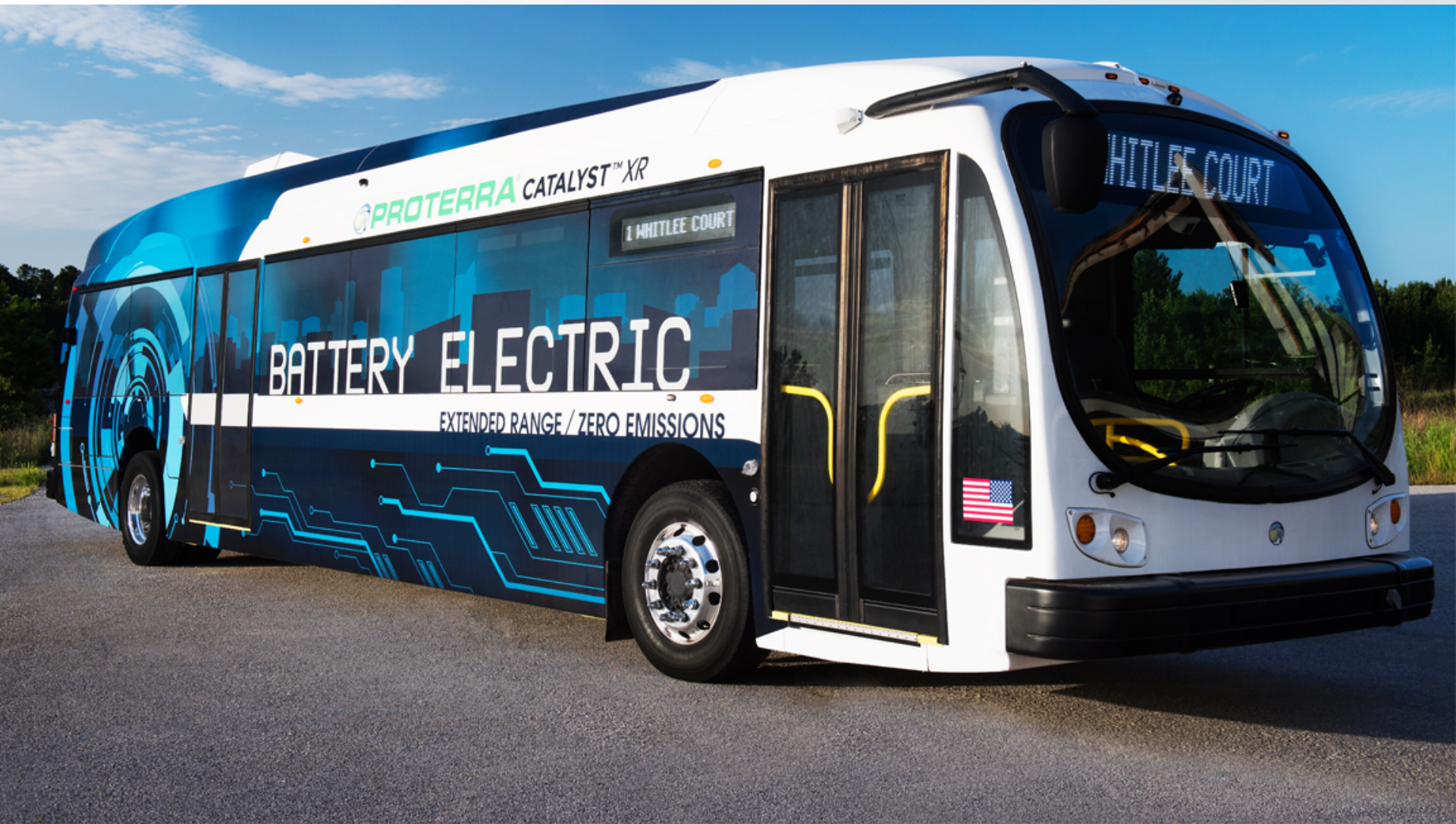


REVOLUTIONIZING URBAN TRANSIT

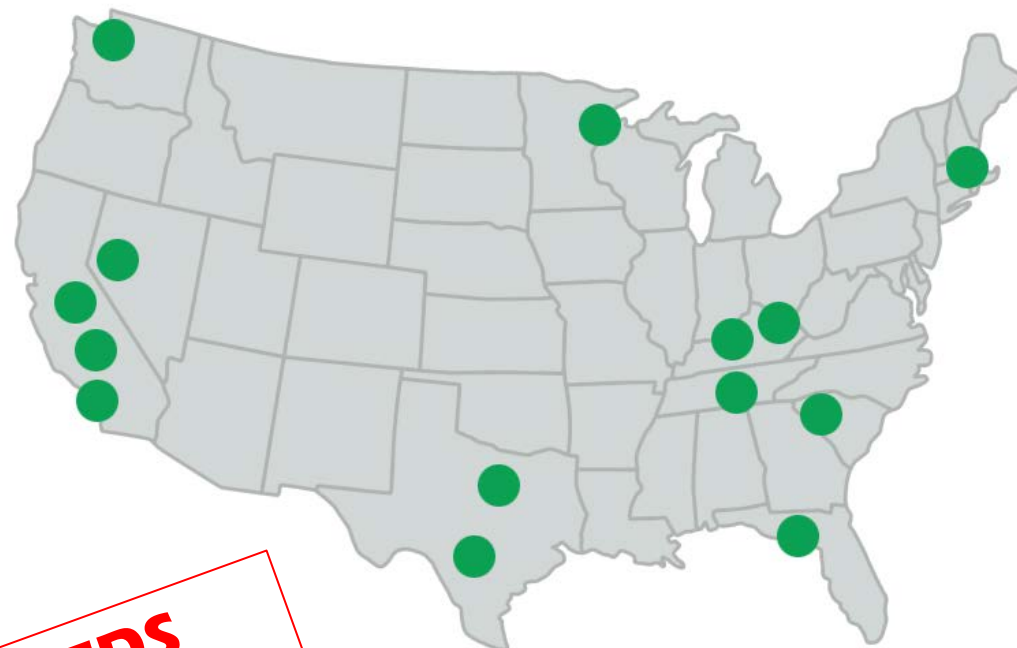


Ryan Popple (@rcpopple)
CEO of Proterra (@Proterra_Inc)



Proterra® Catalyst™ EV Transit Bus Record Breaking (Accel, Climb, Efficiency, Weight)

This is Happening:



**NEEDS
UPDATING**

U.S. EV Transit Deployments already exceed all previous Zero Emission Transit programs.

DEPLOYMENTS NATIONWIDE – HOT & COLD WEATHER



Foothill Transit



**NEEDS
UPDATING**

SAN JOAQUIN
RTD



15 U.S.
CITIES

4 MILLION LBS.
EMISSIONS
ELIMINATED

1.5M REVENUE
MILES

SMART CITIES ARE DEVELOPING EV PROGRAMS *NOW*



CUSTOMER REQUESTED DEMOS



Bremerton, WA
Spokane, WA
Richland, WA
Reno, NV
Missoula, MT
Roaring Fork, CO
Vail, CO
Steamboat Springs, CO
Denver, CO
Houston, TX
San Antonio, TX
Austin, TX
Fort Worth, TX
Dallas, TX
Orlando, FL
Tallahassee, FL
Atlanta, GA
Greenville, SC
Charlotte, NC



Silver Springs, MD
Largo, MD
Washington, DC
Baltimore, MD
Philadelphia, PA
Albany, NY
Boston, MA
Worcester, MA
Amherst, MA
Hartford, CT
Salt Lake City, UT
Pomona, CA
Portland, OR
Eugene, OR
Sacramento, CA
Stockton, CA
Oakland, CA
Modesto, CA
San Jose, CA

Santa Cruz, CA
Visalia, CA
Santa Barbara, CA
Montebello, CA
Culver City, CA
Santa Clarita, CA
San Bernardino, CA
San Diego, CA
Palm Springs, CA
Las Vegas, NV
Los Angeles, CA
Orange, CA



ECONOMIC & SUSTAINABLE



Lowest Cost, Lowest Environmental
Impact for Urban Transportation

ENERGY EFFICIENCY GAINS AND CLIMATE BENEFITS



DIESEL OR CNG
BUS
100% FOSSIL FUEL

CRUDE
OIL

4 MPG

=

10 kWh/Mile

80%

ENERGY SAVINGS
PER MILE



ELECTRIC BUS
(2 kWh/Mile)

ELECTRICITY MIX

US CA Pacific Northwest



Oil
Coal
Gas
Nuclear
Renewables/Hydro

86%

88%

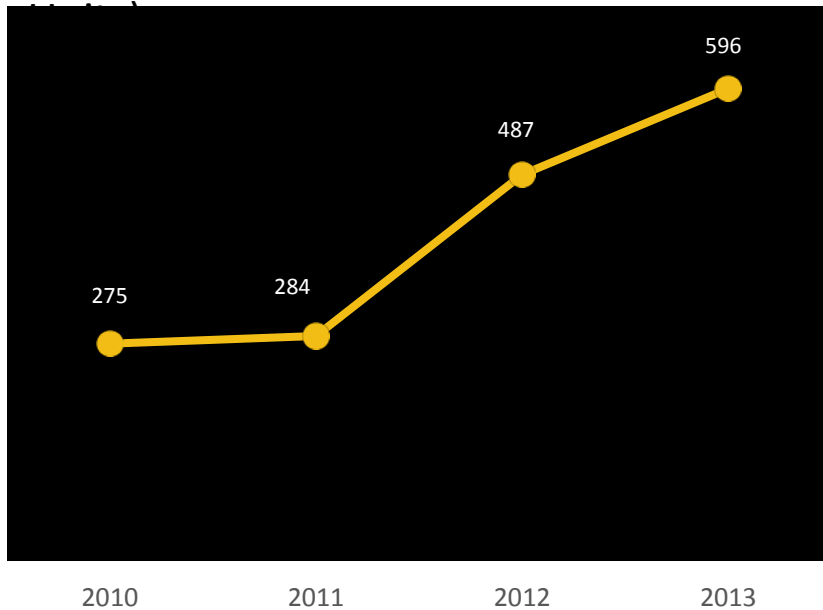
90%

Net Fossil Fuel Reduction

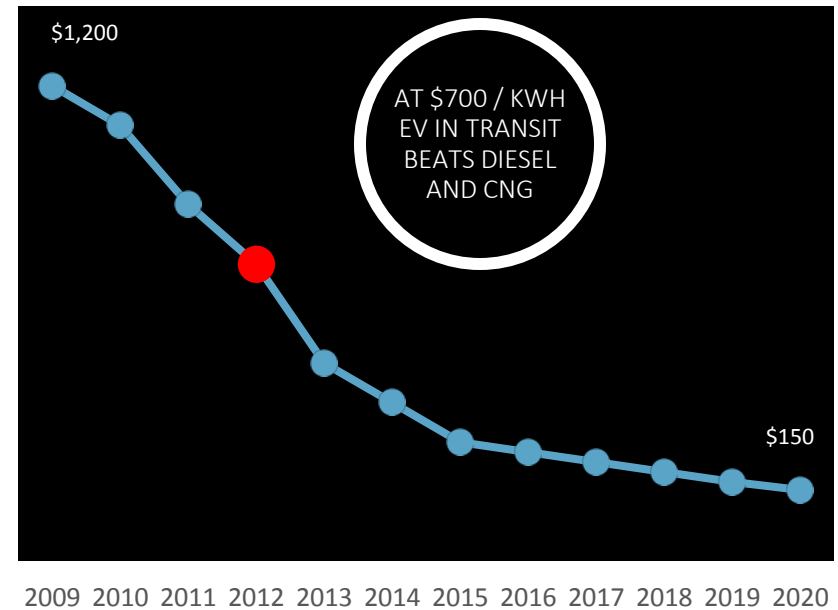
EV MARKET PROVIDED THE SCALE AND COST REDUCTIONS



U.S. HYBRID & EV SALES (000s)

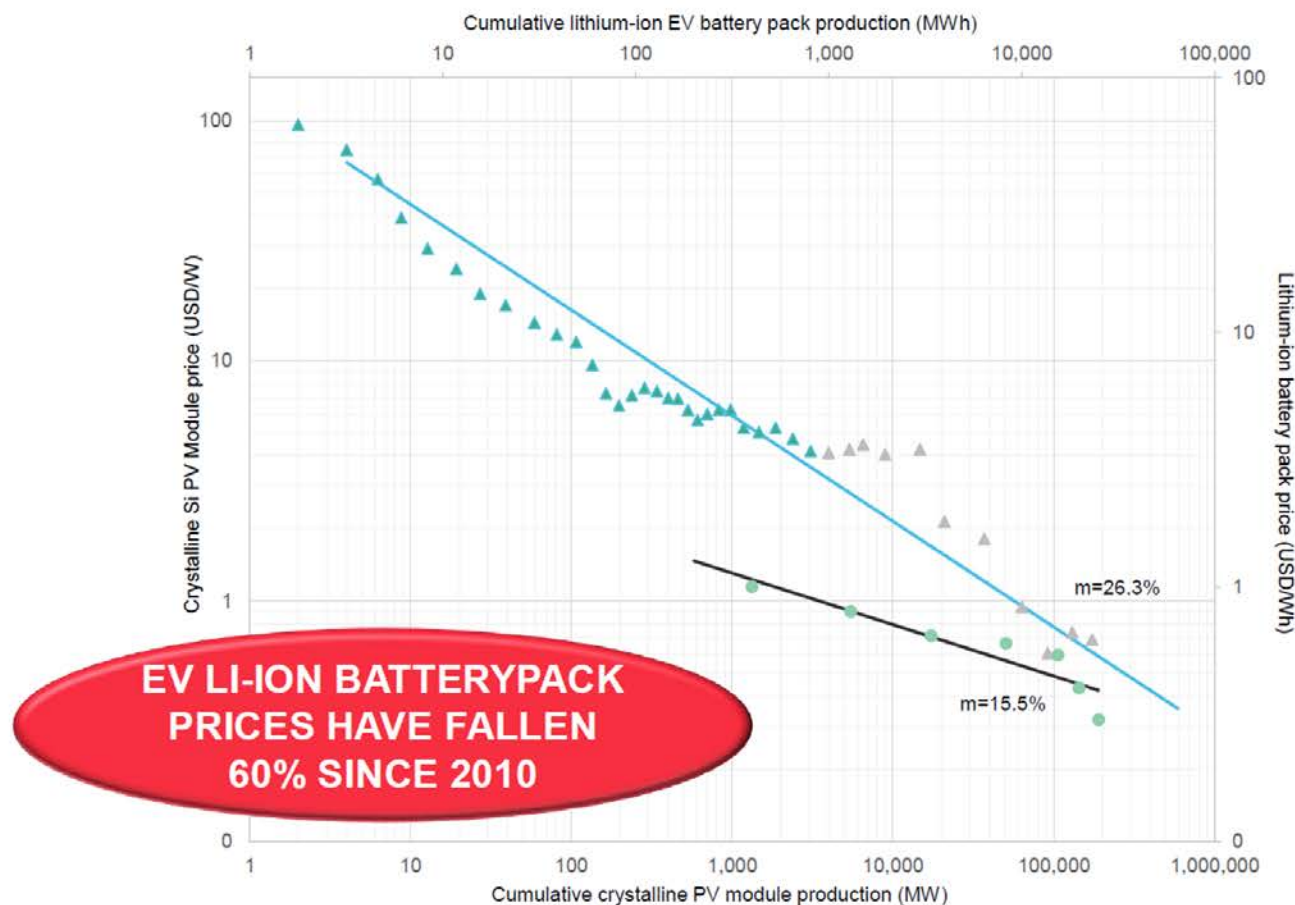


BATTERY PACK COST (\$/kWh)



ADVANCED BATTERY TECHNOLOGY HAS DECLINED IN COST TO THE POINT OF
DISRUPTION IN THE TRANSIT MARKET

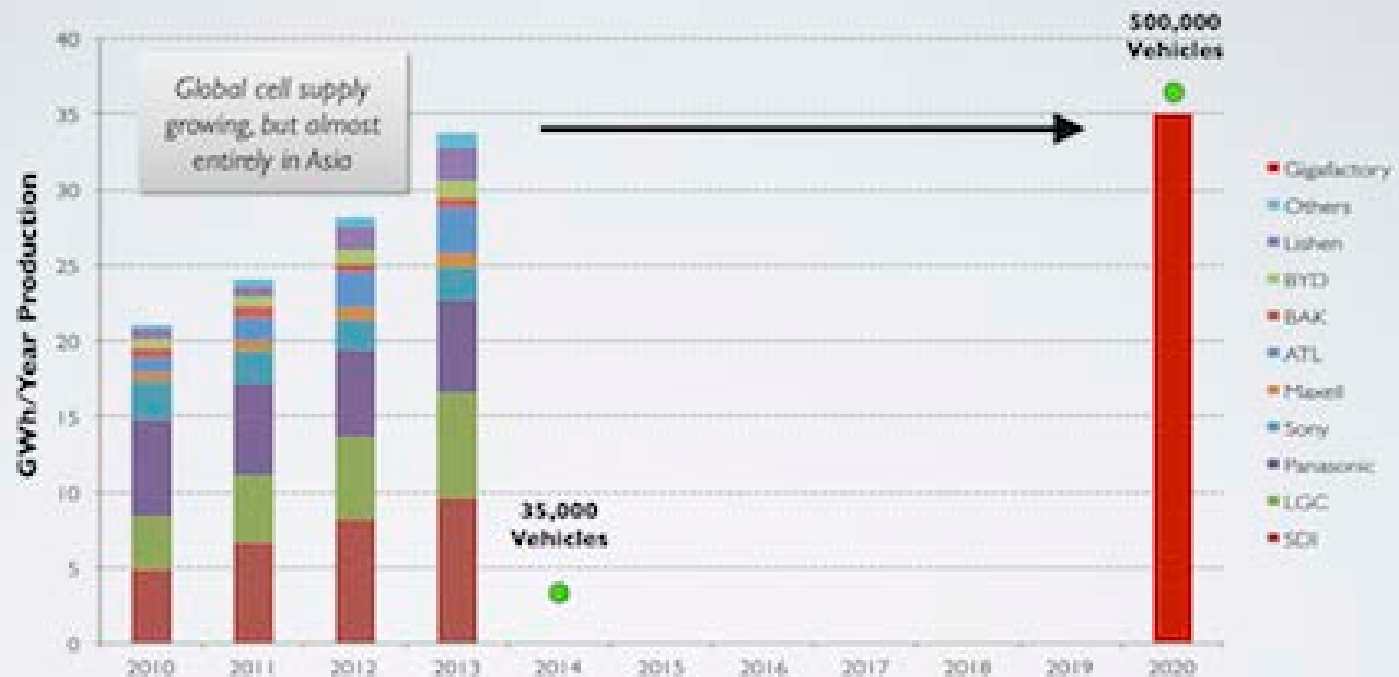
EV LITHIUM-ION BATTERY PACKS & CRYSTALLINE SI PV MODULES: HISTORICAL COST REDUCTIONS



Note: Values from 2010-2014 are based on BNEF's annual battery price index, *2015 based on H1 data. For more see here: <https://www.bnef.com/Insight/10299>. Cumulative production is based on total EVs sold and their respective battery pack size.

Bloomberg New Energy Finance

Planned 2020 Gigafactory Production Exceeds 2013 Global Production

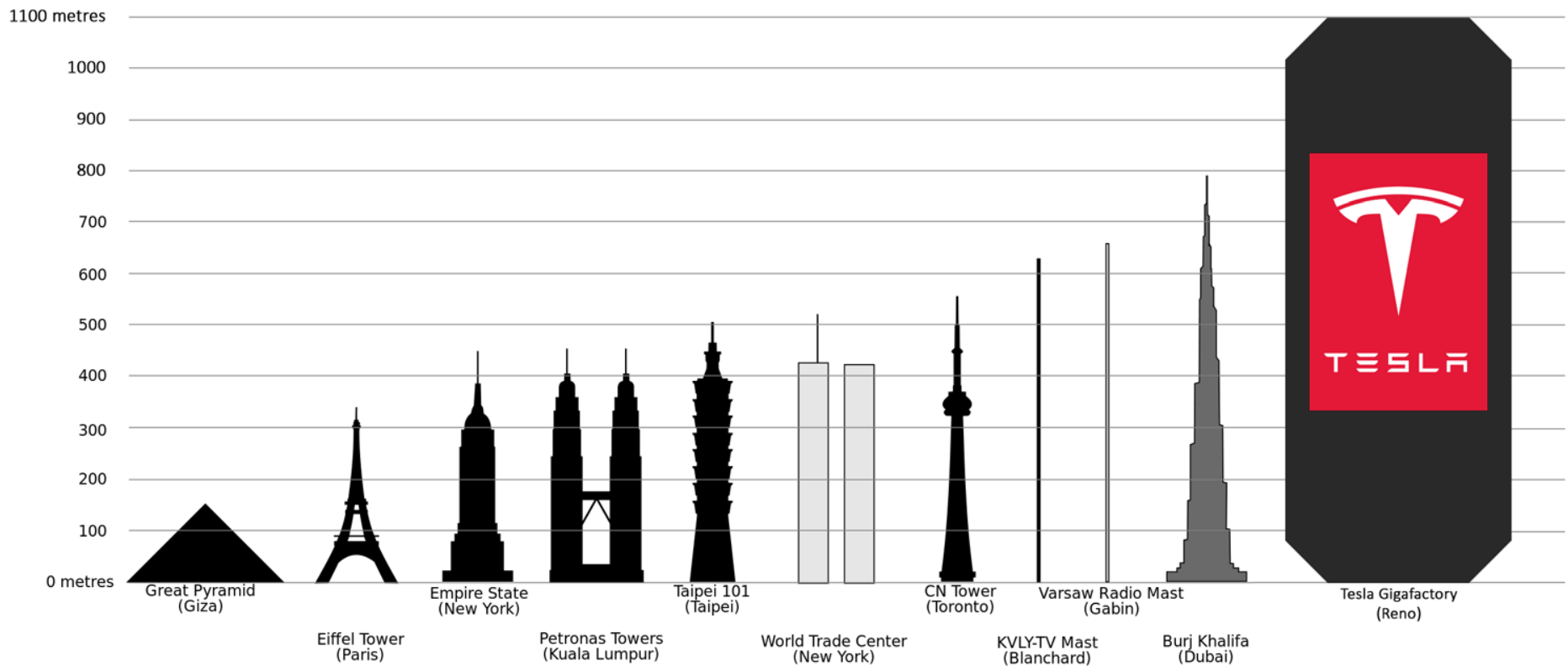


Battery pack cost/kWh reduced >30% by Gen III volume ramp in 2017

Source: IIT Takeshita 2013



BATTERY FORECAST - THE TESLA GIGAFACTORY

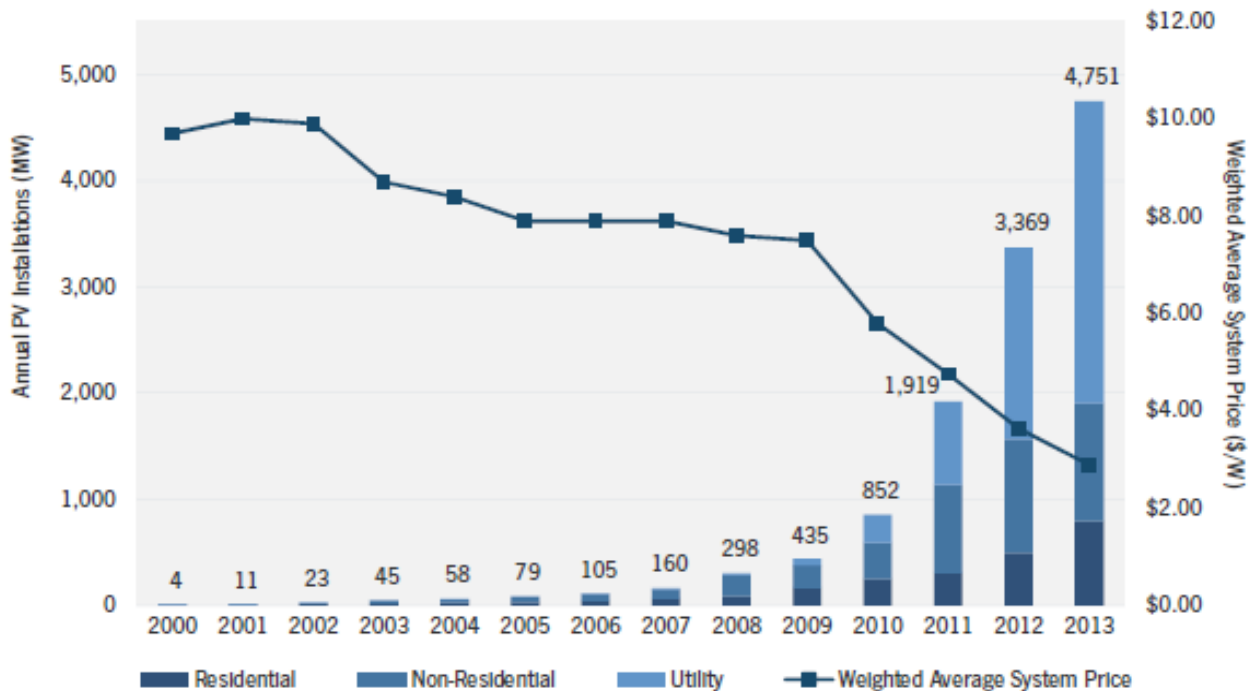


WE'VE SEEN THIS MOVIE BEFORE



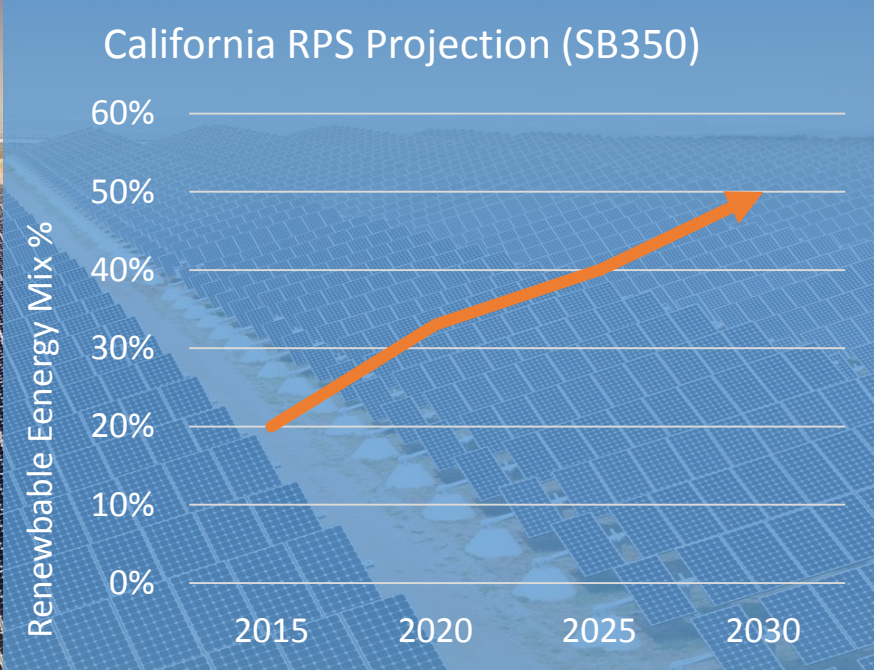
SOLAR INDUSTRY ANALOG

Cost Reduction and Scale Lead to Massive Adoption



Sources: GTM Research / SEIA and Lawrence Berkeley National Laboratory

•...> SOLAR REMAINED
NICHE UNTIL
ACHIEVING
ATTRACTIVE USER
ECONOMICS, THEN
10X GROWTH



This is where your electricity will come from.



**In 2014, a new solar energy system
was installed every 2.5 minutes in the US.**

Standards & Infrastructure

Where standards exist, don't reinvent the wheel to attempt "network effects" – i.e. plug-in charging

We don't need Light Duty Vehicle Chargers and Heavy Duty Vehicle Chargers. We need Low Power, Medium Power and High Power Chargers. Vehicle category is an irrelevant distinction and one that will fragment the market.

J1772CCS is the High Power Charging Standard for U.S. Electric Vehicles. CCS can supply sufficient power for Heavy Duty depot charging.

Multiple Light Duty OEMs already funding CCS networks and equipment scale. Scale = reduced cost and high quality.

