Nissan History in EV & Li-Ion Battery

Nissan has had a long history in EV & Battery technologies

1991 2000 2010

Models on market

EV

Prairie EV

Altra EV

Hyper Mini

Test Cars

Nissan LEAF

PIVO

PIVO2

Motor Show Concept vehicles

MIXIM

NUVU

Land Glider

Battery development

● 1991 First commercial application of lithium-ion batteries (cellular phones)

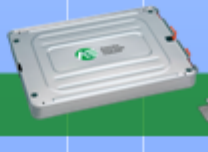
1992 Nissan started R&D

Li-Ion

Laminate Cell structure Breakthrough

Automotive Energy Supply Corporation

2007 Establish AESC



Getting to Mass Market requires Scale

Battery / Nissan EV Manufacturing Capacity

France, Flin
Battery

- Battery 100,000 units/year
- Production from 2012

UK, Sunderland
Battery & EV

- Battery 60,000 units/year
- Production from 2012
- EV 50,000 units/year
- Production from 2013

Ground-breaking
April 27th

employee kick-off
May 14th

Japan, Oppama
EV

- EV 50,000 units/year
- Production from 2010

Portugal, Aveiro
Battery

- Battery 50,000 units/year
- Production from 2012

Japan, Zama
Battery

- Battery 90,000units/year (~2011)
- Production from 2010

USA, Smyrna
Battery & EV

- Battery 200,000 units/year
- EV 150,000 units/year
- Production from 2012

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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 compact 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**

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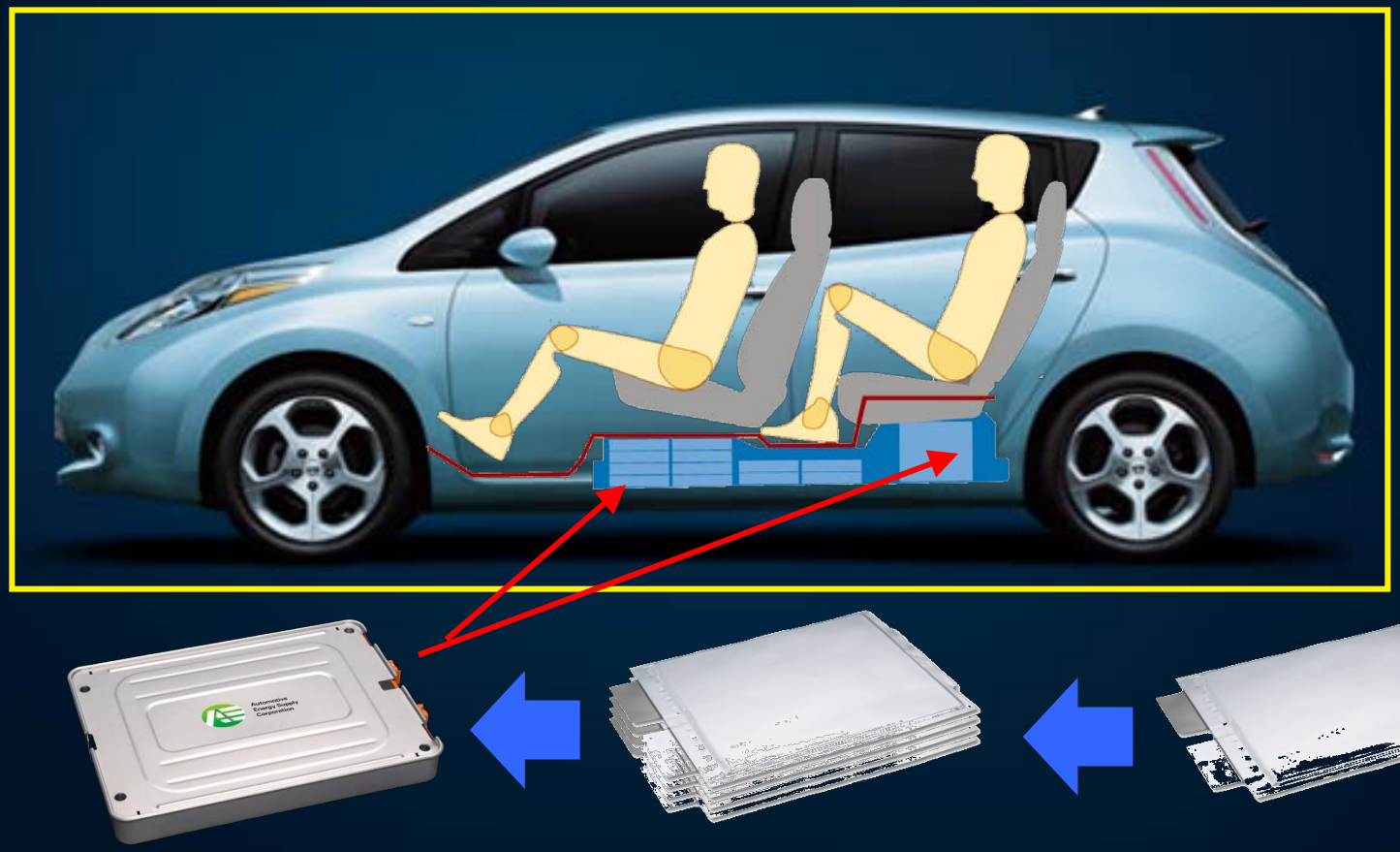
Superior Battery Technology

- 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



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	8 hours
DC Fast Charge	Quick	Public/Private	50 kW	30 minutes (to 80%)

- Level 2 charging universal standard (SAE 1772) and used by all OEMs.
- Level 2 highest penetration for home and public charging.
- NEC requires Level 2 chargers be “hardwired.”
- The standard for Quick Charging is still pending as of today.

Planned Public Level 2 Chargers by 2012

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

Making Zero-emissions Affordable

2011 Nissan LEAF – $25,280 after $7,500 Federal tax credit

- Additional incentive examples:
  - 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 (details pending)
- Tax credit up to $2,000 available toward installing of personal charging dock

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Benefits To The Consumer

- True zero-emission vehicle
- Affordable pricing
- Lower Total Cost of Ownership than a comparable
  Internal Combustion Engine
- Lower maintenance costs than an ICE vehicle (Less complexity, no engine, no oil changes)

Cost Per Mile Comparison (15k miles)

- Car (good 25 mpg, $3/gal)
  = $0.12 per mile / $1,800
- EV (avg $0.11 kWh)
  = $0.026 per mile / $396
- Advantage exists even if gasoline drops below $1.10/gal

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Nissan's Market Rollout

December, 2010 January, 2011 April, 2011 Fall, 2011

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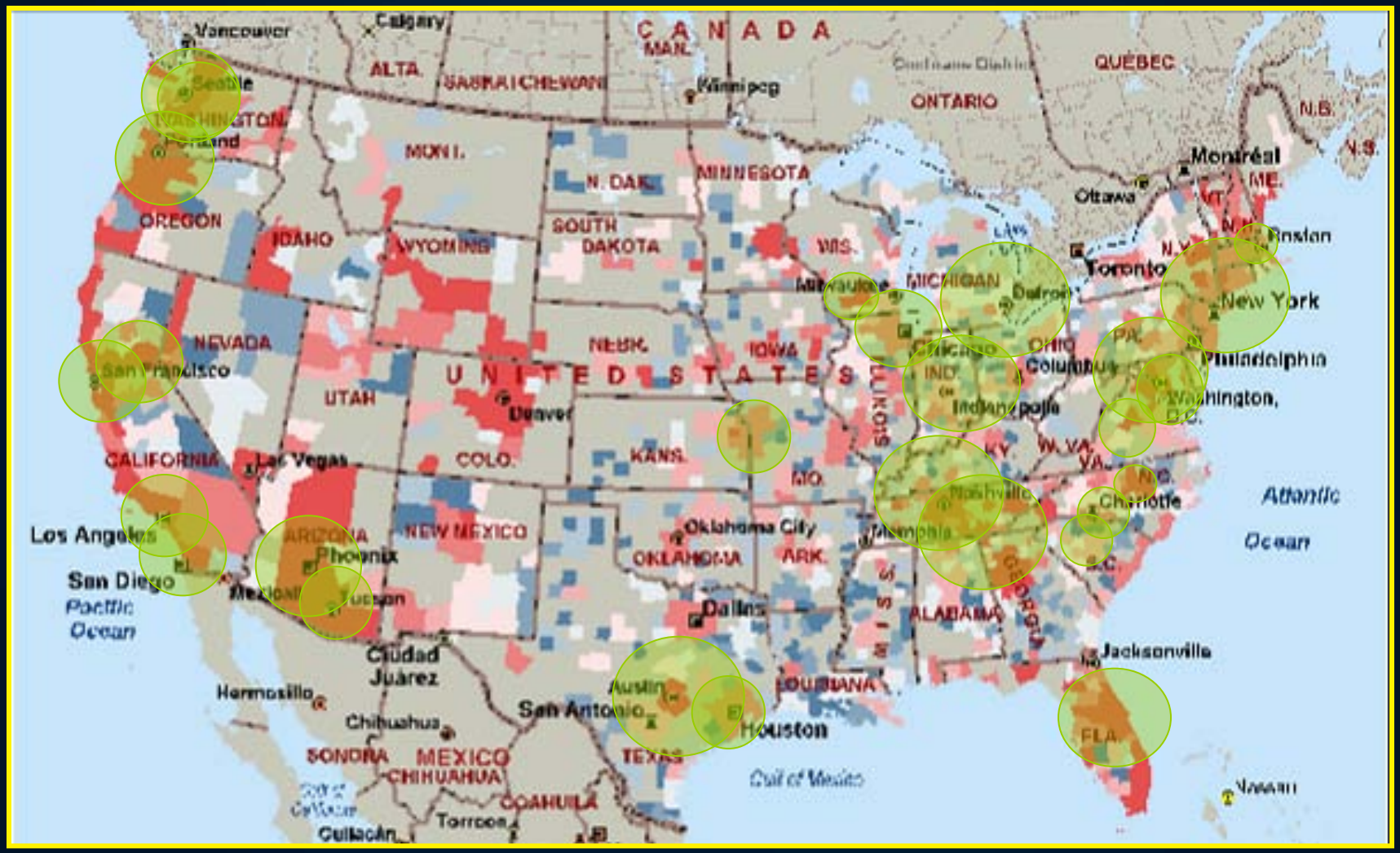
LEAF - Reservation Density Map



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