P305 Industry Information Day

1 October 2015
Nicholas Rubin

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Health & Safety

In case of an emergency

An alarm will sound to alert you. The alarm is tested for fifteen seconds every Wednesday at 9.20am

Evacuating 350 Euston Road

- If you discover a fire, operate one of the fire alarms next to the four emergency exits.
- Please do not tackle a fire yourself.
- If you hear the alarm, please leave the building immediately.
- Evacuate by the nearest signposted fire exit and walk to the assembly point.
- Please remain with a member of ELEXON staff and await further instructions from a Fire Warden.
- For visitors unable to use stairs, a Fire Warden will guide you to a refuge point and let the fire brigade know where you are.

When evacuating please remember

- Do not use the lifts.
- Do not re-enter the building until the all clear has been given by the Fire Warden or ground floor security.

Our team on reception is here to help you, if you have any questions, please do ask them.

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Who we are...

Nicholas Rubin
Market Advisor,
P305 Subject Matter Expert (SME)

Roger Harris
Market Analysis Manager,
P305 SME

Colin Berry
November Release
Project Manager

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What you should take away…

- Why things are changing
  - Background to EBSCR and P305
- Understanding of key changes to Imbalance Price arrangements
  - How prices will be calculated in future
- What BSC Parties and Party Agents must do
- ELEXON is here to help
  - Operational Support Managers (OSMs)
  - Market Advisors and Analysts
  - Reporting and monitoring

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Our plan…

10.00	Welcome
10.10	P305 and the EBSCR: Context and overview
10.30	P305: Detailed overview
12.30	Lunch
13.30	P305: Implementation
14.30	Q&A
15.00	Close

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Imbalance Pricing

Context and overview

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The rules today…

"In simple terms, the imbalance price in each half hour is calculated by ranking in increasing order of cost the purchases made by the system operator (SO) to balance the system.

(In practice it is rather more complicated, of course.)"

Stephen Littlechild

- Dual price method
  - Two Prices (SBP and SSP)
  - Two Methods (Main Price Method and Reverse Price Method)
- Average cost of energy balancing actions (not system balancing)
  - Includes Bids, Offers and Balancing Services
- BSC Parties are charged for any imbalance
  - Pay the SBP when 'Short'
  - Paid the SSP when 'Long'

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‘The times they are a-changin’

- Conclusions of Ofgem’s Electricity Balancing Significant Code Review (EBSCR) will be implemented
- Approved BSC Modification P305 – ‘Electricity Balancing Significant Code Review Developments’
- Implementation: November 2015

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Why are things changing?

- *“Current balancing arrangements are not working as well as they could, undermining efficiency in balancing and security of supply.”*

  (Ofgem’s EBSCR Final Policy Decision)

- Concerns:
  - Efficiency
  - Cost reflectivity
  - Simplicity
  - Future arrangements
    - e.g. demand side participation, European Target Model

- Desire to provide stronger signals to:
  - Encourage more efficient balancing behaviour
  - Provide stronger signals to market for provision of flexible capacity and interconnector flows

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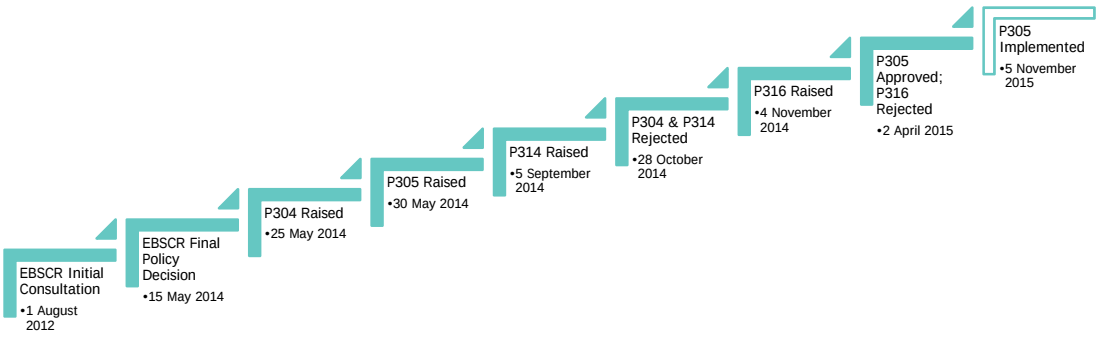
The story so far



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P305: key changes

Detailed overview

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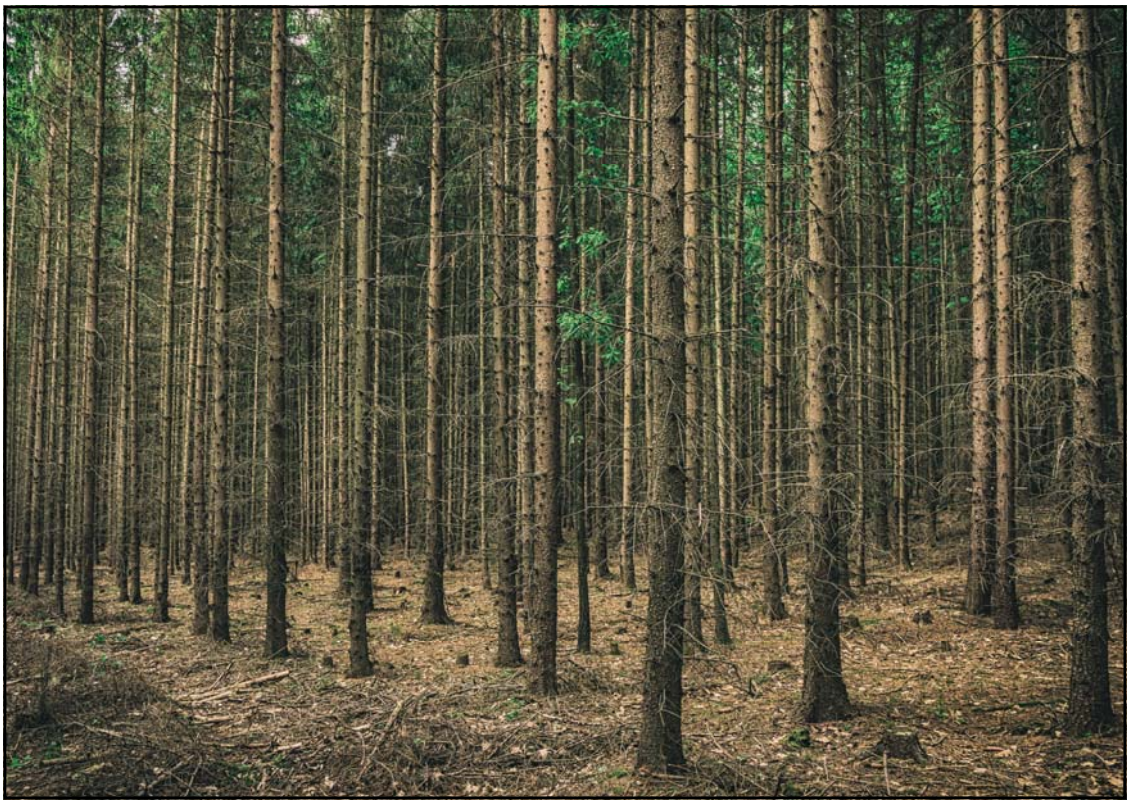

‘The times they are a-changin’

P305 - Areas of Change

- Reduced PAR
- Single Price
- Cost of Reserve Scarcity
- Cost of Disconnections

Implementation: 5 November 2015

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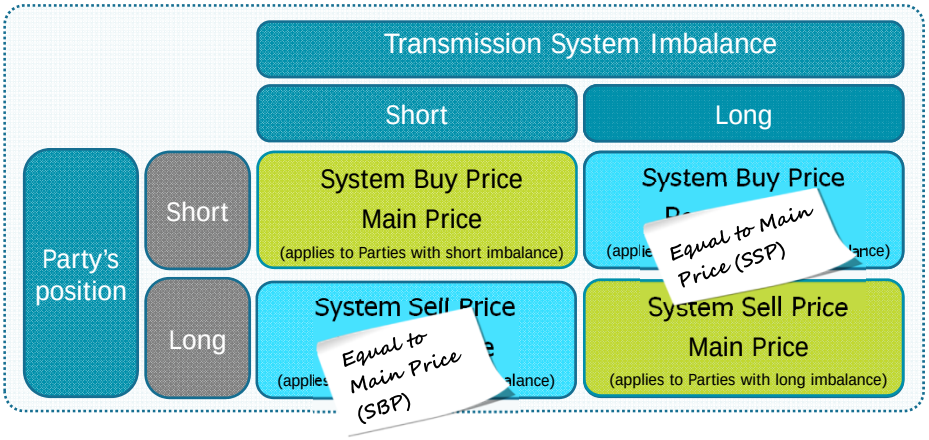
Single Price

A Single Price method will replace the dual price arrangements from 5 November 2015



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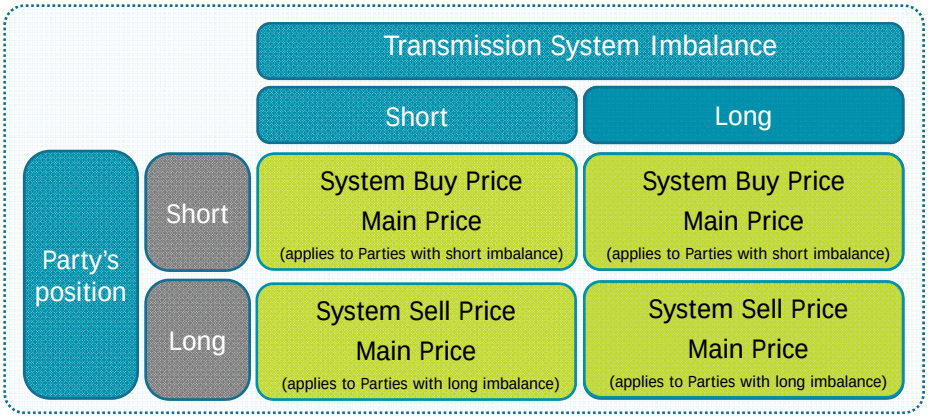
Single Price

- Both System Buy Price (SBP) and System Sell Price (SSP) will be calculated using the Main Price method
- Both SBP and SSP will be equal to each other



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Single Price

What's changing?

Replace Dual Price Method with Single Price Method

Reference

BSC Section T

Why?

- Dual prices create unnecessary balancing costs and complexity
- Reverse Price doesn't fully reflect value of 'helpful' imbalances

New Parameters/Values

N/A

How?

- Existing Main Price method will be used to produce a single System Price
- SBP and SSP will be set equal to the Single System Price
- Market Price will be used where NIV = 0

Who does it affect?

- BMRA
- SAA

FAQs

Will there still be a SBP and SSP?

Will Parties still need to balance their Production and Consumption Accounts?

What will happen to the Reverse Price? Will Market Index Data still be collected?

Will there be new Price Derivation Codes?

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Disconnections and Reserve Scarcity

OFFER
250 MWh at £45/MWh
OFFER
250 MWh at £55/MWh
OFFER
50 MWh at £100/MWh
OFFER
20 MWh at £95/MWh

BID
30 MWh at £35/MWh
BID
30 MWh at £20/MWh
BID
0.5 MWh at £40/MWh

The future...

P305 will introduce additional actions

These may be priced at up to £6000/MWh

Costs of Reserve Scarcity

NON-BM STOR

5 MWh at £350/MWh

Costs of Disconnection

DISCONNECTION Vol

15 MWh at £3000/MWh

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Disconnections

- Imbalance Prices will reflect cost of *involuntary* disconnections requested by Transmission Company

"Incorporating volumes and appropriate prices for Demand Control actions into the arrangements should improve the incentives for generators and suppliers to avoid disconnection of consumers."

Imbalance Prices

- Disconnection Actions included in Imbalance Price calculation
- Disconnection Actions based on 'top down' estimates of total disconnection volumes
- Disconnection volumes will be priced at the VOLL

Imbalance Volumes

- Parties' imbalance positions adjusted based on a 'bottom up' estimate of BMU level disconnection volumes
- Bottom up estimates reflect expected imbalance if disconnection had not taken place

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Value of Lost Load (VOLL)

- New parameter - Value of Lost Load

"The price at which a consumer is theoretically indifferent between paying for their energy, and being disconnected."

- VOLL represents a ***demand*** side value of disconnection…

  …which should reflect the value of providing ***supply*** side action to avoid disconnection.

- VOLL will equal:

  £3000/MWh from 5 November 2015

  £6000/MWh from 1 November 2018

- Ofgem decided on an 'administrative' value based on research by London Economics

- VOLL Review Process similar to MIDS Review

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Disconnections – 'top down' estimate

National Grid informs ELEXON of Demand Control Instructions (DCIs)

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DNOs

UK Power Networks

WESTERN POWER DISTRIBUTION

NORTHERN POWERGRID

National Grid instructs the DNOs to take action

ELEXON → **£ SBP**

ELEXON uses DCIs to estimate total Disconnection Volume(s)...

... which are treated like BOAs and BSAAs in Main Price Method

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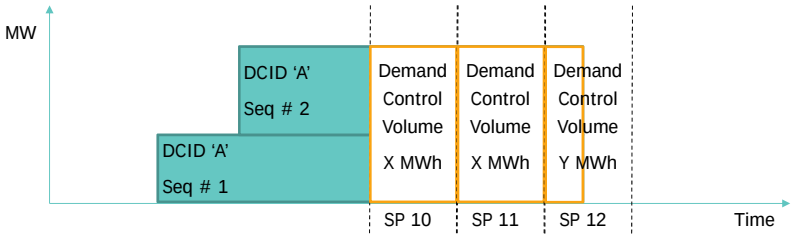
'Top down' estimate

- BMRA and SAA use DCIs to determine Demand Control Volumes
- Demand Control Volumes are calculated per Settlement Period...

ELEXON uses DCIs to estimate total Disconnection Volume(s)...



- ... and added to the Imbalance Price calculation as an action, priced at VOLL
- Demand Control Volumes are treated like any other BOA or BSAA

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Disconnections – 'bottom up' estimate

National Grid instructs the DNOs to take action

DNOs

UK Power Networks
WESTERN POWER DISTRIBUTION
NORTHERN POWERGRID

DNOs send disconnected MSIDs to Party Agents and BMUs to CDCA

DCs & DAs

Party Agents estimate and aggregate disconnection volumes

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CDCA estimates d/c BMU disconnection volumes...

... SVAA adjusts Supplier metered volumes...

£ Imbalance Cashflow

... SAA accounts for disconnection volumes in Parties Credited Energy and Imbalance Charges

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'Bottom up' estimate

- Ensures Credited Energy Volumes reflect likely 'no disconnection' behaviour

And

- Ensures Metered Volumes remain accurate

- Achieved by:
  - ***Estimating MSID level disconnection volumes per Settlement Period*** based on actual meter readings...
    - ... aggregating these to Trading Party Account level...
    - ... and subtracting these from Metered Volumes in calculation of Credited Energy
  - ***Adjusting calculation of AAs for disconnected MSIDs*** to ensure accurate allocation of Meter Advances across Settlement Periods
    - AA calculation will allocate Meter Advances to non-disconnected Settlement Periods only

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Disconnections

What's changing?

Inclusion of the cost of disconnections

Why?

- Imbalance prices do not reflect the value that consumers place on security of supply

How?

- Where TC requires Demand Control, include a 'top down' estimate of any disconnection volumes in Imbalance Price calculation
- Priced at VOLL = £3000/MWh from Nov 2015; £6000/MWh from Nov 2018
- Parties imbalance positions will be adjusted to reflect expected pre-disconnection position
  - CDCA, Party Agents and SVAA determine 'bottom up' estimates of BMU disconnected volumes

FAQs

How frequently will disconnections occur?

Will estimates need to be reviewed/recalculated each Settlement Run?

Reference

BSC Sections F, Q, R, S, S-2, T, T-1, V, V-1, X-1, X-2

BSCPs 502-505, 508, 515

SVA Data Catalogue

DTC

New Parameters/Values

VOLL

Who does it affect?

- BMRA, SAA, CDCA, SVAA
- Transmission Company
- LDSOs
- Suppliers
- HH and NHH DCs and DAs
  - EAC/AA Software

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Cost of Reserve Scarcity

"…the way that the cost of these STOR contracts is currently reflected in the cash out price can have a distortive and dampening impact on the cash-out price, undermining balancing efficiency."

- As capacity margin reduces then the price for providing Reserve should increase up to the cost of disconnection (i.e. VOLL)

- P305 will:
  - Include Non-BM STOR as BSAA
  - BM and Non-BM STOR Actions will be priced as

$$= MAX(Utilisation\ Price, Reserve\ Scarcity\ Price)$$

  - Where

$$RSP = VOLL\ x\ Loss\ of\ Load\ Probability\ (LoLP)$$

  - STOR Actions identified using STOR Provider Flag and Availability Windows
  - Remove 'Option Fees' from BPA

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Loss of Load Probability

- LoLP is a measure of reliability that will be calculated for each Settlement Period.
- For a given level of demand (MW) indicate the probability of that there will be insufficient generating supply (z) to meet demand (capacity requirement (cr))
  - Generating Supply represents availability of Conventional Generation and forecast Wind Generation
  - Capacity Requirement represents forecast demand and largest loss reserve (i.e. Sizewell B, 1260MW)

Static LoLP method – from November 2015

- Static function representing historical relationship between LoLP and De-rated Margin
- National Grid will produce forecasts of De-rated Margin
  - Indicatives – Midday forecasts and SP-8h, -4h, -2h, -1h (i.e. Gate Closure)
- Produce Final LoLP values

Dynamic LoLP method – from November 2018

- National Grid will produce Indicative and Final LoLP values
  - Indicatives – Midday forecasts and SP-8h, -4h, 2h
  - Finals – SP-1h (i.e. Gate Closure)

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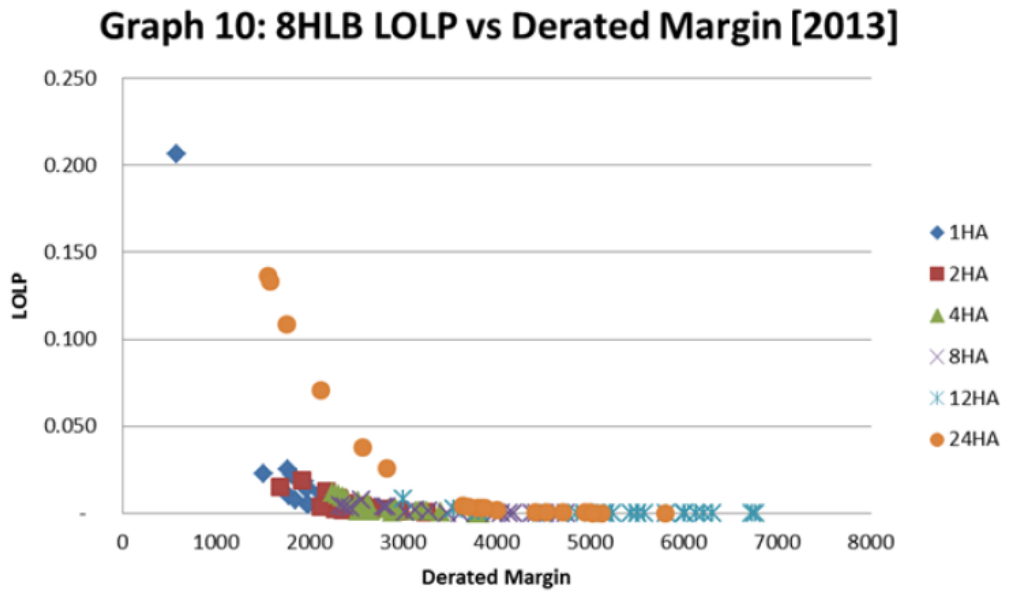
Loss of Load Probability – Dynamic example (1)



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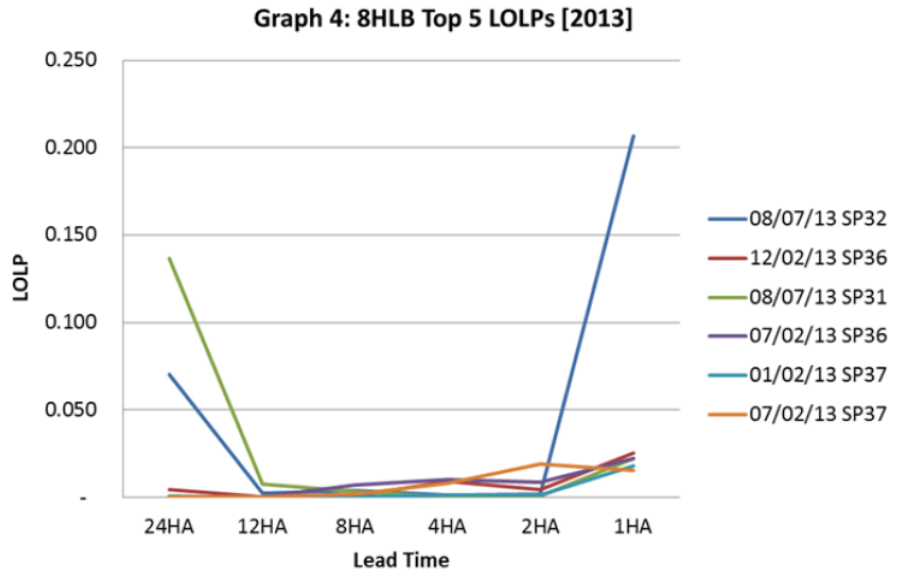
Loss of Load Probability – Dynamic example (2)



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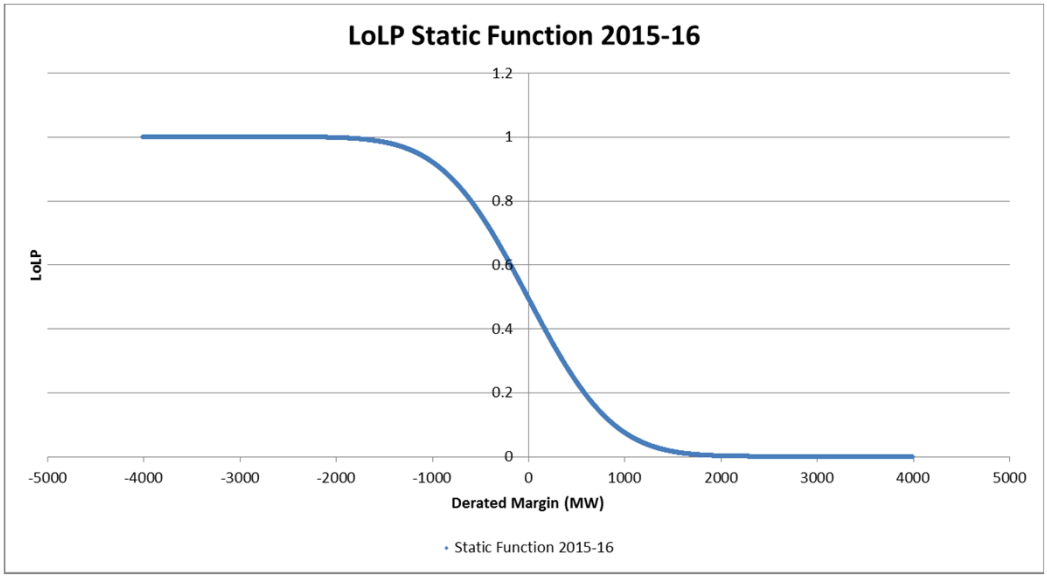
Loss of Load Probability – Static example



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RSP versus Utilisation Price

- How likely is RSP to set the STOR Action Price?

Historical Analysis of RSP for Settlement Periods during 2013

RSP>Utilisation (VOLL £3000/MWh)	Q1	Q2	Q3	Q4
Yes			36	
No	10275	6472	11064	10378
RSP>Utilisation (VOLL £6000/MWh)	**Q1**	**Q2**	**Q3**	**Q4**
Yes	7		39	
No	10268	6472	11061	10378

- Based on a typical Utilisation Price (£100/MWh)
- According to 2015/16 Static LoLP Function, RSP > Utilisation Price where:
  - LoLP > ~0.033
  - Derated Margin < ~1283MW

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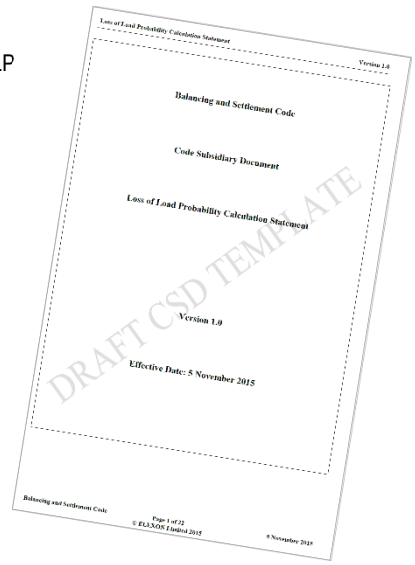
Loss of Load Probability Calculation Statement

- Static and Dynamic Methods are described in the LoLP Calculation Statement
  - Intended to enable interested parties to recreate LoLP calculations
  - Prepared by National Grid
  - Will be included on BSC Baseline Statement
  - Subject to similar governance as the Market Index Definition Statement (MIDS)



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Cost of Reserve Scarcity

What's changing?

The range and pricing of STOR actions

Why?

- Imbalance prices do not fully reflect the value of reserve capacity, particularly when the system is tight

How?

- Include Non-BM STOR actions in Imbalance Price calculation
- Reprice all STOR actions to reflect value of reserve scarcity
  - STOR Action Price = Max(Utilisation Price, RSP)
  - Reserve Scarcity Price (RSP) = LoLP * VOLL
- Loss of Load Probability calculated using a Static Method from November 2015 and a Dynamic Method from November 2018
- LoLP Lookup Table published on ELEXON Portal

FAQs

How frequently will LoLP be calculated? Where will it be published?

Will VOLL be reviewed before rising to £6000/MWh in 2018?

How often is RSP>Utilisation Price? How will STOR Actions be identified?

Reference

BSC Sections Q, T, V-1, X-1, X-2

BMRA & SAA SD and URS

NETA IDD

BSAD Methodology

LoLP Calculation Statement

New Parameters/Values

RSP

LoLP

VOLL

Who does it affect?

- BMRA, SAA
- Transmission Company

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PAR Tagging - today

Only the most expensive actions that equal the PAR are used to calculate the Main Price

= 500 MWh

Main Price is the volume weighted average price of the remaining actions

$$Main\ Price = \frac{((10\ MWh\ \times\ £95/MWh) + (250\ MWh\ \times £55/MWh) + (240\ MWh\ \times £45/MWh))}{(10MWh + 250MWh + 240MWh)}$$

$$Main\ Price = £51/MWh$$

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PAR Tagging – in future

From 5 November 2015, PAR will be 50 MWh

= 50 MWh

= 500 MWh

PAR 500MWh

RPAR 1 MWh Nov 2015

Main Price is the volume weighted average price of the remaining actions

$$Main\ Price = \frac{((10\ MWh \times £95/MWh) + (40\ MWh \times £55/MWh)}{(10MWh + 40MWh)}$$

$$Main\ Price = £63/MWh$$

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PAR Tagging – further into the future

From 1 November 2018, PAR will be 1 MWh

= 1 MWh

= 50 MWh

PAR 50 MWh Nov 2015

RPAR 1 MWh Nov 2015

Main Price is the volume weighted average price of the remaining actions

$$Main\ Price = \frac{(1\ MWh \times £95/MWh)}{(1MWh)}$$

$$Main\ Price = £95/MWh$$

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Reduced PAR

What's changing?

Price Average Reference (PAR) reduces from 500MWh to 50MWh in 2015, then to 1MWh in 2018

Why?

- Concern that averaging costs dampens the Imbalance Price as a signal of scarcity, particularly at times of system stress

How?

- PAR is an existing parameter
- Simply update to 50MWh from 5 November 2015; and
- Reduce further to 1MWh from 1 November 2018

Reference

BSC Section T

Parameters/Values

PAR = 50MWh from 05/11/15

PAR = 1MWh from 01/11/18

Who does it affect?

- BMRA, SAA

FAQs

Will PAR be reviewed before reducing to 1MWh in November 2018?

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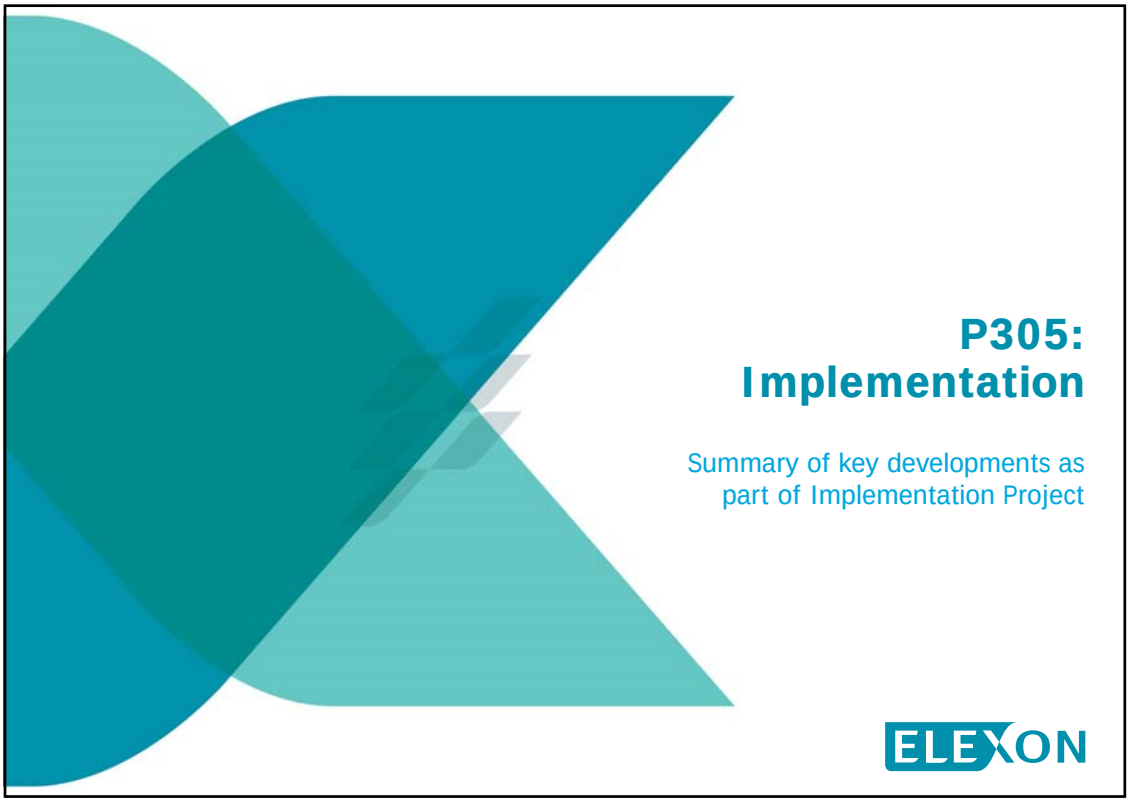
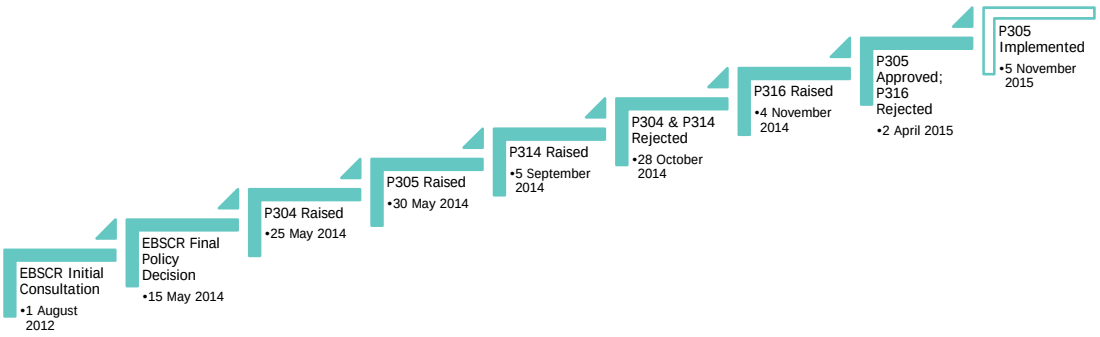


The story so far



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Implementing P305

- Approved Modification P305 covered:
  - BSC legal text
  - Overall requirements
- Development post approval:
  - Detailed processes and software solutions
  - Changes to Central Systems
  - Changes to Party and Party Agents' processes and systems
  - Documentation:
    - BSCPs
    - Central Agent URSs and SDs
    - SVAA, EAC/AA and NHHDA Software Documentation
    - New data flows
      - Data Transfer Catalogue (DTC)
      - SVA Data Catalogue
      - Interface Definition Document (IDD)

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This afternoon's focus

- Disconnections: 'bottom up' estimate
  - A closer look at processes and requirements
- Reporting
  - Updated BMRS
  - New System Price Analysis Report
- Q&A

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Disconnections

What's changing?

Inclusion of the cost of disconnections

Why?

- Imbalance prices do not reflect the value that consumers place on security of supply

How?

- Where TC requires Demand Control, include a 'top down' estimate of any disconnection volumes in Imbalance Price calculation
- Priced at VOLL = £3000/MWh from Nov 2015; £6000/MWh from Nov 2018
- Parties imbalance positions will be adjusted to reflect expected pre-disconnection position
  - CDCA, Party Agents and SVAA determine 'bottom up' estimates of BMU disconnected volumes

FAQs

How frequently will disconnections occur?

Will estimates need to be reviewed/recalculated each Settlement Run?

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BSCPs 502-505, 508, 515

SVA Data Catalogue

DTC

New Parameters/Values

VOLL

Who does it affect?

- BMRA, SAA, CDCA, SVAA
- Transmission Company
- LDSOs
- Suppliers
- HH and NHH DCs and DAs
  - EAC/AA Software

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Disconnections – 'top down' estimate

National Grid informs ELEXON of Demand Control Instructions (DCIs)

DCI

DNOs

UK Power Networks

WESTERN POWER DISTRIBUTION

NORTHERN POWERGRID

National Grid instructs the DNOs to take action

ELEXON uses DCIs to estimate total Disconnection Volume(s)…

£ SBP

… which are treated like BOAs and BSAAs in Main Price Method

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Demand Control Instructions

- Transmission Company must send Demand Control Instructions (DCIs) to BMRA
  - Within 15 minutes of the Instruction
  - BMRA shares with other Central Agents and publishes details on the BMRS

National Grid informs ELEXON of Demand Control Instructions (DCIs)

DCI

- DCIs will contain details:
  - Demand Control Instruction ID
  - Sequence Number
  - Demand Control Event Type Flag
    - 'I' = Demand Disconnection, 'L' = Auto Low Frequency Demand Disconnection
  - Start Date and Time
  - End Date and Time
  - LDSO MPID (where known)
  - Demand Control Estimate (MW) – i.e. the response requested, not necessarily delivered
  - SO-Flag
    - Automatically SO-Flagged if Auto Low Frequency Demand Disconnection

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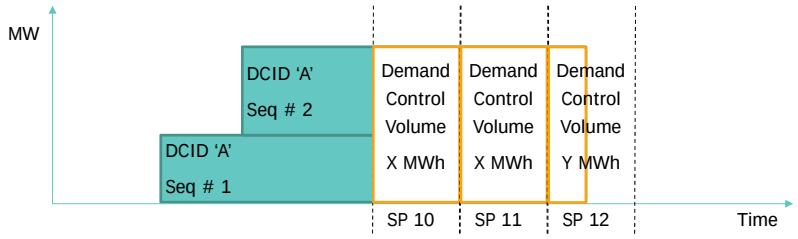
44 Insert: Document title

‘Top down’ estimate

- BMRA and SAA use DCIs to determine Demand Control Volumes
- Demand Control Volumes are calculated per Settlement Period…

ELEXON uses DCIs to estimate total Disconnection Volume(s)…



- … and added to the Imbalance Price calculation as an action
- Demand Control Volumes are treated like any other BOA or BSAA

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Disconnections – ‘bottom up’ estimate

National Grid instructs the DNOs to take action

DNOs

UK Power Networks
WESTERN POWER DISTRIBUTION
NORTHERN POWERGRID

DNOs send disconnected MSIDs to Party Agents and BMUs to CDCA

DCs & DAs

Party Agents estimate and aggregate disconnection volumes

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CDCA estimates d/c BMU disconnection volumes…

… SVAA adjusts Supplier metered volumes…

£ Imbalance Cashflow

… SAA accounts for disconnection volumes in Parties Credited Energy and Imbalance Charges

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DNOs send details of disconnected MSIDs

- DNO sends P0238
  - ...to ALL Party Agents...
  - ...within 5 working days of end of a Demand Control Event...
  - ... containing details of ALL disconnected MSIDs*.

DNOs

UK Power Networks

WESTERN POWER DISTRIBUTION

NORTHERN POWERGRID

DNOs send disconnected MSIDs to Party Agents and CDCA

- In practice, DNO sends P0238 to ELEXON...
  - ...who forwards to all Party Agents.
- P0238 defined in SVA Data Catalogue

* Excluding de-energised, de-registered or voluntarily disconnected MSIDs

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National Grid sends details of voluntary disconnections

- National Grid may have requested voluntary disconnections, e.g.
  - Demand side Non-BM STOR
  - Demand Side Balancing Reserve (DSBR)

- These voluntary actions must be excluded from the Imbalance Price calculation
- National Grid uses P0241 to send details of voluntarily disconnected MSIDs to the SVAA...
  - ... within 25 working days...
  - ... the SVAA then forwards the MSIDs to all HH and NHH DCs and DAs for use when estimating and aggregating disconnection volumes...
  - ... the SVAA uses the D0375 data flow.

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SVAA sends Profile Data to NHHDCs

- Following receipt of Demand Control Instruction(s) SVAA must send D0018s to all NHHDCs for use when calculating EACs and AAs.
- SVAA only sends D0018s for Settlement Periods affected by a disconnection.
- D0018s are used by NHHDCs when calculating NHH EACs and AAs for disconnected sites

Estimating and Aggregating – overall summary

HH

DCs & DAs

Party Agents estimate and aggregate disconnection volumes

- Data Collectors and DAs produce an estimate of likely Disconnection volumes and send these to the SVAA
- Estimation of Disconnection Volumes is in parallel to ordinary DC and DA activities
  - Not in place of them
- SVAA aggregates BMU level estimates of disconnection to Account level and sends to SAA

NHH

- In general, Data Collectors produce EACs and AAs as normal
  - Though AA calculation updated and DCs rely on new input data
- Data Aggregators aggregate NHH Disconnection Volumes in parallel to ordinary DA activities
- SVAA aggregates BMU level estimates of disconnection to Account level and sends to SAA

Estimating and Aggregating - HHDC

- BSCP502 updated with process and guidance
- Receive P0238 and D0375s containing disconnected MSIDs
- HHDCs are required to:
  - Estimate Disconnection Volumes for MSIDs they're appointed to
  - BSCP502 sets out methods for estimating
  - Must take account of D0375 from SVAA
  - Send estimates to HHDA using D0375 within 19wds
    - Zeros reported for non-impacted Settlement Periods
- Estimates must be recalculated upon receipt of updated/replacement P0238 and D0375s

DCs & DAs

Party Agents estimate and aggregate disconnection volumes

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Estimating and Aggregating – HHDA and SVAA

HHDA

- BSCP503 updated with new process and guidance
- According to existing Settlement Timetable and using existing rules and processes for aggregating data…
  - HHDA aggregates Disconnection Volumes for disconnected MSIDs…
  - …For Impacted Settlement Periods only
  - Report to SVAA using D0376 or D0378 (as appropriate)
- Exceptions should be reported manually to the relevant Supplier

DCs & DAs

Party Agents estimate and aggregate disconnection volumes

SVAA

- Upon receipt of D0376s and D0378s, sums aggregated disconnection volumes and attributes to BMUs and CCCs
- These volumes are provided to the SAA

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Estimating and Aggregating - NHHDC

- BSCP504 updated with process and guidance

DCs & DAs

Party Agents estimate and aggregate disconnection volumes

- Receive P0238 and D0375s containing disconnected MSIDs
- NHHDCs are required to:
  - Load D0018s upon receipt
  - Load P0238s and calculate EAC/AAs for all MSIDs in file
  - Load D0375s and calculate EAC/AAs for all MSIDs in file
  - Resulting D0019s reported to NHHDA as usual
  - Exceptions (e.g. failure to load a file) should be reported manually to ELEXON and LDSO
- EAC/AAs must be recalculated upon receipt of updated/replacement P0238 and D0375s
  - Nb including where an MSID was originally reported on a P0238 but is removed by a subsequent P0238

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Estimating and Aggregating – NHHDA and SVAA

NHHDA

DCs & DAs

Party Agents estimate and aggregate disconnection volumes

- BSCP505 updated with new process and guidance
- According to existing Settlement Timetable and using existing rules and processes for aggregating data…
  - NHHDA aggregates Disconnection Volumes for disconnected MSIDs…
  - …For Impacted Settlement Periods only
  - Report to SVAA using D0377 (Disconnection Purchase Matrix)
- Exceptions should be reported manually to the relevant Supplier

SVAA

- Upon receipt of D0377s, profiles DPM and attributes to BMUs and CCCs
- The profiled DPM data is subtracted from profiled SPM to ensure accurate Metered Data
- The profiled DPM and corrected profiled SPM volumes are provided to the SAA

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How are BMRS and Portal changing?

BMRS

- In general, existing pages updated to include new data
  - RSP
  - STOR Flag
- In some cases, new pages created:
  - STOR Availability Window data
  - Demand Control Instructions

ELEXON Portal

- Only addition at this point is:
  - LoLP Lookup Table
- All other pricing data remains as is

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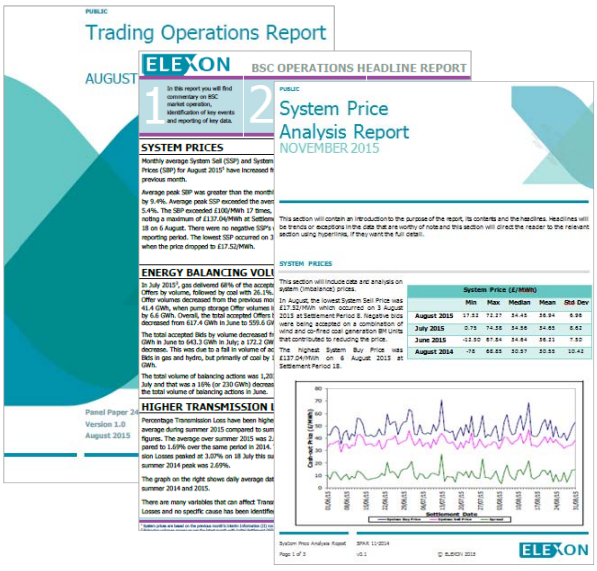
New SPA Report



- In addition to existing monthly reports
  - Trading Operations Report
  - BSC Operations Headline Report
- New SPA Report content
  - Last month price analysis
  - Parameter analysis
  - Future Par 1 Scenario Prices
  - Pre/Post Price Calculations
- Published on ELEXON.CO.UK
- Presented to Imbalance Settlement Group

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Q&A

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Further reading

- Ofgem – EBSCR - https://www.ofgem.gov.uk/electricity/wholesale-market/market-efficiency-review-and-reform/electricity-balancing-significant-code-review
  - Electricity Balancing Significant Code Review: Draft Policy Decision
  - London Economics Value of Lost Load for electricity in GB - https://www.ofgem.gov.uk/publications-and-updates/electricity-balancing-significant-code-review-draft-policy-decision
  - Electricity Balancing Significant Code Review: Final Policy Decision - https://www.ofgem.gov.uk/publications-and-updates/electricity-balancing-significant-code-review-final-policy-decision
    - Electricity Balancing Significant Code Review - Final Policy Decision Impact Assessment
    - Electricity Balancing Significant Code Review - Further analysis to support Ofgem's Updated Impact Assessment (Baringa)
- ELEXON - Approved BSC Modification P305 - https://www.elexon.co.uk/mod-proposal/p305/
  - Final Modification Report
  - Historical Analysis - https://www.elexon.co.uk/wp-content/uploads/2014/05/P305-Final-Modification-Report.zip
  - The Authority's decision - https://www.elexon.co.uk/wp-content/uploads/2014/05/P305D-v2.0.pdf
- November 2015 Release documentation - https://www.elexon.co.uk/release/november-2015-release/

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What you should take away…

- Why things are changing
  - Background to EBSCR and P305
- Understanding of key changes to Imbalance Price arrangements
  - How prices will be calculated in future
- What BSC Parties and Party Agents must do
- ELEXON is here to help
  - OSMs
  - Market Advisors and Analysts
  - Reporting and monitoring

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Thomas Percy
Guido Fawkes
Robert Catesby

Thank you