Future Role of Distribution Companies

WFER 2015

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EDSO for Smart Grids

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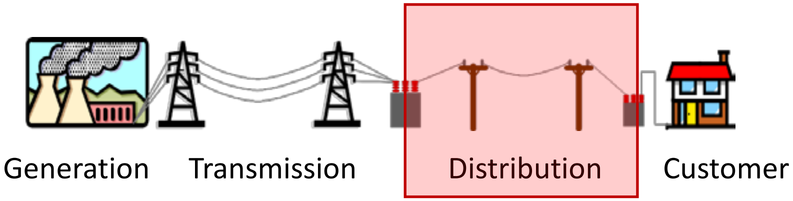
Leading the cooperation for the Electricity networks of the future

Bringing Smart Grids from vision to reality



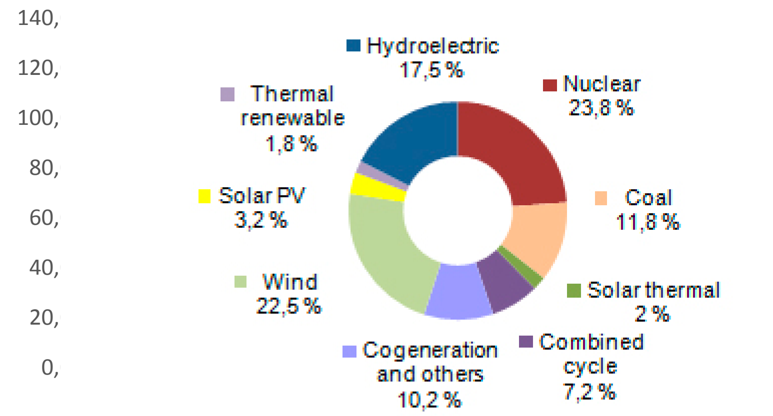
Renewable energy is growing fast in the EU

2020 EU objectives
- 20% RES
- 20% increase in energy efficiency compared to 1990
- 20% reduction in greenhouse gas emissions compated to 1990

2030 EU objectives
- 27% RES
- 27% increase in energy efficiency compared to 1990
- 40% reduction in greenhouse gas reductions compared to 1990

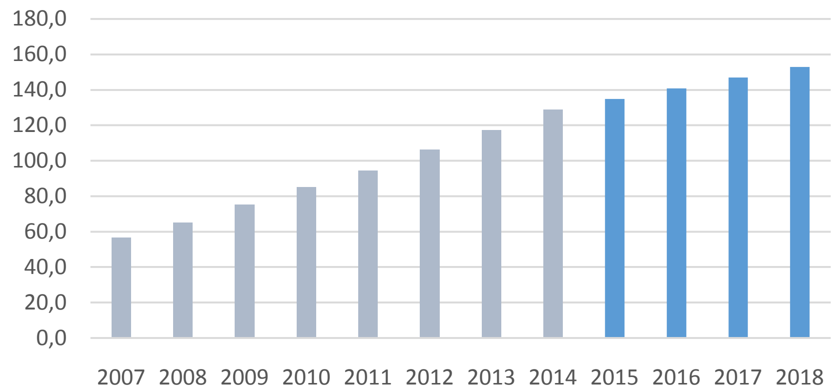
Spain - Generation mix in the month of March 2015

Cumulative installed PV capacity in the EU (in GW)



Source: Red Electrica de Espana

Cumulative wind capacity in the EU (in GW)

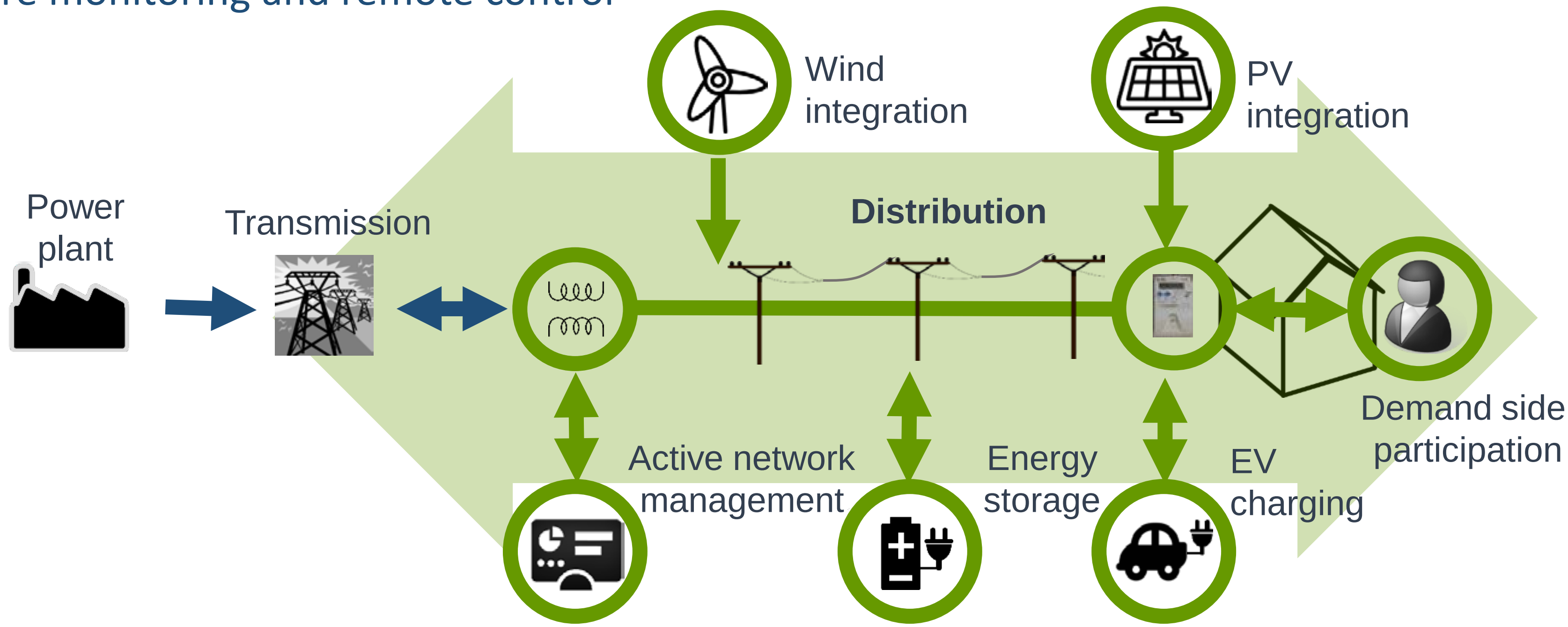


… to a decentralised one.

Less predictable generation

Less predictable consumption

More monitoring and remote control



DSOs as neutral market facilitators

Through smart grids, DSOs can deliver better services:

- to consumers - Accurate information on energy consumption, helping to lower bills
- to suppliers and energy services providers - **data delivery and analytics** to help develop new products and services
- to local authorities - information on district energy consumption / communal building energy consumption and **advice**.
- (in some countries) support to the electric vehicles market by deploying the first public charging spots.

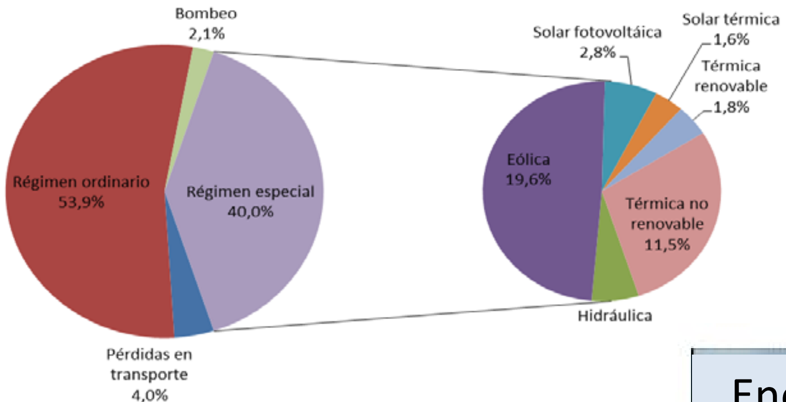
DSOs as neutral market facilitators

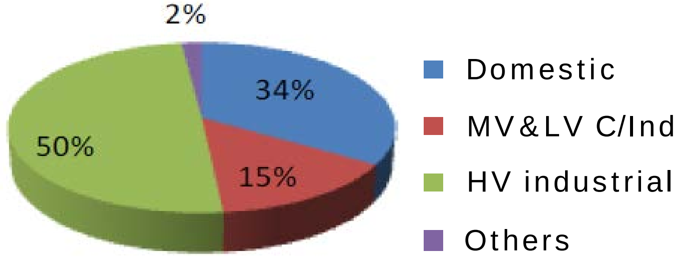
Concretly, how would they do that?

- Offering direct incentives to regular consumers willing to lower their consumption at time of peak grid use.
- Offering « smart contracts » to consumers accepting to be curtailed a few times a year, in exchange of cheaper and quicker connection.
- Offering differentiated connection charges to DER, based on location of the grid connection.
- Procuring flexibility services
- Providing more data to suppliers and energy services companies (based on consumer consent), through a data hub.
- Facilitating supplier switching, billing, and settlement

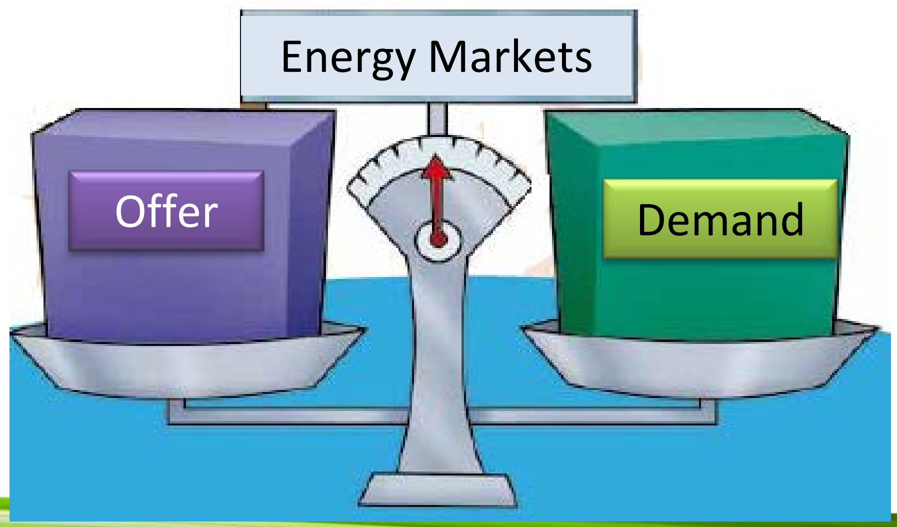
1.- The DSO as market facilitator

1. Allow connection and access (transparent and non discriminatory)
2. Switching procedures
3. Enabling metering information access for retail (market agents) and setllement processes
4. Data protection and privacy
5. New service providers relationships (aggregators, ESCOS, ICTs,…)





40% of the offer is connected to the DSO System



More than 60% of demand is connected to the DSO system

Source: REE (Spanish TSO), 2013 (annual report)

Source: CNE (Spanish NRA), 2011

What are DSOs waiting for?

Consumers	Consumers need to be better communicated the benefits of smart grids, and be given an incentive to become more active
Investments	Current regulatory frameworks do not incentivise (or worse, allow) investments in smart grids – traditional approach of “firm capacity” are preferred to guarantee revenues
Innovation	Large scale demonstrations – RD&D/ innovation funding is needed.
Role of the DSO	DSO as active system operator and neutral market facilitator: not recognised by all regulators yet.
Interoperability	Standards exists, but interoperability has to improve
Data	Privacy and cyber/system security are key

Thank you for your attention!

www.edsoforsmartgrids.eu