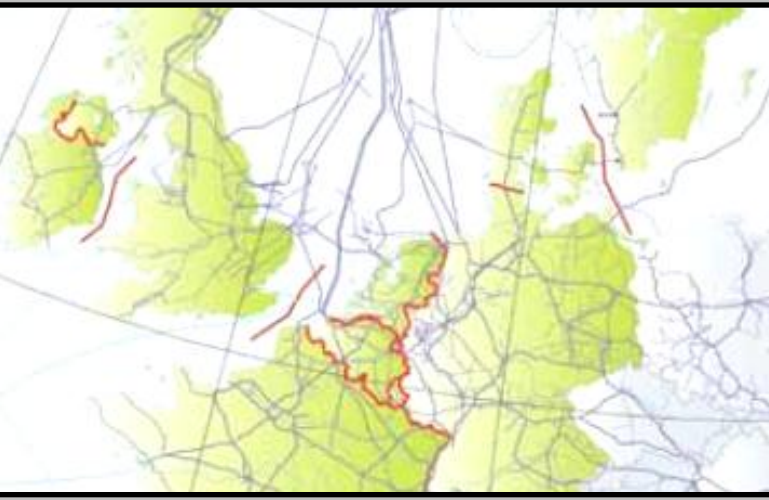
Gas Regional Investment Plan
North West 2013-2022



Stakeholder Consultation Presentation
4th April 2013

Consultation Details

- This presentation informs stakeholders about the content of the North West Gas Regional Investment Plan 2013-2022 (NW GRIP)

Presentation at the GRI NW meeting in the Hague on 4th April 2013

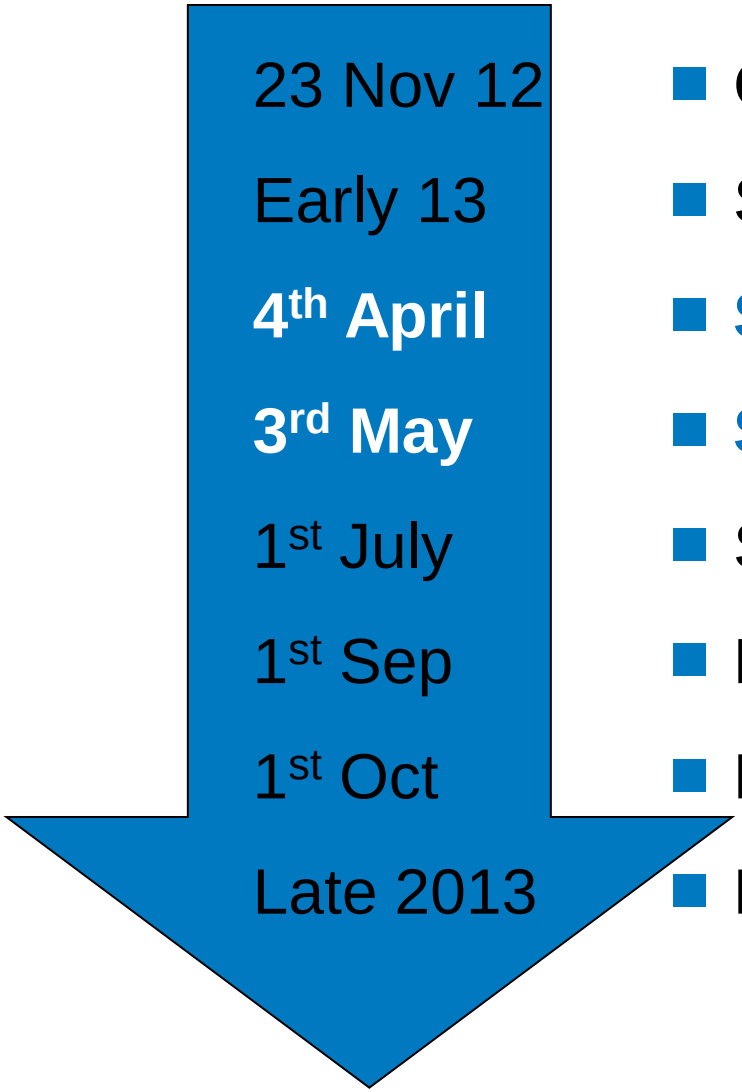
- This presentation will be accompanied by a consultation questionnaire

Published on the regional TSOs', ENTSOG and GRI websites and shall be regarded as the input for the stakeholder consultation

- Stakeholder Consultation start date 4th April 2013
- Stakeholder Consultation end date 3rd May 2013

- Responses to be submitted to NW GRIP coordinator GTS (see last slide with contact details)

NW GRIP 2013: Timeline



- GRI NW consultation on concept
- Start drafting the document
- **Stakeholder Consultation start date**
- **Stakeholder Consultation end date**
- Share draft version with GRI NW
- Deadline for GRI NW response
- Final publication
- Post GRIP publication consultation

Introduction

Why a GRIP?

- Third Energy Package legal obligation
- Regulation Art. 12(1) 715/2009/EC
- Obligation for TSOs to publish a regional investment plan every two years

1st NW GRIP published in November 2011

- First ever GRIP published from any region
- Show how infrastructure projects influences cross-border points in the Northwest region
- Highlighted strong collaboration between regional TSOs

Response to GRIP 2011 consultation round

- No direct response to the questionnaire provided
- EFET response
- RCC response

Additional value GRIP 2013 compared to TYNDP 2013-2022

- Additional element of regional cooperation
- Update of project data and 2012 data
- More detailed information about TYNDP identified cross-border issues

Structure NW GRIP 2013

High level principles

- Complement ENTSOG TYNDP and ensure consistency with National Plans
- Build on the inaugural NW GRIP and improve it
- Improve stakeholder communication/consultation
- Describe/explain the Region‘s assets & needs
- Explain why investments in gas transmission projects are required in the Region
- Describe projects

Agreement reached during the Nov. 2012 Copenhagen GRI NW GRIP consultation next NW GRIP to include:

- Improvements based on feedback received, including RCC recommendations
- Enhanced regional supply and demand analysis
- Showing the Impact of projects on cross border points
- Show procedure and results of regional cross border open seasons / auctions
- ‘Deep Dive’ into regional congested points as highlighted by TYNDP 2013-2022

Chapters NW GRIP 2013

- **Executive Summary**
- **Introduction**
- **North West Specifics**
- **Supply and Demand**
- **In Depth Review of TYNDP Identified NW Issues**
- **Projects**
- **Conclusions**
- **Annex**
  - Project description: more detailed description/visualisation compared to TYNDP

Chapter North West Specifics I

The capacity developed by gas infrastructure projects directly improves the development of the European internal energy market by enhancing all three aspects of European Energy Pillars.

Pillar I Competition

- Decades of collaboration and front runners in promoting competition
- Resulted in the most liquid hubs in the EU
- Previous and current Auctions and Open Seasons listed in the GRIP
- All relevant projects included and elaborated in the GRIP

Pillar II Security of Supply

- Long history of security of supply, cold spell 2012 cooperation illustrative for the region
- Decrease in indigenous production, increase need for imports
- L-gas issues up to 2022 only applicable to German situation, covered in German Netzentwicklungsplan and Pentalateral Forum, information to be included

Pillar III Sustainability

- Gas as the cleanest fossil fuel plays a role in the future energy supply.

Gas infrastructure allows for a strong growth in the use of renewable sources (wind/sun), as it can affordably provide the required network flexibility and it can serve for example as a means to store energy.

Chapter North West Specifics II

This chapter will also outline the various reasons for the need for investment in gas infrastructure in the NW region

- Sufficient capacity to promote competition
- Sufficient capacity to guarantee security of supply
- Substitute decreasing regional production
- Supply diversification
- Maintenance projects related to the ageing infrastructure
- Sufficient network flexibility

But also barriers to investment exist, what is needed

- A favourable regulatory framework (in the project's definition, execution and operation phase).
- A stable investment climate, ensuring that system owners are incentivised to invest in infrastructure projects and that investors can trust that they have a sufficient return on their investments
- A clear political vision, not only on an annual volume base, but also on a daily/hourly capacity base

Chapter Supply & Demand

The NW GRIP will cover the following Demand based topics

- Annual Demand for the north west region compared to total EU demand
- Annual Demand development by country
- Breakdown of Annual Demand into Gas Fired Power Generation and other
- High Daily Demand scenarios
- An example of the Impact of Renewables on Gas Fired Power Generation

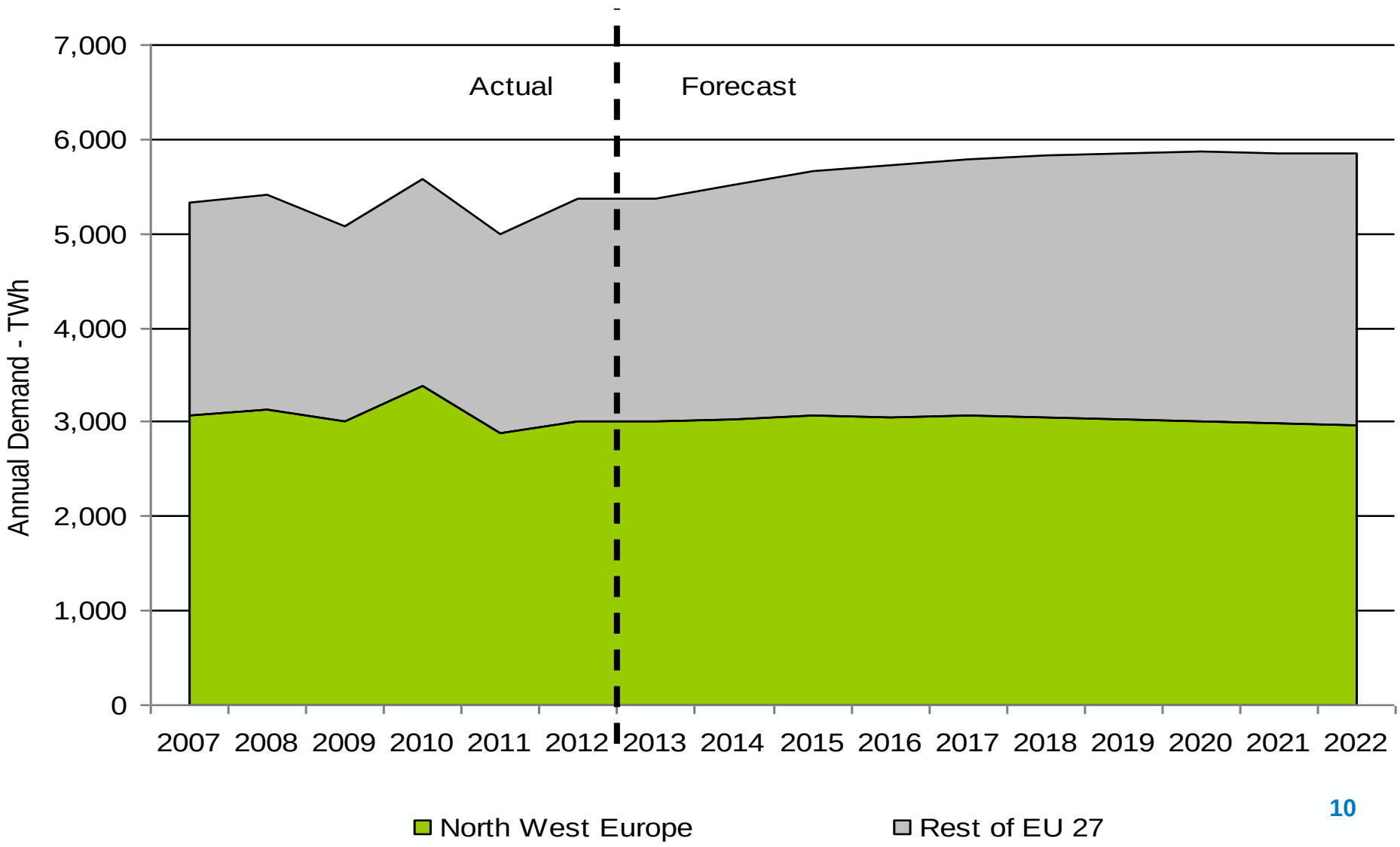
The Supply aspect of the chapter will look into

- The North West region's growing import dependency
- How regional Supply Source diversification will evolve
- Infrastructure development of LNG in the region

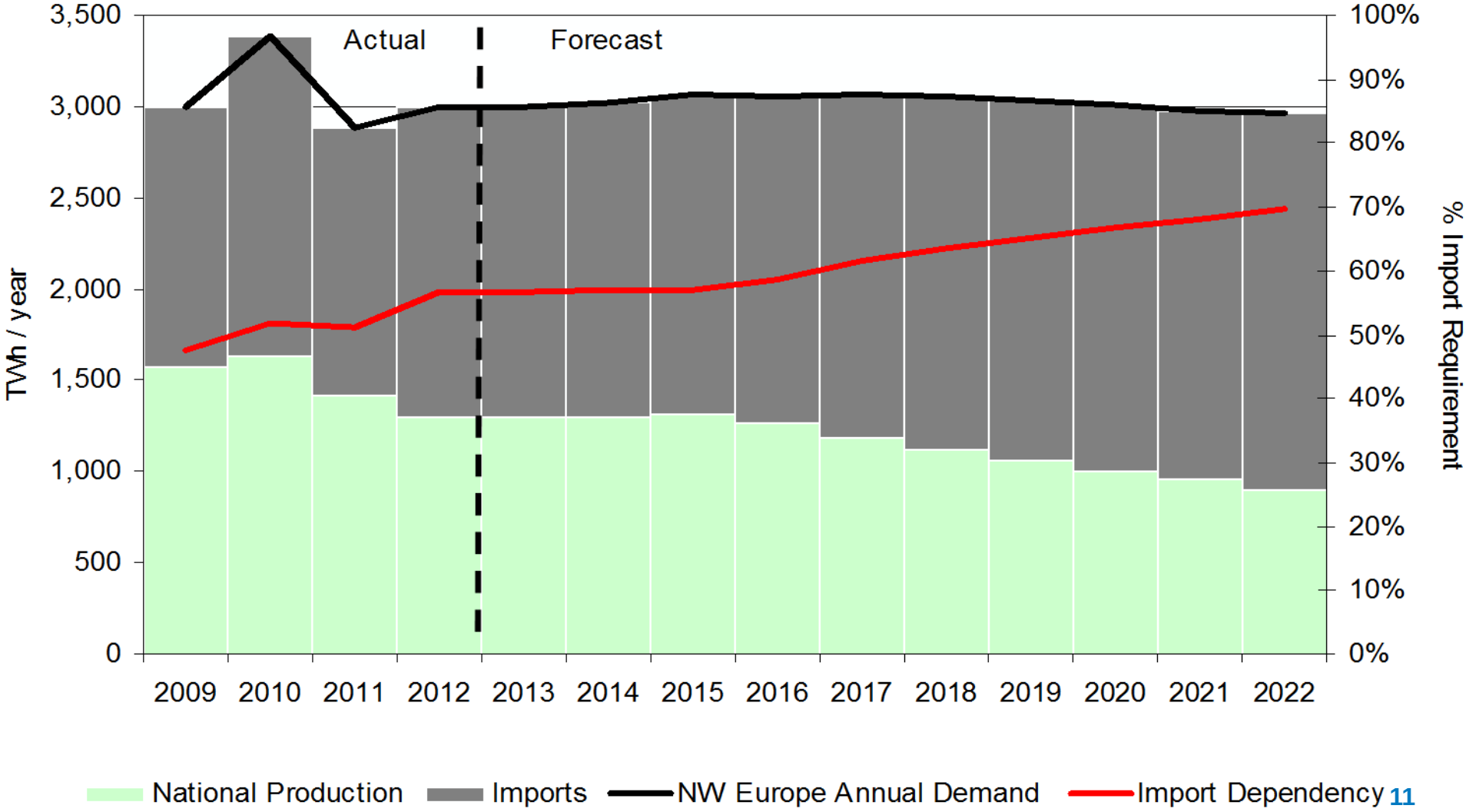
The chapter will provide a wide ranging Supply and Demand outlook for North West Europe

**All 2012 figures shown the next charts are based on 2013 forecast data, by the time of publication 2012 data will be available.*

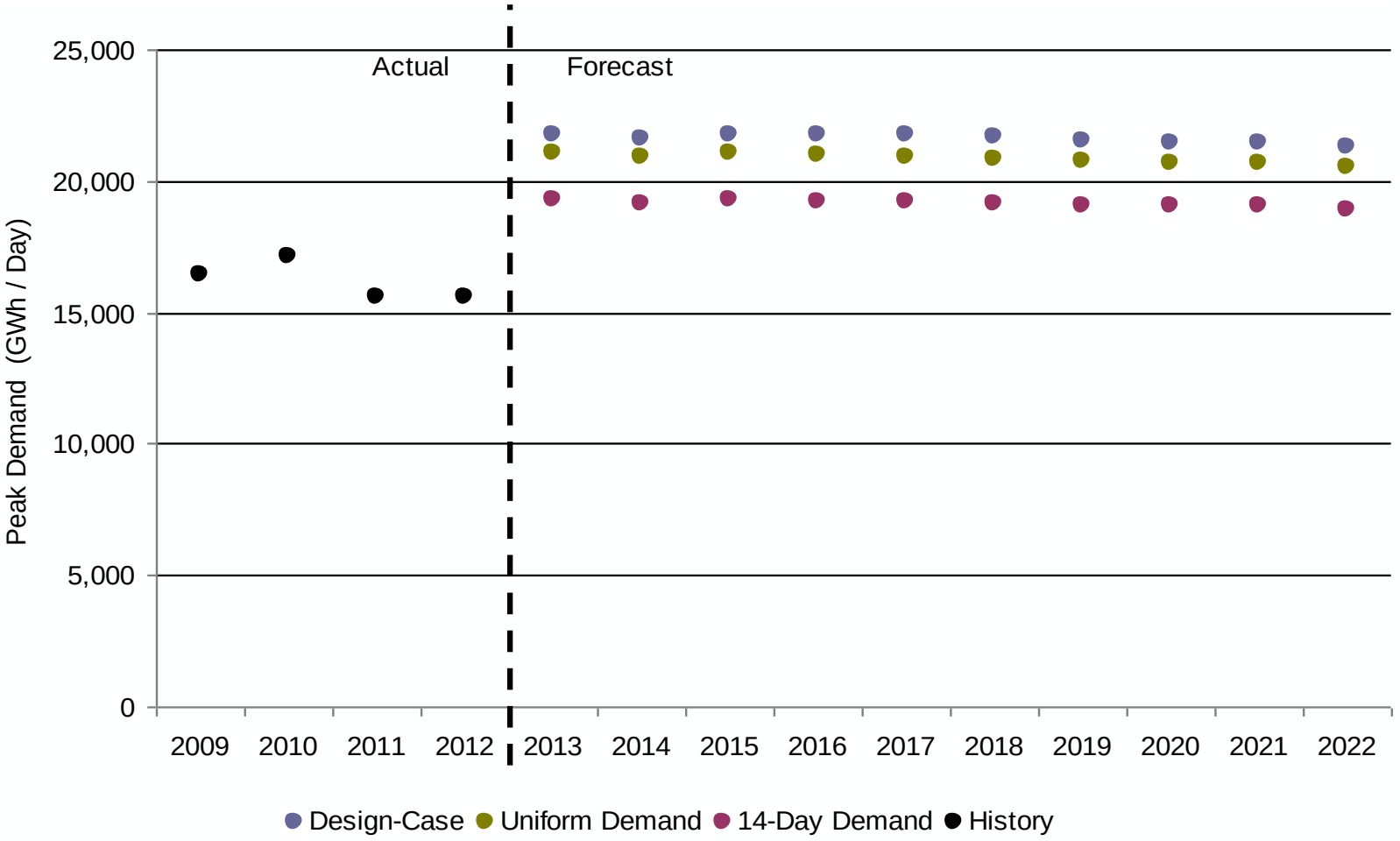
Chapter S&D: Annual Demand



Chapter S&D: Annual Balance



Chapter S&D: High Daily Demand



The Design-Case scenario is favoured by the TSOs of the NW region, as it is considered the most robust. 2011 data has been used for 2012 in this example, actual data will be available for final publication.

Chapter ‘In Depth Review of TYNDP Identified NW Issues’

TYNDP covers four types of analyses:

1. Resilience assessment (potential investment gaps)

Findings for: Denmark, Sweden and Luxemburg

2. Supply dependency assessment (the dependence of some Zones on a single supply source)

Findings for Germany (GASPOOL market area), Denmark, TIGF France and South France

3. Network adaptability assessment (the ability of the system to adapt to various supply patterns)

No findings in NW region

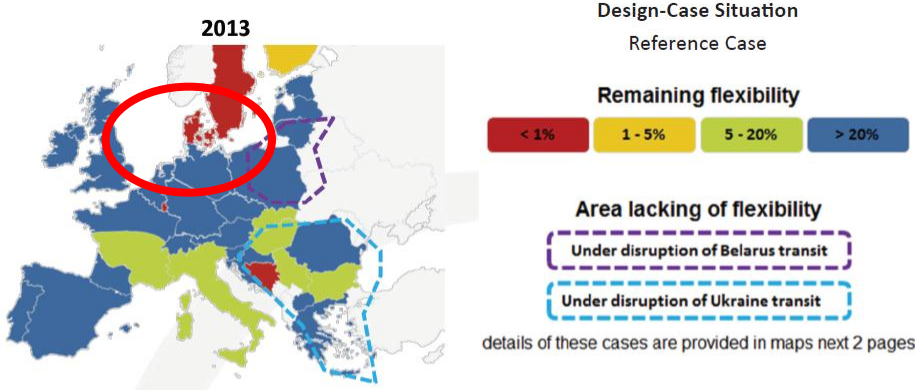
4. Supply source diversification assessment (the capability of the system to enable its Zones to access different supply sources)

Overview included in NW GRIP S&D chapter

Chapter ‘In Depth Review of TYNDP Identified NW Issues’: Example

Resilience Assessment

- Potential investment gaps
- Germany, Denmark (and Sweden)

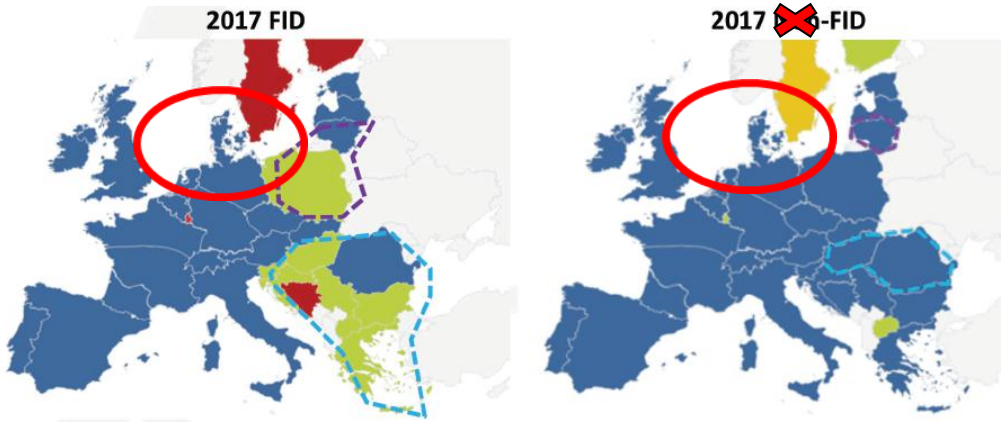


TYNDP Project Ellund

- Capacity extension from Germany to Denmark would solve this issue
- Projects were identified through an Open Season in 2009
- FID-project Step 1 increase capacity from Oct. 2014 at a level of 310,000 m³/h
- Non-FID project Step 2 increase capacity in 2016 at a level of 500,000 m³/h

Update GRIP 2013

- Step 2 is now also FID
- No investment gap



Chapter Projects: Matrix

The matrix improves regional transparency by showing how infrastructure projects impact border points and vice versa.

	POINT TYPE	NAME LOCATION	System Operator 1	CC		System Operator 2	CC	TYNDP CODE	NAME - PROMOTOR	TYNDP CODE	NAME - PROMOTOR
			Gascade	DE		Gas Connect Austria	AT				
27	cross-border IP	Kiefersfelden	bayernets	DE	>	TIGAS	AT				
31	cross-border IP	Wallbach	Fluxys TENP	DE	>	FluxSwiss	CH	TRA-N-208	Reverse Flow TENP Germany - Fluxys		
			Fluxys TENP	DE	>	Swissgas	CH				
			Open Grid Europe	DE	>	Swissgas & FluxSwiss	CH				
34	cross-border IP	Oltingue (FR) / Rodersdorf (CH)	GRTgaz	FR	>		CH	TRA-N-046	Exit capacity increase to CH at Oltingue - GRTgaz	TRA-N-045	Reverse capacity from CH to FR at Oltingue - GRTgaz
35	cross-border IP	Larrau	TIGF	FR	>	Enagas	ES	TRA-F-039	Iberian-French corridor: Western Axis (CS Chazelles) - GRTgaz		
			Enagas	ES	>	TIGF	FR				
36	cross-border IP	Biriatou (FR) / Irun (ES)	TIGF	FR	>	Naturgas Energia Transporte	ES	TRA-F-039	Iberian-French corridor: Western Axis (CS Chazelles) - GRTgaz		
			Naturgas Energia Transporte	ES	>	TIGF	FR				

Annex: Project Details

- Based on the project information in the TYNDP
- Plus new info if applicable
- Plus more graphical information

Alveringem - Maldegem			
TRA-F-205	Fluxys Belgium		
Description : A new interconnection point between GRTgaz and Fluxys near Veurne (Alveringem) to allow firm physical capacity with non-odorized gas from France to Belgium. Thanks to this new connection, the terminal of Dunkirk will be linked with the IPs of the zone of Zeebrugge (IZT/HUB, ZPT and LNG terminal) and the North-West European market through the virtual hub ZTP.			
Benefits : Security of Supply, Market integration (This project gives a connection from the LNG terminal of Dunkirk and the PEG-Nord to Belgium and the international markets of North-West Europe.), Reverse Flows, Diversification of sources, Diversification of routes, N-1 National (Belgium), N-1 Regional (NW Europe), Back-up for renewables			
FID	2012 Q2	Pipe Length (km)	74
Commissioning	2015 Q4	Pipe Diameter (mm)	1000
PCI Candidate	Yes		
IP Capacity Increase	FR->BE	Capacity (GWh/d)	270

Additional details :

Consultation Questionnaire – Sample

- What additional information/analysis would you like to see included in the North West Specifics and/or Supply & Demand chapter?

- Do you think that the NW GRIP enhances transparency on projects? If not, please provide your reasoning.

- Which chapter, do you think, will be of most interest to you and why?

Questions

Point of Contact / Response to be sent to

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