

Current status and progress of Demand Response in the EU

Jessica Stromback
Chairman of Joule Assets and Chairman of the
Smart Energy Demand Coalition
European Parliament
30th May 2017



SEDC Membership

Executive Members



Associate Members



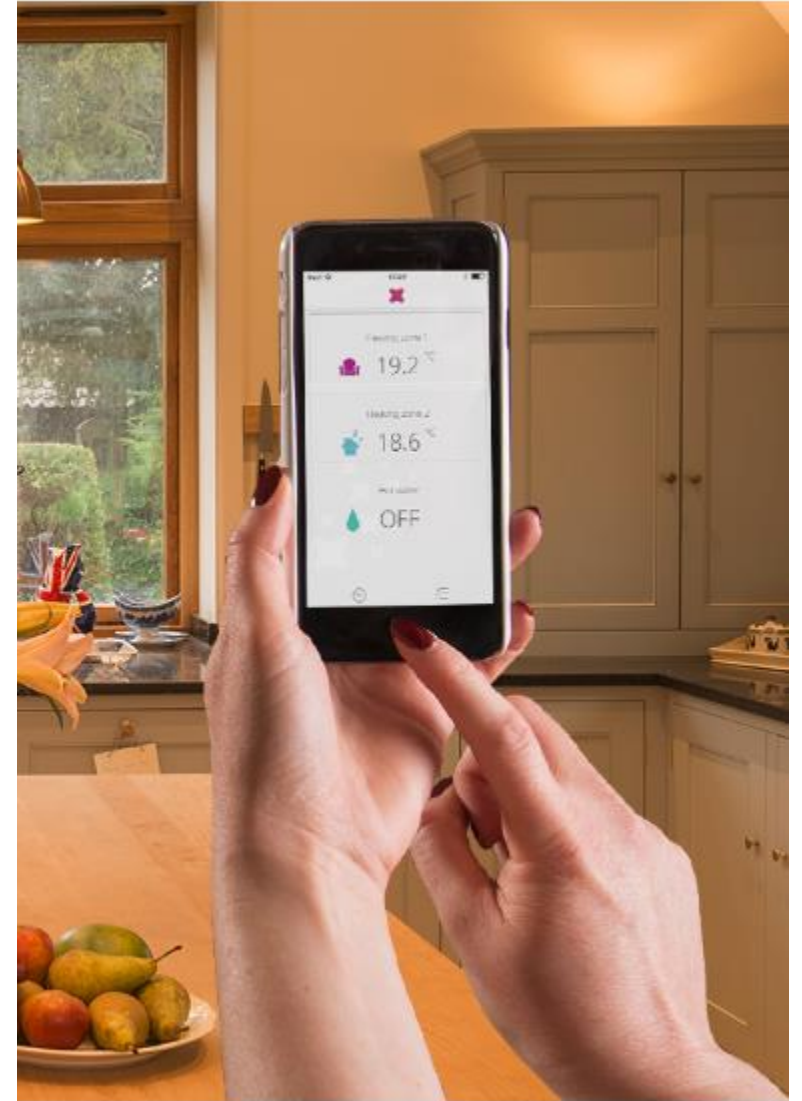
Two types of Demand Response



1) Implicit Demand-Side Flexibility

Consumer adjusts to variable market-price signals through

- ➔ personal choices
 - ➔ automation
-
- ✓ uses power when it's cheapest
 - ✓ saves money on consumer's bill
 - ✓ saves hedging cost & supports system

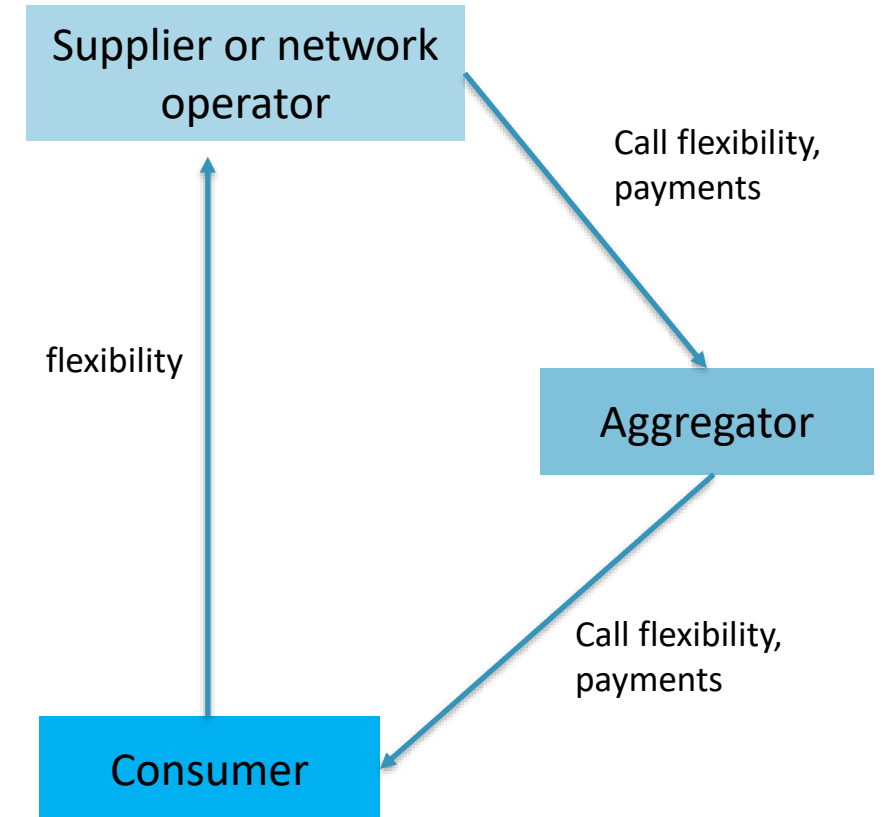


Picture: geo

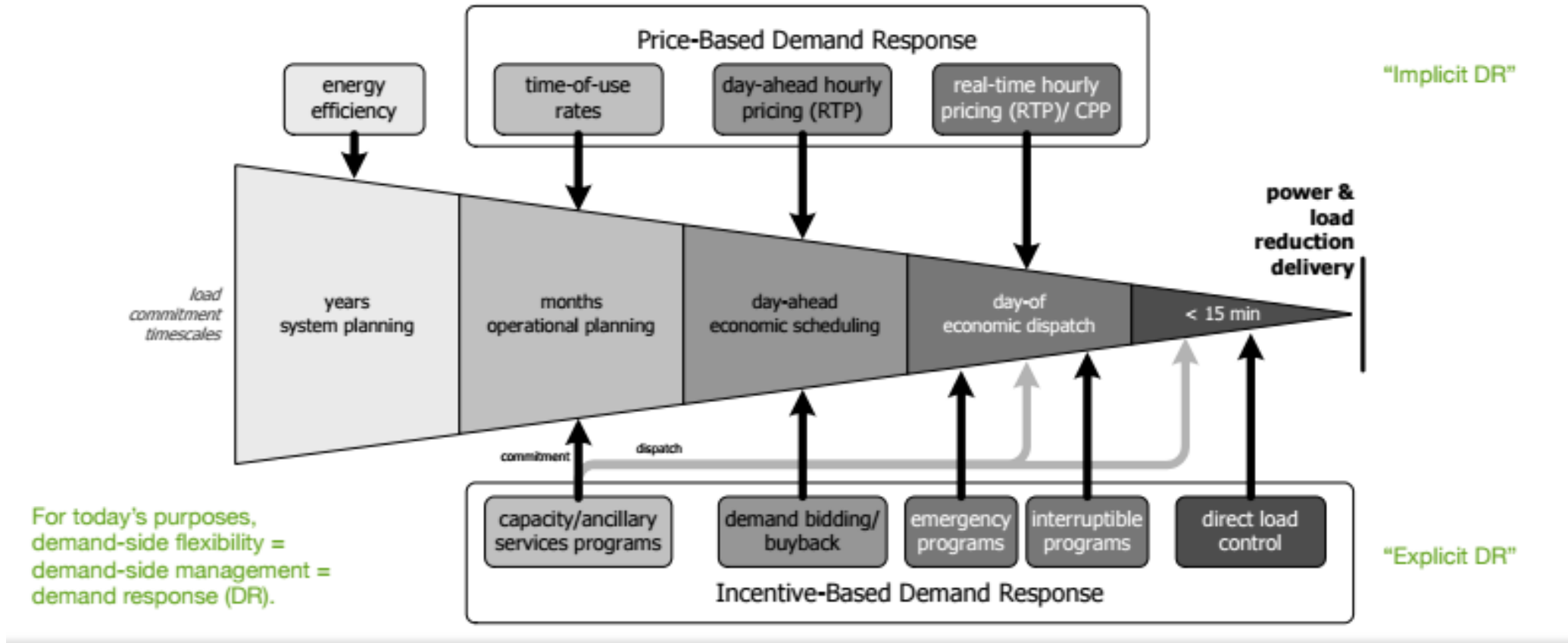
2) Explicit Demand-Side Flexibility

Consumer sells local flexibility via an aggregator

- ✓ Gains an income on committed flexibility
- ✓ Supports the system



Implicit & Explicit Demand Response can go hand in hand



From US Department of Energy, Benefits of Demand Response in Electricity Markets and Recommendations for Achieving Them, Figure 2-3

Real life examples of Demand Response in action

- Commercial & Industrial



Vivaqua – Water Treatment



Sainsbury's – Supermarkets

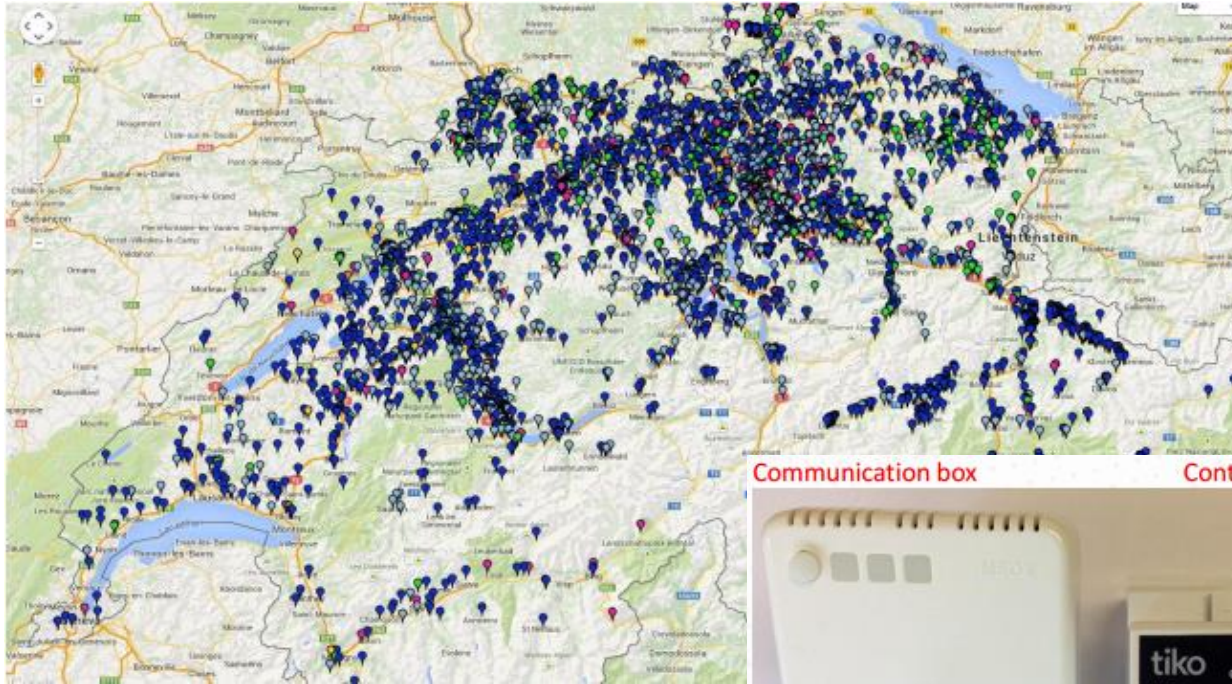


ArcelorMittal – Steel Prod.

Pictures: REstore,
Open Energi

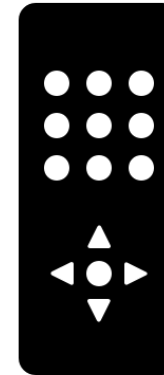
Real life examples of Demand Response in action

- Residential

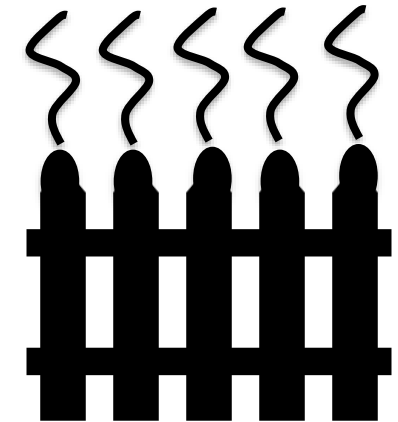


Credit: tiko

**tiko: 10,000 customers
in Switzerland**



**Finland: hourly
electricity pricing &
smart controls**

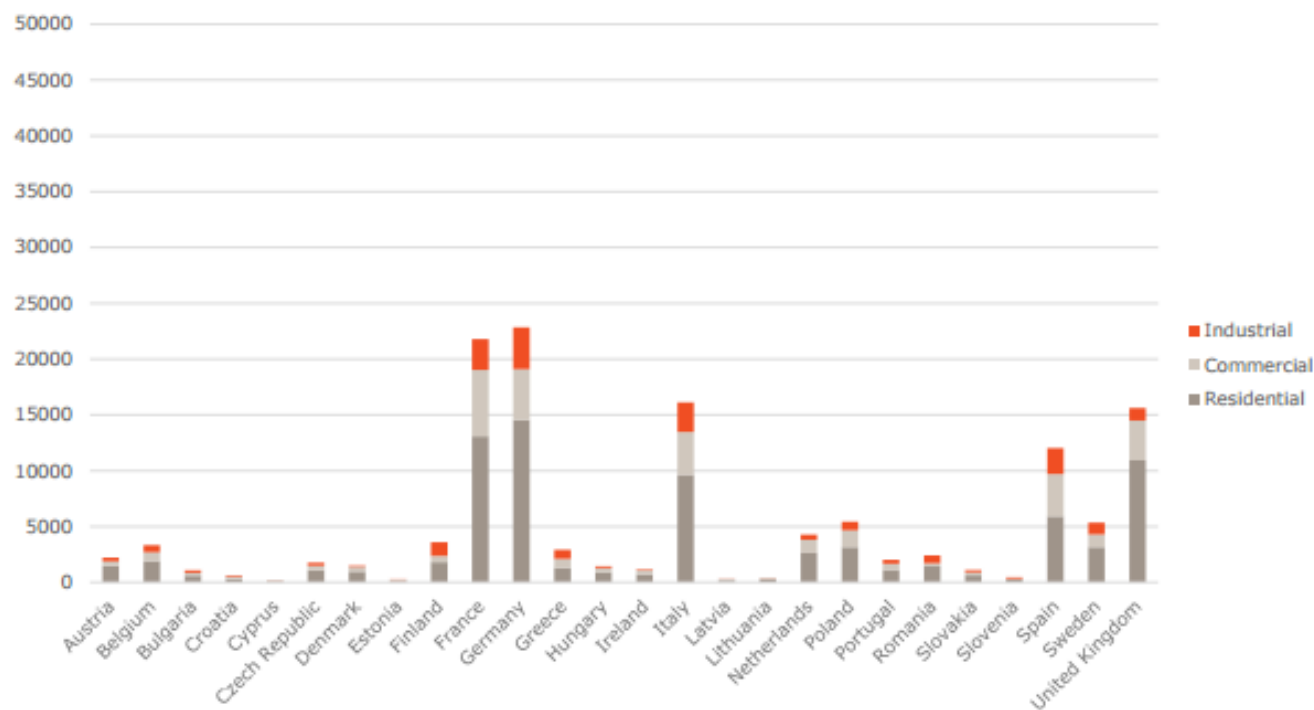


Communication box Controlling box



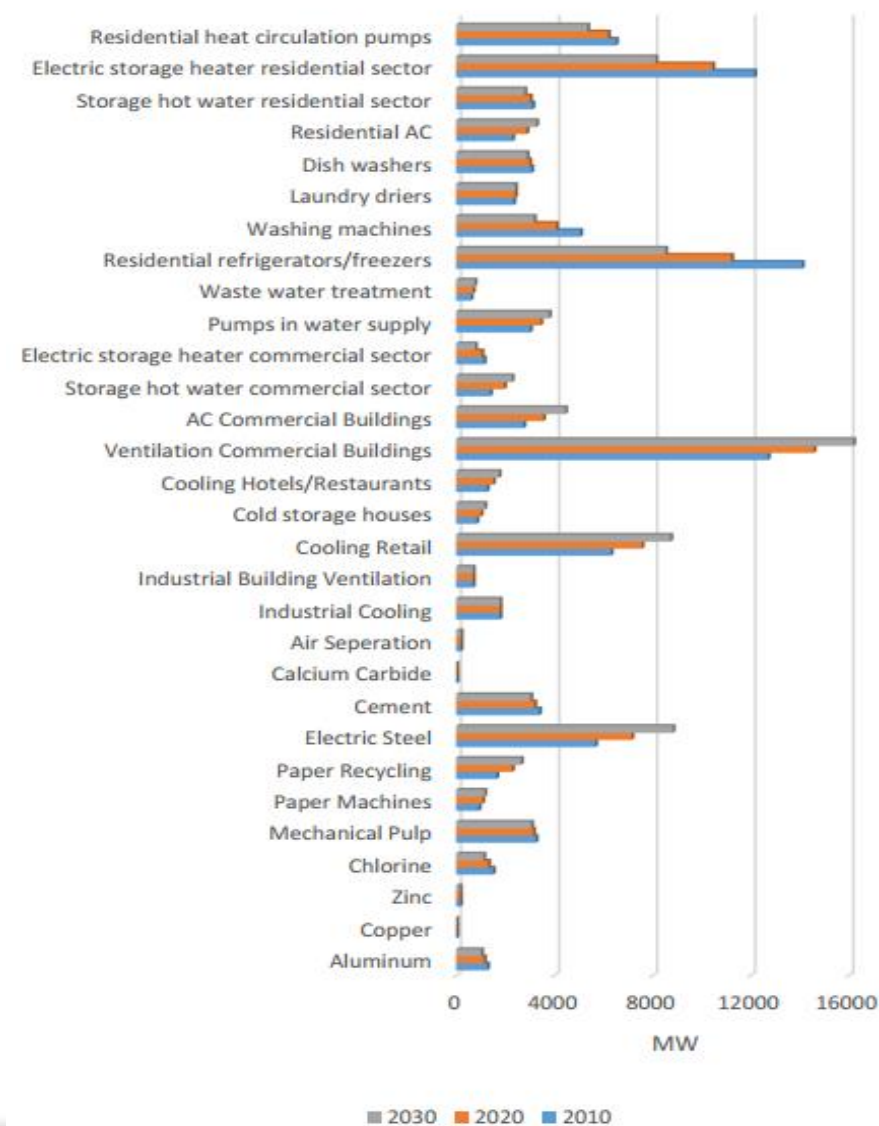
Demand Response potential

Figure 1: Theoretical demand response potential 2016 (in MW)



Source: Impact Assessment support Study on downstream flexibility, demand response and smart metering, COWI, 2016

Figure 2: Theoretical potential of demand response per appliance



Mapping Demand Response in Europe

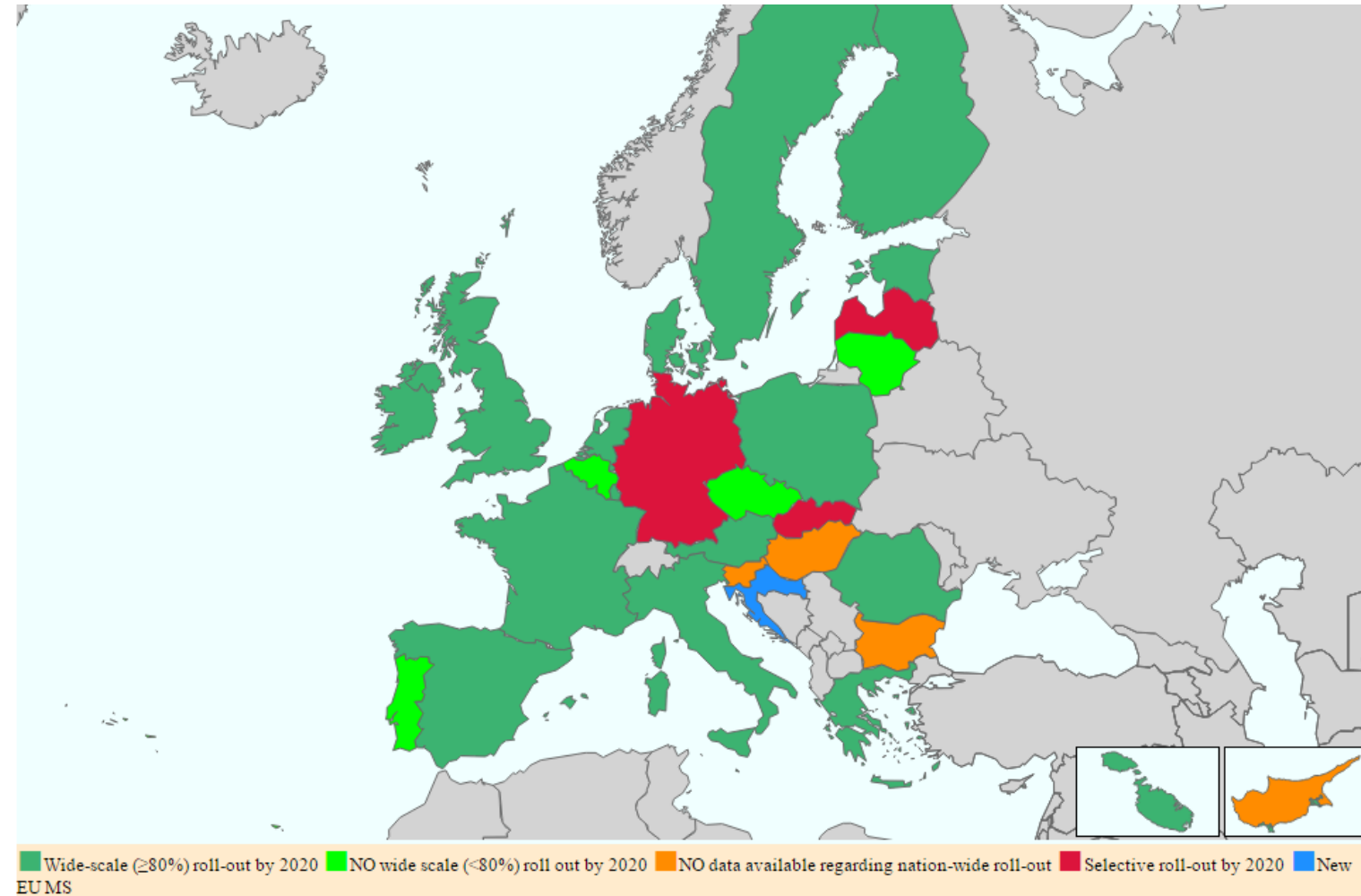


Access to a smart meter to support dynamic pricing

A smart meter
should enable a
real-time pricing
contract

Advanced dynamic pricing contracts only available in Estonia & Finland

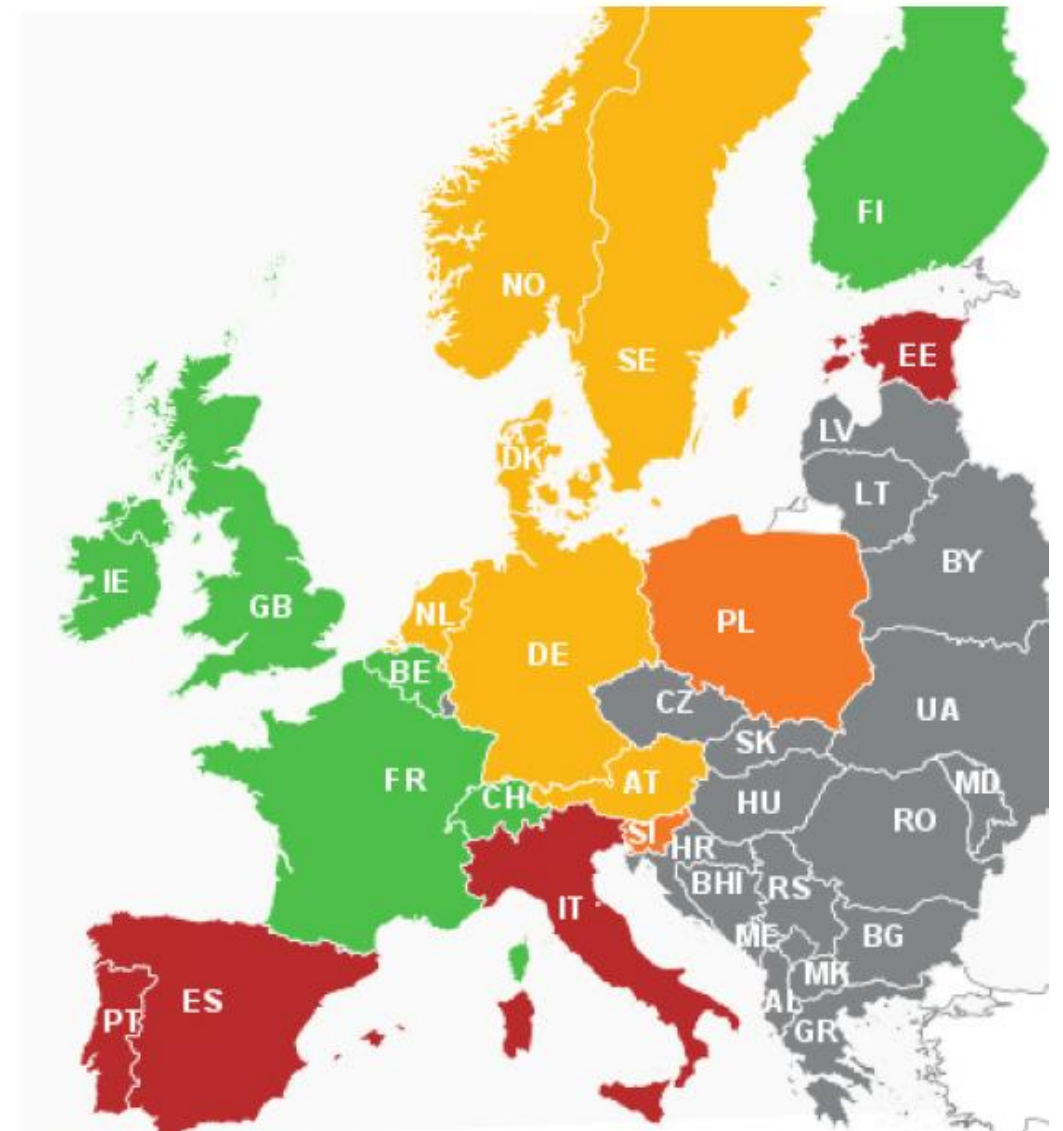
source: JRC



Explicit Demand Response 2017



- Commercially active
- Partial opening
- Preliminary development
- Closed
- Not assessed



SEDC Policy Recommendations i

- 1) **Open** electricity markets for all solutions
 - wholesale, retail, ancillary services, balancing, reserves, capacity products
 - appropriate product definitions & gate closure times
- 2) Provide **fair market access** for all actors and service providers, prosumers and local communities
 - free market access on an equal footing & consumer empowerment
 - aggregator access to consumers without consent of retailer
- 3) Allow **effective price signals** at wholesale and retail level
 - wholesale price caps removed – upward & downward price variability
 - dynamic contracts & access to a smart meter

SEDC Policy Recommendations ii

- 4) Facilitate relevant **data access** for all service providers
 - consumers must access their own energy information
 - they must be able to share it with third parties & be able to switch easily

- 5) Enable network operators to make optimal use of **decentralised** flexibility resources
 - DSOs, and other network operators, to procure flexibility on the market, as alternative to investment in new capacity



SEDCC
Smart Energy Demand Coalition

Jessica Stromback
Chairman of Joule Assets and Smart Energy
Demand Coalition (SEDCC)

jstromback@jouleassets.com
www.smartenergydemand.eu