



Energy for
generations

DS3 System Services:

Auction Design Industry Workshop

25/04/2016

The need for an industrywide solution

Stopping curtailment increase ~14% from ~5%

The market interactions need to ensure no missing money as per GB

APPL

DS3

CRM

DSM

System Services

Performance Monitoring

Grid Code

System Performance

WSAT

Centre tools

Model Dev. & Studies

EMRO

SEMO

SIN

17-18 Capability Requirement

19-20 Capability Requirement

Department of Energy & Climate Change

CAPACITY MARKET

Other reforms to Capacity Market

HMGT07 | March 2016

Commission for Energy Regulation
Riaili Fuinnimh

Utility Regulator
ELECTRICITY GAS WATER

14:00

13:00

12:00

11:00

10:00

09:00

08:00

07:00

06:00

05:00

04:00

03:00

02:00

01:00

00:00

2014

14,000

12,000

10,000

8,000

6,000

4,000

2,000

0

100%

90%

80%

70%

60%

50%

40%

30%

20%

10%

0%

SIN

FFH

POH

SOH

TOR₁

TOR₂

RR₁

RR₂

RM₁

RM₂

RM₃

RM₄

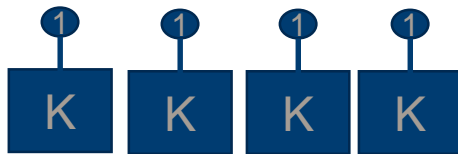
SRP

DRR

FPFAPR

Supporting the RAs to ultimately deliver the best outcome for consumer through competitive means requires the most efficient market design with dynamic price signals that delivers performance and attracts investment.

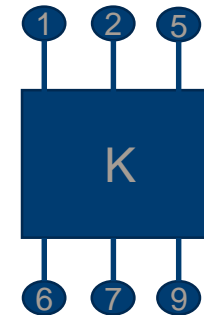
Traditional single service products



- A single investment for a single product will clear at a single price.
- Investors can make the relevant choice as to whether to participate.

Different investment options offer provision of different services in different proportions with different costs

Joint product investments



- With complex interacting markets and complex auctions
 - pricing complexity increases
 - potential exposures rise
 - risk of full capital partially contracted
 - risk premium for loans & pricing greater



All participants in a market need to know what price they will be paid for contracted volumes and need to be able to exercise choice in a market. Price revelation for each product is important as is commitment.

Solution to reward and allocate contracts to DS3 system service providers

1. Regulated Tariffs

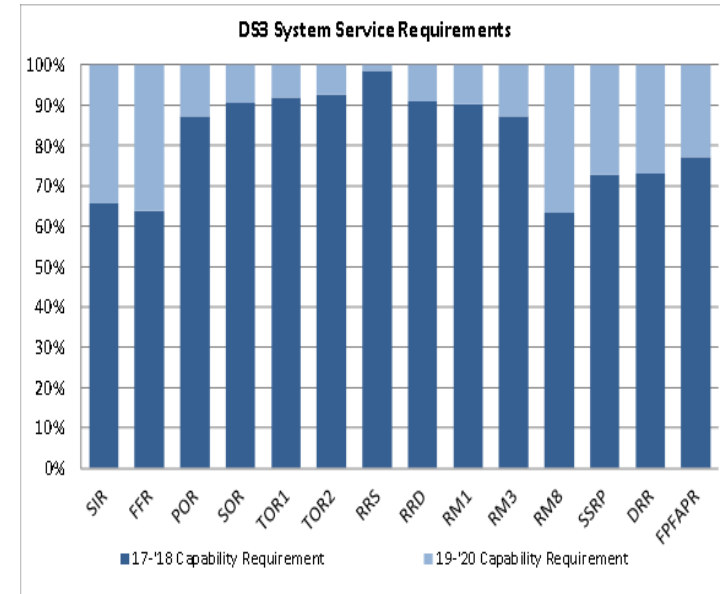
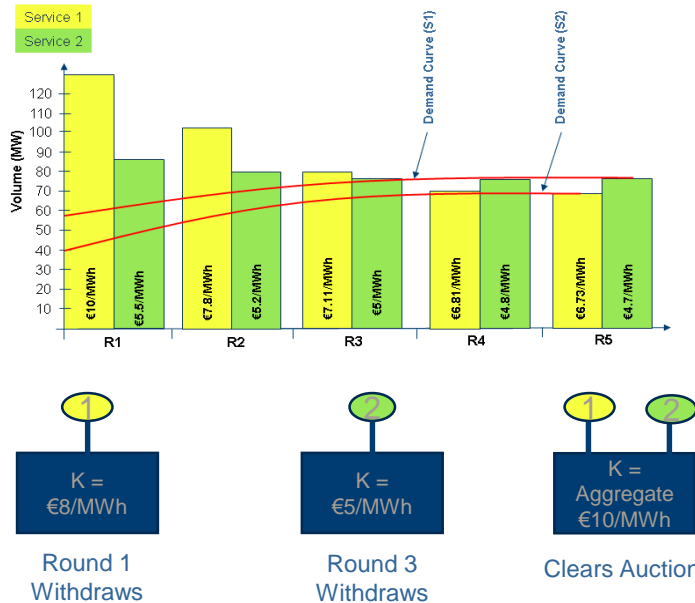
- Prices that support performance and attract investment
- RAs' concern re Energy Efficiency Directive impacts
- Only an issue once excess services exist/or prequalify?

2. Auction based

- Multi-product/ multi-round design
- Provides:
 - price revelation
 - choice of entry and exit for provider
 - Can reflect high or high scarcity
 - Allows combinations of revealed prices and quantities to contract to pay for investments

Auctions can provide competitive means – the devil is in the detail! But they must be transparent

The mechanics and weakness of a MP/MR auction



- Auction seeking to bring different types of service providers together
- Prices simultaneously descend across all services through multiple rounds (if they have not cleared)
- Providers withdraw as prices fall

- Supply converging to demand until all services clear (rate of convergence and price acceptability?)
- To avoid risk of later withdrawal from a cleared product demand can be scaled for lumpiness of service provision

Sufficient merit to warrant exploration?

- 1 The dynamics of the market and the interaction of the remuneration conditions creates great risk to participation in the annual auction due to the uncertainty of running
- 2 Ability of wholesale market prices to provide an economic signal may be limited if penalties are applied to those who provide volume contracted for the TSO but potentially not required
- 3 A more efficient economic signal can be provided by having remuneration based on capability availability
- 4 Long term contracts may limit taking advantage of new technologies by the TSO
- 5 Prices must reward all equally for the service provided and be sufficient to retain provision and attract new investment