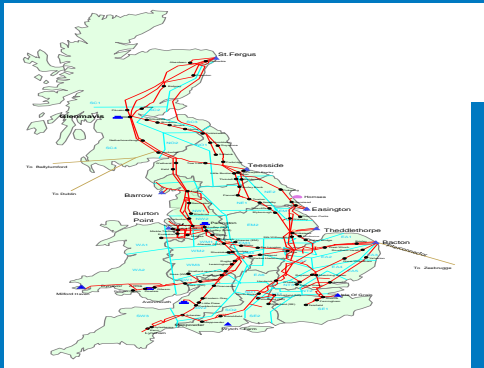


Entry Capacity Reserve prices for 2016 QSEC



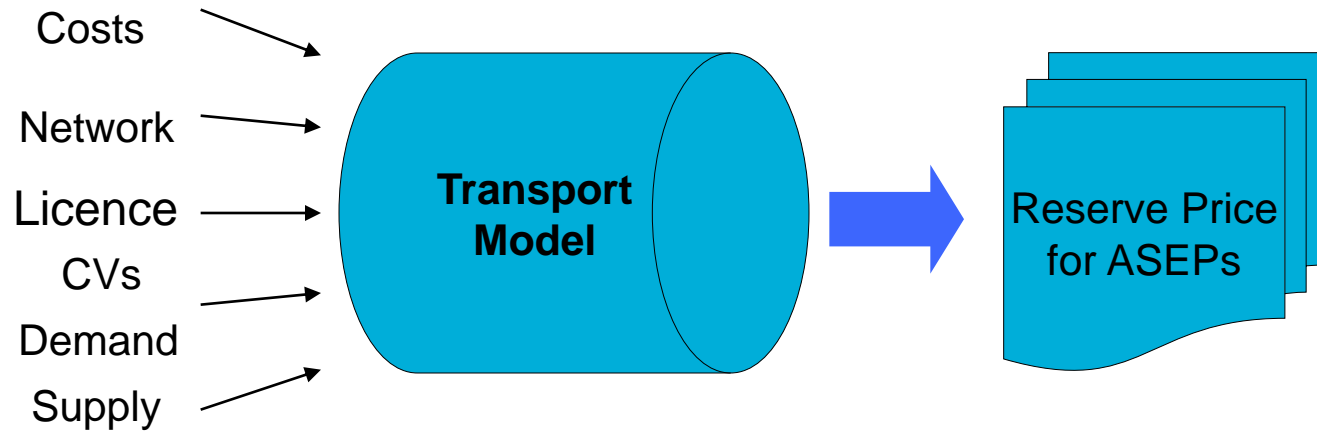
Explanation of the changes to reserve prices

Introduction

- **QSEC 2016 reserve prices have been revised**
- **Results have been compared to QSEC 2015**

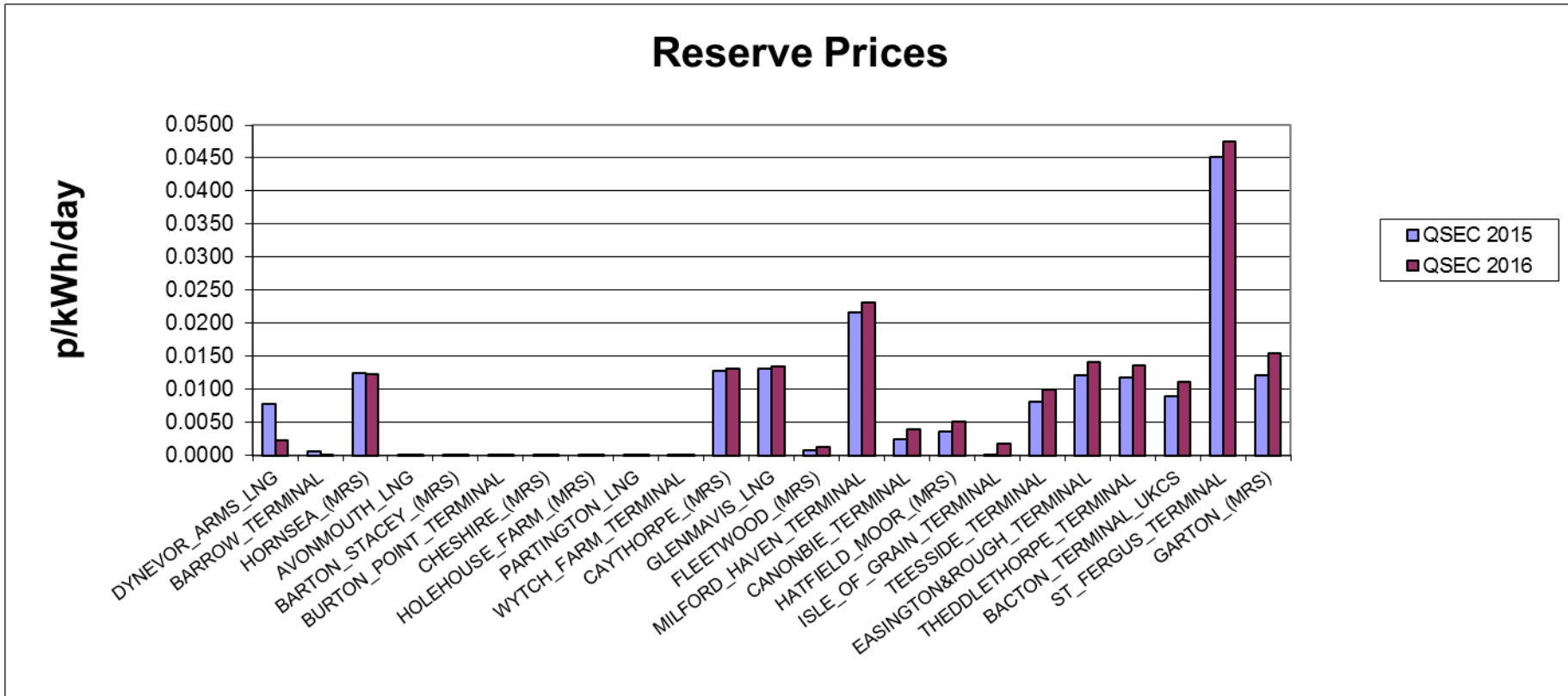
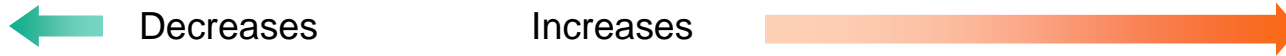
- *Headline:*
- *Most movement, due to changes in average exit/entry costs as a result of changes in supplies and demand*

Inputs, Outputs



Inputs to the model also follow Section Y of the UNC

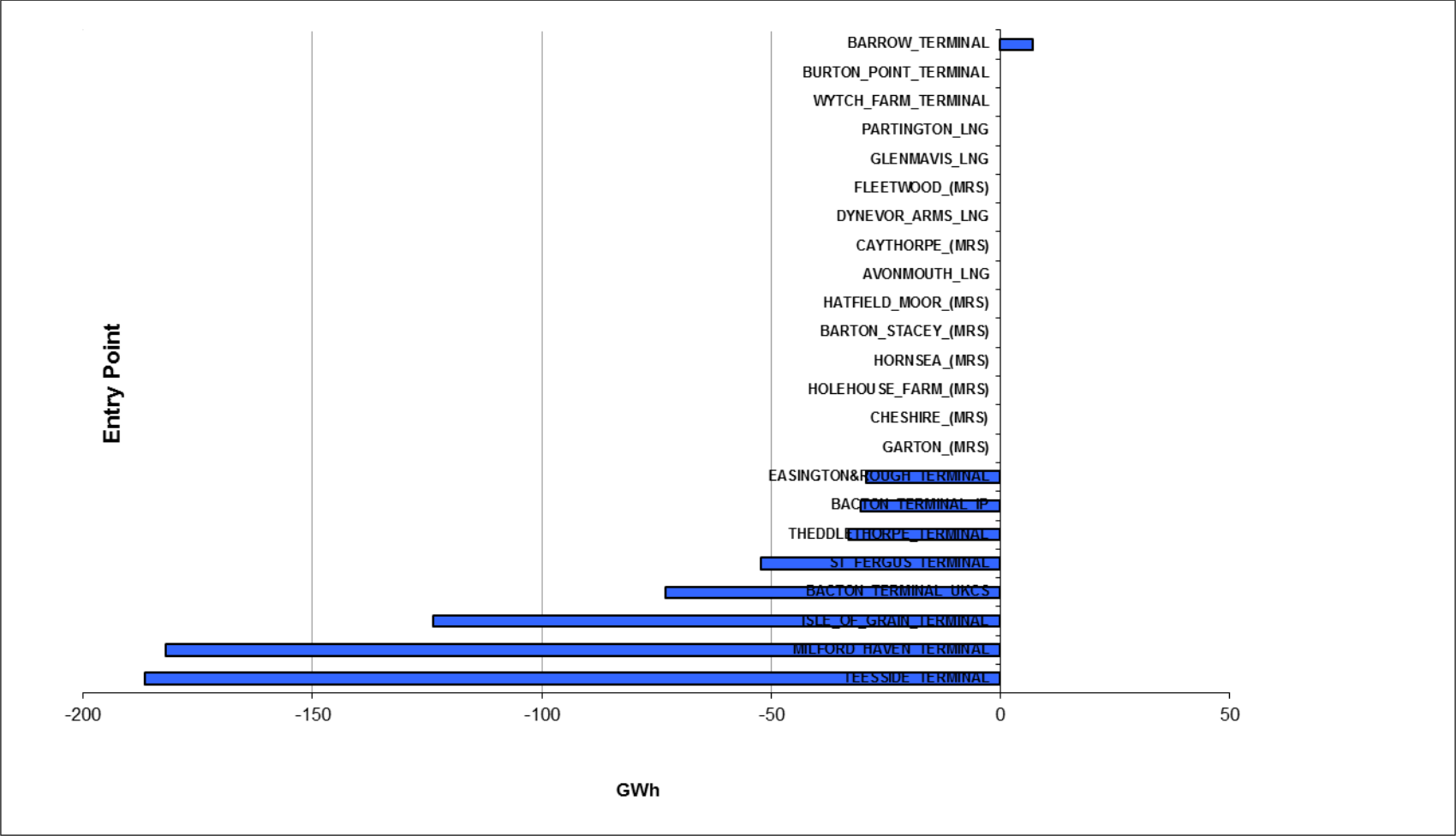
Reserve prices for QSEC capacity (2015 → 2016)



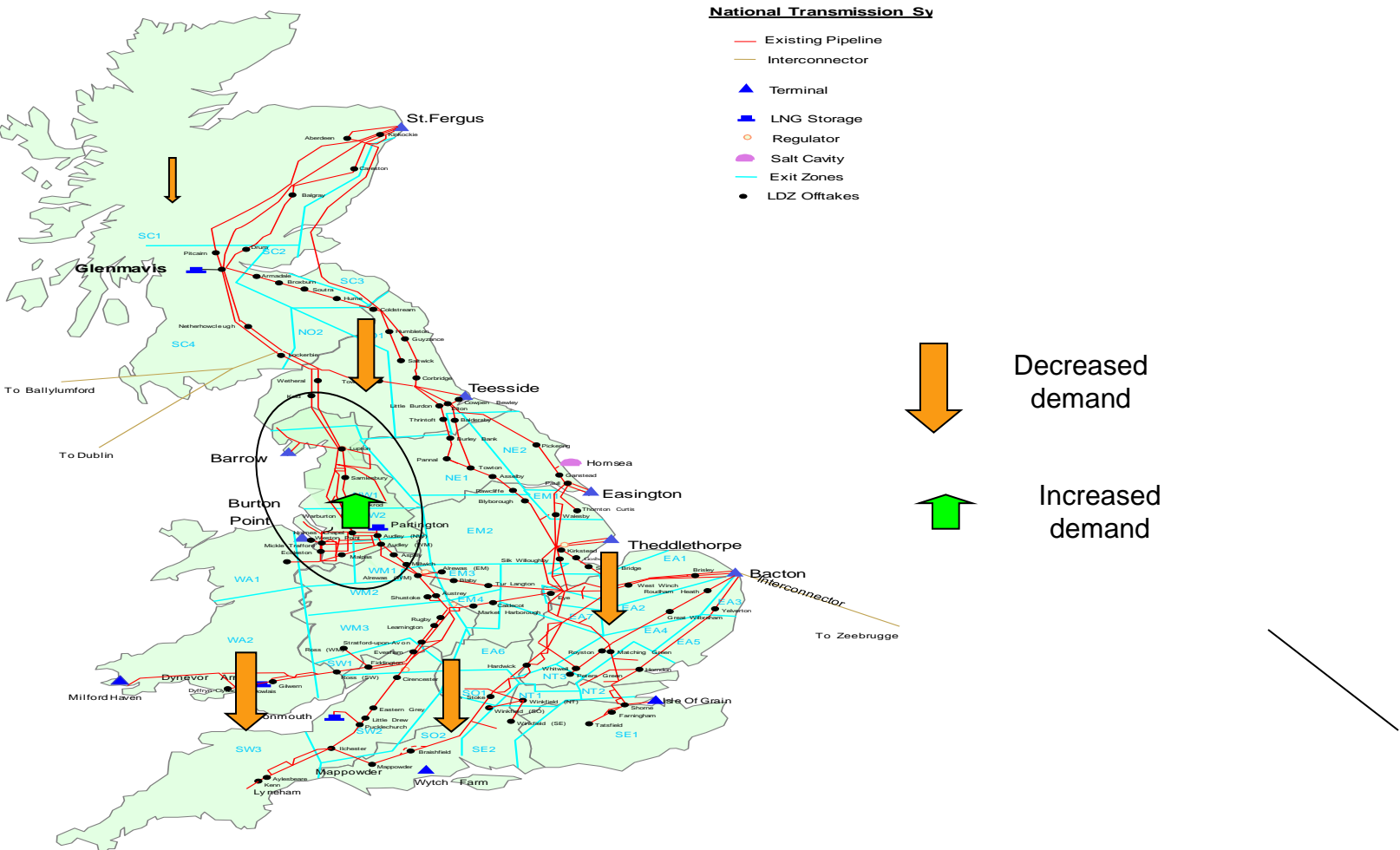
Focus on Supply & Demand

- Change in supply and demand normally has the greatest influence on prices
- Forecast peak day demand has decreased by 11% in 2018/19 from 6,188 to 5,485 GWh
- -12% LDZs and -10% direct connects (mainly power stations)
 - DCs Mainly due to closures/reductions of power stations (one new one coming in, Trafford PS 85GWh)
 - Moffat decreased by 22 GWh
 - LDZ down by c.15% but SC down by 2%
 - Total locational effect all areas down except NW (Trafford PS)
 - Consequently supply has decreased to match demand
 - Beach terminals as in the TYS, down by 398 GWh
 - MH down by 182 GWh and IOG down by 124 GWh

Focus on Supply & Demand



Changes in demand



Focus on Supply & Demand cont.

Why have entry prices gone up?

- Most reserve prices have increased (average 0.0016 p/Kwh/d).
- In the SW WM and SE exit LRMCs have risen (there were only a few decreases) which means that the average exit prices have increased, ie the supplies need to come from further afield to meet the demand in those areas.
- There is an increase in balance of costs to exit, which means the adjustment factor to meet the 50:50 must be positive on entry and negative on exit. Hence the entry reserve prices have increased.
- To maintain a 50/50 split the adjustment factor has shifted from a -10.4 to 6.8 which in itself equates to a 0.0014 (p/kWh/day) even when the entry LRMC's remained as last year.

Focus on Expansion Constant

- The Expansion Constant represents the capital cost for an additional km of pipe
- Updated annually at this time
- Updated according to RPI forecast using the RIIO methodology $0.75 * \text{Forecast RPI growth for 2016} + 0.25 * \text{Forecast RPI growth for 2017}$
- Taken from the HM Treasury report November 2015, “Forecasts for the UK Economy” so can be reconciled externally
- Revised from 2994 to 3092 GWhkm, a 3.3% increase

Focus on Expansion Constant (cont)

- Entry points that are furthest from the centres of demand are most affected
 - An incremental GWh of supply will require a greater length of pipe to be installed to transport the gas to the demand centres. Therefore these entry prices are more sensitive to changes in the expansion constant
 - St. Fergus +0.0015 p/kWh/d
 - Milford Haven +0.0007 p/kWh/d
- Changes of this nature should be expected and predictable

Focus on Network Changes

- Network changes have had a limited effect ..
 - no new projects added to the network this year
 - changes are updated measurements
 - effect on prices is negligible

Obligated Levels

- No change in obligated levels from last year
- Except, due to the Bacton Split;
 - Moved from a total of 1783.4 GWh/d for B/C to
 - Bacton UKCS 485.6 GWh/d
 - Bacton IP 1297.8 GWh/d

Rounding has caused a change from 0.0089 to 0.0088 p/kWh/d

CVs

- To recognise different CVs at each entry point, the capital costs are adjusted for CVs
- An increase in CV will reduce reserve price
- Tiny changes not enough to affect prices
- Only one change, seen at MH, effect on price -0.0001 p/kWh/d CV changed from 39.2 to 39.7 MJ/m³

QSEC 16 Reserve Prices

	QSEC15	QSEC 16	Change
AVONMOUTH_LNG	0.0001	0.0001	0.0000
BACTON_TERMINAL_UKCS	0.0089	0.0112	0.0023
BARROW_TERMINAL	0.0006	0.0001	-0.0005
BARTON_STACEY_(MRS)	0.0001	0.0001	0.0000
BURTON_POINT_TERMINAL	0.0001	0.0001	0.0000
CANONBIE_TERMINAL	0.0025	0.0040	0.0015
CAYTHORPE_(MRS)	0.0128	0.0131	0.0003
CHESHIRE_(MRS)	0.0001	0.0001	0.0000
DYNEVOR_ARMS_LNG	0.0078	0.0023	-0.0055
EASINGTON&ROUGH_TERMINAL	0.0122	0.0142	0.0020
FLEETWOOD_(MRS)	0.0008	0.0013	0.0005
GARTON_(MRS)	0.0122	0.0155	0.0033
GLENMAVIS_LNG	0.0131	0.0135	0.0004
HATFIELD_MOOR_(MRS)	0.0036	0.0051	0.0015
HOLEHOUSE_FARM_(MRS)	0.0001	0.0001	0.0000
HORNSEA_(MRS)	0.0125	0.0123	-0.0002
ISLE_OF_GRAIN_TERMINAL	0.0001	0.0017	0.0016
MILFORD_HAVEN_TERMINAL	0.0216	0.0231	0.0015
PARTINGTON_LNG	0.0001	0.0001	0.0000
ST_FERGUS_TERMINAL	0.0451	0.0475	0.0024
TEESSIDE_TERMINAL	0.0082	0.0099	0.0017
THEDDLETHORPE_TERMINAL	0.0118	0.0137	0.0019
WYTCH_FARM_TERMINAL	0.0001	0.0001	0.0000