



EU Code Requirements Industry Workshop

28th July 2014

Agenda

- NI Arrangements
- European Network Codes
 - Capacity Allocation Mechanisms Code
 - Nominations for New Entry Products
 - Interoperability and Data Exchange Code
 - Balancing Code

NI Arrangements

NI Arrangements

	October 2014	October 2015	October 2016
Configuration	<ul style="list-style-type: none"> Point to Point 	<ul style="list-style-type: none"> Entry / Exit 	<ul style="list-style-type: none"> Entry / Exit
Market Facing Bodies	<ul style="list-style-type: none"> Premier Transmission Belfast Gas Transmission BGE(NI) 	<ul style="list-style-type: none"> Premier Transmission Belfast Gas Transmission BGE(NI) 	<ul style="list-style-type: none"> CJV (Representing NI TSOs)
Network Codes	<ul style="list-style-type: none"> 3 Point to Point 	<ul style="list-style-type: none"> 3 Entry / Exit 	<ul style="list-style-type: none"> 1 NI Entry / Exit Code
Systems	<ul style="list-style-type: none"> 2 TSO Systems 	<ul style="list-style-type: none"> 2 TSO Systems PRISMA 	<ul style="list-style-type: none"> 1 CJV System PRISMA
Capacity	<ul style="list-style-type: none"> Exit (Point to Point) 	<ul style="list-style-type: none"> Entry Exit 	<ul style="list-style-type: none"> Entry Exit

European Network Codes

Background

- The European Third Energy Package (Directive 2009/73/EC / Regulation (EC) No 715/2009)
- Regulatory framework developing European-wide Network Codes
 - The Network Codes form a legally binding set of common technical and commercial rules and obligations that govern access to and use of the European energy networks
 - Congestion Management Procedures
 - Capacity Allocation Mechanisms
 - Gas Balancing
 - Harmonised Transmission Tariff Structures
 - Interoperability and Data Exchange
 - Incremental Capacity

Code Objectives

Code / Regulation	Objective
Congestion Management (CMP)	CMP Guidelines set out certain provisions to be applied to counter and prevent contractual congestion. Contractual congestion is a situation where network users cannot gain access to gas transmission systems in spite of the physical availability of the capacity.
Capacity Allocation Mechanism (CAM)	In order to facilitate gas transport and gas trading across the EU, CAM aims to promote and define harmonised capacity allocation mechanisms, i.e. auction procedures, and a small set of standardised bundled cross border capacity products at interconnection points between entry-exit zones.
Balancing (BAL)	To create balancing rules, including network-related rules on nominations procedures, rules for imbalance charges and rules for operational balancing between TSOs' systems.
Interoperability & Data Exchange (INT)	This Code aims to make EU networks 'interoperable' by removing barriers to cross border gas flow associated with: <ul style="list-style-type: none">• Interconnection Agreements• Gas Quality• Odourisation (of transmission systems)• Common Units• Data Exchange
Tariffs	To promote the harmonisation of transmission tariff structures within the EU.
Incremental Capacity	To propose harmonised and market-based approaches throughout Europe to allocate and price both existing and incremental/new capacity in an integrated manner.

Code Status

Code	Current Status	Implementation date
Congestion Management (CMP)	Implemented	1 st October 2013 (Fixed)
Capacity Allocation Mechanism (CAM)	CAM approved for EU wide implementation at relevant EU IPs.	1 st November 2015 (Fixed)
Balancing (BAL)	BAL approved for EU wide implementation 26 th March 2014 (Commission Regulation (EU) No 312/2014 establishing a Network Code on Gas Balancing of Transmission Networks.)	1 st Oct 2015 (subject to NRA approval for additional 12 months) (Fixed)
Interoperability & Data Exchange (INT)	In Comitology. 1 st Comitology meeting took place on 11 th July 2014 Next meeting to take place in September/October 2014 (dates TBC).	Q4 2015 (Estimated)
Tariffs	Under development. Code to be submitted 31 st December 2014	Estimated earliest mid January 2017 Applicable from October 2017
Incremental Capacity	Under development. Incremental Capacity to be introduced via combination of new articles in CAM Network Code and via Tariffs Network Code Code amendment to be submitted 31 st December 2014	Applicable from March 2017

Capacity Allocation Mechanisms

CAM Code Scope/Requirements

- Gas Day
- Products
- Auction Timescales
- Auction Rules / Algorithms
- Interruptible Product Rules (incl. VRF)
- Interruption Process Rules
- Rules for Shippers bundling their own capacity
- Tariff rules (minimal) and use of a booking platform

Gas Day

- The gas day is required to change to 05:00-05:00 to achieve compliance with the CAM code
- NG is proposing 23 hour day on Gas Day 30th September 2015, to start 1st October at 05:00
- Development of Gas Day Transition Plan ongoing - to align with National Grid and Gaslink
- Code Review - line references. No issues
- Operation and System process timings that are time driven i.e. forecasting, meter reading, telemetry, data exchange are under review
- Review all contracts for gas day dependencies ongoing

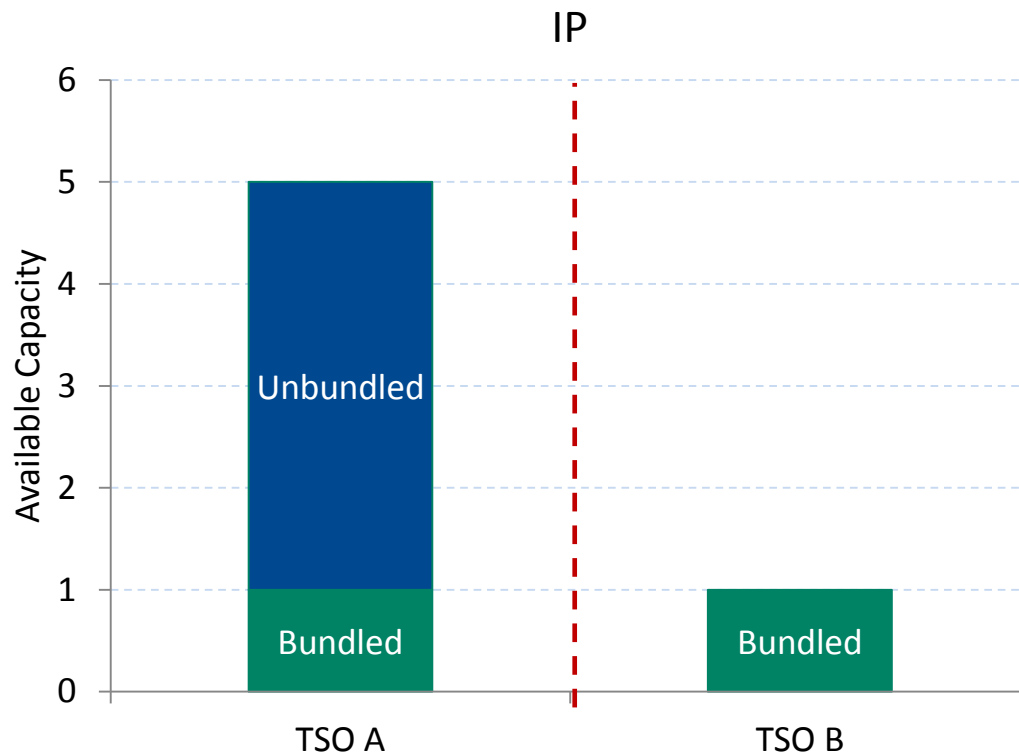
NI Capacity Concept - Transition Principles

- NI will be introducing Entry Capacity as a separate product for the first time
- Mechanism to transition Point-to-Point capacity entitlements to Exit and corresponding Entry Capacity entitlements
- **Initial Entitlements**
 - Shippers have capacity entitlement at both entry and exit associated with their existing bookings and this entitlement will be separated for entry and for exit
 - Initial Entitlements will be determined based on existing holdings
 - Shippers existing long term capacity holdings will be split into entry and exit (Same quantity and duration for both)
 - Where DNs hold capacity on behalf of Shippers , we need to determine how much is attributable to each Shipper (method to be determined)
 - Shipper's total entry capacity entitlement will be the sum of the Initial Allocation plus any capacity bought post October 2015

NI Capacity Concept - Transition Principles Continued

- Belfast / Firmus Distribution System Arrangements
 - PNG/Firmus holds aggregate capacity booking and charges their Shippers on a commoditised basis (i.e. = gas flow allocations)
 - Maintain this approach for Exit
 - Shippers to DSOs networks will be required to buy own Entry Capacity to meet their flow requirements
 - i.e. DSOs not required to buy entry capacity
- Must offer new capacity product set at IPs
 - Annual
 - Quarterly
 - Monthly
 - Daily
 - Within Day
- Introduction of Secondary Capacity trading at an IP
- Most of the existing rules for exit will remain, adding the new rules for Entry
- Exit Capacity Review in 2016

CAM Capacity Concept – Bundled Capacity



- Bundled Capacity
 - Consists of corresponding entry and exit capacity on both sides of the IP
 - Cross border bundling of unsold capacity has to be given priority
- Unbundled Capacity
 - Where more available firm capacity exists on one side of an IP, this can be offered as an unbundled product up to 1 year ahead

CAM Capacity Concept – Bundled Capacity

- Bundled capacity sales will start from 1st November 2015

Moffat



South North



CAM Capacity Concept – Key Notes

- TSOs are required to offer bundled Capacity at an IP where Firm available on both sides
- Capacity sold at an IP is to be auctioned and allocated on a booking platform (PRISMA)
- Shippers purchasing bundled Capacity at an IP **must:**
 - **Have a Shipper and/or Supplier licence granted from the relevant RA on either side of an IP**
 - **Be a registered Shipper with both TSOs either side of an IP**
- Where there is more unsold Capacity on one side of the IP, that capacity may be sold as unbundled capacity for a maximum for one year.
- Existing capacity contracts are exempt from bundling but cannot be extended i.e. once the booking ends the Capacity must be bundled (assuming there is adequate Capacity on the other side of the IP)
- Shippers are encouraged to bundle existing transport contracts
- Based on the current levels of unsold Capacity, from November 2015, all NI Firm Entry Capacity shall be sold as bundled
- **There will be no unbundled NI Firm Capacity available from November 2015**

CAM – PRISMA Platform

- PRISMA
 - Joint Capacity Booking Platform
 - Currently provides CAM compliant auction functionality, up to day ahead
 - Bundled and Unbundled capacity
 - Functionality for Shippers to notify/offer surrendered capacity to TSO
 - Functionality for secondary trading between Shippers
 - Developing day ahead and within day auction functionality for Q3 2015
 - Developing functionality to auction in £'s for Q3 2015
 - NI Bundled Product and ROI Bundled Product
- Simply an auction platform – no ‘backend’ processes, i.e. TSOs upload:
 - Available capacity on each side
 - Shipper Credit Information
- PRISMA runs the auction and informs Shippers and TSOs of the outcome
- TSOs bill separately for their part of bundled products

CAM Auctions for Capacity Products

Auction	Frequency	Product Entry/Exit	Capacity Commences	Start of Auction	Allocation	Auction Algorithm
Annual Yearly	annually	Firm Y1 to Y15 Annual strips	1 st October	1 st Monday of March	Next business day	Ascending clock
Annual Quarterly		Firm Q1 to Q4	1 st October 1 st January 1 st April 1 st July	1 st Monday of June		
Rolling Monthly	monthly	Firm Monthly Tranche	1 st day of each month	3 rd Monday of M-1		
Rolling Day Ahead	daily	Firm D+1	Start of the Gas Day	D-1	Within 30 minutes of closure of bidding round	Uniform price
Within Day	hourly	Firm D	Rest of the Gas Day	D		

CAM Auction Reserve Prices

- Auction reserve prices will be determined by aggregating the respective Entry and Exit Tariffs
- Moffat Example



- Payable Price = Cleared Price
- Cleared Price = Reserve Price + Auction Premium (if any)
- Auction premium to be split between the two TSOs (default 50/50)
- TSOs bill separately for their part of bundled products

NI Capacity Concepts

- Interruptible Capacity Currently
 - Interruptible Nom = Interruptible Capacity Application unlikely be maintained for Exit in current form
- Interruptible Entry Capacity Product
 - Interruptible Capacity can only be released where all Firm Capacity has been sold out
 - Interruptible Capacity secured via Auctions
 - May be offered, TSOs considering if product required
 - Interruptible Entry Product(s) Proposal will be developed
- Entry Point Accession/Registration Rules in development
- Currently we have point-to-point VRF rules (VRF service available to all NI exit points)
 - No longer needed for all Exit Points, though need VRF rules at IPs
 - Adaption of CAM VRF rules for IPs in development
- Currently CMP rules apply in respect of Exit Points
 - Changes needed to make them apply at the IPs
 - Approach to CMP for Entry in conjunction with National Grid and Gaslink in development

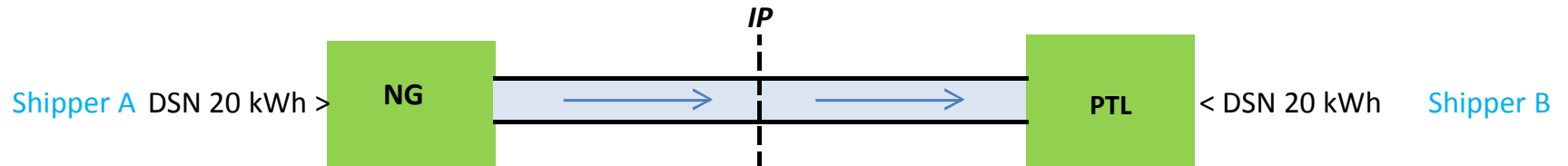
NI Capacity Concepts – Impact on Balancing

- NI has multiple TSOs but a single balancing zone
 - Currently Imbalance calculated on difference between Shippers allocated total inputs and outputs on each contract path
 - Imbalance will now need to be calculated on aggregate basis across whole of NI (total NI inputs – total NI outputs)
 - Implementation procedures are being developed
- NI Balancing zone boundaries are and will remain the IP entry points and the “NI System” Exit Points

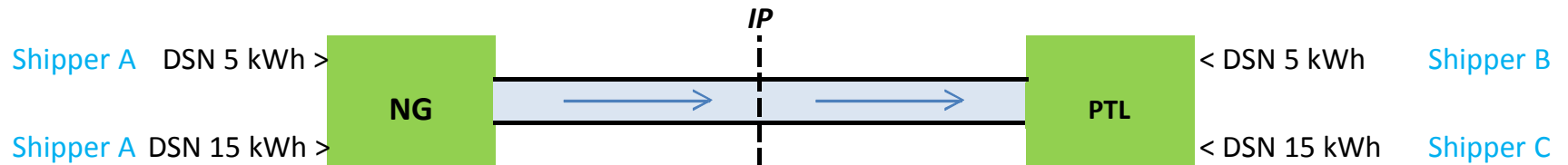
Nominations for New Entry Products

Nominations for New Entry Products - Examples

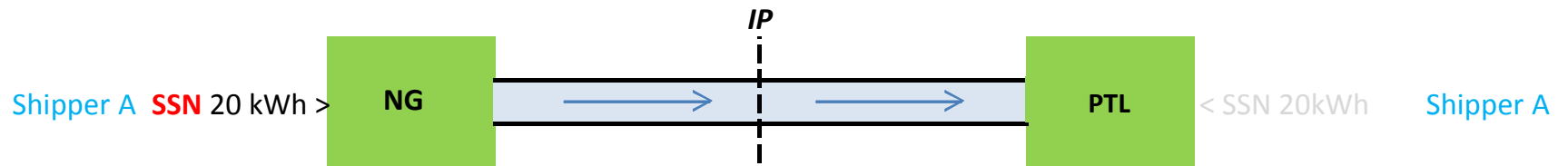
Example 1



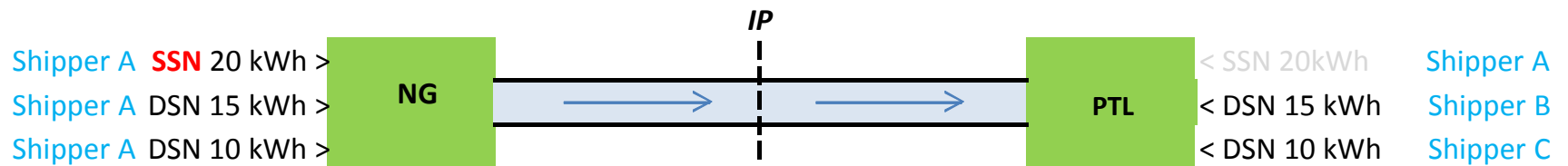
Example 2



Example 3



Example 4



Nominations for New Entry Products

- Need to comply with BAL, INT and CAM codes
- Single Sided Entry Nomination
 - For bundled capacity products
- Double Sided Entry Nomination
 - For unbundled capacity products
- Shippers may have both bundled and unbundled capacity at an IP
 - Bundled product will have single capacity booking, single nomination and single allocation
 - Shippers may have multiple entry nominations per IP (A User holding both Bundled Capacity and Unbundled Capacity at an IP may submit separate Single Sided Nominations and Double Sided Nominations)
 - As opposed to current situation where Shippers have single (EODQ) nom at a point
- Nominations must specify a single counterparty
 - Or be single noms – i.e. specifying same party
 - In contrast to current situation at Moffat where NTS Shippers make a single nom on NG side, and may have multiple counterparties downstream
- Single Nom for bundled products of different durations
 - E.g. Shipper with long term bundled capacity of 20 and daily bundled capacity of 5 (with same counterparty) can make one nom, up to 25, then TSO may reject nom>25
- Separate noms for unbundled products – one nom per counterparty per day

Noms Timescales Summary and Comparison

Feature	Current (Exit) Rules	EU Required IP Rules
Earliest Nomination submission time	None specified	D-30
Nomination deadline	08:00 D-1	13:00 D-1
Re-nomination period start time	18:00 D-1	15:00 D-1
Re-nomination period end time	01:00 D	02:00 D
Nomination Effective Time	Hour bar + 4 hrs	Hour bar + 2 hrs
Default nomination rule (no nomination submitted)	Nom = Zero	Nom = Zero
VRF latest (exit) Nom time	22:00 D-1	02:00 D

Interoperability and Data Exchange

Interoperability Code Requirements

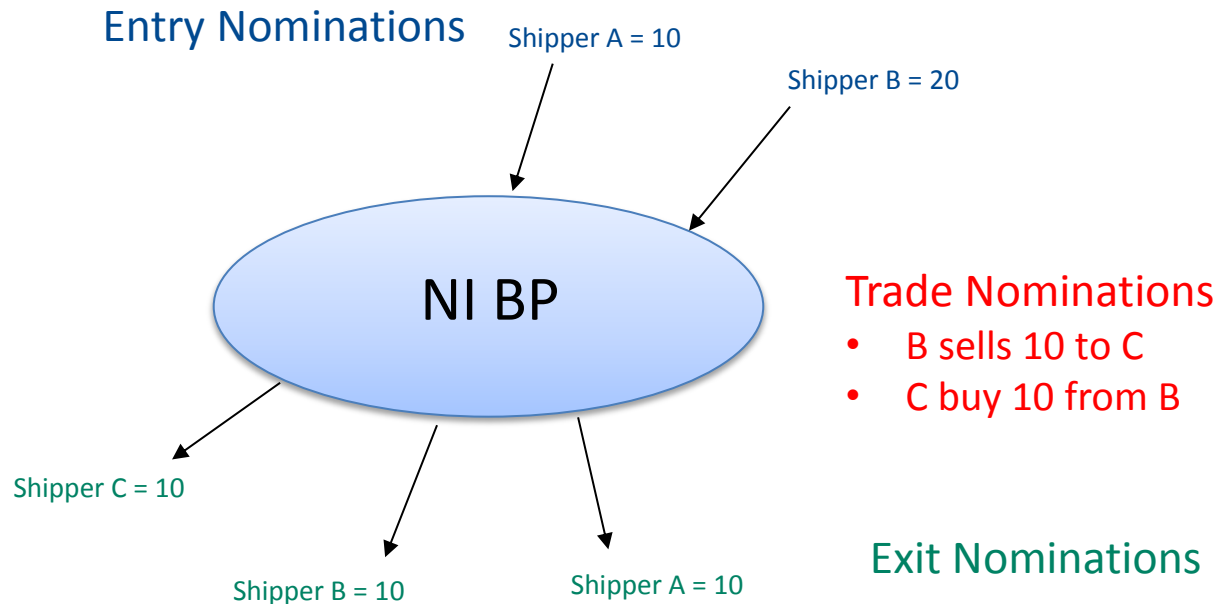
- In respect of each IP the adjacent TSOs shall establish an Interoperator Agreement to include information on gas quality, matching process, allocation rules and data exchange rules.
- **Operational Balancing Agreement (OBA)** to be implemented at IPs
- OBA approach = Shipper gas allocations to be 'held whole' to their nominations (i.e. Shippers 'get what they nominate')
 - 'Steering difference' = difference between target aggregate delivery quantity and actual)
 - Steering difference within a tolerance
 - Gets allocated to an Operational Balancing Account between the TSOs
 - Next day's target adjusted to try to reduce any balance in the OBA Account
- National Grid and BGE(UK) have indicated their intention to introduce an OBA at Moffat for October/November 2015
 - No need for Moffat Agent allocation services for NI Entry Allocations
 - Develop the NI Entry Allocations rules to be consistent with the provision of an OBA arrangement at Moffat as of 1st October 2015.
 - It is assumed that, should Shippers wish to use South North Entry Point, BGE(NI) would implement an OBA arrangement with Gaslink, and the Entry Allocation rules described here will be identical for both Entry Points.
 - Other than simplifying the current VRF Allocations rules (which were designed to operate for NI's 'contract path' arrangements) the TSOs do not intend to make changes to the existing processes for Exit Allocations
 - PTL currently carrying out analysis on the impact of the Moffat OBA to determine impact on balancing costs for NI
- Data exchange requirements
 - Work taking place to determine specific requirements

Balancing

Balancing Code

- Network Users are to bear responsibility of balancing inputs and outputs
- Balancing rules designed to promote a short term wholesale gas market,
 - with trading platforms established to better facilitate gas trade between network users
- Balancing requirements to reflect genuine system needs
- Introduces concepts such as Balancing and Trading Platforms
- Both are unsuitable for NI due to the lack of liquidity and expense of introducing such measures
- Where the TSO can demonstrate that as a result of insufficient interconnection capacity between balancing zones a Balancing Platform cannot increase liquidity...and enable efficient balancing actions...it may use an alternative such as balancing services
- NI TSOs propose to undertake balancing actions through the use of interim measures ie balancing services (as is done currently)
- Balancing Services
 - Procured in a market based manner through transparent and non-discriminatory public tender
 - Unless decision by NRA allows, duration of balancing service shall not exceed one year
 - Publish use and costs incurred annually

Trade Nominations



- Shippers (and Traders) will be able to make trade nominations to each other within the NI Network, i.e. 'At the NI Balancing Point'
 - In EU terms, the NI BP is a trading 'hub'
- Trades specify quantities to be traded in respect of a Gas Day
- The trading parties need to submit matching and opposite Trades for them to be accepted

Balancing Code – Information Provision Requirements

- Information Provision
 - TSO shall provide info on system status
- Intraday metered inputs/offtakes – two updates of metered flows per day
 - Only required if no OBA
 - Potentially required if User doesn't have own access to metered data
- Information Models : Base Case, Variant 1 and Variant 2 .
 - NI = Base case (NDM info is day ahead and within day forecast)
- NDM offtakes
 - TSO shall provide first NDM forecast no later than 12:00 D-1
 - First update no later than 13:00 D
 - Second update defined by TSO and approved by NRA
- By EOD D+1, TSO shall provide initial allocations and imbalance
- Where interim measures apply, initial allocation/imbalance can be at D+3
 - If not technically possible by D+1
- Final Allocations – timing defined by National Rules
- Requirement for Cost Benefit Analysis on increasing information provision frequency

Balancing Code – DSO Obligations

- DSO Obligations
 - DSO (and forecasting party if different) to provide info to TSO for info provision to Users
 - Appropriate format etc.
 - Intraday and DM offtake information
 - DSOs to provide forecasting party with necessary info
 - Forecasting party to provide forecast info to TSO no later than 1 hour before the deadlines for provision to users
 - Specifics about the demand forecasting model (e.g. load profile basis)
- Review of DSO information Provision proposed for 2016

Questions?