Gas Winter Outlook 2015 / 16



BIEE
14th October 2015
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Why do we prepare a winter outlook?

As the GB System Operator, part of our role is to provide credible analysis of how the energy sector might look based on the latest information available to us. This report draws together analysis and feedback from across the industry to present robust data and help optimise availability for the coming winter by ensuring the market is fully informed

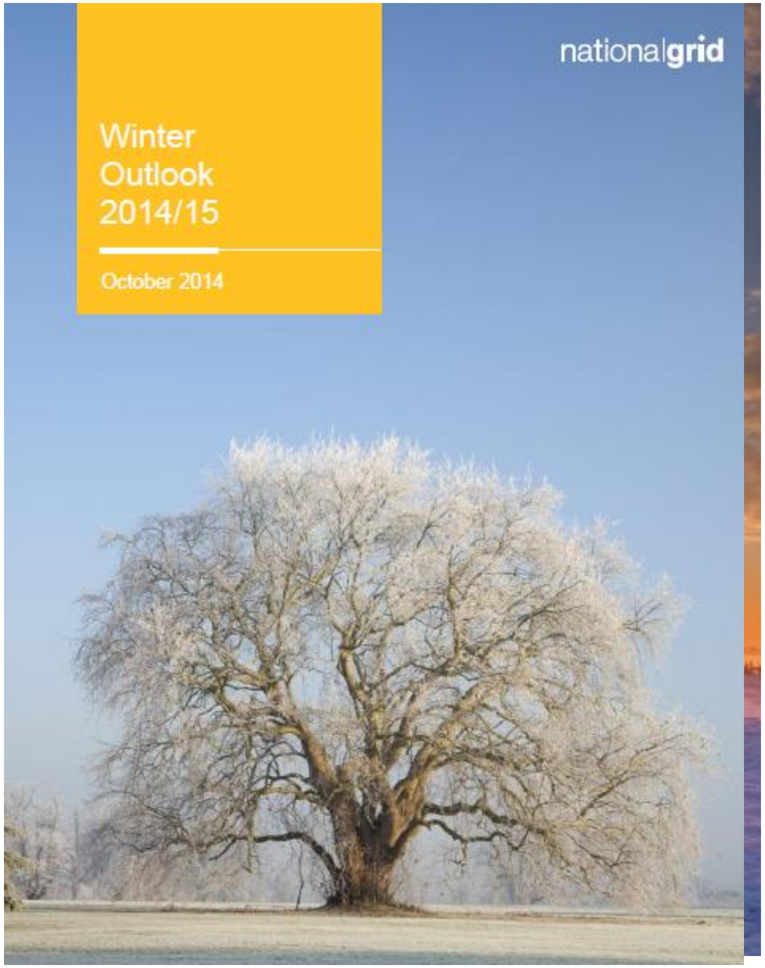
Who reads it?

- Winter Outlook
- Summer Outlook
- FES

- >1500 downloads
- <100
- 4,500

How do we write it?

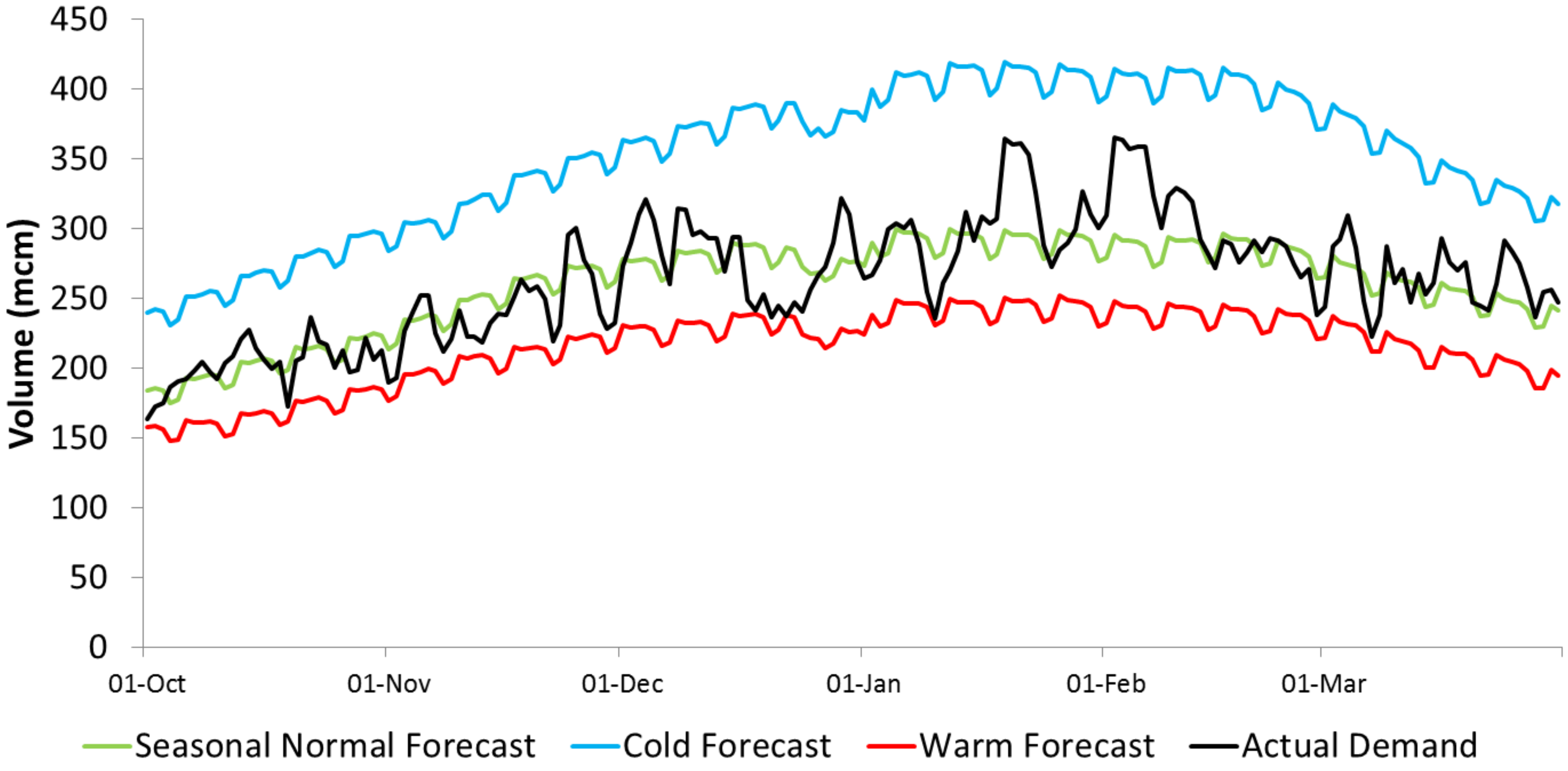
- Winter Consultation
  - Review
  - Preview
  - Consultation
- Winter Outlook



Review: Gas Demand

What we said in the Winter Outlook Report	What actually happened	Why there was a difference
Projected demand of 47.5 bcm over winter. Peaks not to exceed 425 mcm/day.	Actual demand was 47.5 bcm. Maximum daily demand of 366 mcm/day.	Total demand was aligned as deviations in non-daily metered and power generation demand offset each other.

Observed Gas Demand



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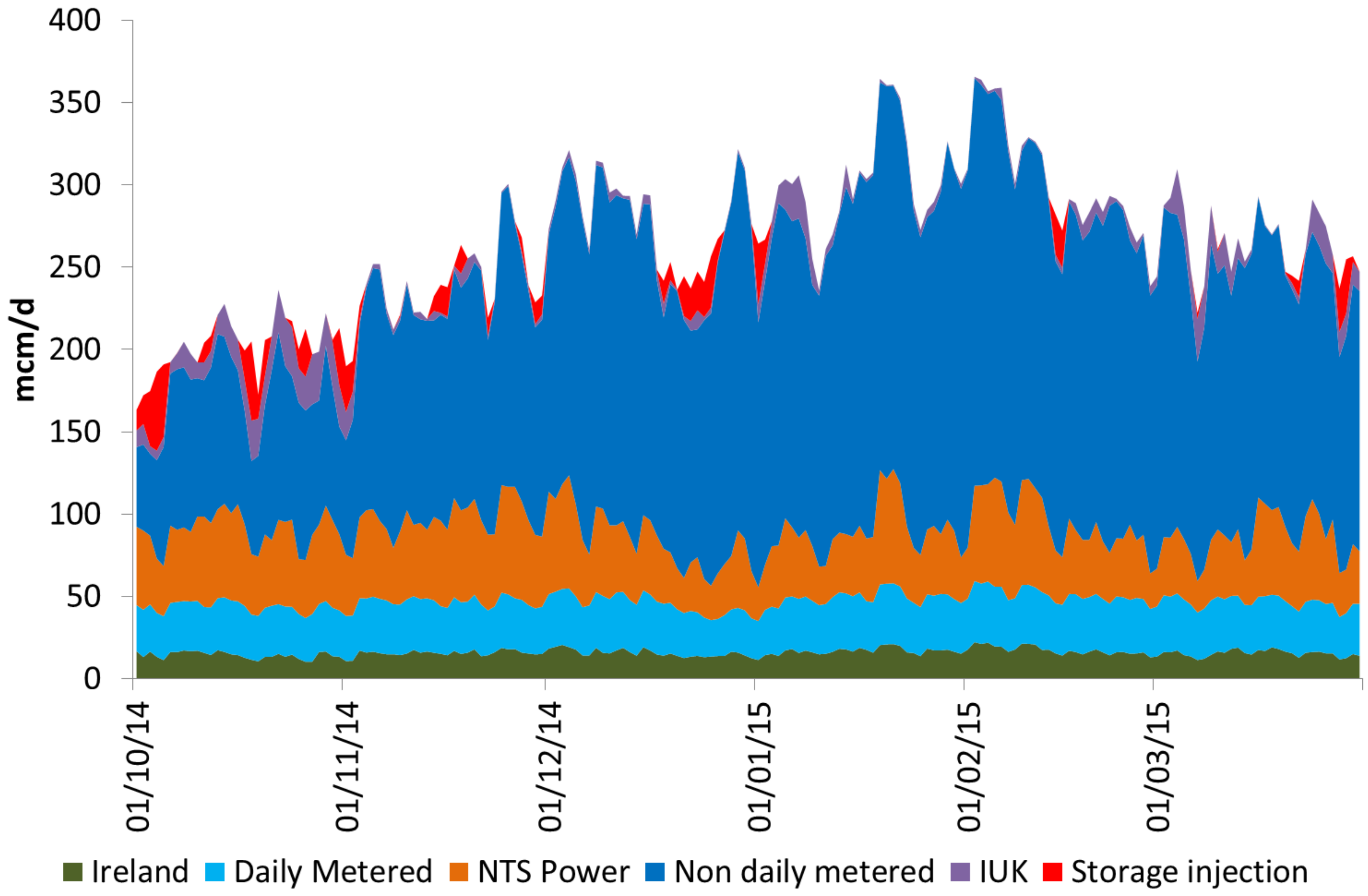
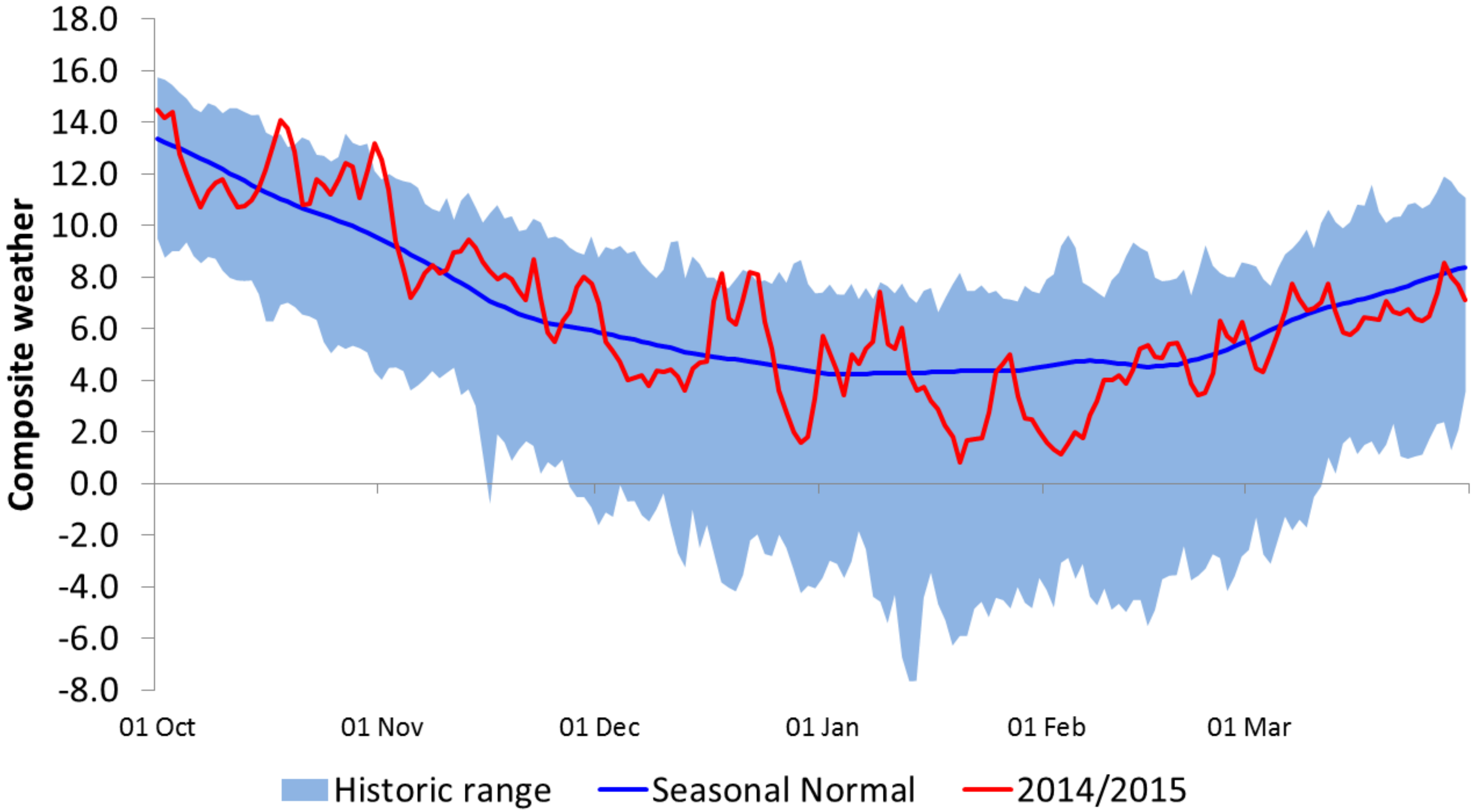
Gas demand breakdown

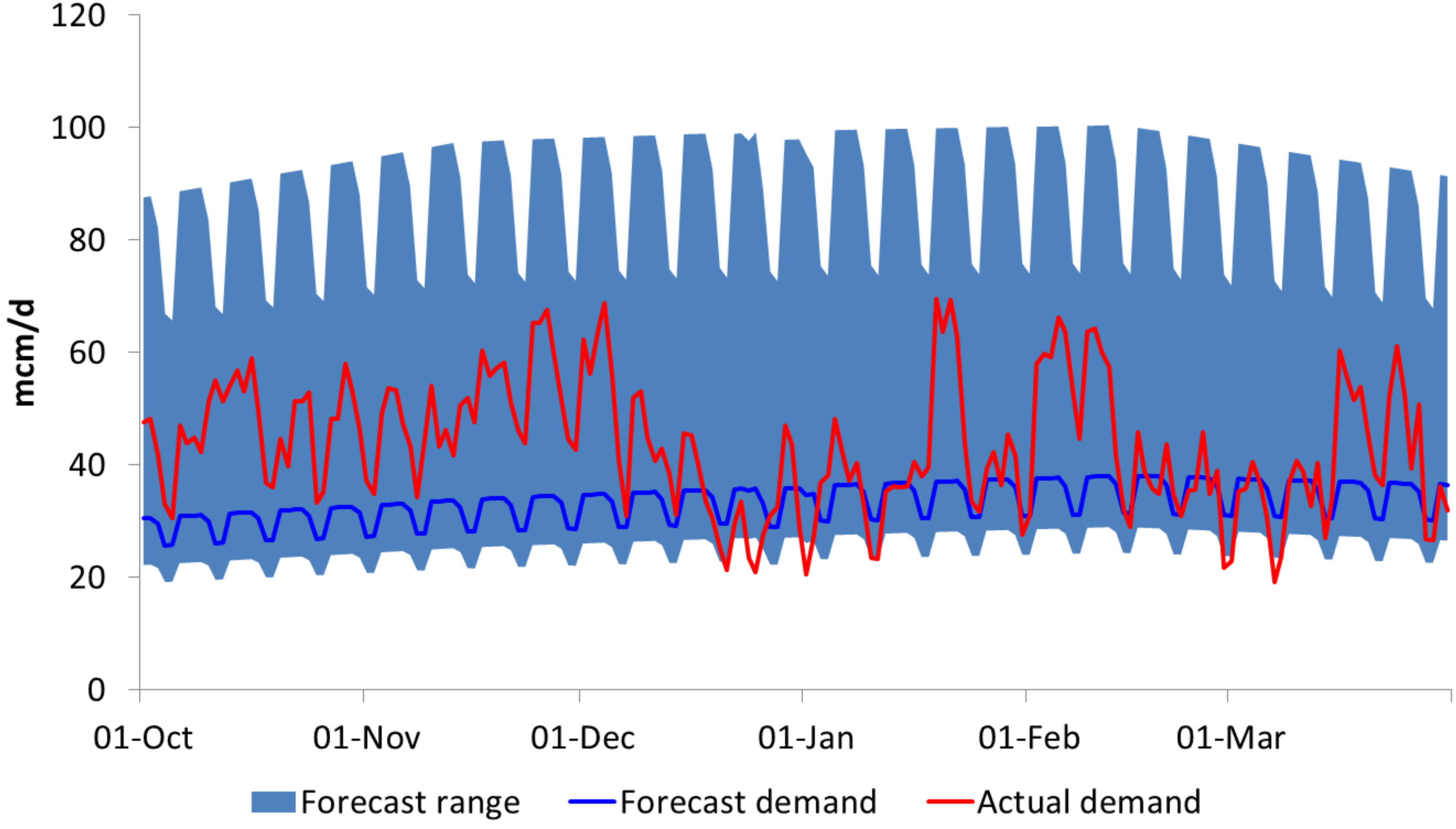


Weather



Composite weather
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
-2.0
-4.0
-6.0
-8.0
01 Oct
01 Nov
01 Dec
01 Jan
01 Feb
01 Mar
Historic range
Seasonal Normal
2014/2015

Gas for Power Generation



Review: Gas Supply

What we said in the Winter Outlook Report	What actually happened	Why there was a difference
Supply patterns to be similar to 2013/14 and range of supply options to meet peak demand.	UKCS and Norwegian gas similar to last year. More supply from LNG Less supply from continental Europe.	Asian and European prices converged. Continental supplies reduced, possibly in response to restrictions on the Groningen field in the Netherlands .
No disruption from Russia except with full Russian interruption in cold weather.	There was no interruption to supplies of Russian gas to Europe.	No supply issues, in line with analysis.

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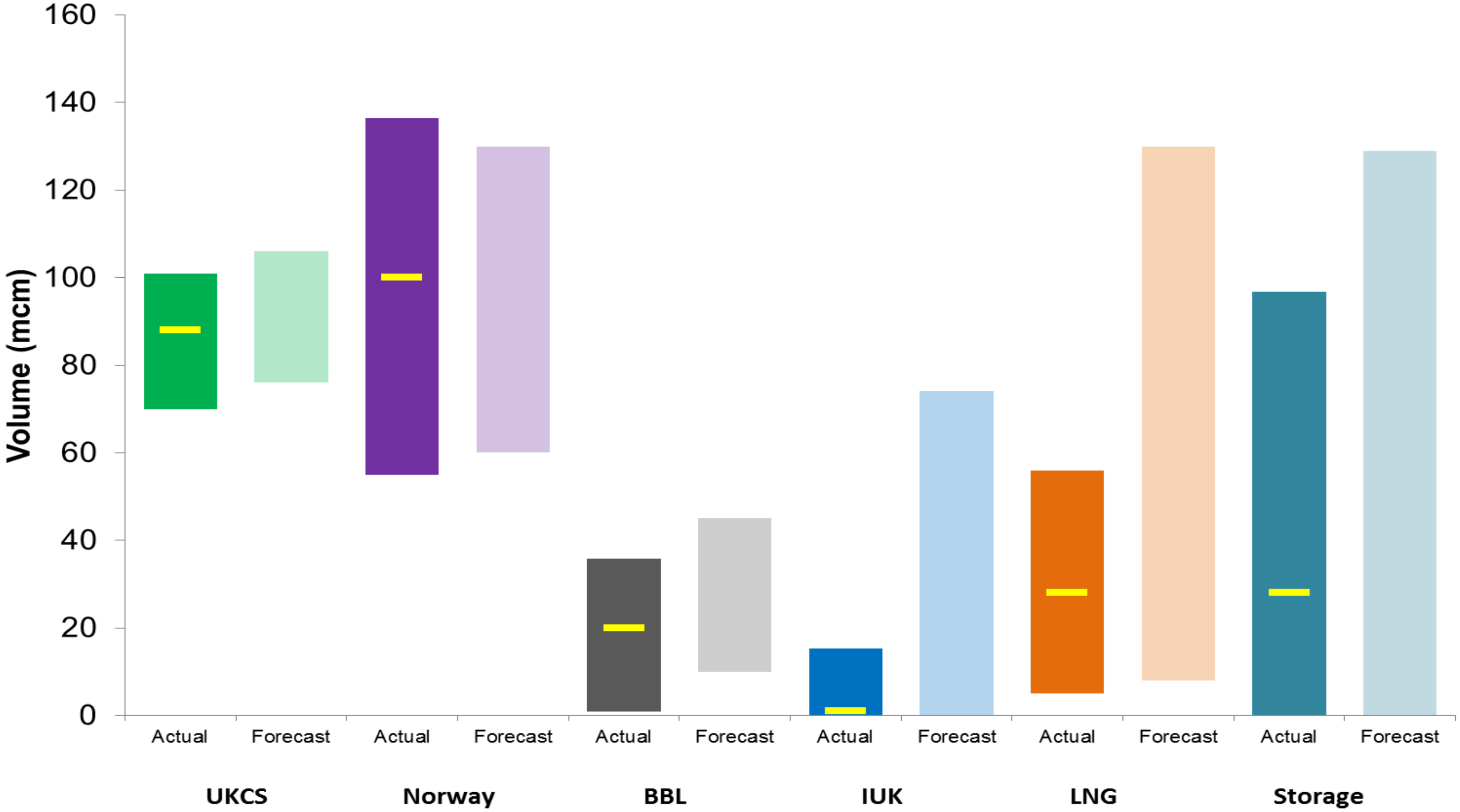
Actual and forecast supplies by source



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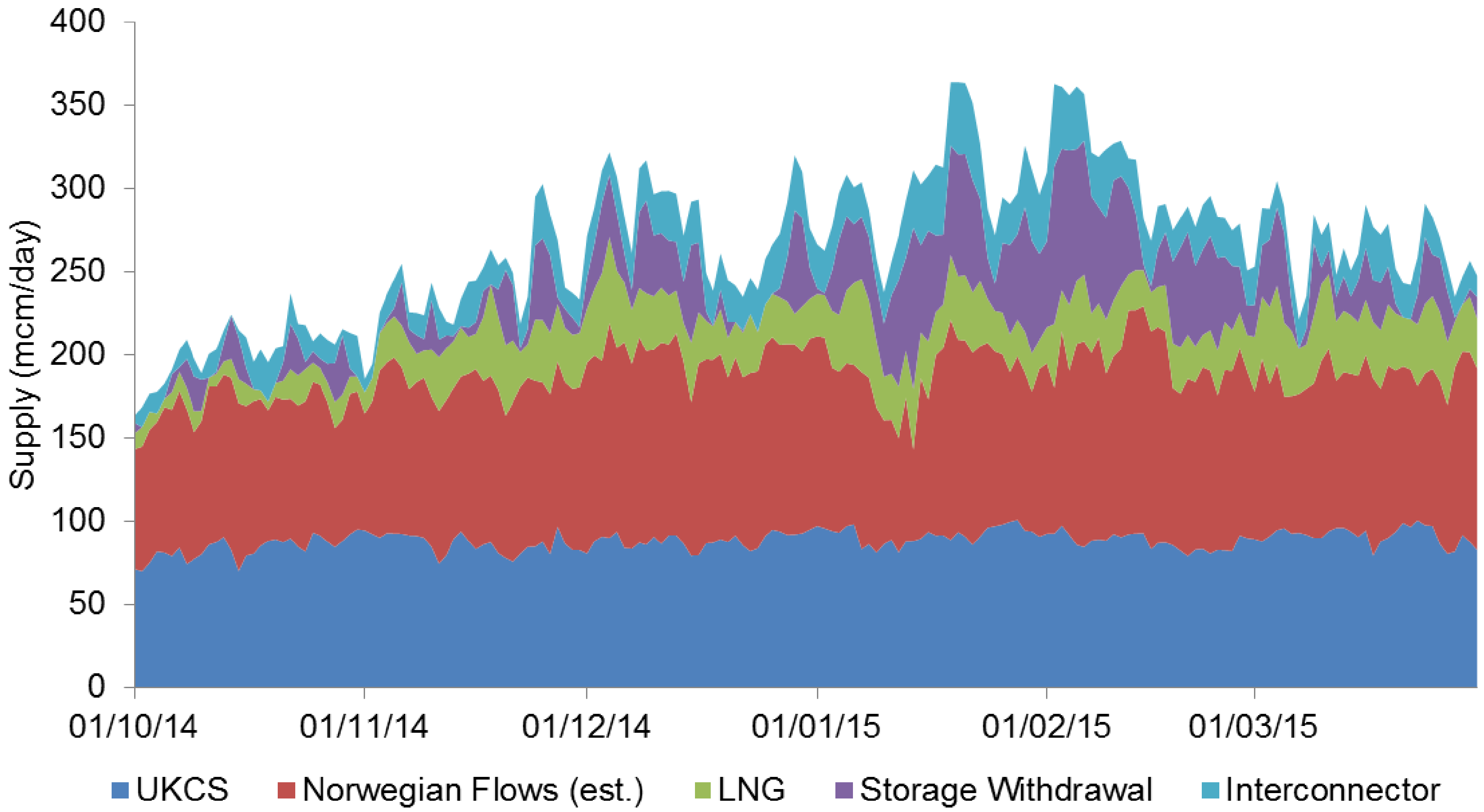
Daily supplies by type



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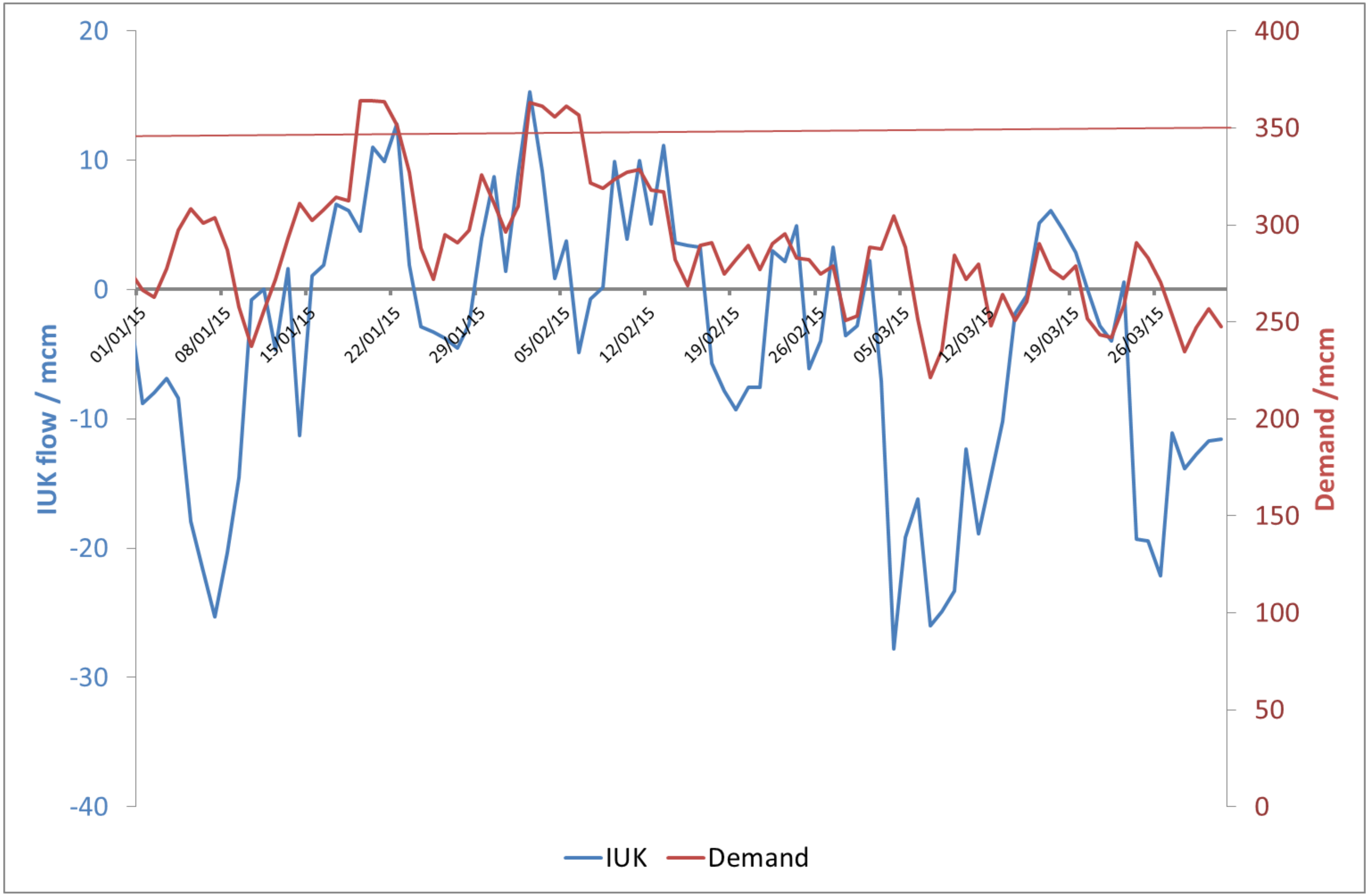
IUK at times of high demand



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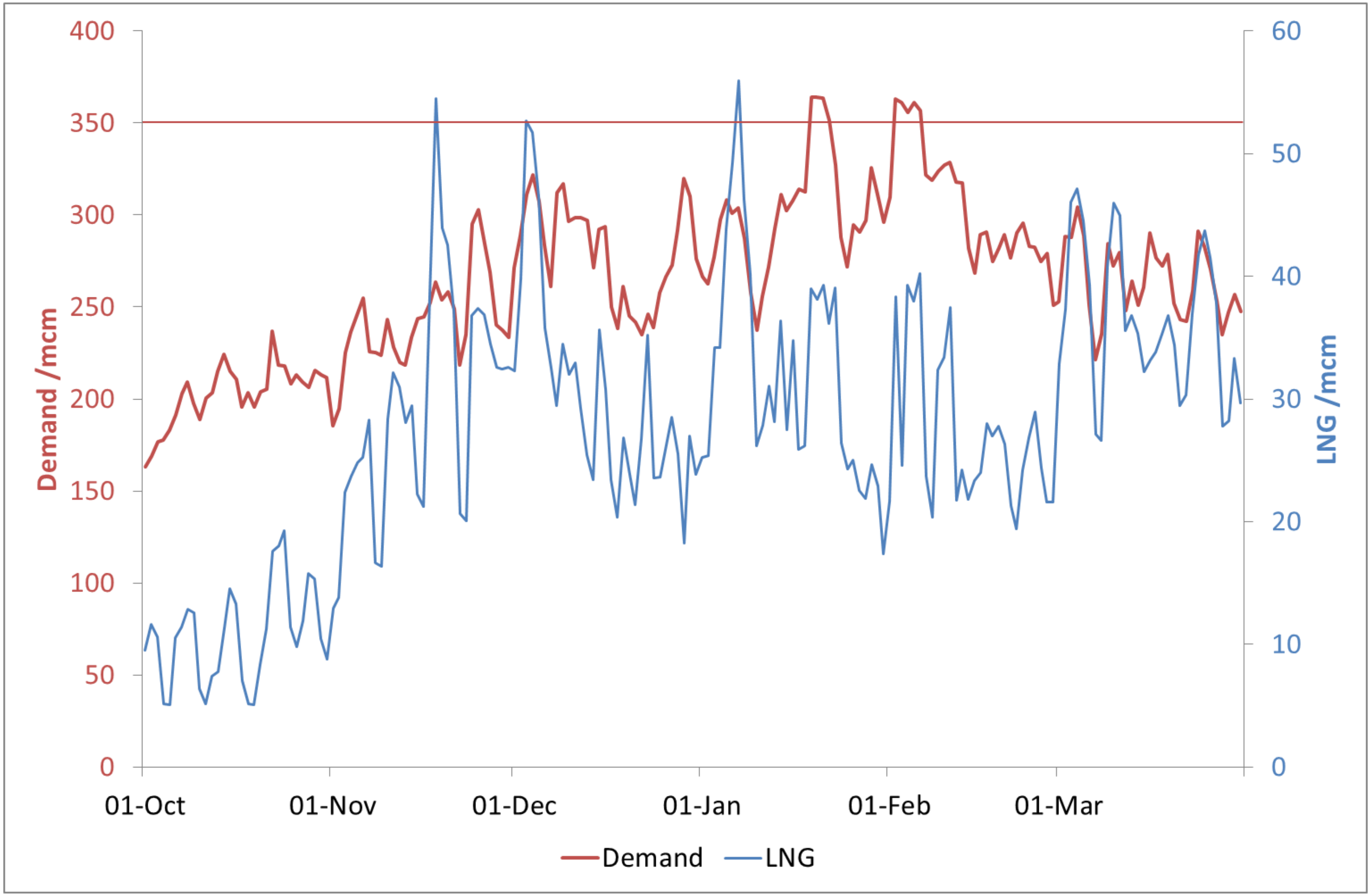
LNG at times of high demand



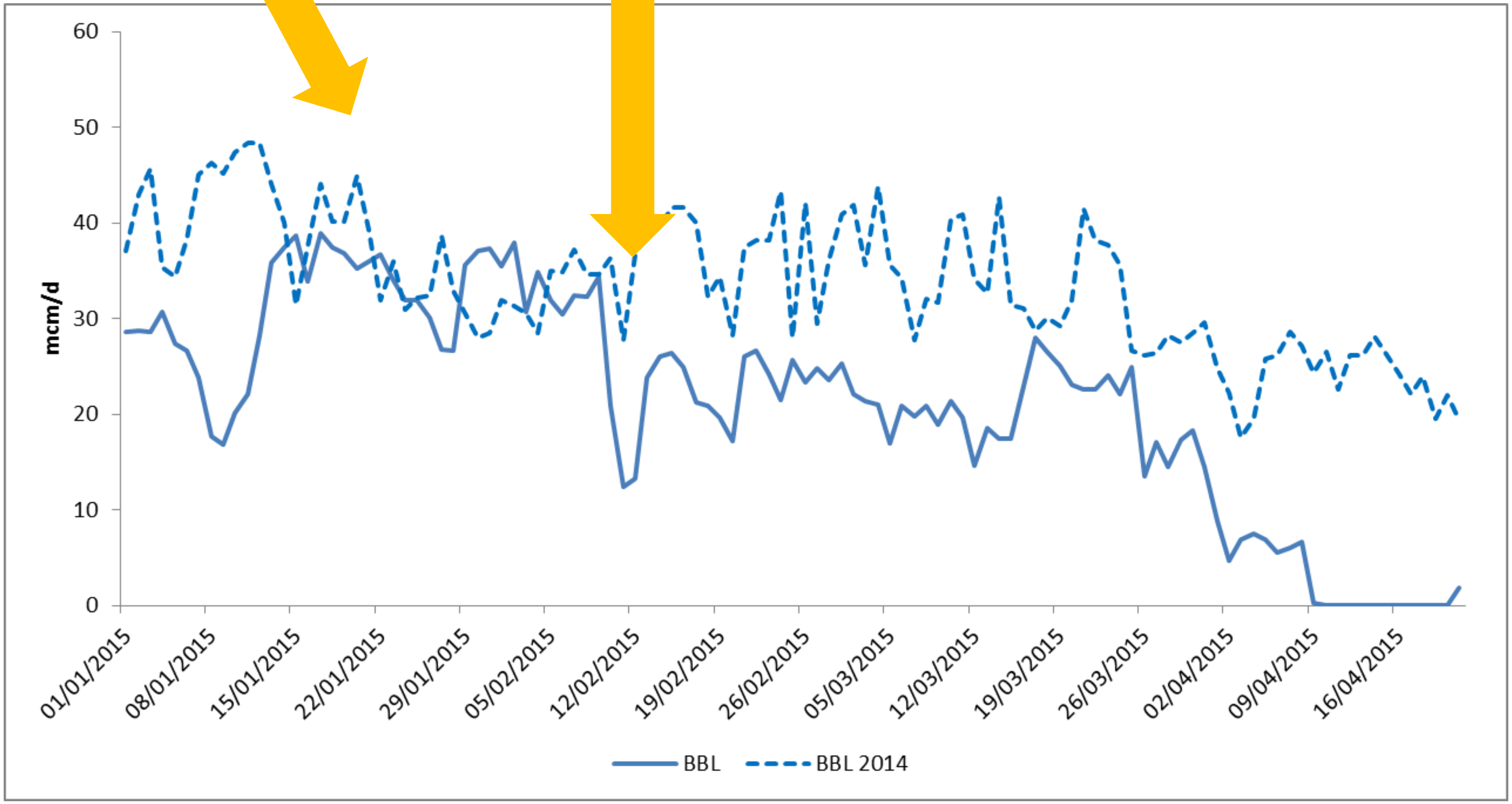
BBL and Groningen

- Groningen is the largest field in Europe
- 53 bcm in 2013
- Restrictions due to earthquakes
- 30 bcm in 2015
- Low calorific value gas (L-Gas) used for residential heating and export to DE, FR, BE
- Not suitable for BBL export
- High Calorific gas (H-Gas) can be converted

BBL Flows

Flows similar to 2014

Drop on initial Groningen falls, but partly recover



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Preview: Gas demand

- No spoilers!
- FES has lower demand in 2016 than 2015
- Coal and gas prices reviewed since FES
  - Coal/Gas switching for electricity generation more likely

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Preview: Gas Supply

(mcm/d)	2014/15		2015/16	
	Range	350+ Range	Range	Cold Day
UKCS	70 - 100	85 - 97	70 - 112	100
Norway	55 - 136	88 -132	60 - 136	110
BBL	1 - 36	3 - 13	1 - 45	40
IUK	0 - 15	0 -15	0 - 74	45
LNG Imports	5 - 56	25 - 40	5 - 100	50
Total NSS				**345**
Storage	0 - 97	66 - 95	0 - 136	

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Margins Notice

Date & Day Number	Demand Forecast	NSS Assumption
09/10/2015 (D-1)	220	345
10/10/2015 (D-2)	218	345
11/10/2015 (D-3)	220	345
12/10/2015 (D-4)	222	345
13/10/2015 (D-5)	225	345

Storage	
Min Use	Max Use
#N/A	129
#N/A	127
#N/A	123
#N/A	120
#N/A	107

Total	
Min Use	Max Use
#N/A	474
#N/A	472
#N/A	468
#N/A	465
#N/A	452

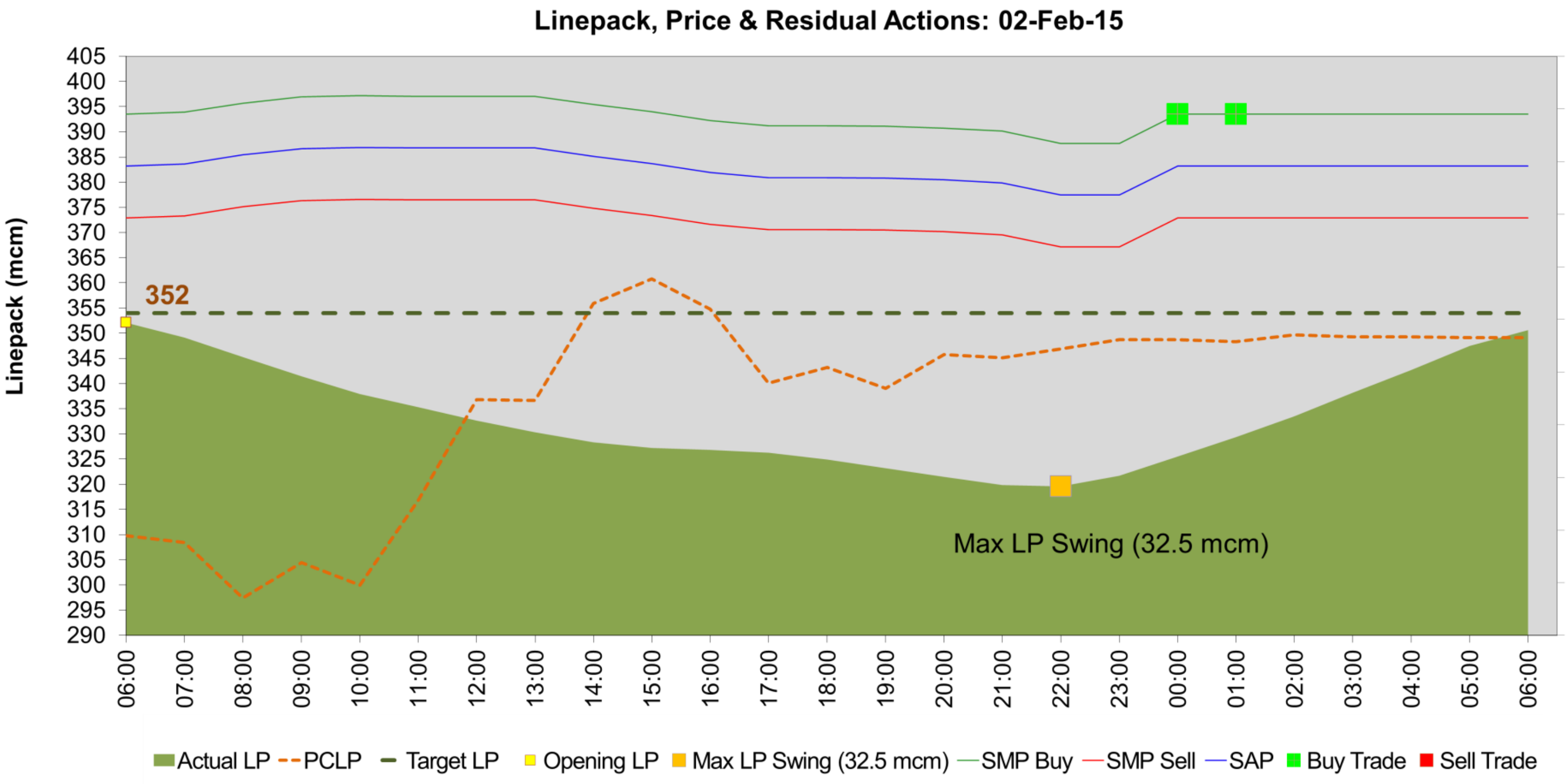
Consultation

- Questions on
  - Supply projections
  - Rough
  - Groningen
  - Ukraine
  - …
- 13 responses
- Six via Survey Monkey
- Three written responses with detail on gas supply

Operational challenges: Linepack

- Gas that is in the NTS
- Incentive to meet predicted closing linepack
- We have to meet assured pressures
- UNC expects flat flows but shippers only have to balance on the gas day

Gas Day Chart



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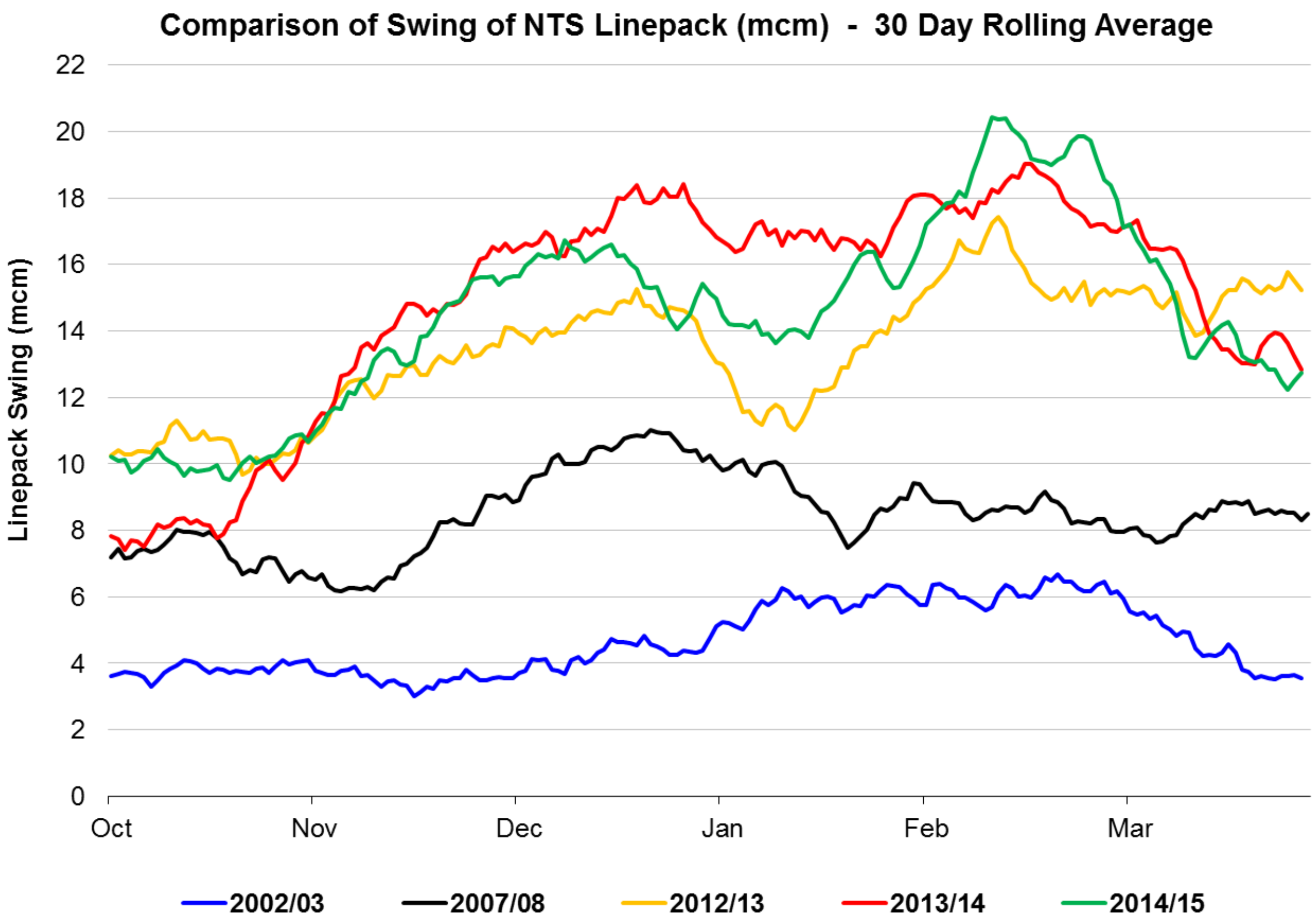
30 Day Rolling Average LP Swing



Linepack Swing	Winter 2002/03	Winter 2007/08	Winter 2012/13	Winter 2013/14	Winter 2014/15
Maximum	18.9	18.7	29.9	28.7	38.6
Average	4.7	8.6	13.9	15.3	14.7

On the Watch List

- Gas/Coal Switching
- Groningen and BBL
- Storage use
- Ukraine
- El Niño