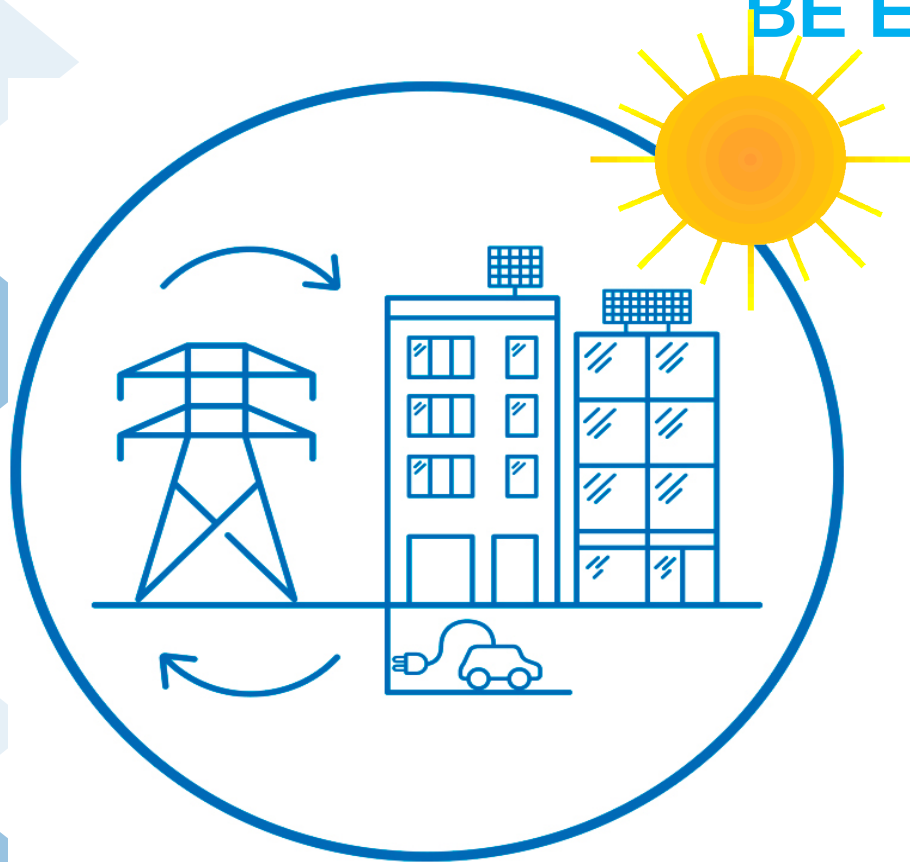


FAST CHARGING TO FACILITATE TRANSITION TO EV IN CATALONIA. WILL IT BE ENOUGH?



National Agreement for the
**energy
transition**
of Catalonia



ASSUMPTA FARRAN. Head of Transport Unit
Urban Mobility for Energy Transition



Generalitat de Catalunya
Institut Català d'Energia

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Commitments for the Catalan Energy Transition



AIR QUALITY SUMMIT



RENEWABLE ENERGY



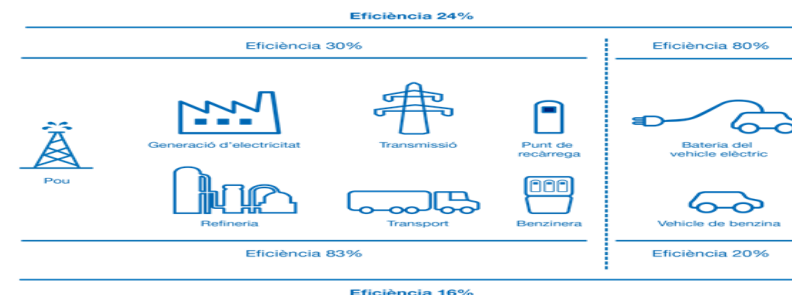
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**PIRVEC
2016-2019**

CLIMATE ACTION



ENERGY EFFICIENCY



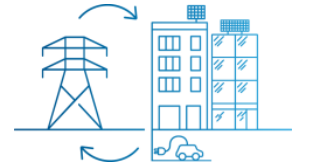
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PIRVEC 2016-2019

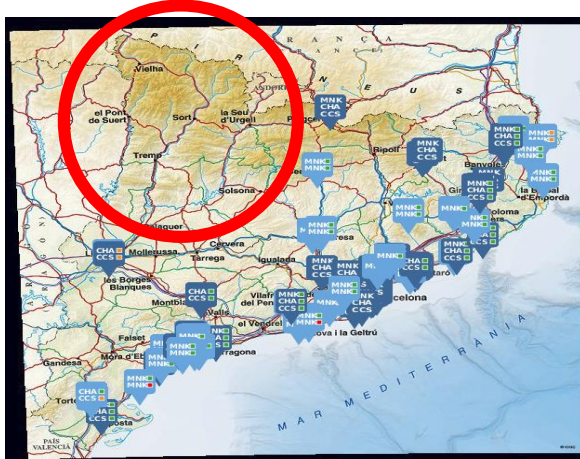
Boost a públic EV charge, key for energy transition commitments



PIRVEC. PUBLIC Fast, interoperable, easy and visible chargingpoint network



Real-Time viewer of the fast network



Girona



Cabrera de Mar



Montblanc

Alliance of municipalities for intermodality



2015



User card: LIVE, Reus, Girona, IBIL, Lleida

2017



User card interoperable

2018-19



Smartphone APPS



Lleida



Sta. Perpètua de Mogoda



Amposta



Olot



St. Cugat del Valles



Reus

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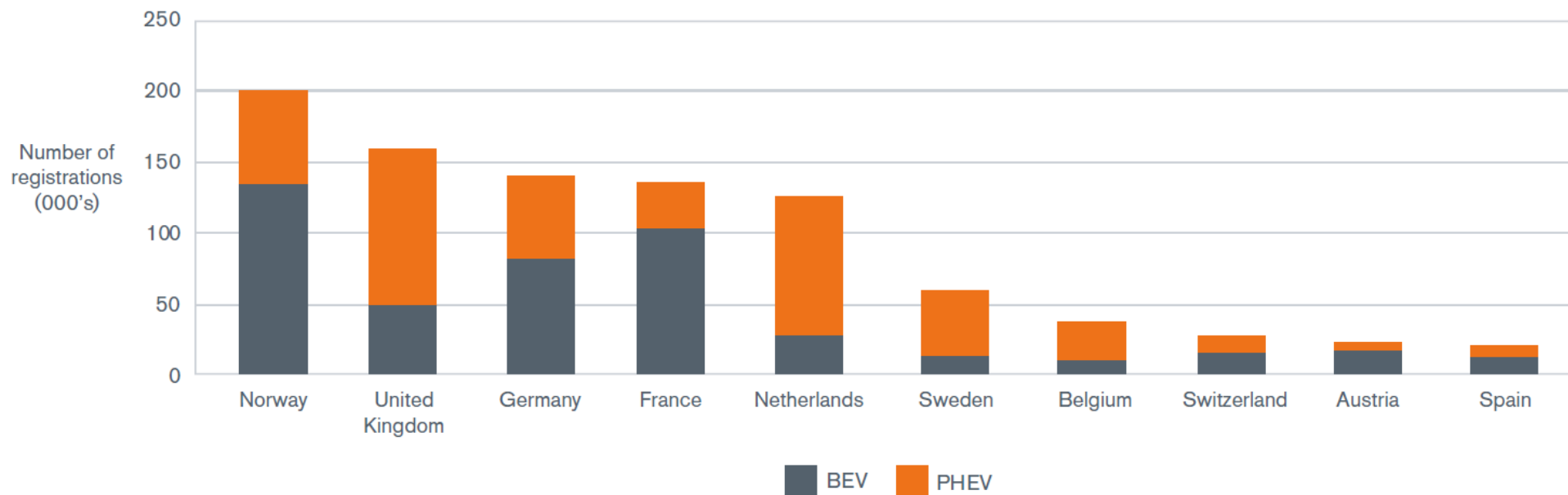
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THERE IS SOMETHING MISSING

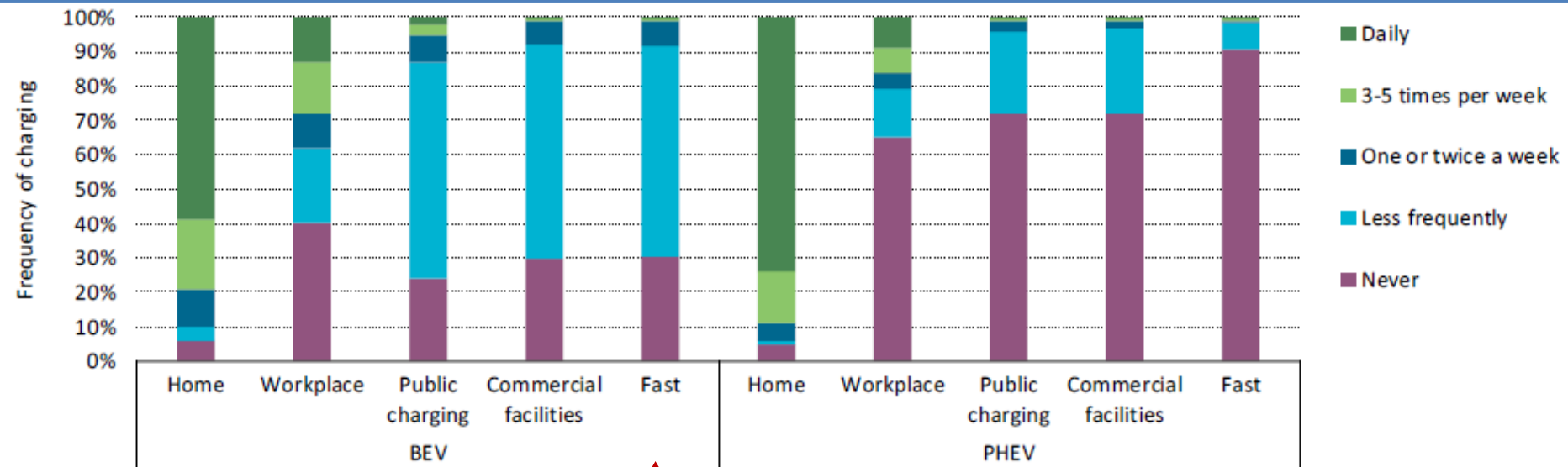
Top 10 European countries for EV registrations

1%



WHERE IS THE BUSINESS MODEL ?

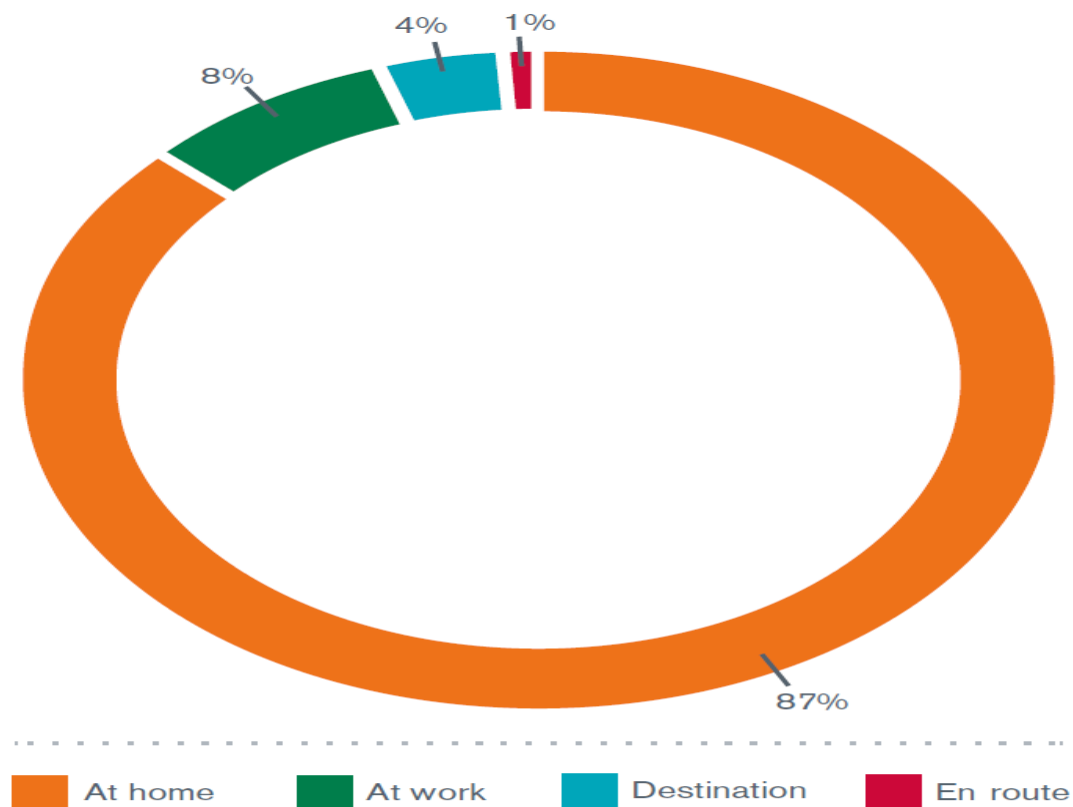
Figure 13 • Charging habits for a sample of Norwegian electric car users, 2016



Source: IEA elaboration based on results from Figenbaum and Kolbenstvedt (2016).

WHERE IS THE BUSINESS MODEL ?

EV charging activity by location in UK



Domestic charging point. Training plan for installers



PIRVEC 2016-19
Pla d'Infraestructura
de Recàrrega
per al Vehicle Elèctric
de Catalunya
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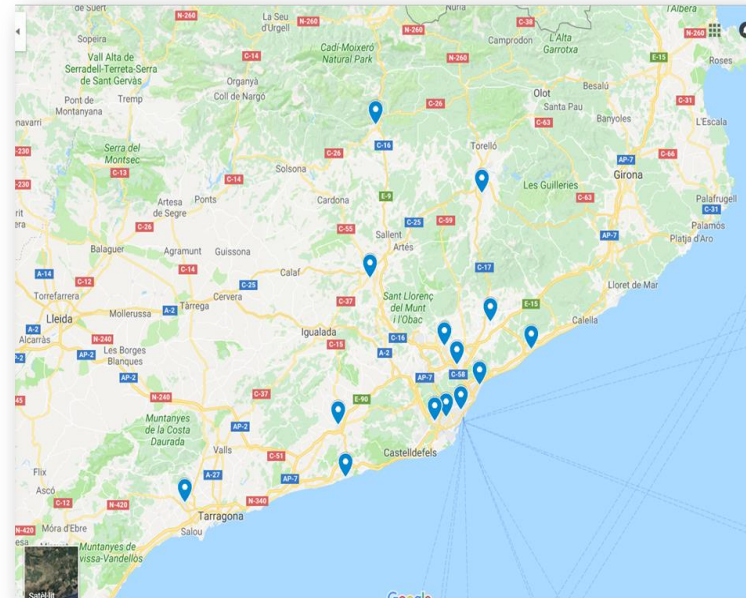


Collaboration between ICAEN and the guild of installers to provide training for the installation of domestic charging points in community car Parks and the necessary administrative procedures

Des del juny al desembre s'han fet **14 convocatòries** i s'han format **150 professionals d'empreses instal·ladores**.

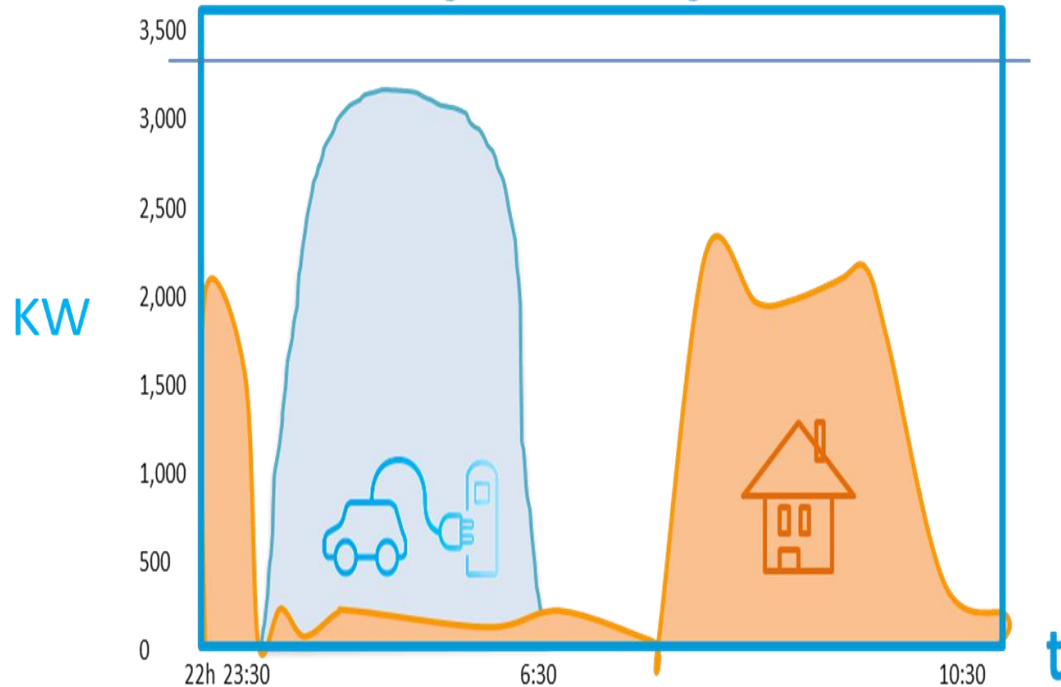
S'han fet cursos a:

- Barcelona,
- Granollers
- L'Hospitalet
- Mataró
- Sabadell
- Cornellà de Llobregat
- Badalona
- Vilafranca del Penedès
- Reus
- Vic
- Manresa
- Ripollet.



TODAY'S REGULATION. DEMAND MANAGEMENT IN VINCULATE CHARGE POINTS.

Load Curve of an EV



20%

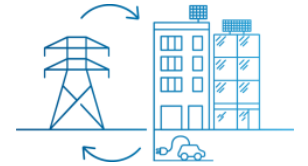


Nightly hourly rate



A XX CENTURY REGULATION FOR A XXI CENTURY TECHNOLOGY.
IS NOT INTERESTING AT ALL FOR THE CAPTURE OF CONSUMERS VALUE

THE WAY TO 100% RES IN POWER SYSTEM



EU PARLAMENT 35%



EUROPEAN COUNCIL 27%



SPAIN LAST MINUTE 35%



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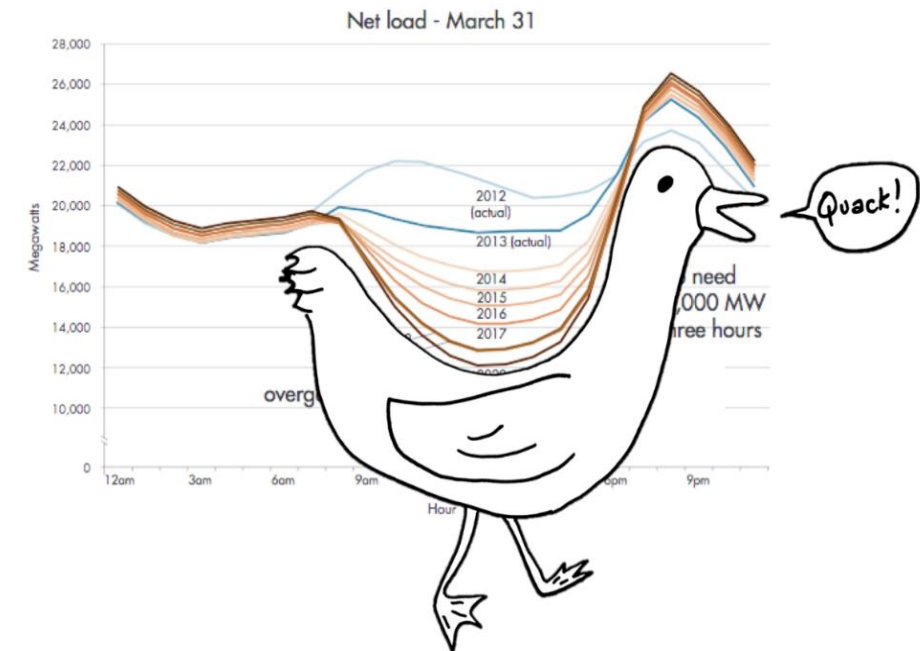
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ENERGY TRANSITION 2030 IN SPAIN

Energy transition experts comisión (27 % RES)

	2017 (Avanç informe anual de REE)	Escenari Generació Distribuïda 2030	Diferència 2017-2030 Escenari GD	Escenari Transició Sostenible 2030	Diferència 2017-2030 Escenari ST
Demanda (TWh)	250	296	18%	285	14%
Capacitat total instal·lada (MW)	99.311	149.439	50.128	143.737	44.426
Nuclear	7.117	7.117	0	7.117	0
Carbó	9.536	847	-8.689	4.660	-4.876
Cicle Combinat	24.948	24.560	-388	24.560	-388
Hidràulica (+bombament)	20.331	23.050	2.719	23.050	2.719
Eòlica	22.863	31.000	8.137	31.000	8.137
Fotovoltaica	4.431	47.150	42.719	40.000	35.569
Termosolar	2.299	2.300	1	2.300	1
Resta de renovables	743	2.550	1.807	2.550	1.807
Cogeneració i altres	7.043	8.500	1.457	8.500	1.457
Bateries	-	2.358		-	
% RES / Generació	33%	62%		67%	
Emissions ktCO2	66.000	12.593	-81%	16.264	-75%

Can't quite see it? Here, let me help:



CAISO/Jordan Wirfs-Brock

THE ENERGY TRANSITION IS AT THE BEGINNING BUT...



Los Angeles Times

California invested heavily in solar power.
Now there's so much that other states are
sometimes paid to take it

By IVAN PENN

JUNE 22, 2017



BUSINESS
INSIDER

Germany paid people to use electricity over
the holidays because its grid is so clean



Jeremy Berke

Dec. 29, 2017, 12:31 PM

41,405

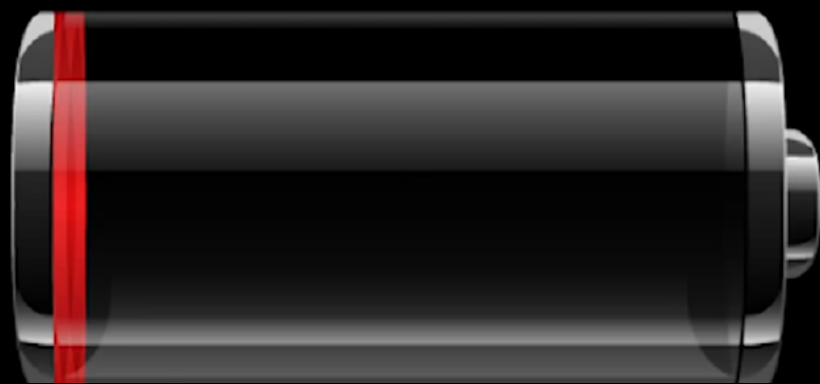


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#cleanenergy

Low Battery

1% of battery remaining

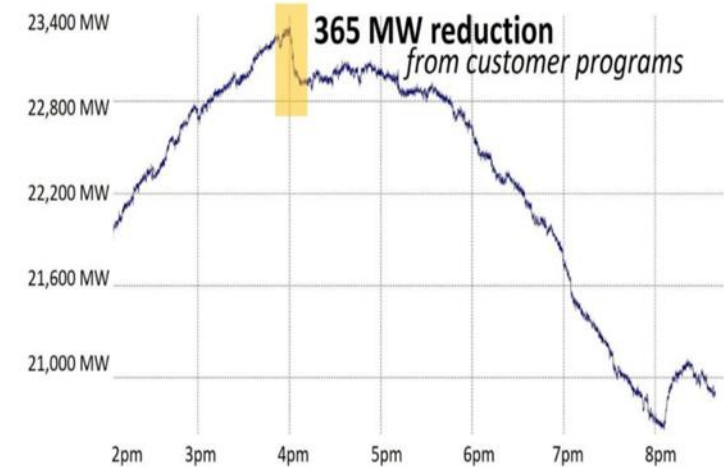


CHALLENGES AND OPORTUNITIES DO EV REPRESENT TO THE GRID?

AGREGATION OF V2G RESOURCES, FLEXIBLE MARKETS



Southern California Edison system on Tuesday, July 24, 2018

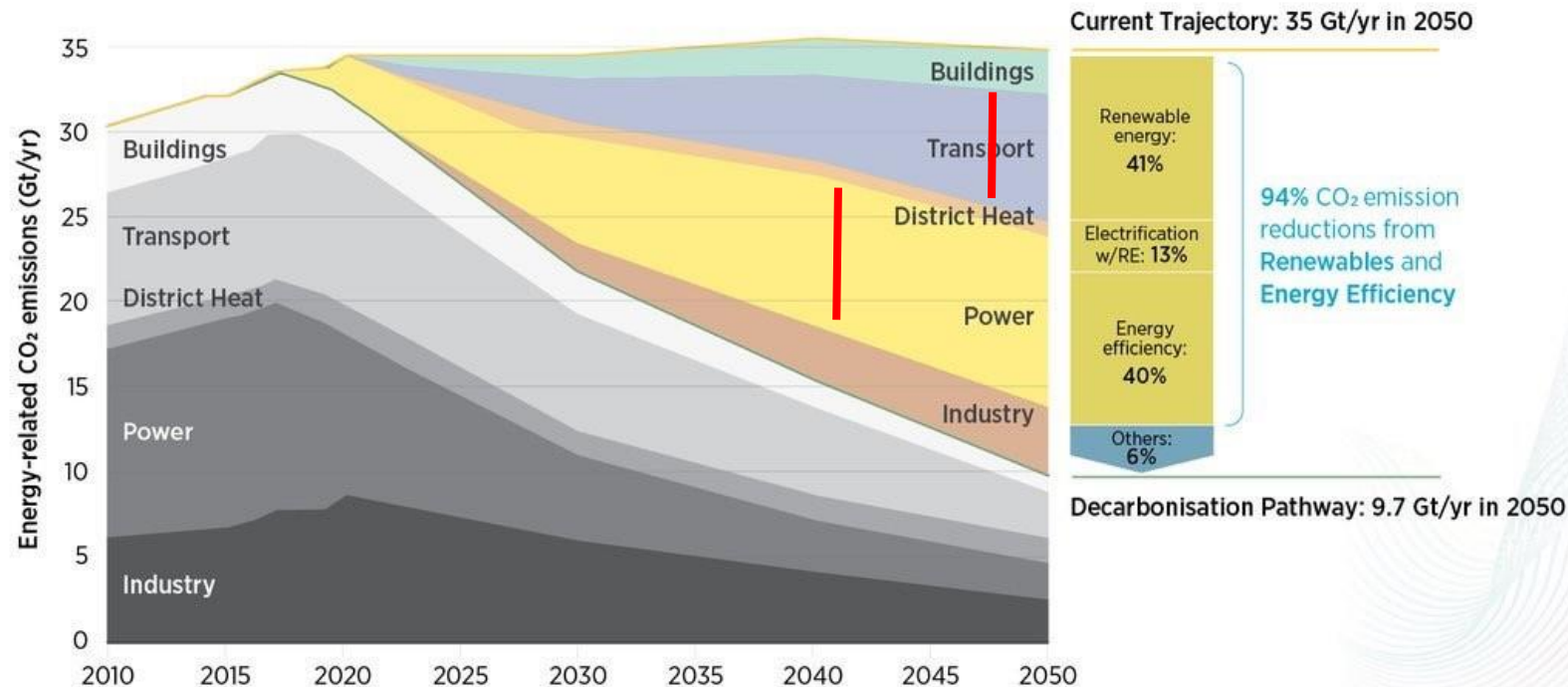


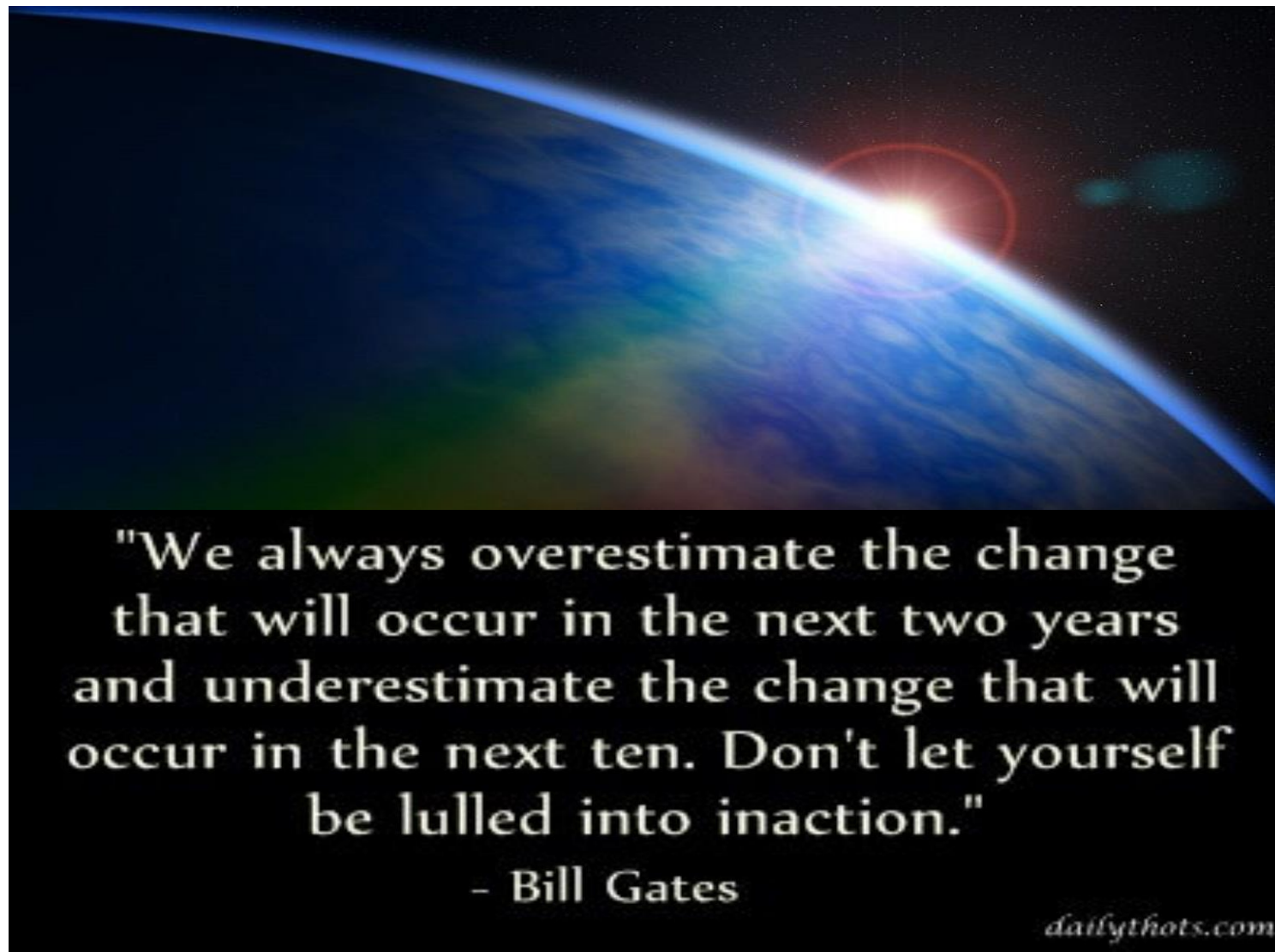
THE INTEGRATION OF SOLAR AND WIND ENERGY WILL REQUIRE ENERGY CHARGING SERVICES FOR EV

GLOBAL ENERGY
TRANSFORMATION



Renewables and improved energy efficiency can dramatically reduce energy-related CO₂ emissions.





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