2nd Technical Workshop: Gas Market Design and Natural Gas Transmission Grid Codes

Case Study on Grid Code Harmonization: Italy

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- Snam's Transmission Network Code
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Brief Overview
of the Italian Gas Market

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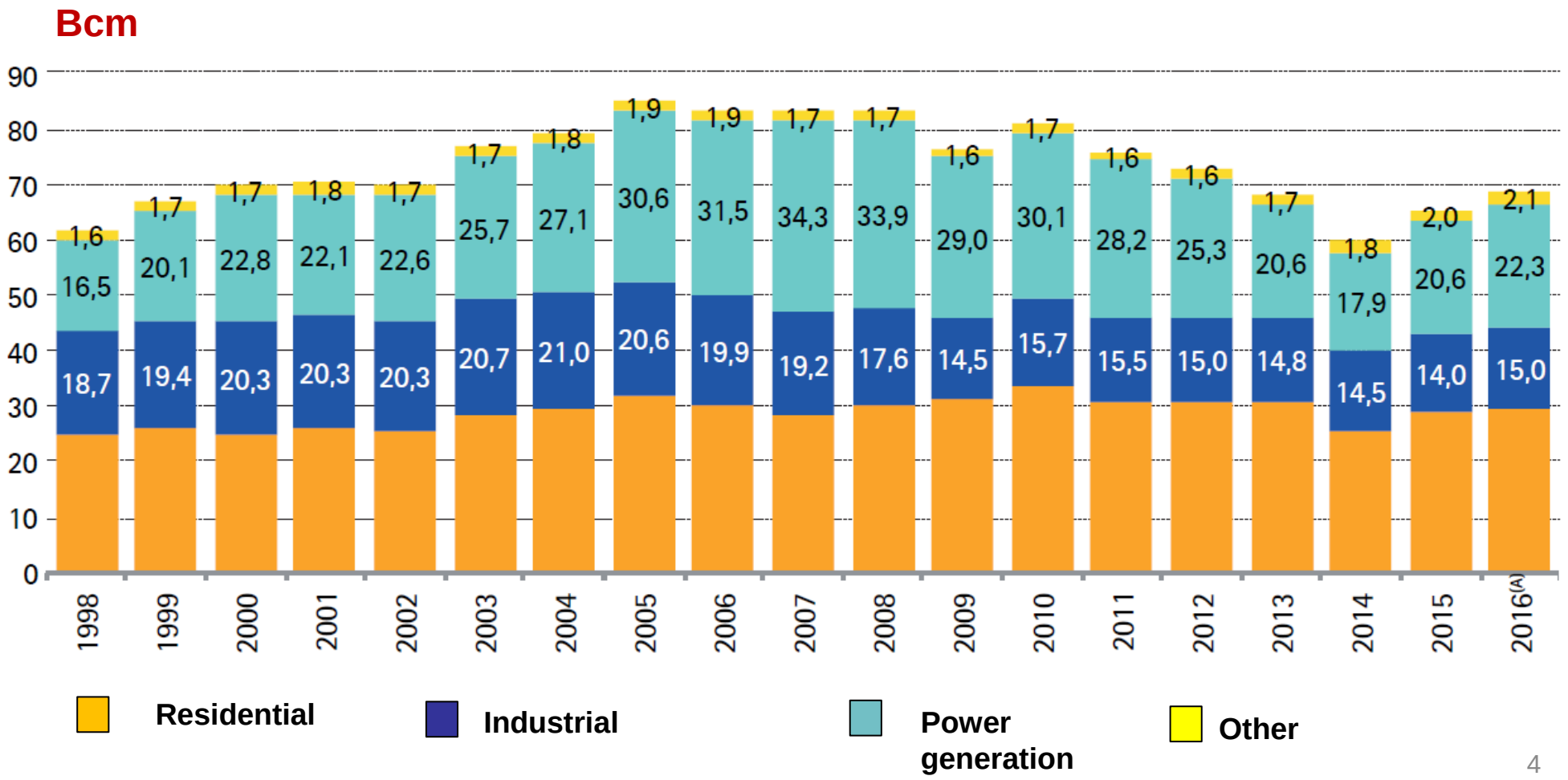
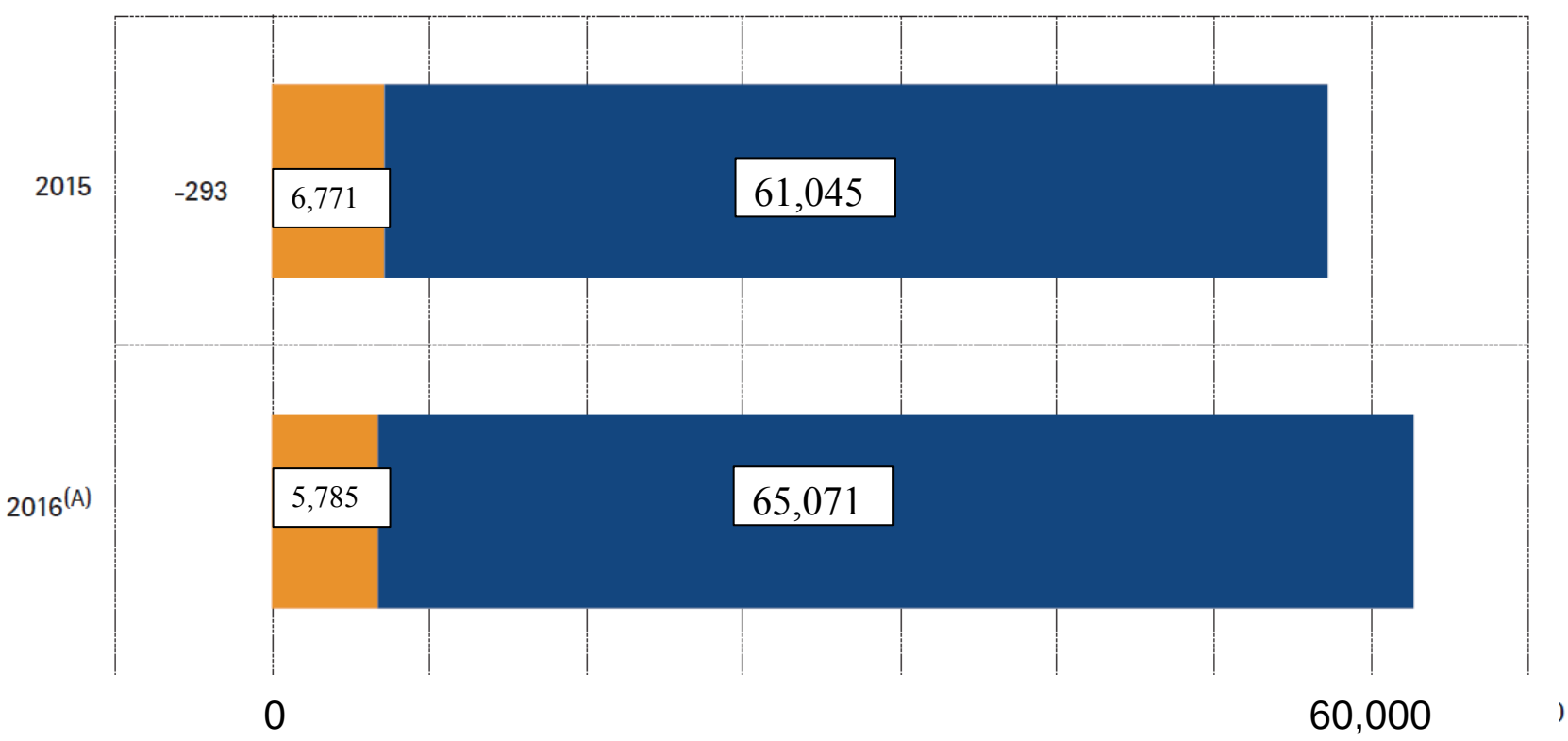
Italian Gas Demand

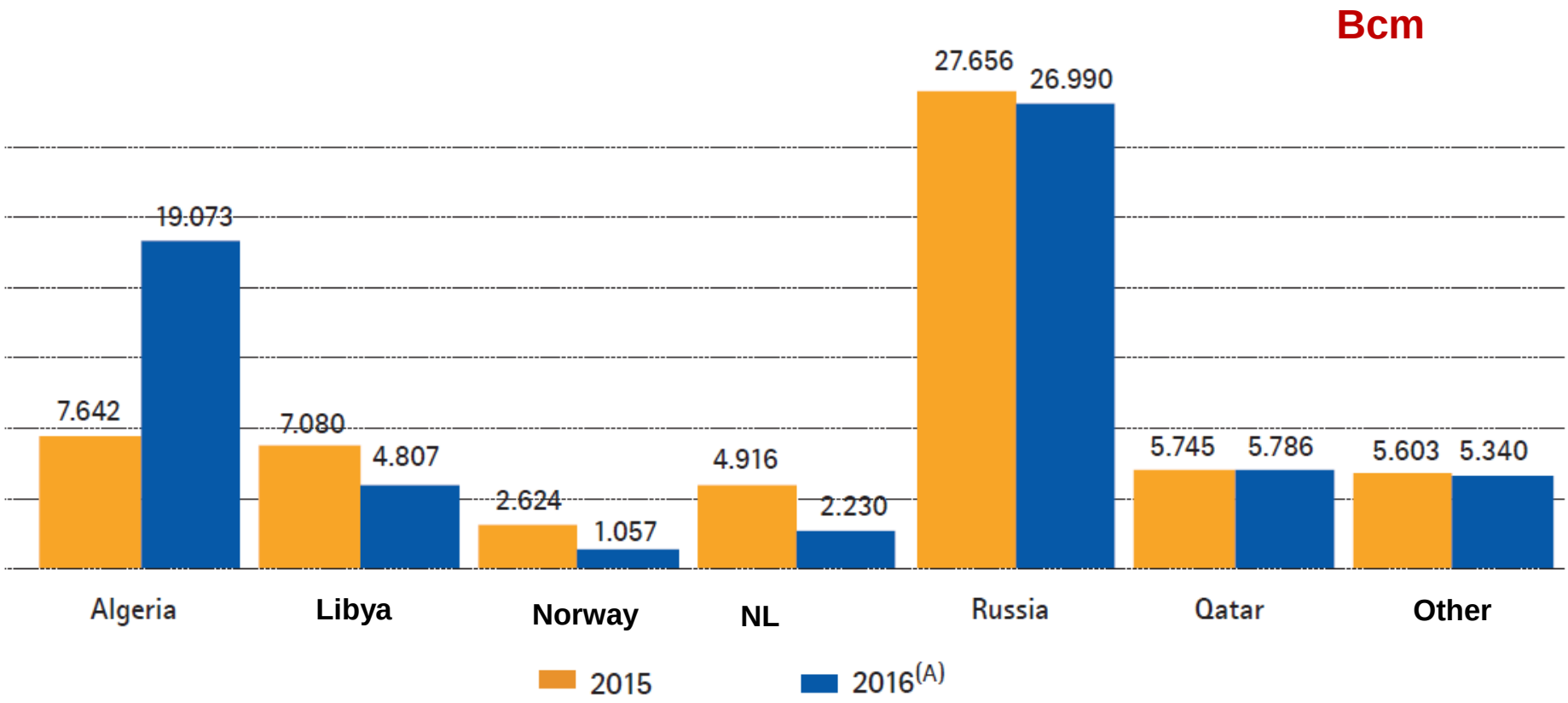


Italian Gas Supply



Source: AEEG

Italian Gas Supply by source



(A) Preliminary data

Source: AEEG

Italian Gas Transmission Network

TRANSPORTATION NETWORK INFRASTRUCTURE

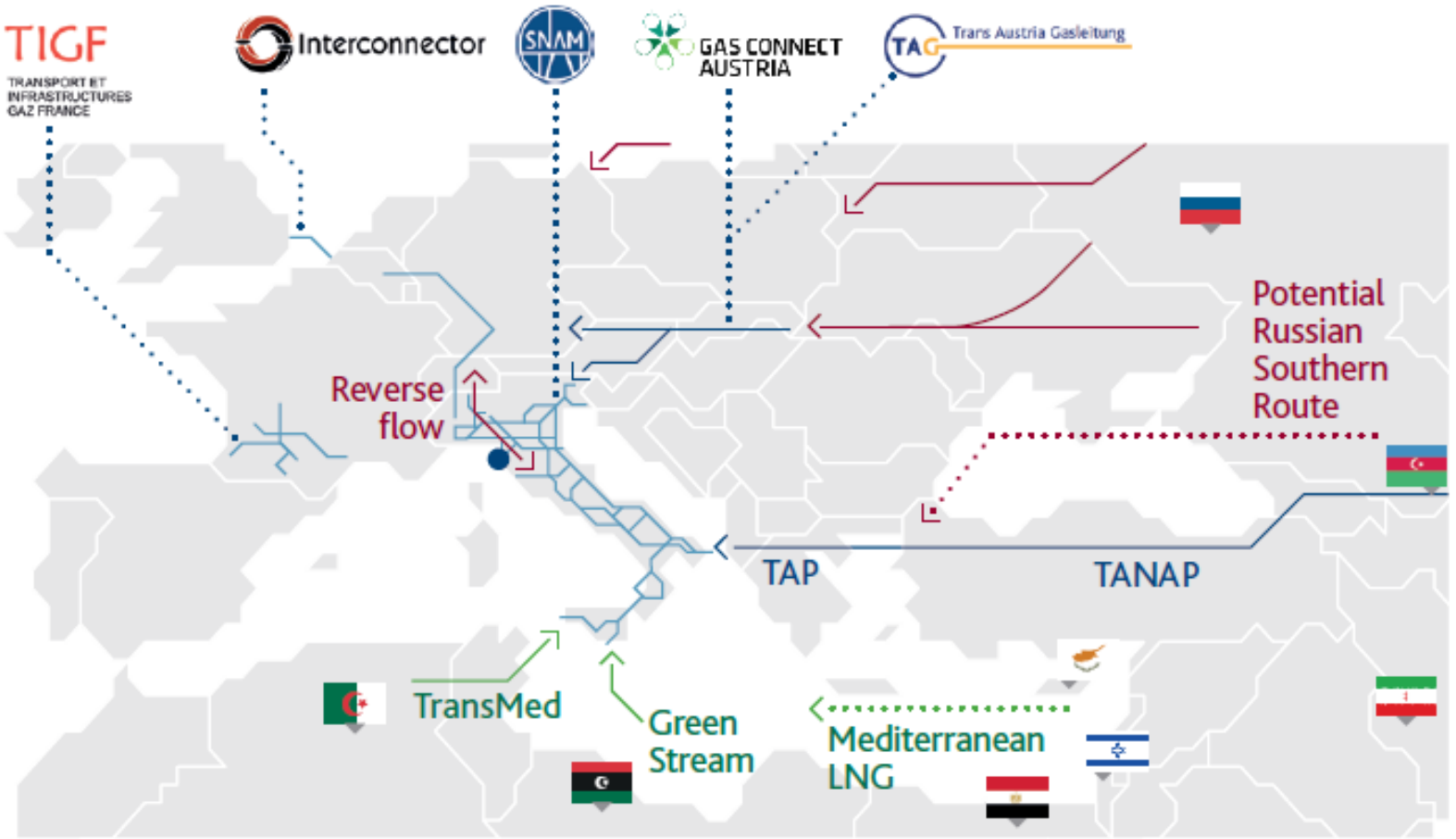
2016 HIGHLIGHTS

ENTRY POINTS OF THE NATIONAL NETWORK FOR NATURAL GAS COMING FROM ABROAD: TARVISIO, GORIZIA, PASSO GRIES, MAZARA DEL VALLO, GELA, AS WELL AS THE LNG TERMINALS IN PANIGAGLIA, CAVARZERE AND IN LIVORNO	8
BILLION M3 OF NATURAL GAS INJECTED INTO THE NATIONAL NETWORK	70.63
KM TRANSPORTATION NETWORK IN USE	More than 32,500

LEGEND

- NATIONAL GAS PIPELINE NETWORK
- REGIONAL TRANSPORTATION NETWORK
- COMPRESSOR STATION
- ENTRY POINTS IN THE NATIONAL NETWORK
- REGASIFICATION TERMINAL
- DISPATCHING CENTER

At the Centre of European Gas Flows



Snam Rete Gas Network Code

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Snam's Transportation System

2016

32,508 Km	Transport network
70.63 bcm	Gas injected into transport network
11	Compression stations
16.5 bcm	Total storage capacity
1	Regasification terminal
2,883	Employees

First TSO in Italy, with > 95% transported gas

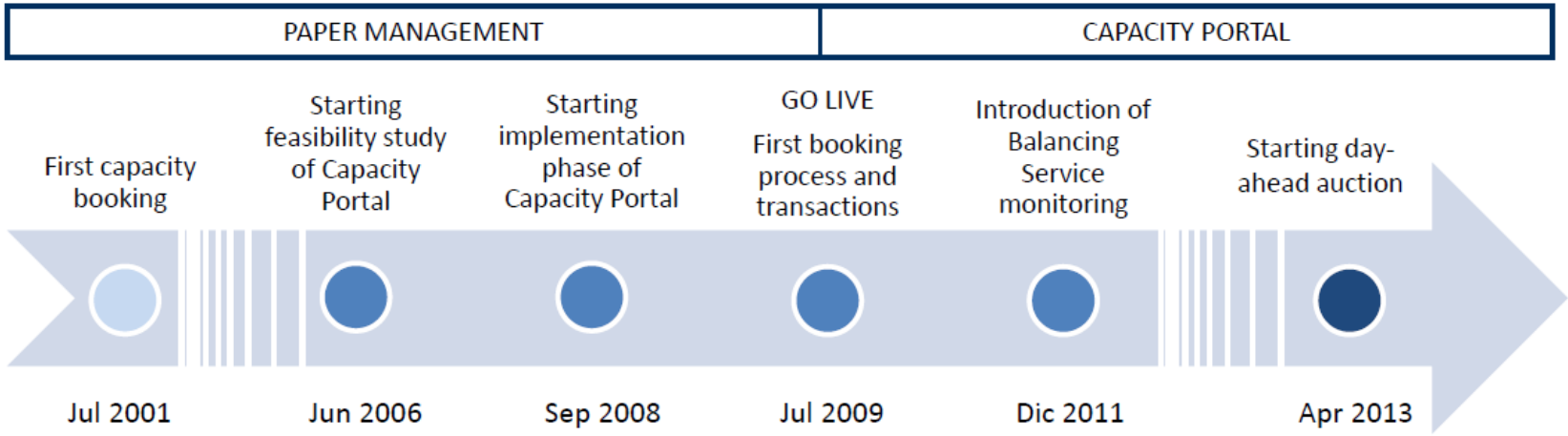
Snam Network Code: Birth and Evolution

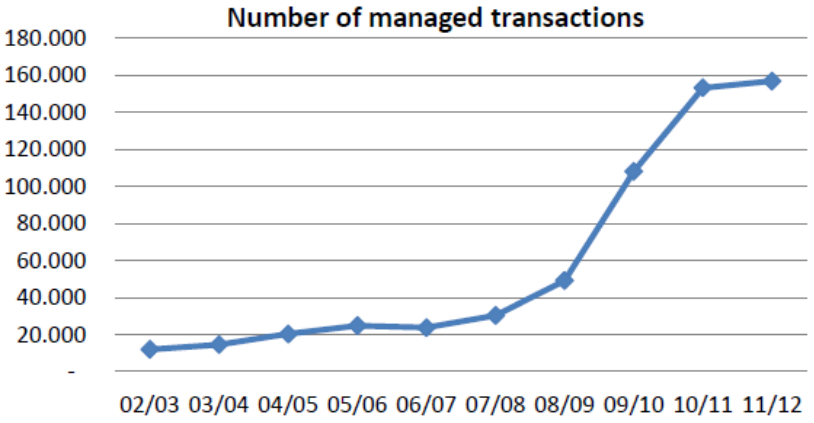
Institutional pathway

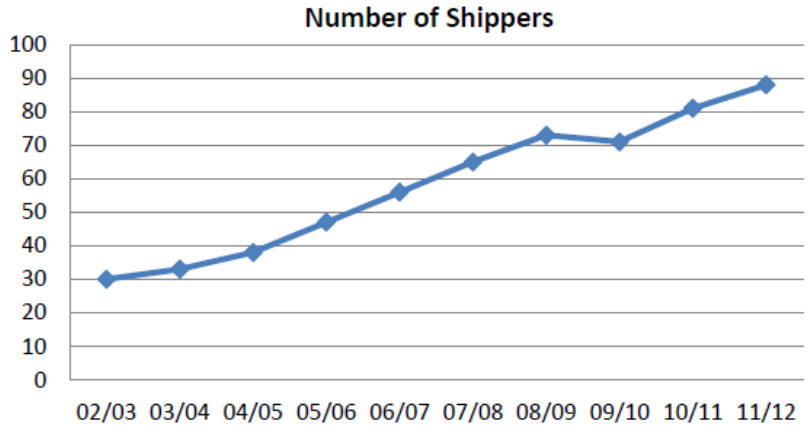
- November 2002, Snam submits to the National Regulation Authority (NRA) its first draft Gas Transmission Network Code
- June 2003 Snam submits an amended version, in accordance with requirements from NRA
- July 2003, NRA approves (Resolution 75/03/Gas) Snam's Network Code, which enters into force
- …. Several amendments (to comply with new EU and national regulation, market evolution and shippers´ requests (.. We are now at the 60th revision)

Snam Transportation Service Evolution

Evolution of communication methods







Source: Snam

Structure of Snam Network Code

Main Sections (2017 version)

- Introduction
- Information
- Access to transportation service
- Supply of transportation service
- Quality of service
- Planning
- Administration
- Emergencies
- Update of the Network Code

Content of the Network code

Information	Regulatory framework	
	Network description and management	
	Description of services provided	
	Information exchange	
Access to transportation service	•Capacity booking	at entry/exit points (foreign pipelines interconnections)
		at points non interconnected with foreign pipelines
		in case of TPA exemption and priority allocation
		transportation contract for capacity assigned to suppliers
	•Construction and management of delivery and redelivery points	•Requesting connections
		•Conditions for activation and termination

Content of the Network code

Transportation service	Capacity trading and transfer	Rules for capacity trading and entry/exit points
		Short-term UIOLI
		Long-term UIOLI
	Booking assignment and re-assignment	Annual, semiannual, monthly, weekly and daily program
	Balancing	Physical
		Commercial
		Balancing session
		Adjustment session
	Gas measurement	Measurement for transportation
		Ownership of measurement plants
		Provisions, rules, rights and responsibilities
	Gas quality	Parameters
		Energy and gas quality control parameters calculation
		Data quality validation

Content of the Network code

Quality of service	Basic principles	Service efficiency
		Continuity
		Impartiality
		Health, safety and environment
	Interventions areas	Commercial quality indicators
		Service continuity indicators
		Technical quality indicators
		Standards
Planning	•Management of maintenance and other interventions	Shippers obligation
		Types of interventions
		Interventions planning
		Communication between parties
	Operational coordination with third parties	Interconnected transportation operators
		Storage companies
		Regasification companies
		Production and distribution utilities
	Demand forecasting	Demand estimation models
		Data collection on transportation demand

Content of the Network code

•**Administration**	Fiscal and custom requirements	Excise and regional additional tax
		Indirect TAX / VAT
		Custom duties
	Invoicing and payment	Content
		Issue and payment terms
		Disputes
	Parties liabilities	Non-fulfilment of contractual obligations
		Limitation of liability
		Early termination of the transportation contract
		Force majeure
		Dispute resolution

Code Harmonization with EU Regulation and ENTSO-G Codes

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Code Harmonization with EU Regulation

- **1998 – 1st Gas Directive**
- **2003 – 2nd Gas Directive**
  - 2005 – Gas Regulation (access rules)

Modified the Network Code operators definitions, capacity booking, transportation access requirements, financial guarantees, exemptions; balancing; parties responsibilities. Chapters 2, 3, 5, 7, 9, 19.

- **2009 – Third Energy Package**
  - 3rd Gas Directive
  - Gas Regulation (access rules)
  - ACER Regulation
- **2010 – Security of Gas Supply (SoS) Regulation**

Modified Network Code on access to capacity markets and balancing activities. Chapters: 2, 3, 5, 6, 7, 8, 9, 14, 15, 18, 19; The Operators; Glossary; Attachments: 5/B; 5/C; 5/D; 5/F; 5/G; 5/H; 5/L; 5/M; 5/N; 5/O; 5/O - Appendix; 5/P; 5/Q; 5/R; 5/S; 5/SAppendix; 5/T; 5/T-Appendix

- **2011 – REMIT Regulation**

Harmonization with ENTSO-G Codes

- **2013** – Commission Regulation (EU) 948/2013 of 14 October 2013 establishing a Network Code on **Capacity Allocation Mechanism.**

- **2014** – Commission Regulation (EU) 312/2014 of 26 March 2014 establishing a Network Code on **Gas Balancing of Transmission Networks**.

- **2015** - Commission Regulation (EU) 2015/703 of 30 April 2015 establishing a Network Code on **Interoperability and Data Exchange Rules**.

- **2017** - Commission Regulation (EU) 2017/460 of 16 March 2017 establishing a Network Code on **Harmonized Transmission Tariff Structure**.

- **2017** - Commission Regulation (EU) 2017/459 of 16 March 2017 establishing a Network Code on **Capacity Allocation Mechanism**.

Modified the Network Code on capacity booking: multi-annual capacity booking, available capacity. Chapter 5.

Modified the Network Code on information exchange, capacity booking (within-day capacity booking) and balancing. Attachm.: 9/A, 11/A; Ch. 9, §§ 3.3.1, 4.1 e 6; Ch. 4, ch 5, §3.6 and ch 9, § 1.2

Modified Network Code on capacity booking: multi-annual capacity booking, connection request, capacity transfer, balancing, invoicing. available capacity. Chapters: 5, 7, 9, 18; Glossary.

Concluding Remarks

- Modelled after the British Code, Snam's Code have had to deal with one of the largest and more complex gas systems in Europe;
- Since 2003, it has been repeatedly amended and adapted to follow EU and national regulation, market evolution and shippers' needs;
- More recently, the Code has been revised to fully harmonize it with the pan-European network codes drafted by ENTSO-G.

Thank you for your attention.