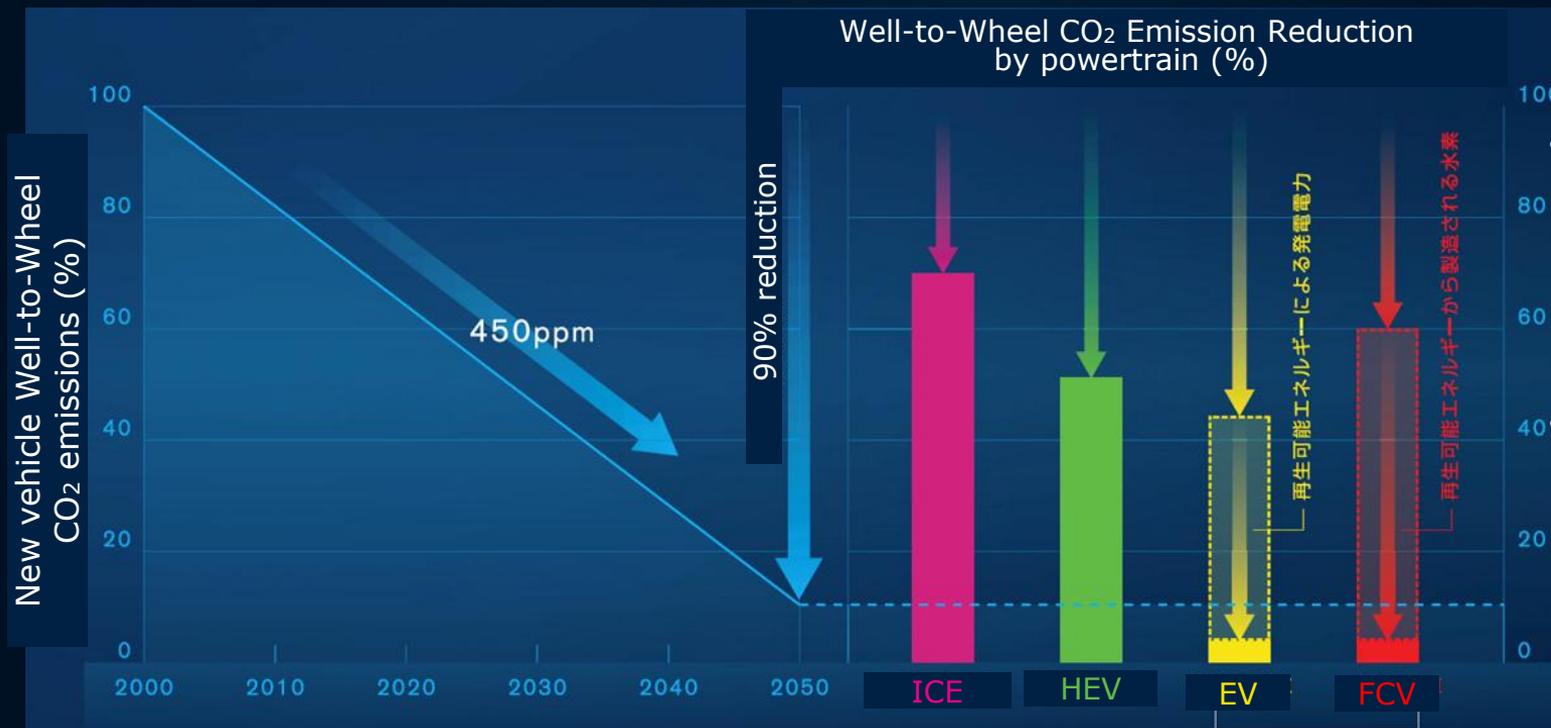


*Tracy Woodard
Director, Government Affairs*



Why Electric Vehicles?

Long-Term Goals for Reducing CO2



- 90% reduction is a trial calculation to keep CO₂ emission at 450ppm level
- According to calculations, to stabilize atmospheric CO₂ concentration below 450ppm,
- CO₂ emissions (Well-to-Wheel) from all new vehicles must be reduced by 90% in 2050 (compared to 2000).
- Well-to-Wheel CO₂ emissions include CO₂ emissions from power generation, power supply, and vehicle operations

- To keep global temperature from rising more than 2 degrees Celsius, we need to keep CO₂ concentration below 450ppm
- To achieve 450ppm, CO₂ emission from all new vehicles must be reduced by 90% by 2050 (vs. 2000)



Meet Nissan LEAF

2013 Nissan LEAF

The advanced, all-electric car that delights every day

- **100% electric** – no gas
- Zero emission – no tailpipe
- Affordable - **\$199/month**
- Fun to drive – **quick, quiet**
- Spacious – **seating for 5 adults**
- Sufficient range – **83 miles (EPA)**
- World's best-selling EV - 70,000 to-date; **>30,000 in U.S.**



LEAF Owner Driving Habits



- Average charging time: **<3 hours** (Level 2)
- Average trip: 7 miles
- Average daily driving: 30 miles
- Generally used as driver's **PRIMARY car**
- >85% of charging occurs at home





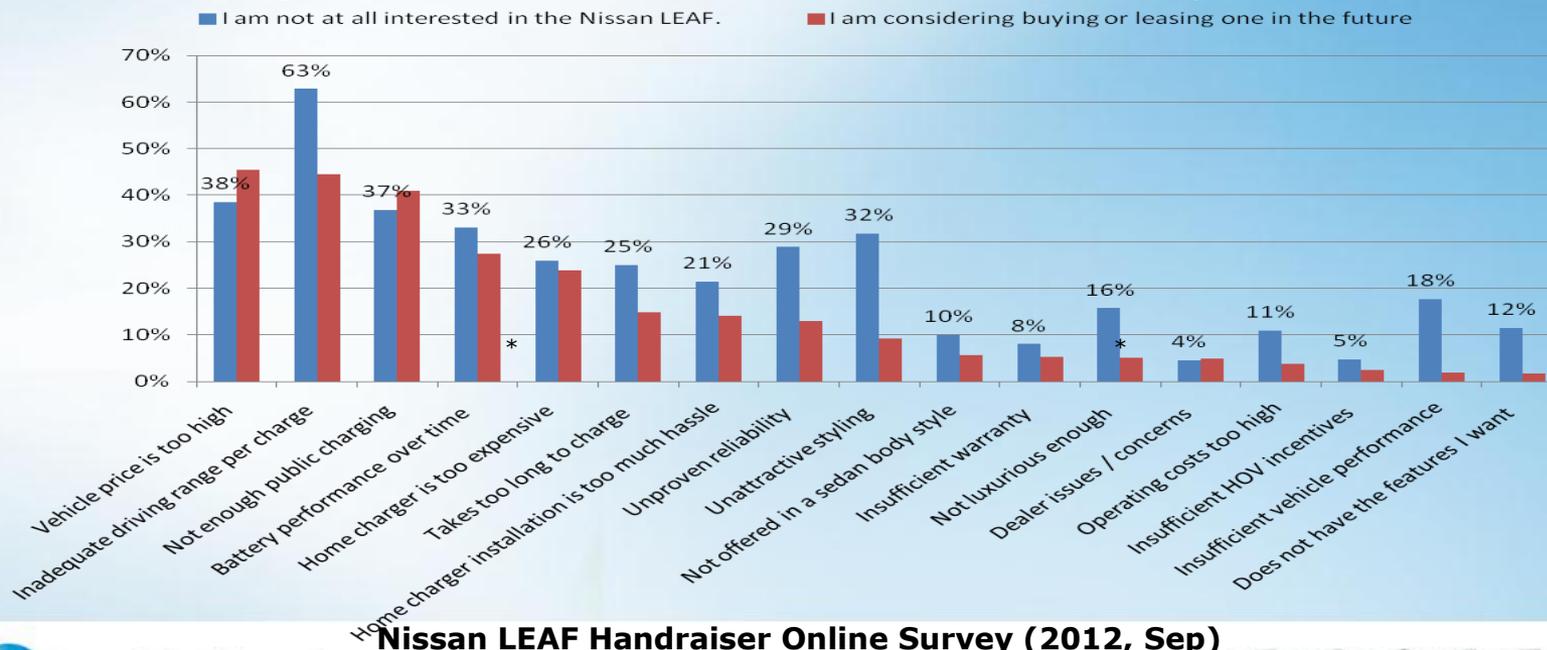
Why develop EV Infrastructure?

Red Bar: Customers that *could* buy LEAF as their next car.

- #1 Price, #2 Range, #3 Infrastructure, #4 Battery Perf.

Blue Bar: Customers that *could* buy LEAF in the distant future.

- #1 Range, #2 Price, #3 Infrastructure, #4 Battery Perf.



Nissan LEAF Handraiser Online Survey (2012, Sep)



Charging 101: A Quick Tutorial



EVSE	Charge Type	Charge Power	Time to Charge
Level 1	Trickle	1.4 kW	~21 hours
Level 2	Normal High	3.3 kW 6.6 kW	< 8 hours < 4 hours
DC Quick Charge	Quick	44 kW	30 minutes (to 80%)



Charge at home

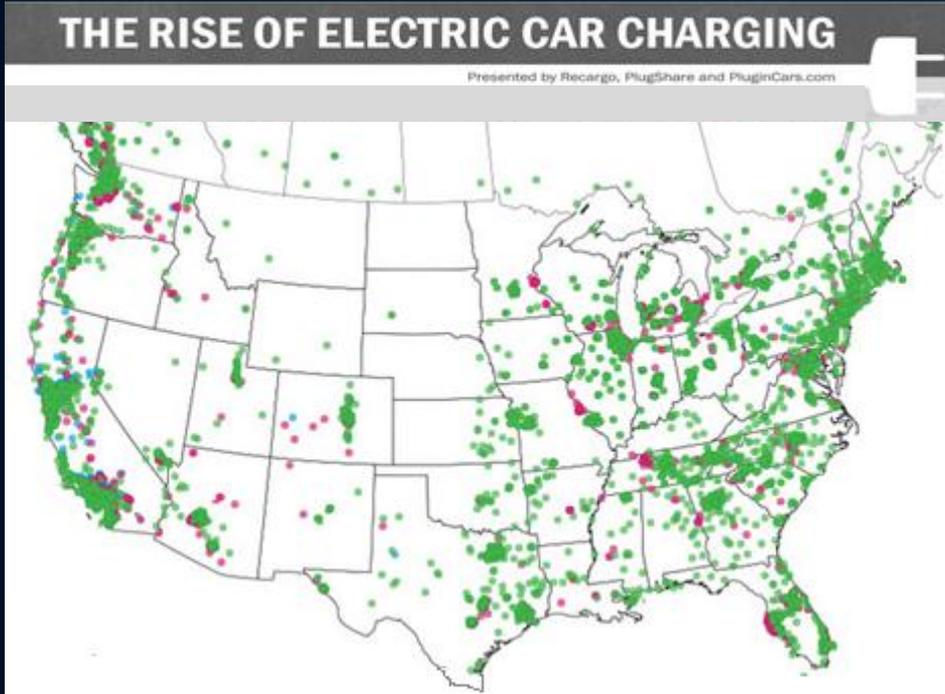


**Charge at work or
while you're out**



**Fast Charge while
on your way**

Rapid Charging Infrastructure Growth



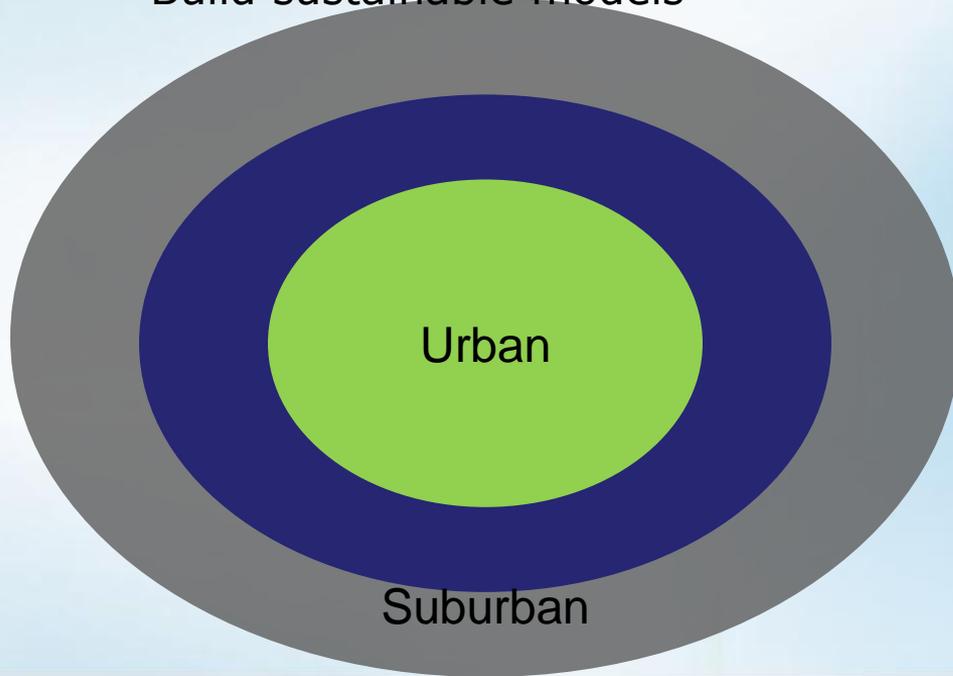
	2010	2013
Level 2	1,972	11,743
DC Quick	2	283

as of July 1, 2013

Nissan Approach to Market



- Create customer convenience
- Maximize site host value
- Build sustainable models



- Strong LEAF Sales with Strong DCFC Infrastructure...but not enough
- Strong LEAF Sales with DCFC Gap
- Infrastructure and signage to build range confidence in other markets

Quick Charger Study Data



Utilization



Average Charge Event Duration: **21 minutes**



Average Charge Events per Day: **4.75**



Charge Event Leader: **11** per day



Cost

Average Cost Per Site: **\$49,679** (Unit & Install)

Study Background

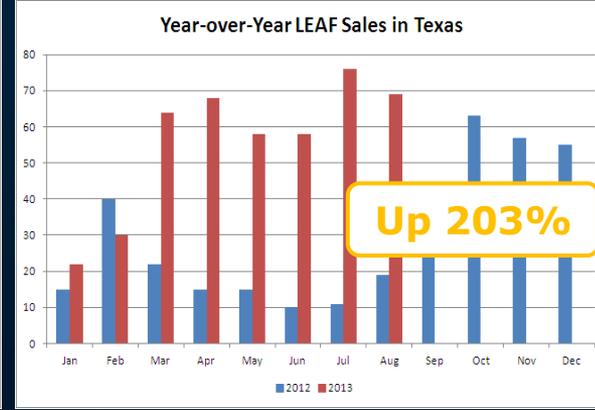
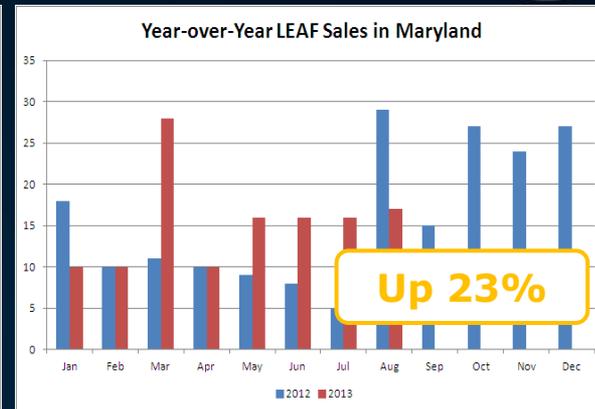
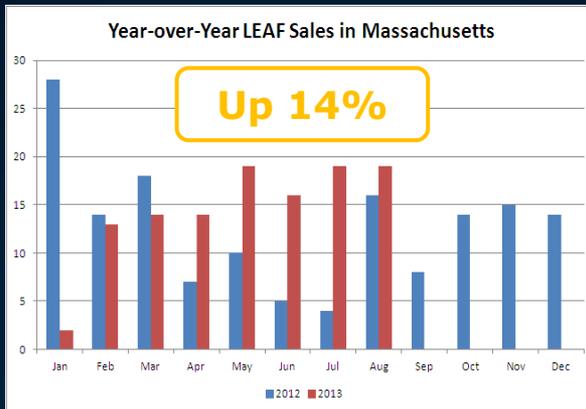
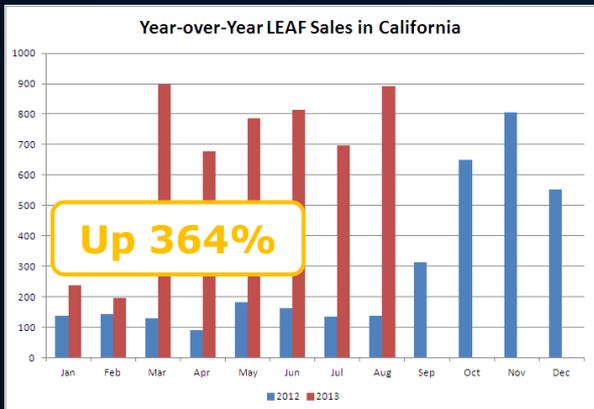
- >5 Markets: LA, San Fran, San Diego, Sacramento, Seattle
- >24 dealers





LEAF Success

States are Making Strides!



LEAF Value (Retail Purchase)



	<u>2013 LEAF</u>	<u>2013 Honda Civic</u>
MSRP:	\$28,800	\$18,165
Federal Tax Credit:	(\$7,500)	(\$ 0)
<u>Georgia Tax Credit:</u>	<u>(\$5,000)</u>	<u>(\$ 0)</u>
Total Price:	\$16,300	\$18,165



- + Free HOT & HOV lane access
- + \$600 home charger incentive
- + \$0 spent on gas

LEAF Value (Lease)



	<u>2013 LEAF</u>	<u>Current Car</u>
Monthly Payment:	\$199	\$ 0
<u>'Fuel' Expense:</u>	<u>\$ 35</u>	<u>\$350</u>
Total Monthly Cost:	\$309	\$475

A red double-headed arrow pointing from the \$309 total cost of the 2013 LEAF to the \$475 total cost of the current car, highlighting the cost difference.

- + Free HOT and HOV lane access
- + \$600 home charger incentive
- + \$0 spent on gas

Incentives by State Summary



■ Inclusive ■ Partial

	CA	CT	FL	GA	IL	MD	MA	MS	NJ	NY	NC	OR	PA	TN	TX	VA	WA
Federal																	
\$7500 Tax Credit																	
Infrastrcture Business (Alt Fuel) 30%/30K																	
Infrastrcture Residential (Alt Fuel) 1K																	
State																	
Single Occupancy HOV Lane																	
EVSE Hardware Incentive / Financing																	
EVSE Tax Credit																	
EV Rebate POS																	
EV State Tax Credit (sales & use)																	
EV Financing (state & local credit union)																	
Reduced Vehicle Registration/Tax																	
Free Vehicle Emissions Inspection																	
The EV Project																	
Free Metered Parking																	
Free EV Charging at State Locations																	
Free / Reduced Toll Access																	



Business-to-Business Opportunity

Corporate Workplace Charging Value Creation

		Value Proposition	Nissan Value-Add
Employer		<ul style="list-style-type: none"> ▪ Unique employee benefit ▪ Sustainability (reduce CO₂ footprint) ▪ Brand image ▪ Reduced fleet costs 	<p><u>Turn-key Package:</u></p> <ul style="list-style-type: none"> ▪ Competitive pricing ▪ Infrastructure consulting ▪ Best practices sharing ▪ EV education sessions
employee		<ul style="list-style-type: none"> ▪ Competitive pricing ▪ Lower fuel expenses ▪ EV range extension (charge at work) 	<ul style="list-style-type: none"> ▪ Home charging consulting ▪ Online tools and apps ▪ Resource for EV questions

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Parting question:

Are you ready to 'kick gas,' too?