

European
Engine
Power
Plants
Association



Does the Energy Union need Capacity Mechanisms to keep the lights on?

EEF dinner-debate, Brussels, 22 March 2017



fast
responsive
environmentally sound
efficient
reliable
flexible energy

European
Engine
Power
Plants
Association



Capacity mechanisms, what is it all about?

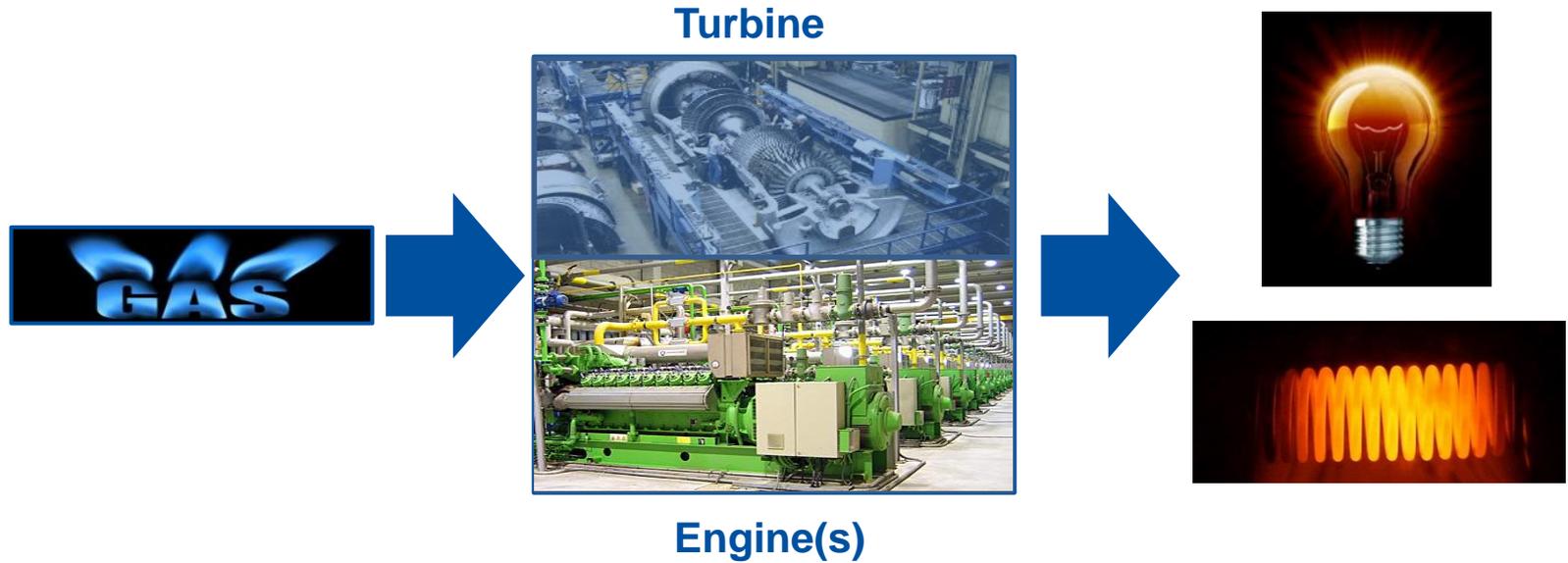
Ralf Wezel, EUGINE Secretary General

EEF dinner-debate, Brussels, 22 March 2017



fast
responsive
environmentally sound
efficient
reliable
flexible energy

The Voice of the European Reciprocating Engine Power Plants Industry



fast



From 0 to full
load in 2-5 min

efficient



CHP up to 95%

clean



Biogas

reliable



Dispatchable
and stable

responsive



Modular from
0.5 to 600 MW

flexible energy

What is the challenge?

EU
climate & energy
targets



More & more (variable) RES



Overcapacities
= depressed wholesale
market prices



Pressure on marginal
producers, closure of some
plants, disinvestment

1 - Capacity challenge

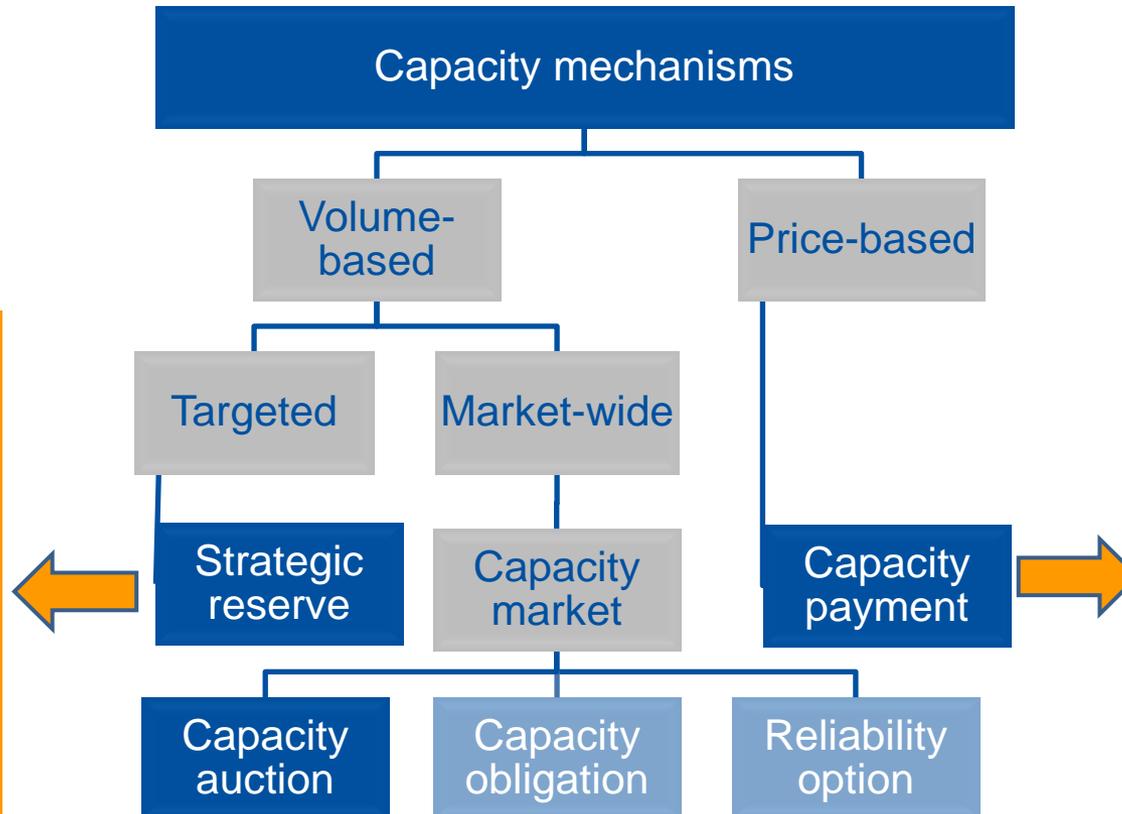
Will the total capacity
be able to match the
total peak demand?

2 - Flexibility challenge

How to ensure that
at any moment demand
can be balanced by
supply?

Could
capacity
mechanisms
be a
solution?

Capacity mechanisms – A ‘patchwork’ of national measures



- Capacity kept outside the market
- Keeping existing plants operational
- Rarely dispatched
- e.g. in BE, FI, DE, PL, SE

- Centrally set price of capacity
- Mostly targeted, limiting to certain technology
- e.g. in ES, PT, IE

- Auctions for defined capacities
- Capacities remain on the market
- e.g. in UK, IT

European
Engine
Power
Plants
Association



How to set the right incentives for keeping the lights on?

Marcel Zürn, EUGINE / Rolls-Royce PS

EEF dinner-debate, Brussels, 22 March 2017



fast
responsive
environmentally sound
efficient
reliable
flexible energy

Capacity mechanisms: Experience from EU Member States



No capacity
mechanism



Strategic
reserves



Capacity
markets



Capacity
payments



Capacity mechanisms: German example – strategic reserves

Germany is committed to the 'Energy-Only Market' and its Energy Minister said in 2014 that 'being paid while not working, it's not possible' but...

Network reserve

Network stability
installations

Capacity reserve

'Security readiness'
(lignite reserve)

- 8 lignite-fired power plants
- Reserve outside of the market
- After 4 years, definitive closure

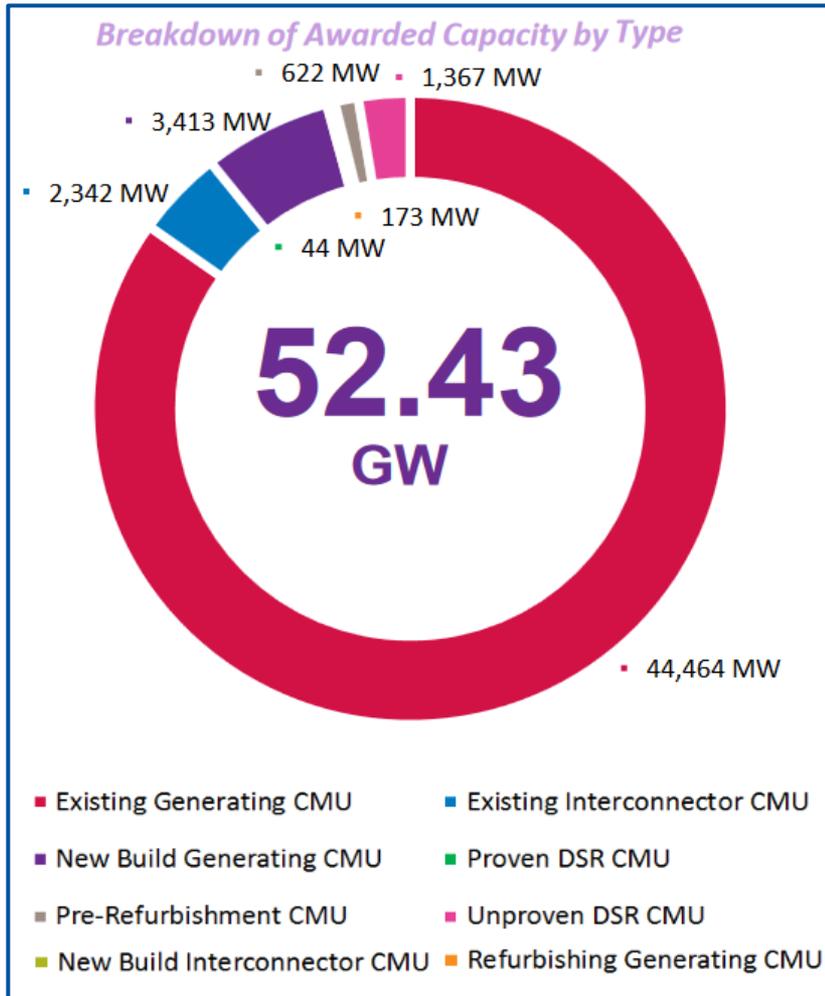
Problems:

- No tender to select the plants
- Coal for flexibility is nonsense
- Climate measure (not for energy)
- € 1,6 billion

Strategic reserves:

- Least distortive type of CM
- However, any 'safety net' has a negative impact on investors' decisions

Capacity mechanisms: British example - capacity market



Source: National Grid, provisional auction results, T-4 Capacity Market Auction 2020/21

sandbag **sandbag.org.uk**
@sandbagorguk Follow

£453m for dirty coal...
#CMAuction payments to coal power plants =
£453m across 4 auctions.
Time for some changes...

| | | Coal capacity payments £m | | | | |
|-------------------|--------|---------------------------|-------------|------------|-------------|-------------|
| Plant | Owner | 2017/18 | 2018/19 | 2019/20 | 2020/21 | TOTAL |
| Drax | Drax | £8 | £24 | £22 | £25 | £78 |
| Ratcliffe | Uniper | £6 | £35 | £32 | £41 | £114 |
| West Burton | EDF | £12 | £26 | £0 | £29 | £67 |
| Cottam | EDF | £12 | £34 | £0 | £0 | £46 |
| Aberthaw | RWE | £10 | £29 | £27 | £33 | £99 |
| Fiddlers ferry | SSE | £9 | £26 | £0 | £0 | £35 |
| Eggborough | EPH | £13 | £0 | £0 | £0 | £13 |
| TOTAL COAL | | £70 | £173 | £81 | £128 | £453 |

Source: Sandbag, Twitter account, message posted on 6 February 2017

The Telegraph

Business

**National Grid's
'unnecessary' power reserve
cost £180m - and wasn't
used**

Source: The Telegraph, 13 March 2017

Capacity mechanisms: Spanish example - capacity payments

Spain has ‘targeted capacity payment’ schemes since market liberalisation (1996):

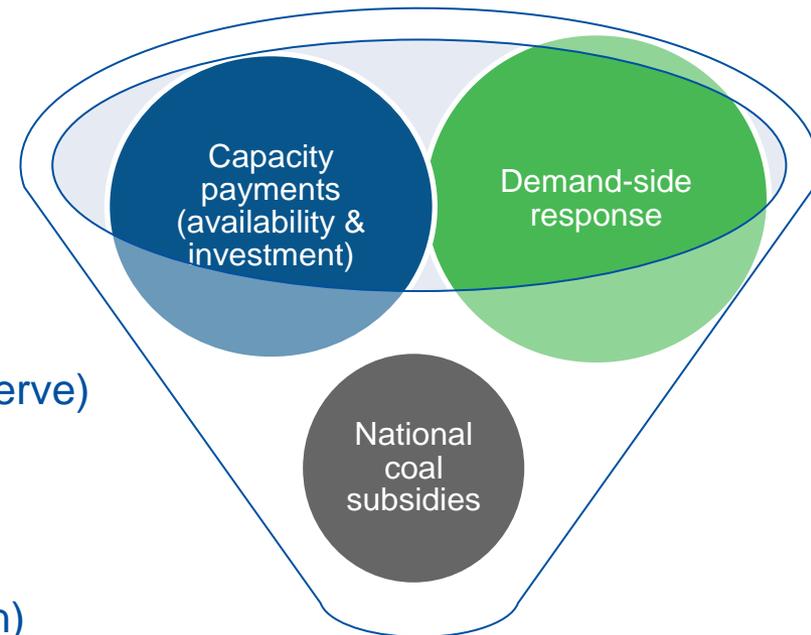
- national regulator sets the price of capacity
- the market chooses the amount provided

Growing overcapacities but still numerous CMs:

- 3 capacity payment schemes since 2007
- Interruptibility scheme, i.e. DSR (strategic reserve)

Targeted capacity payments:

- High costs (oversized, not enough competition)
- No technology neutrality



High costs for society:
~ € 1 billion per year,
11% of Spanish electricity bills

Capacity mechanisms

- national schemes
- state aids distorting competition
- to existing, less efficient, more polluting plants
- for simply being available

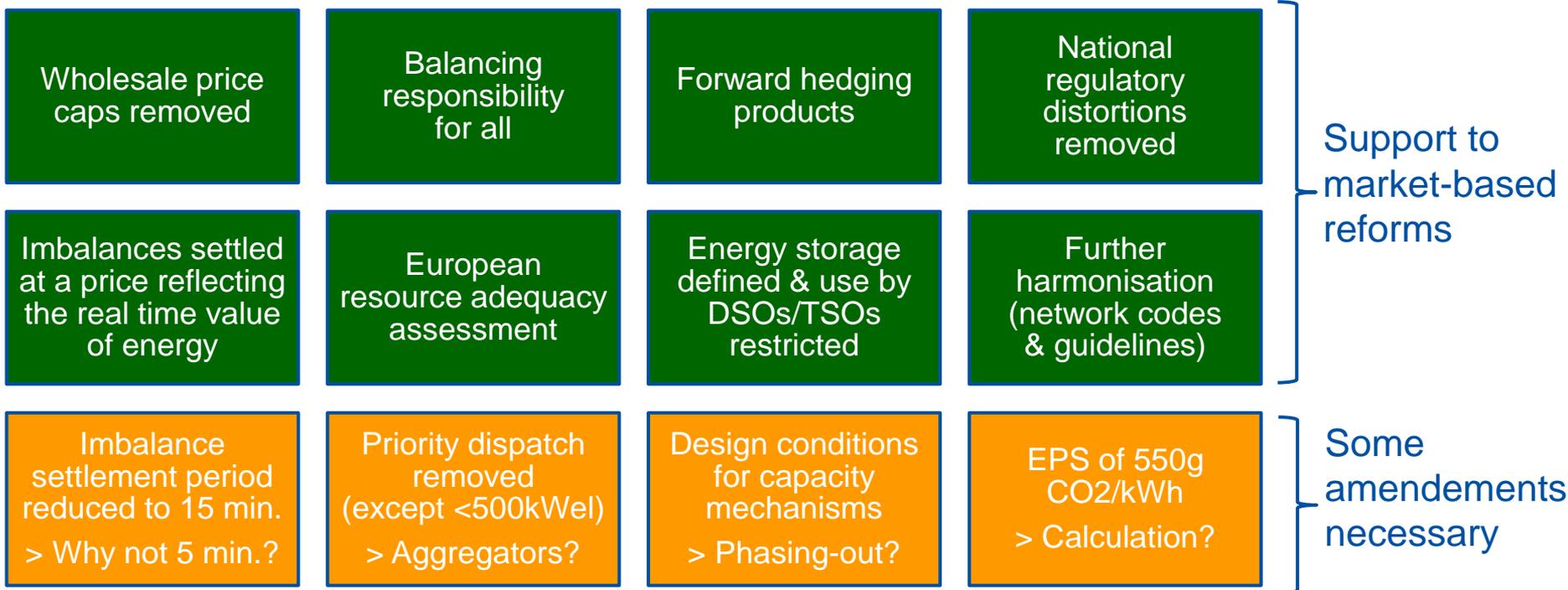
The Energy Union

- solidarity between Member States
- free flow of energy within internal market
- increase efficiency & reduce pollution
- promote innovative technologies

> EU decision-makers have to choose between Capacity Mechanisms & the Energy Union

Our recommendations / market design

Building on a very good proposal



‘shorter than or equal to 15 min’

‘shall not be granted to aggregators’

phasing-out:
- after a specific period of time;
- when concerns were addressed

Need for:
- a delegated act
- A smart & stable methodology

The 5 Take-Aways

- Solve the **Flexibility Challenge** via a functioning inclusive market:
 - Allow scarcity prices for clear investment signals
 - Don't create unnecessary exemptions – let the market work
 - Neutrality on technology (flexible generation, demand response, storage)
- **All Capacity Mechanisms distort market conditions and need to be minimised**
- If Member States insist on „belt and braces“:
Strategic Reserves are the least distortive mechanism (outside of the market, limited period of time)
- Ensure **Phasing-out** of all capacity mechanisms
- A smart and stable calculation methodology for the **Emission Performance Standard (EPS)**
 - A delegated act for the '550g CO₂/kWh' calculation methodology
 - Flexible gas-fired power plants should not be affected