



Demand-response in Europe

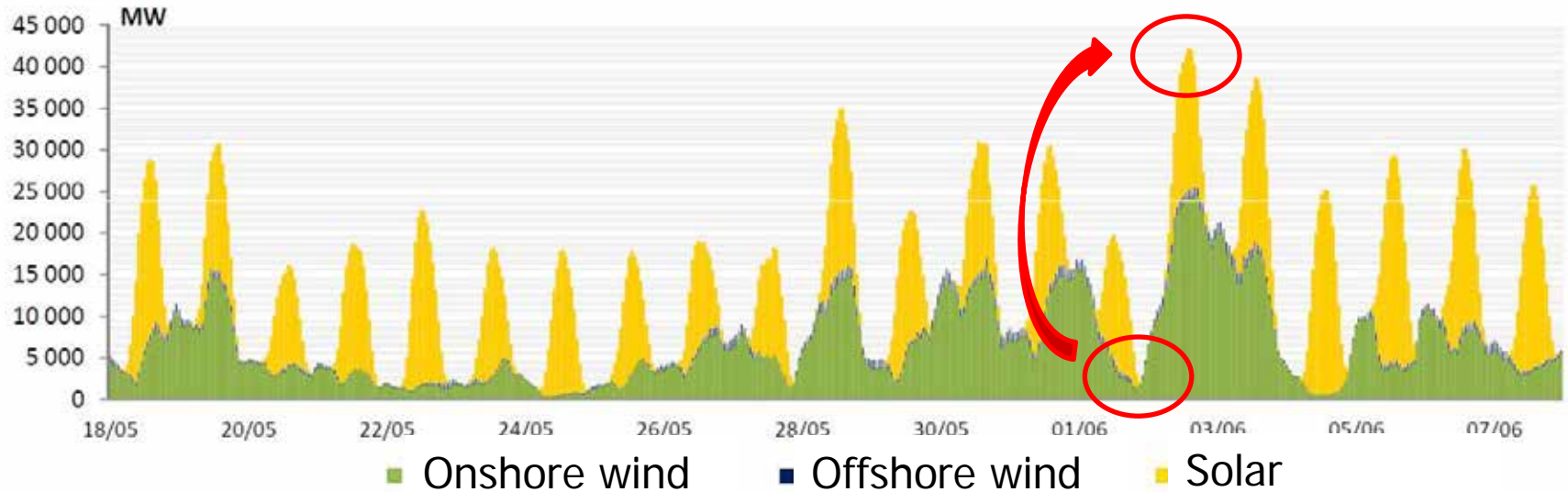
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We need it but how can we
deliver for real?

Pierre BORNARD
Deputy CEO (RTE)
Lausanne – September, 10th 2015

Energy transition, Transición energética, Energiewende, Transition énergétique...

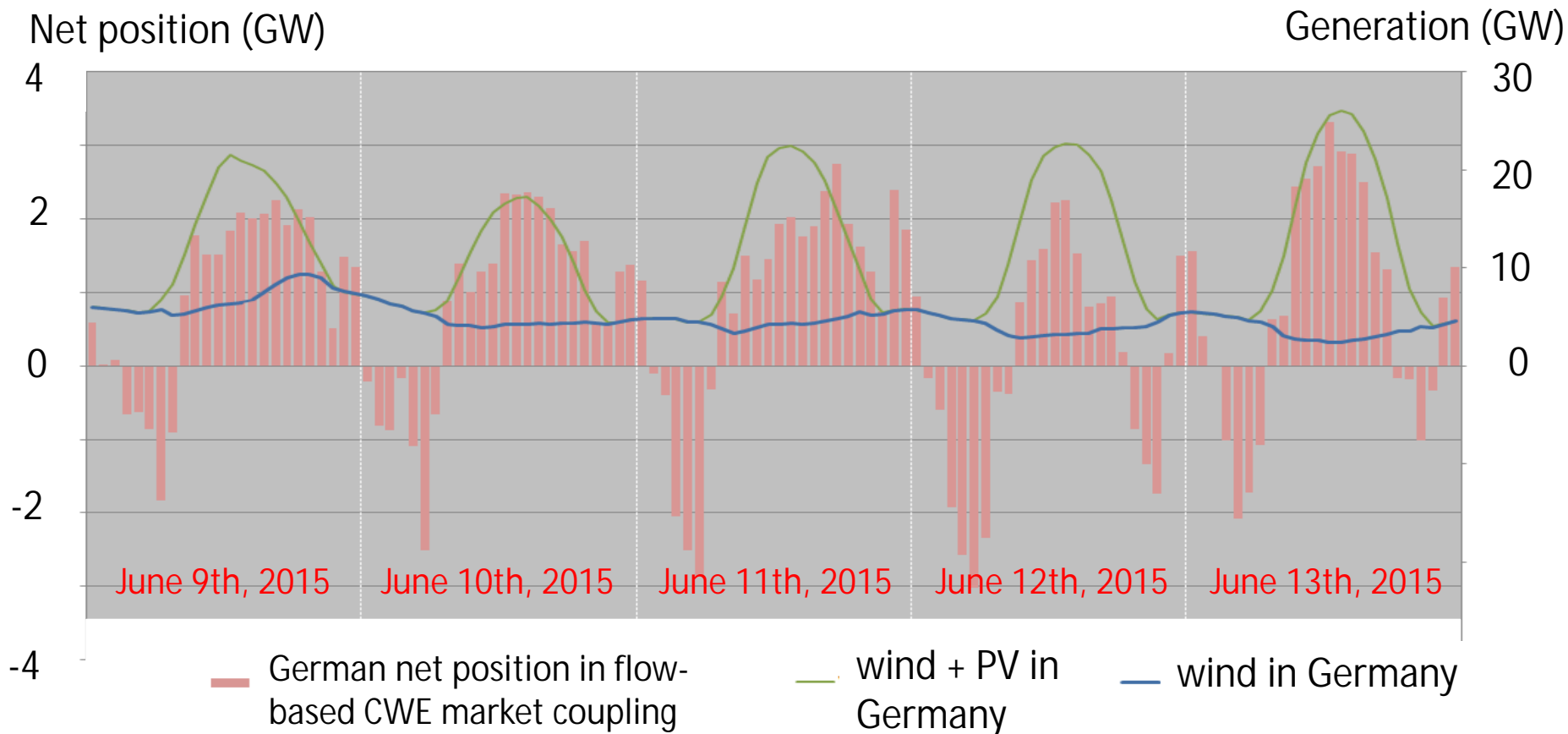
GERMANY



40 GW within 12 hours (e.g. on June 2nd 2015)

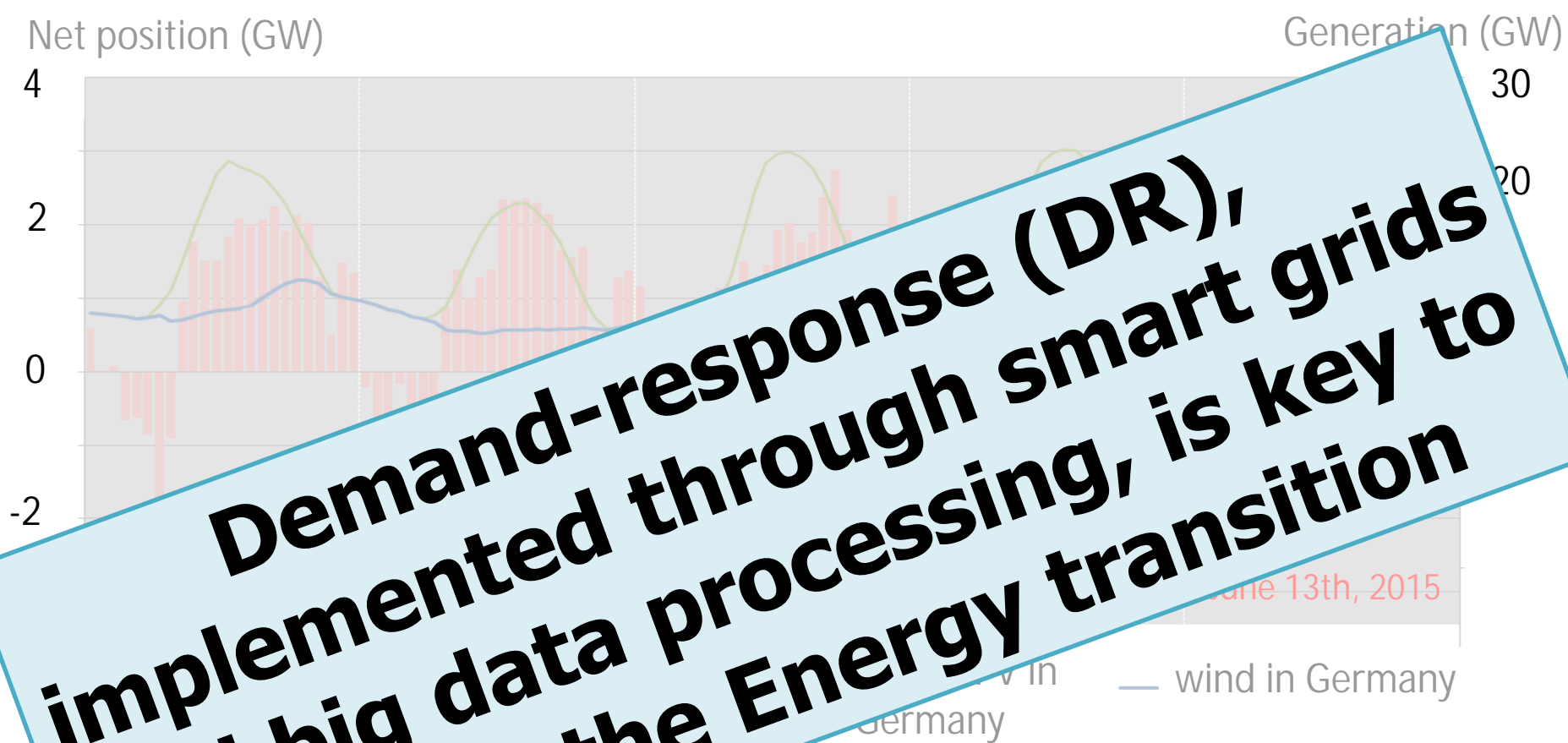
(25 GW in 1 hr during the 2015 March 20th solar eclipse)

Variability in Generation requires Flexibility in Demand



- Presently, **more than 200 GW of wind and solar** installed capacity in Europe
- **Need for timely new infrastructures AND flexible resources**

Variability in Generation requires Flexibility in Demand



Demand-response (DR), implemented through smart grids and big data processing, is key to achieve the Energy transition

- 100 GW of wind capacity in Europe
- New timely new infrastructures AND flexible resources

Promoting DR is a consensual topic...



CALLS for the Commission to swiftly present its communication [...] recognising **the importance of promoting flexible demand response.**



Emphasises the urgent need for new, modernised, smart and flexible energy infrastructure, especially smart grids, to **allow for a more flexible back-up and balancing power capacity, including [...] demand response**

Promoting DR is a consensual topic...



The Commission will prepare an ambitious legislative proposal to redesign the electricity market [... this will] **enable full participation of consumers in the market** notably through demand response.



All forms of generation, storage and **demand response will compete on a level-playing field across all timeframes** [in a European-wide market].

Promoting DR is a consensual topic...

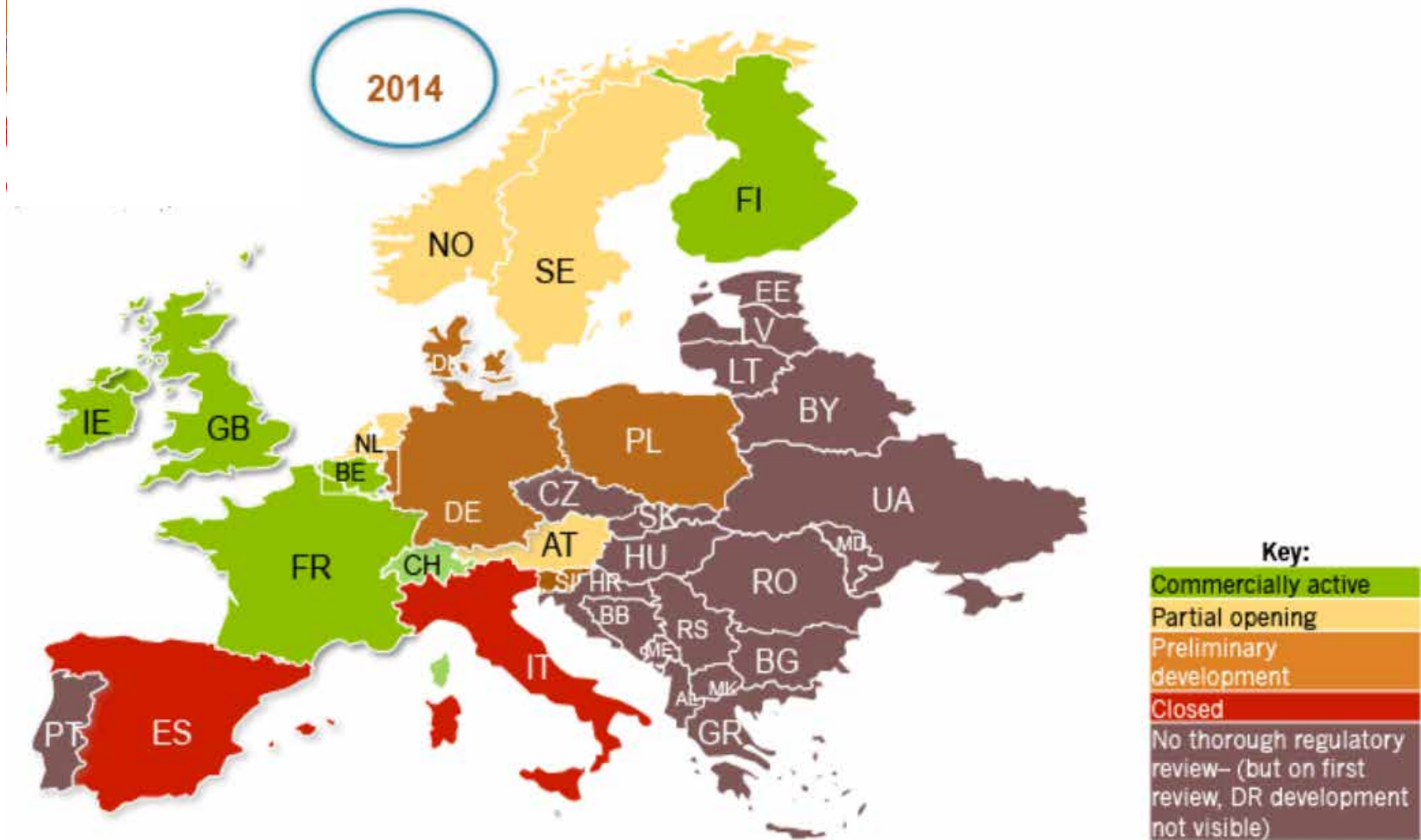


The Commission

All stakeholders (be it EU institutions, governments, TSOs, manufacturers, consumers) are **recognising the importance of DR** and asking for its timely deployment

...demand response will compete on a level-playing field across all timeframes [in a European-wide market].

... BUT the reality seems different



SEDC Report, "Mapping DR in Europe today", 2014

... BUT the reality seems different

Only 5 EU countries have commercially mature DR market

SEDC report "Mapping DR in Europe Today"

2014



SEDC Report, "Mapping DR in Europe today", 2014

The French case

- **After a 5-year market reform**, DR is able to compete **directly on a level playing field** with other market players in **all existing market structures**.
- **Technical barriers to aggregation have been removed** (aggregation of consumers whatever their suppliers, their connection grids, their size...).
- **SEDC has ranked France as the 1st country** regarding the integration of DR in markets.
- Market signals are improving and **competition is increasing in the French market** (e.g. 10 DR operators are competing in France).

... but still a long way to go !!



How to really deliver DR?

**European framework
for DR**

**Well designed DR
products**

**TSO/DSO
coordination**

**Full market
integration of DR**

**Right data for the
right needs**

Energy Efficiency Directive – Art 15.8

Member States shall ensure that national energy regulatory authorities **encourage demand side resources, such as demand response, to participate alongside supply** in wholesale and retail markets.

Member States shall ensure that **transmission system operators and distribution system operators**, in meeting requirements for balancing and ancillary services, **treat demand response providers, including aggregators, in a non-discriminatory manner**, on the basis of their technical capabilities.

Energy Efficiency Directive

Member States

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**Within the current discussion
on the Energy Union do we
need a more ambitious EU
framework for DR ?
(Network code? Stronger
requirements towards Member
States...?)**

Two different set of barriers to DR currently exist in most European markets



1. Regulatory barriers



- Need to introduce a real level playing field between DR operators (e.g. aggregators) and suppliers**
- DR operators should be able to act without any dependence on suppliers (free access to consumers, be able to value DR as a resource alongside supply on electricity markets)**

Two different set of barriers to DR currently exist in most European markets



2. Technical barriers



- **Need to allow aggregation** (e.g. IT systems)
- **Technical requirements should facilitate aggregation** (adapted method for control of DR, suppression of barriers to aggregation regarding the volume of DR, the connection point, the supplier...)

Full market integration of DR

Two different set of barriers to DR currently exist in most European

**An in-depth market evolution
+ the commitment of public
authorities, ACER & NRAs,
ENTSO-E, TSOs and DSOs
across Europe are required**

S... DR,
the... regarding
SU... the connection point, the

Collection and use of data from TSOs and DSOs need to rely on 5 principles:

- **Confidentiality** of data for consumers and between competitors
- **Transparency** for the consumers
- **Competition between market parties must be preserved**
- **Respect of each party's role & duties:** data must be collected and accessed based on needs and adequate geographical scale (e.g. TSO should be able to have access to DSO's data in order to fulfill their duty in terms of system security and market operations)
- **Economic efficiency**

TSO/DSO coordination is crucial

- ∅ Data access for a secure operation of power system and grids: **TSOs and DSOs need to be able to have access to all data necessary to perform their core mission.**
- ∅ Market integration: **TSOs and DSOs should facilitate the integration of DR in markets:**
 - TSOs and DSOs need to ensure that **all DR resources are able to participate in all markets** as much as possible.
 - **From a TSO perspective:** defining market rules that allow the participation of DR resources + controlling DR activations of aggregated loads.
 - **From a DSO perspective:** allowing aggregation.

Conclusion: some personal suggestions

- ∅ **Create a single European DSO body**, bound to neutrality (if not unbundled), as the DSO voice to contribute in establishing European rules
- ∅ **Put in place some European 'legislation'**:
 - high level guidelines for general harmonized principles
 - some mandatory details (e.g. Flows of data and cash between aggregators / suppliers / consumers)
- ∅ **Give ACER new mandatory tasks** on retail markets with powers to overrule NRA's: the energy market can be regulated only if considered as **wholesale + retail**

Thank you for
your attention!

