

© NISSAN LEAF

Nancy Mansfield
EV Regional Manager





© The Nissan Vision

"A new era is beginning in the global automotive industry. At Nissan and Renault, we are working together to lead the way to mass-market zero-emission mobility."

— Carlos Ghosn, CEO of Nissan and Renault



Zero Emission

◎ Getting to Mass-Market volumes



Smyrna, Tenn.: production begins in 2012

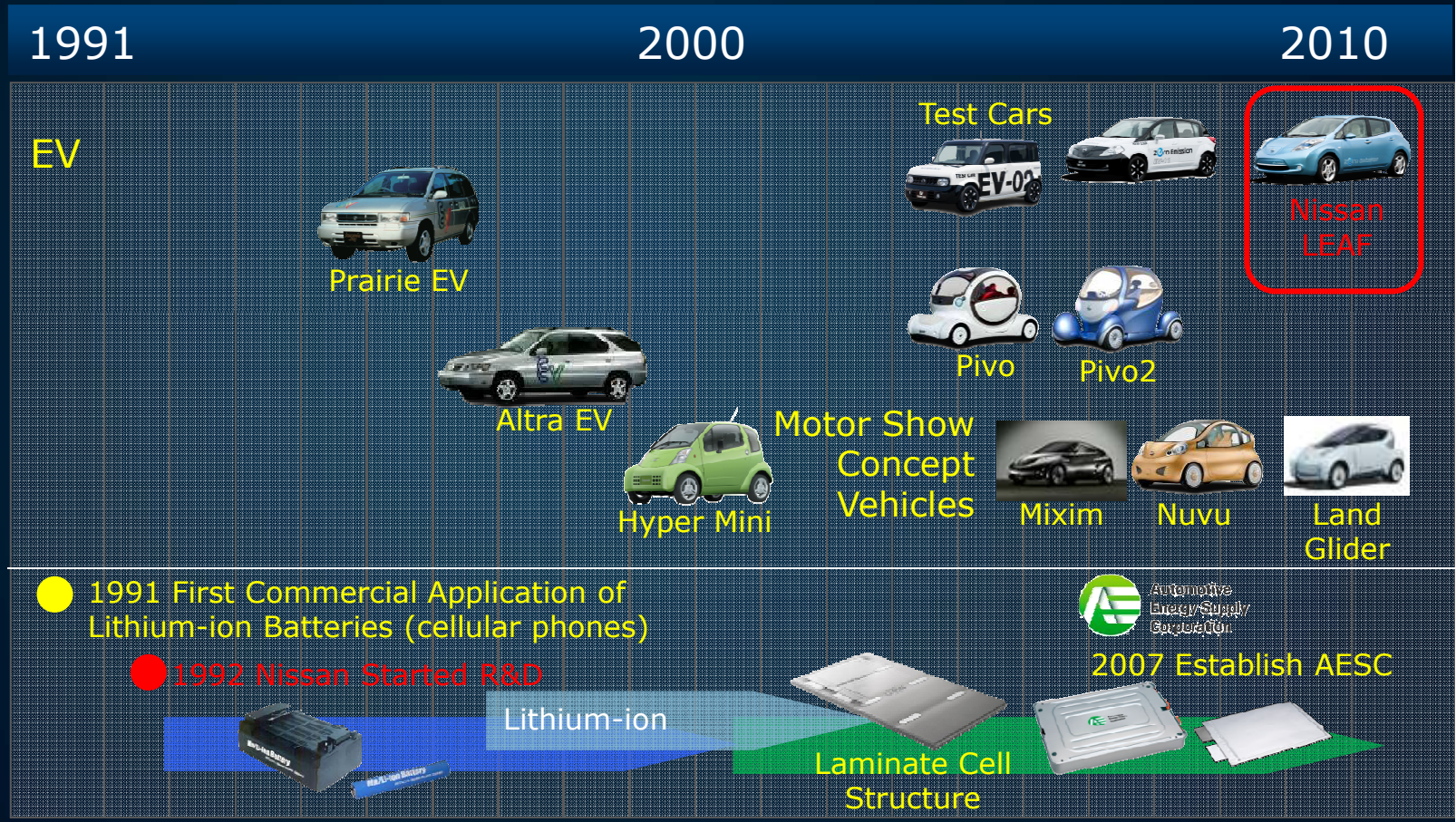
- Capacity: 200,000 battery packs; 150,000 Nissan LEAF vehicles





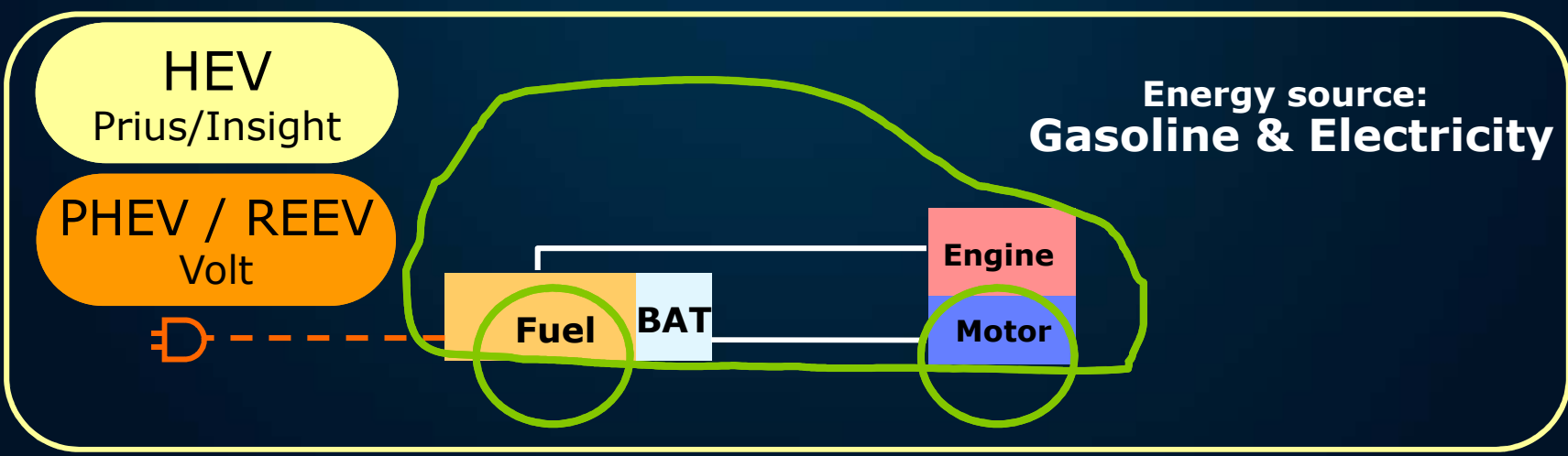
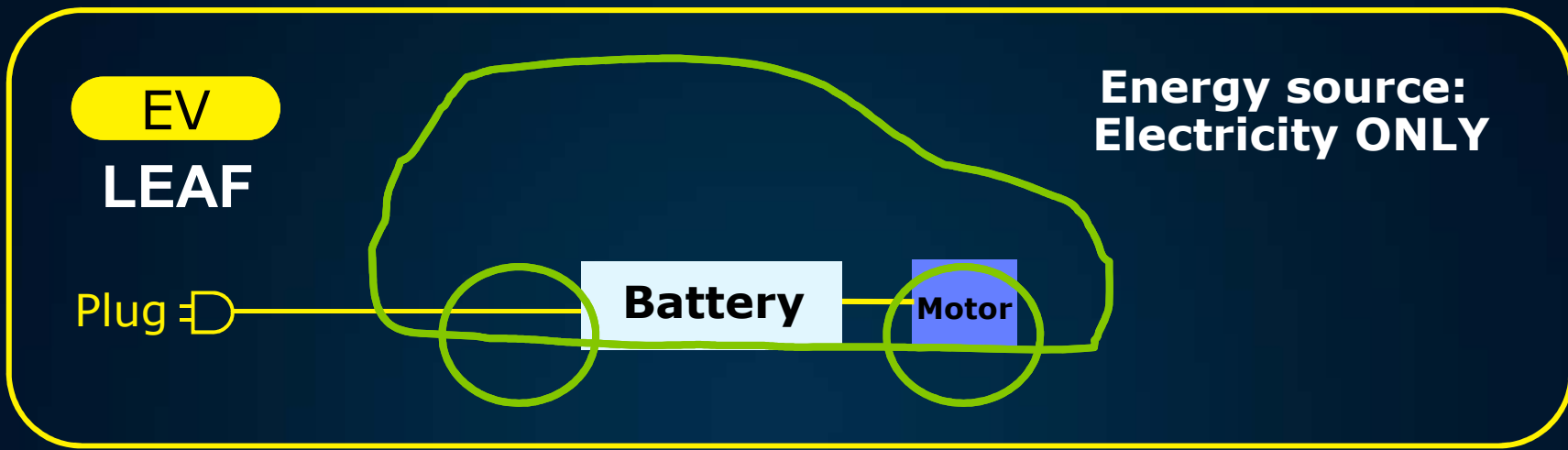
© Nissan History in EV & Li-Ion Battery

Nissan has had a long history in EV & Battery technologies





EV Basics



© Nissan LEAF Customer – Early Adopter



DEMOGRAPHICS

- Married, mid-40's
- 70% male
- HHI \$75K+
- Own home and secure parking
- Multiple vehicles in household

MINDSET

- Leaders "walk the talk"
- Decisions driven by **what should be**
- Open-minded to culture and bring a global view to daily life
- Ask "Why not?" instead of "Why?"
- Insatiable appetite for Green information – untrusting of corporations

VEHICLE NEEDS

- Want to inspire others to do their part
- Will make compromises, but there needs to be a practical component
- Drive a Prius, but EV is the best solution **for today**

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



© Nissan LEAF Customer – Pragmatist



DEMOGRAPHICS

- Married, mid-40's
- Male and female
- HHI \$75K+
- Own home and secure parking
- Multiple vehicles in household

MINDSET

- Guiltless fast followers
- Decisions based on **what is**, not what should be
- Open-minded to new ideas, but slow to adopt
- The market will bring convenient solutions, so why sacrifice?
- Must be able to integrate "Green"-ness in their existing lifestyle
- Influenced primarily by family

VEHICLE NEEDS

- Must not inconvenience; must behave like "normal" cars
- Ability to conveniently refuel is expected; a cost of entry
- Drive a Prius, but EV is the best solution **for tomorrow**

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





© Nissan LEAF – Product Highlights

- Zero emission
- 100-mile range
- Superior battery technology
- Built for sustainable mobility
- Stimulating acceleration
- Quietness
- Connected intelligent transportation (IT) system
- Affordable

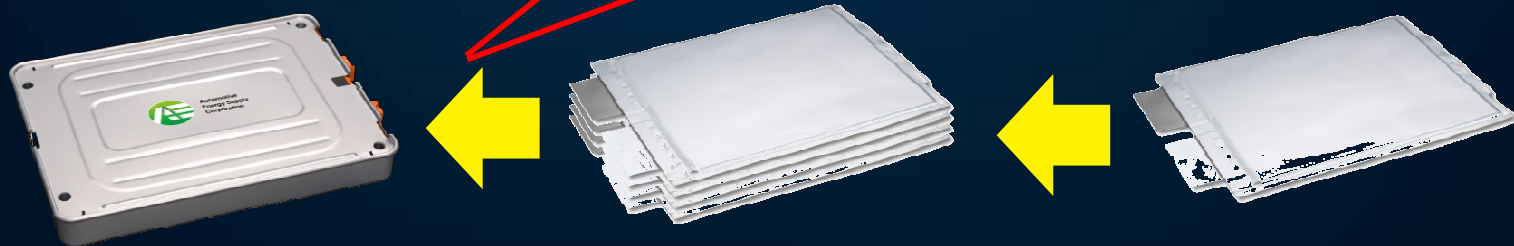
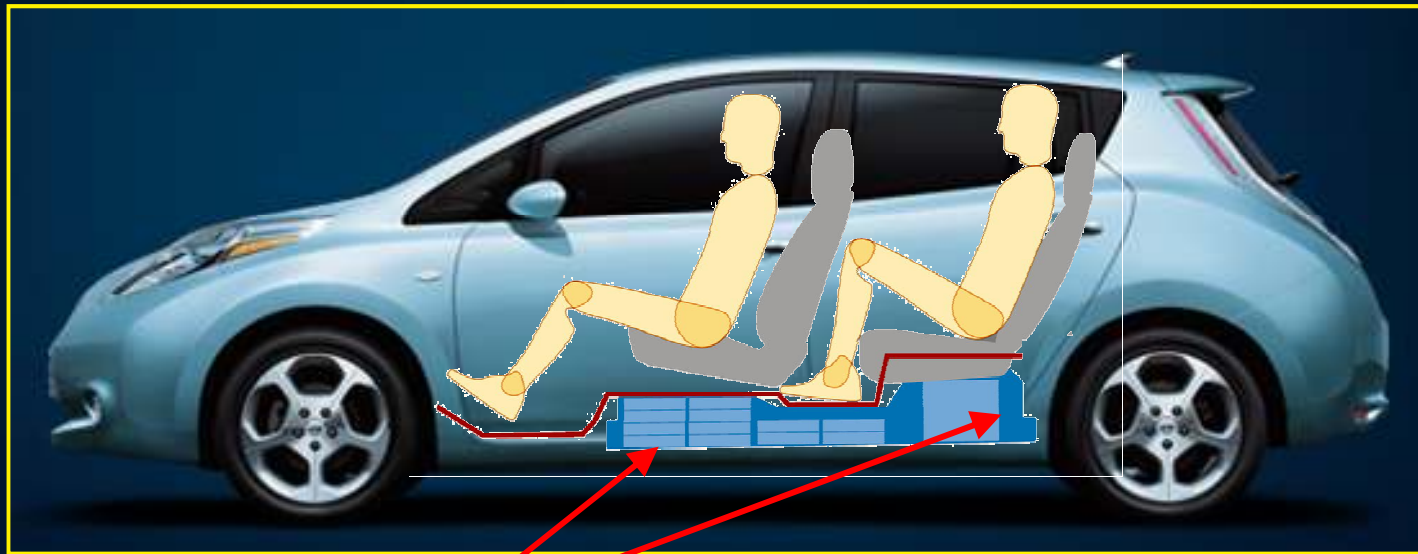


Size	5-door mid size hatchback
Capacity	5 Adults
Range	100 miles (US LA4)
Top Speed	90 mph
Battery	Laminated Li-ion
Capacity/Power	24 kWh/over 90kW
Motor	High-response synchronous AC Motor (80kW/280Nm)
IT System	Integrated communication system



◎ Superior Battery Technology

- Places **batteries in the safest location**
- Provides **optimum weight distribution** for ideal/predictable handling
- Allows for 5 passenger seating by not intruding into cabin space



© Sustainable Mobility – Recycled Materials



Green-colored parts are recycled material from end-of-life products



© Charging Basics

EVSE	Charge Type	Usage	Charge Power	Time to charge
Level I	Trickle	Opportunity	1.4 kW	~20 hrs
Level II	Normal	Home/Public	3.3kW	7 hours
DC Fast Charge	Quick	Public/Private	50 kW	30 minutes (to 80%)





◎ Benefits To The Consumer

- 100% zero-emission
- Affordable pricing
- Lower Total Cost of Ownership
- Lower maintenance costs

◎ Cost Per Mile Comparison (15k miles)

- Gas = \$0.12 per mile / \$1,800
- Electricity = \$0.026 per mile / \$396
- Advantage exists even if gasoline drops below \$1.10/gal





© Why 100 Mile Range?

On average 90% of the U.S. population drives less than 100 miles a day

Typical consumer driving patterns:

- Weekday
 - Less than 50 miles - 73%
 - 5-10 miles – 27%
- Weekend
 - Less than 50 miles – 66%
 - 20-29 miles – 24%





Reachable Area



Advanced Vehicle IT System

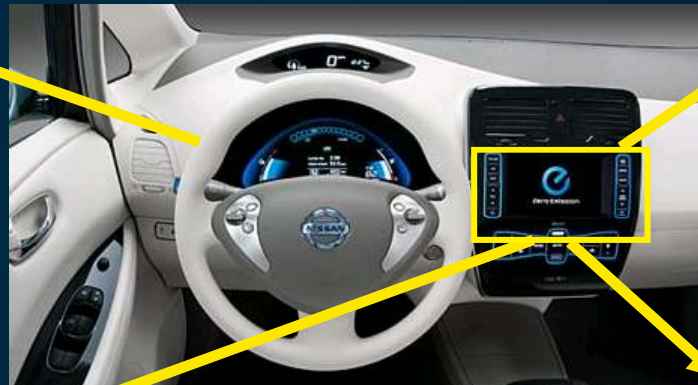
Use of technology for Range Management



Meter: Distance to empty



Navigation: Reachable area



Charging Timer

MENU Charging Timer 23:30 BACK

Next Scheduled Battery Charging
Timer 1 : ON Wednesday

START Time	END Time
01:00 AM	06:00 AM

Charging Limit
100%

Time required to reach 100% charge
240V About 15 hr 120V About 7 hr 30 min.

Current Time 10:21 AM Tue.

For Battery Charging:
Timer 1
Timer 2
SET Timer 1
SET Timer 2



Timer functions

Climate Control Timer

MENU A/C-Heater Timer 23:30 BACK

Next Scheduled A/C-Heater Timer
Timer 1 : ON Wednesday

Departure	Priority
01:00 AM	A/C-Heater Timer

Assigned Days
Mon. Tue. Wed. Thu. Fri. Sat. Sun.
Timer 1: Mon, Tue, Wed, Thu, Fri, Sat, Sun
Timer 2: Sat, Sun

Current Time 10:47 AM Tue.

For Climate Control:
Timer 1
Timer 2
SET Timer 1
SET Timer 2

Connected Mobility – Apps!



© Making Zero Emissions Affordable



2011 Nissan LEAF – \$25,280 after \$7,500 Federal Tax Credit

- Additional incentive examples:
 - Tennessee: \$2500 tax rebate for first 1,000 vehicles
 - California: clean vehicle rebate of up to \$5,000
 - Colorado: tax credit up to \$6,000
 - Georgia: tax credit up to \$5,000
 - Hawaii: rebate up to \$4,500
- Tax credit up to \$1,000 available toward installing of personal charging dock

Our Response: The LEAF Customer Journey



Close to 100% online shopping experience

www.nissanusa.com/leaf-electric-car

Learn

Is Nissan LEAF right for me?

Shop

Configure YOUR car

Reserve and Order

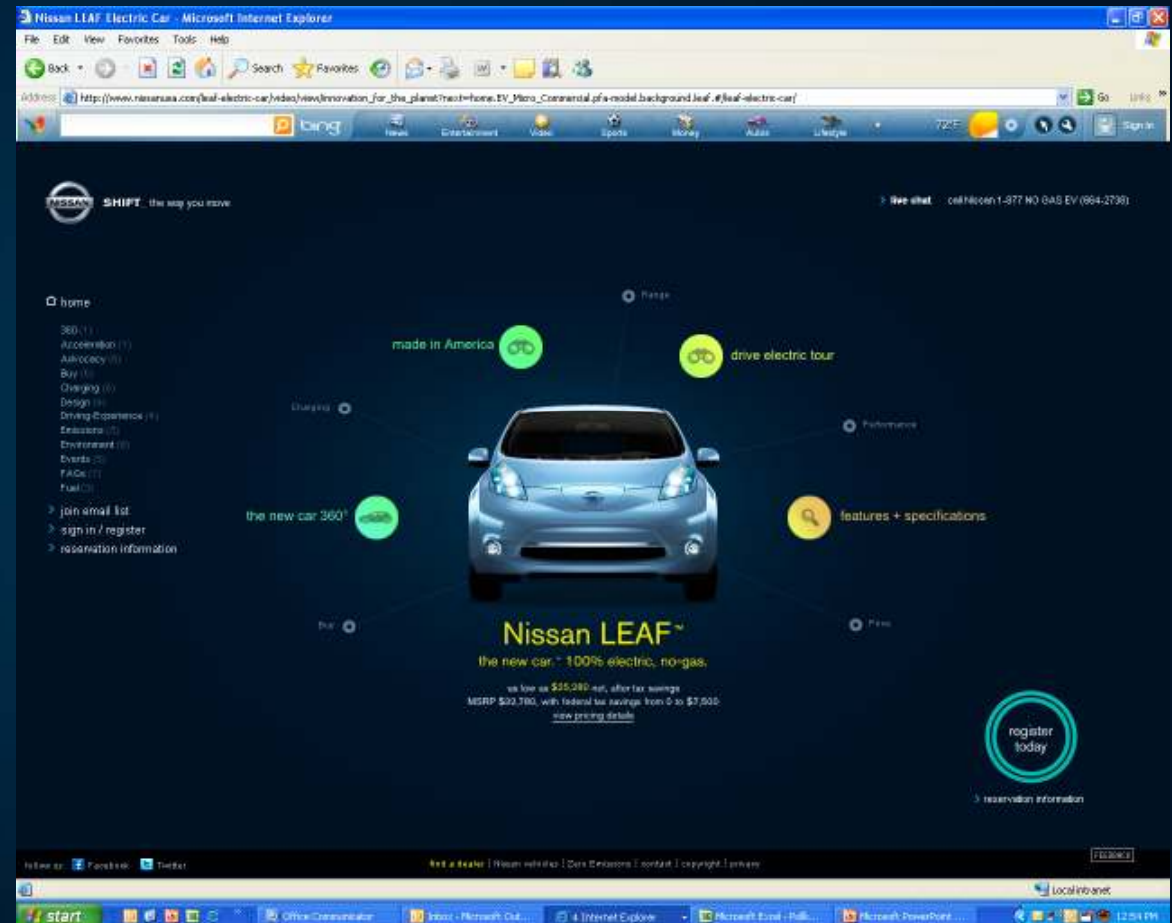
Reserve your place in line when ordering opens in your market, negotiate price, place order

Delivery

Schedule charging dock install and vehicle delivery

Own

Owner portal plus Mobility Apps



Support Market Adoption



Early months of Mini's EV test were a tangle of local red tape

By DIANA T. KURLYKO, AUTOMOTIVE NEWS



ZOOM

Rich Steinberg of BMW says many towns are slow to approve permits for home chargers because it's a new issue and there's no standard procedure.

It's not as easy as plug, charge, unplug and go--a lesson Mini learned at the onset of its electric car trial.

It took Mini up to seven months for local approvals and proper electrical inspections before the first trial cars were delivered to lessees of the Mini E electric car project began in April 2010 and is set to end this summer. But participants say the trial will continue for another year to test an electric car that parent company BMW is planning to launch in 2011.

The participants are in New Jersey, where parent company BMW is based.



AUTOS | JULY 11, 2010

Charge Up and Go? First Ask City Hall

Article

Comments (7)



Save This



By MIKE RAMSEY

For all the talk of high-tech batteries and advanced electronics, the success of Nissan Motor Co.'s costly bet on electric vehicles may come down to cities such as Raleigh, N.C., making changes to old-fashioned building codes and permitting procedures.



View Full Image

Nissan's ambition to be the first mass-market maker of electric cars depends on making it easier, quicker and cheaper for owners to install a charging station in their garage. That means cutting through municipal red tape that could delay installation by weeks or even months.

Though electric cars often are described as plug-in vehicles, connecting Nissan's coming

© EV Market Readiness



- **Incentives for consumers**

- Financial (tax credit, free permitting, free charging, subsidized charger installation)
- Non-financial (HOV lane access, preferential parking, etc.)

- **Streamlined EVSE permit process**

- Fast, easy permit application process (online permitting)
- Expedient installation approvals or installer self certification

- **Charging Infrastructure**

- Home
- Workplace
- Public

- **Education and Public Outreach**

- Educate the public on environmental, social, and financial benefits of electric drive vehicles