



Demand Response: A Sustainable Win-Win for All

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European
Commission



Financial
incentives are
too small

Consumers
don't like
complexity



We challenge this view...

We adopt a **consumer-centered approach** to understand how to assess:

1

Consumers' potential

2

Consumers' willingness

to participate in
active demand response

Consumer Not Only Pays But Also Gets Paid

Reduced Consumer Bills (demonstrated)

- Individual energy savings/reductions: 2-4% kWh
- Partial consumption shift to cheaper periods: € ca.10%(HH)/20%+(I)
- (Lower system costs)

System Efficiency

- Reduced peak generation: up to 60 GW (HH controllable load)
- Reduced grid needs

Vicarious benefits

- More RES possible on the grid
- Environment/CO₂↓
- Consumer engagement/empowerment

How to Get More of the Same?

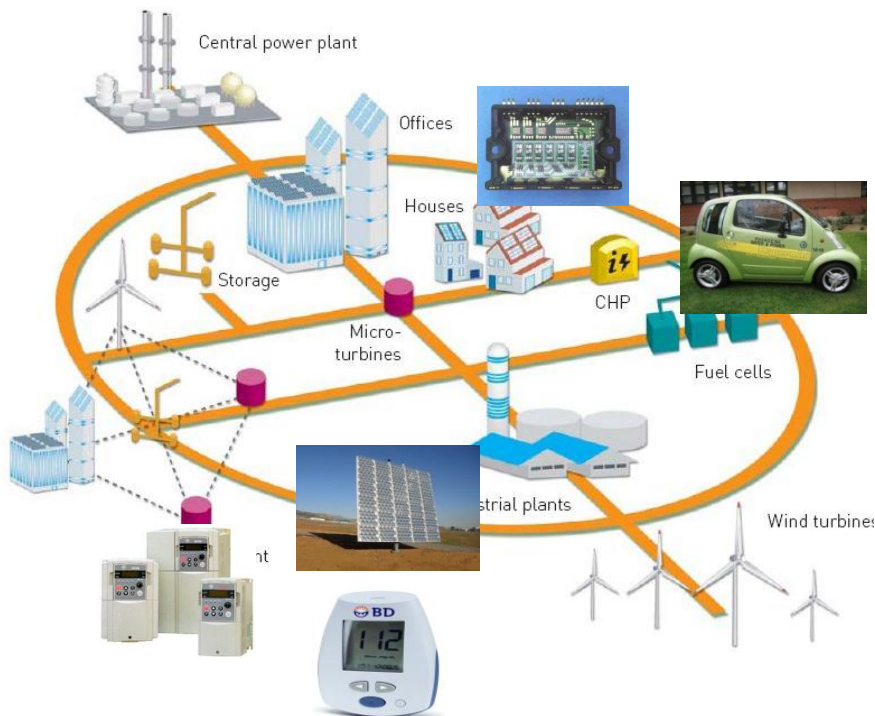
Industrial DR already in some MS:



- **Consumer-driven**
- **Market-based**
- **↓energy bills (+ ↑grid stability)**

How to bring:
more DR in industry? DR also in households?

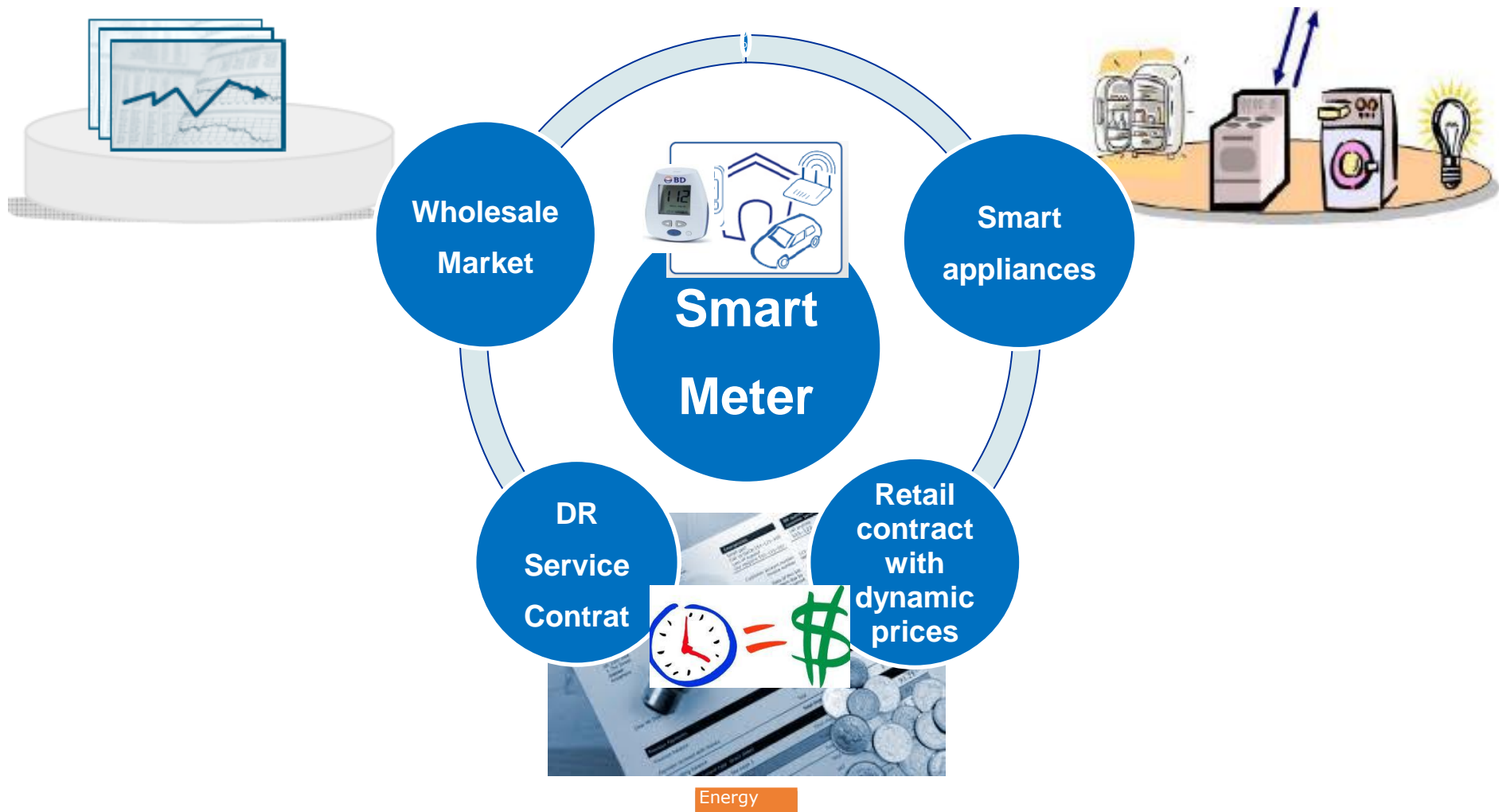
Demand Response as Part of Smart Grids



- **Flexibility & Responsiveness**
- **RES, Storage Integration**
- **Cost-Efficiency**
(investment & operation)
- **Security of Supply**
- **Consumer Empowerment**
(demand response)

Successful roll-out of smart metering is key

It Takes More Than Two to Tango



Demand Response: What is Needed?

Market-based & transparent incentives

- Dynamic pricing and reward structures
- Data protection and security

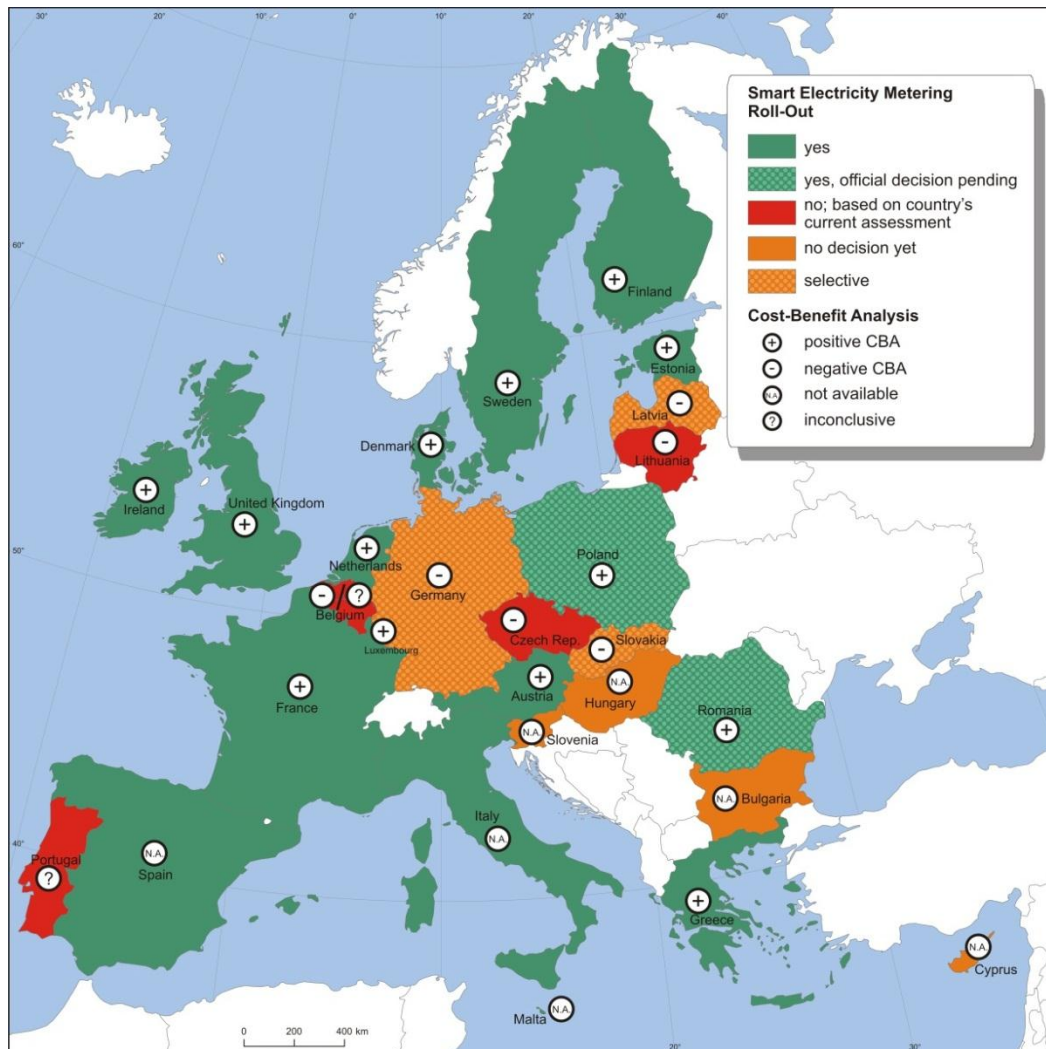
Opening up the market to DR

- Equal footing with supply
- Contractual/technical rules, e.g. network codes

Bringing technologies into the retail segment

- Smart meters
- Smart appliances

Investment in Smart Metering roll-out: Electricity CBAs results



Roll out of ELECTRICITY smart metering by 2020

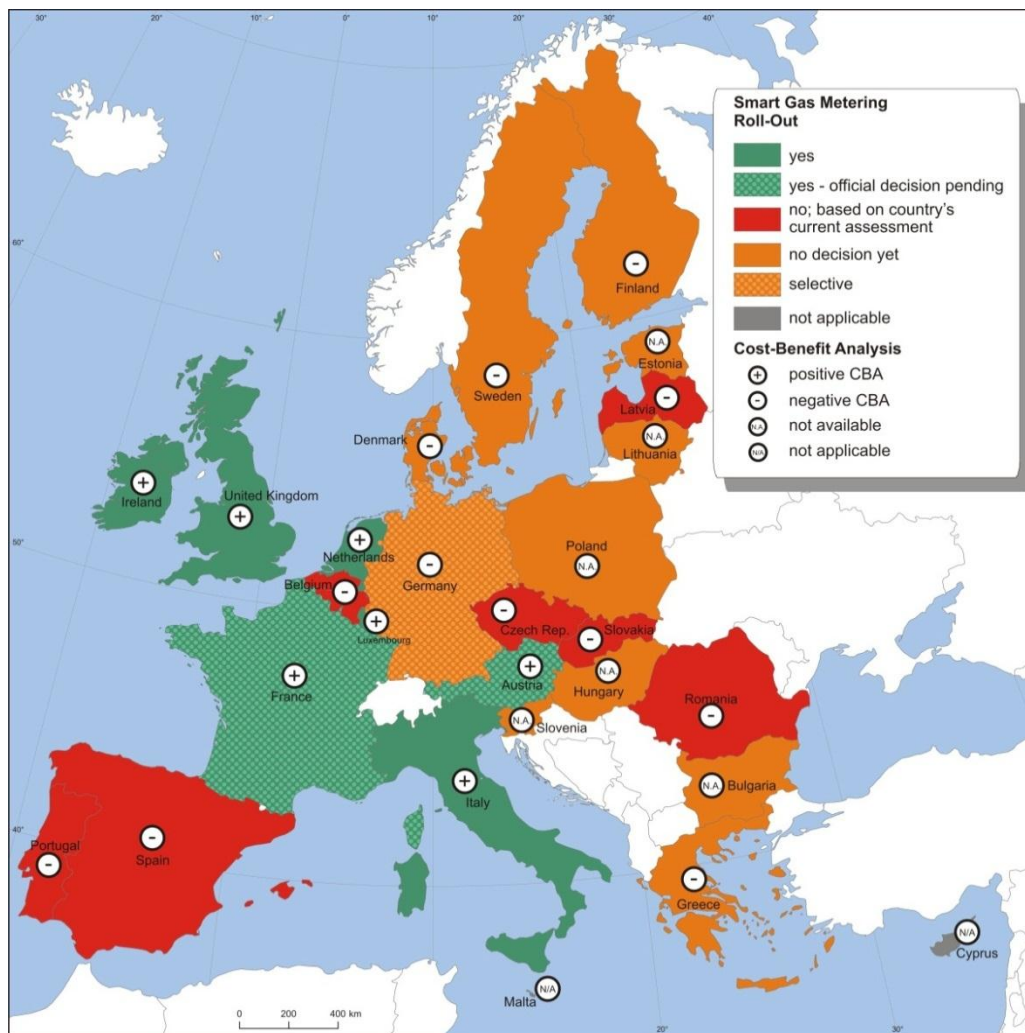
- ❖ 20 CBAs, 16 MS: wide roll-out
- ❖ ~ 72% EU consumers
- ❖ 195 million meters
- ❖ € 35 billion





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Investment in Smart Metering roll-out: Gas CBAs results



Roll-out of GAS smart metering by 2020

- ❖ 19 CBA, 7 MS: wide roll-out
- ❖ ~ 40 % EU consumers
- ❖ 45 million meters
- ❖ €10 billion



Thank You