Winter Review

Cold Snap Feb 2012

Carmen Rodríguez
Adviser

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Introduction

- The seasonal Reviews aim a deeper comprehension of the development of the demand and supply in the previous seasons and the identification of trends that cannot be captured at national or regional level.

- They help to build experience and solid background for the assumptions considered in the Outlook, and TYNDP.

- The Winter 2011/12 Review is especially focused in the period of particularly high gas consumptions following the cold spell affecting Europe during the first half of February, highlighting the link between gas and electricity markets.
Winter 2011/12

Demand

> Winter 11/12 gas demand was 3,191 TWh, significantly lower (-9.5%) than in the previous winter.

> For the countries where the demand breakdown is available, the gas demand for power generation represented 26% out of 467 TWh, showing a decrease of 18% in comparison with previous winter.

![Total gas demand graph](chart)
Winter 2011/12

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**Winter 2010/11**

Total electricity production 1,826 TWh

**Winter 2011/12**

Total electricity production 1,782 TWh

*Source: Own calculations based on data provided by ENTSO-E*
Winter 2011/12

Supply

> The decrease in the seasonal demand has been translated in the general decrease of each supply source with the exception of Norway. The reduction of LNG supplies has been particularly strong, influenced by the increase of LNG consumptions in Asia after Fukushima.
Winter 2011/12

Supply

Winter 2011/12 Supply profile

TWh/d

01/10/11 01/11/11 01/12/11 01/01/12 01/02/12 01/03/12

UGS
LNG
RU
NO
LY
AL
NP

UGS % full

 (%)
Cold Spell: February 2012

**Demand**

> This cold snap was characterized not only by its sharpness, but especially for its duration, with an average gas consumption of 27,644 GWh/d during the 14-day period, that is a 12% more than the 14 days of highest consumption of the previous winter.

<table>
<thead>
<tr>
<th>Peak period</th>
<th>31/01/2012 - 13/02/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average consumption</td>
<td>27,644 GWh/d</td>
</tr>
<tr>
<td>Peak day</td>
<td>7/02/2012</td>
</tr>
<tr>
<td>Peak consumption</td>
<td>29.141 GWh/d</td>
</tr>
<tr>
<td>Peak consumption  +8% (ref peak consumption W10/11)</td>
<td></td>
</tr>
<tr>
<td>Peak period +12% (ref 14 days of higher consumption W10/11)</td>
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</tbody>
</table>
Cold Spell: February 2012

**Demand**

> The map shows at country level the comparison of the average consumptions during the 14-day period in February, with the average consumptions in the 14 days period of highest consumption in Europe in Winter 2010/11 (starting on the 9 December 2010)

Demand comparison between the highest 14-day periods of Winter 2010/11 and Winter 2011/12
Supply

> UGS played a substantial role in covering the high peak consumptions, moving from an average share of 11% in the winter supplies up to a 33% during the peak day.

Supply contribution under different situation of Winter 2011/12

Winter Average

14-day cold spell

7th February
7th February

Flows in the transmission system

Demand variation:
- < -20%
- (-20 - -10)%
- (-10 - 0)%
- (0 - 10)%
- (10 - 20)%
- > 20%

Daily flows GWh/d on 7 February:
- LNG
- Russia
- Norway
- Algeria
- Libya

Unidirectional crossborder flow
Direction of net flow in a bidirectional crossborder

Daily flows GWh/d on 7 February:
- 1,284
- 1,004
- 80
- 538
- 39
- 84
- 61
- 61
- 287
- 538
- 1,857
- 506
- 6
- 39
- 0
- 1,092
- 506
- 6
- 39
- 0

Map showing daily flows GWh/d on 7 February with color coding and directional arrows.
> Gas infrastructures have proved their ability to react according to the market needs when facing this cold spell.

> Lessons learnt from this cold spell as feed for TYNDP – Definition of 14-day period of high level of consumption.
Thank You for Your Attention

Carmen Rodríguez
ENTSOG Adviser, System Development
ENTSOG -- European Network of Transmission System Operators for Gas
Avenue de Cortenbergh 100, B-1000 Brussels

EML: Carmen.Rodriguez@entsog.eu
WWW: www.entsog.eu