



Ad Hoc Group of Experts on the Supply and Use of Gas

CROATIA: GAS INDUSTRY DEVELOPMENTS 2006

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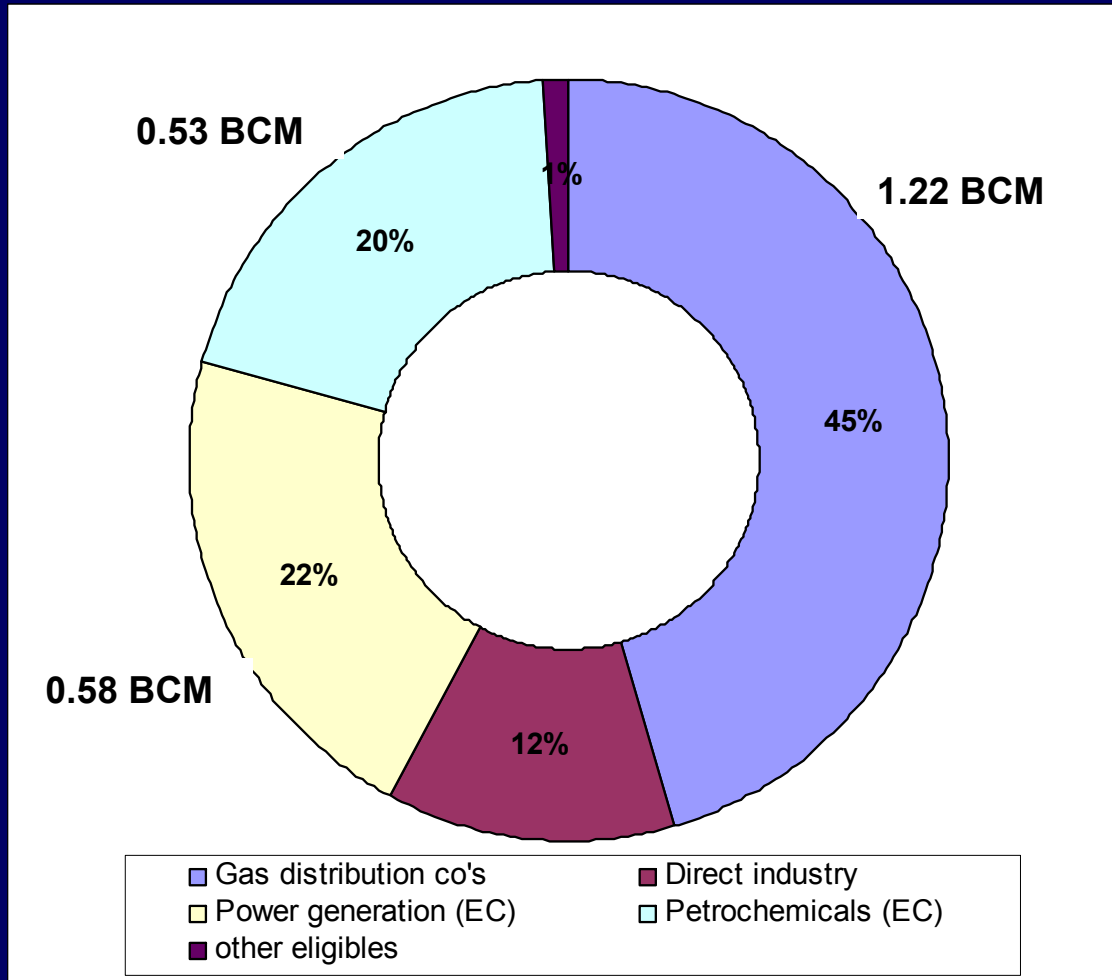
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- Supply and demand situation
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- Future gas system development
- Legal framework
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- New and on-going projects
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Croatian Gas Market 2006



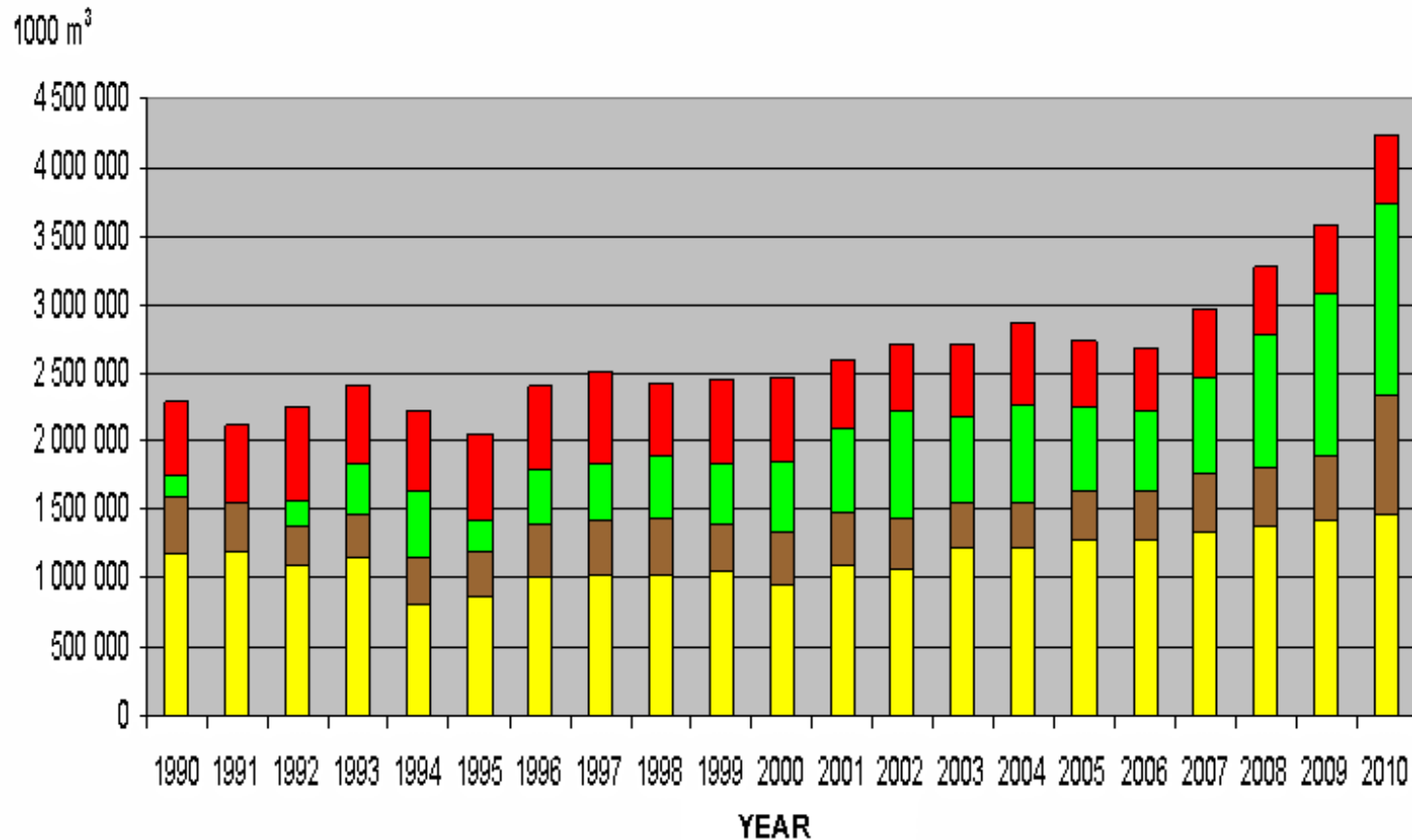
2006*

**Total sales:
2.68 BCM**





Croatian gas market breakdown



■ DISTRIBUTION Co's

■ DIRECT INDUSTRY

■ POWER GEN.

■ PETROCHEM.

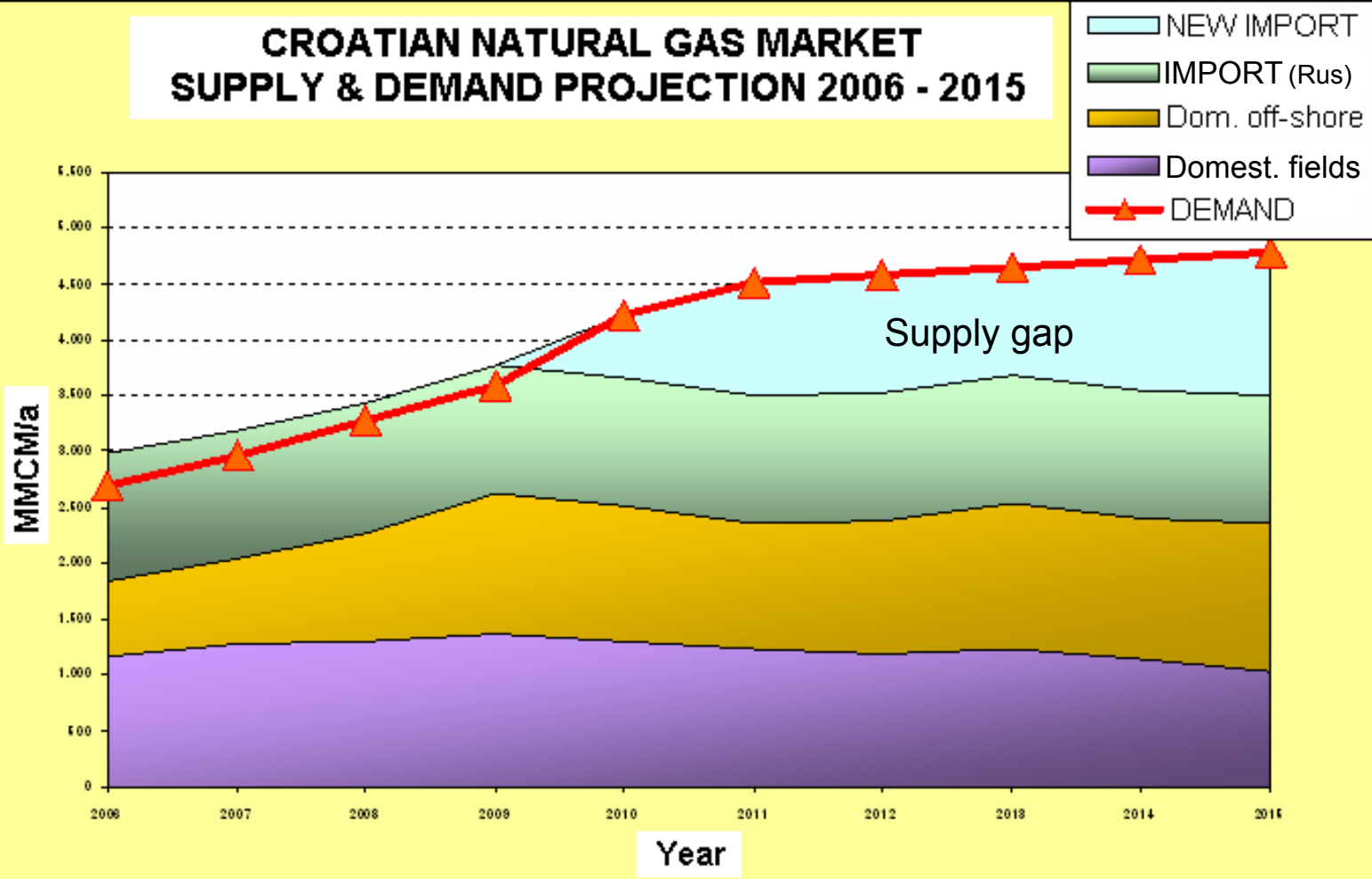
ELIGIBLES to 2007





Supply & Demand Projection

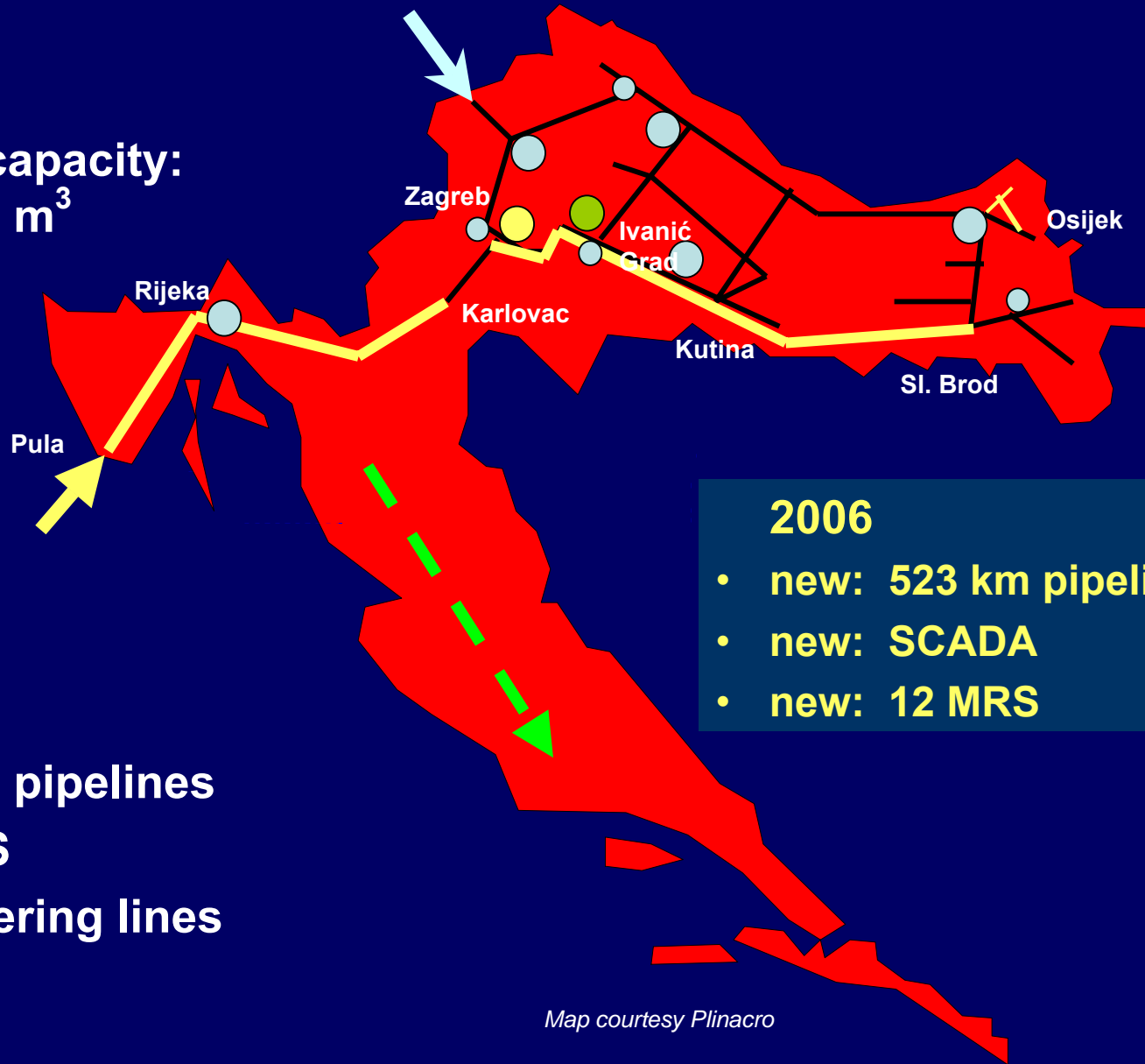
CROATIAN NATURAL GAS MARKET SUPPLY & DEMAND PROJECTION 2006 - 2015





Gas Transportation System

System capacity:
 $3,5 \times 10^6 \text{ m}^3$



2006

- new: 523 km pipelines
- new: SCADA
- new: 12 MRS

- 1657 km pipelines
- 142 MRS
- 210 metering lines

Map courtesy Plinacro





Gas Transportation System Development Plan 2007 – 2011



Pula – Umag DN 300/50
Kukuljanovo – Omišalj DN 500/75

Lučko – Zabok DN 700/75
Zabok - Rogatec DN 700/75

D.Miholjac – Dravaserdahely DN 700/75
Slobodnica – D. Miholjac DN 700/75
Slobodnica – B.Brod DN 700/75

Bosiljevo – Split DN 500/75
Dugopolje – Ploče DN 500/75
Ploče – Dubrovnik DN 700/75

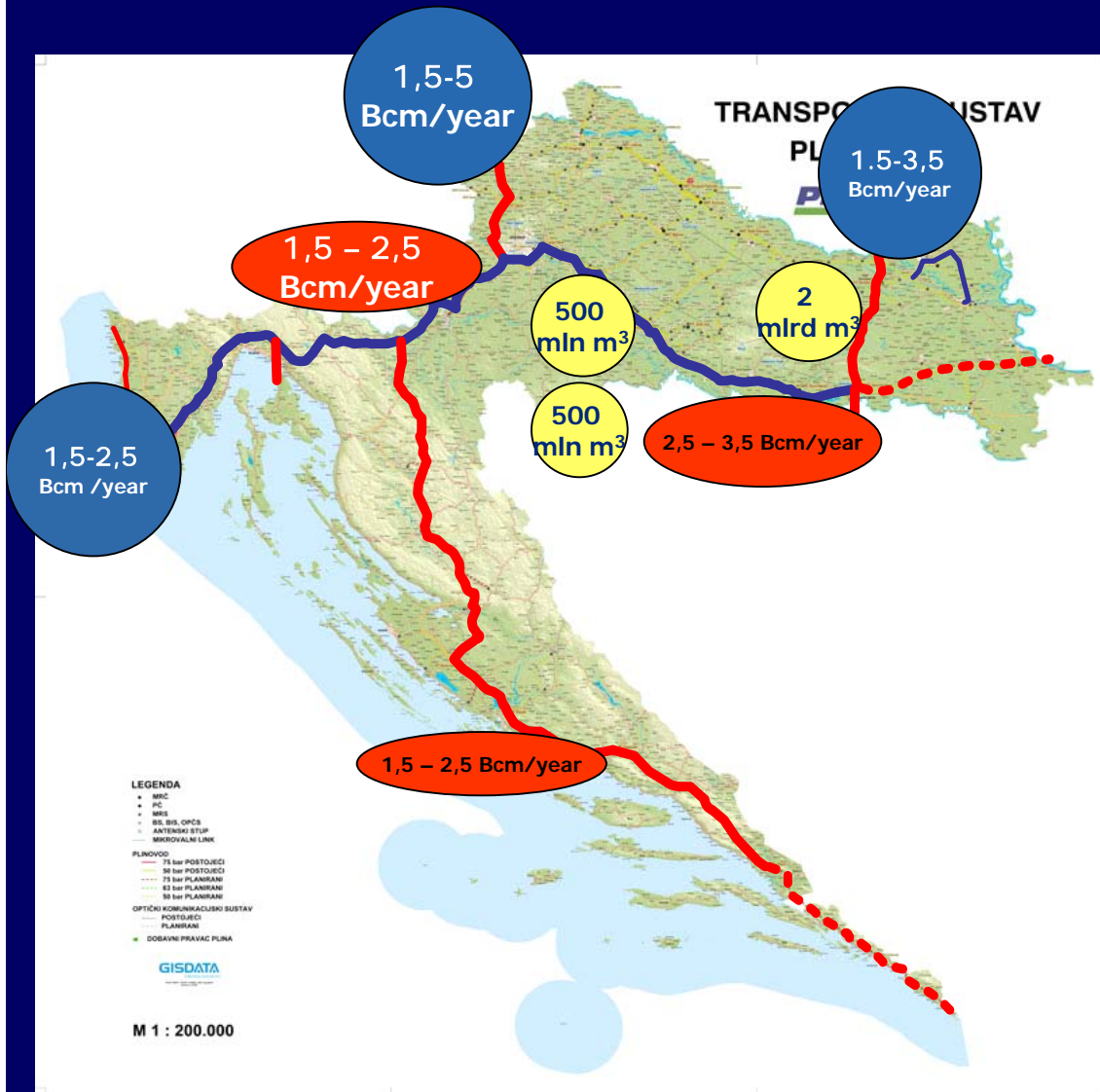
Dubrovnik – Igalo DN 700/75

Slobodnica – Sotin DN 700/75
Sotin – Bačko Novo Selo DN 700/75





Future System Capabilities



New sources of supply

Sufficient capacity and power

Transit capacity

Regional connections

Storage capacity

Map courtesy Plinacro





Croatian gas transportation system in European context





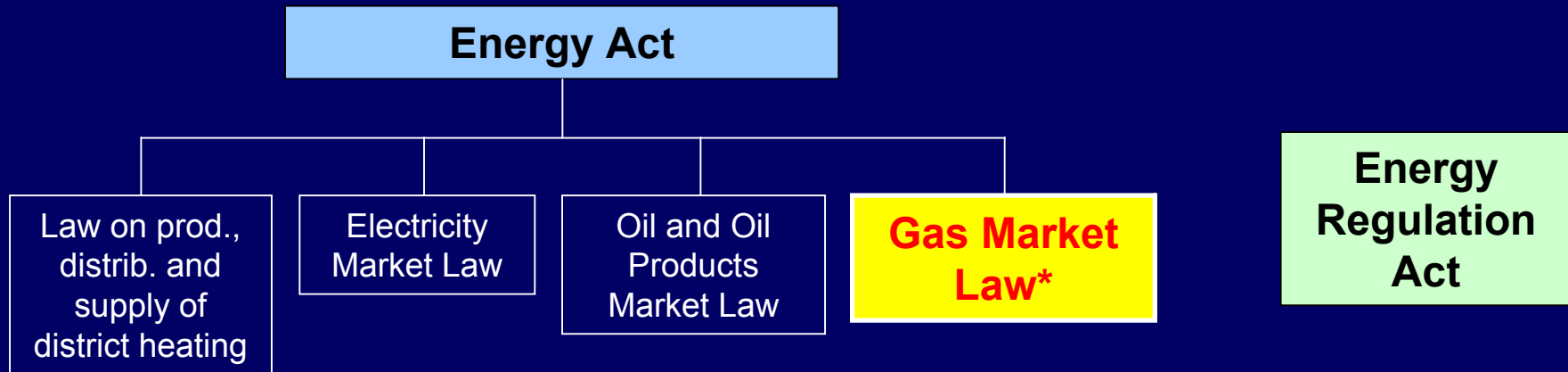
Legal Framework

- 2nd round of the National energy reform
- EU harmonisation (55/03, ...) and EEC requirements
- Gas market liberalisation
- **Central position of the new GAS MARKET ACT***
- Horizontal and vertical (legal*) unbundling
- Gas market opening in 2007 (non-residentials) & 2008 (full)
- Protected customer categories (tariff → PSO)
- Price control (to 2011 ?*)





Legal Framework*



Gas activities (functions):*

Regulated:	WS Supply (TCs)	TSO	DSO	SSO	LNGO	Ret. Supply (TCs)
Market:	Production	Supply (eligible cs)		Trade*		

Secondary legislation and operational regulations expected in 2007:

6 Tariff systems for gas activities/functions (methodologies)

General conditions of gas supply

Security of Supply Bill

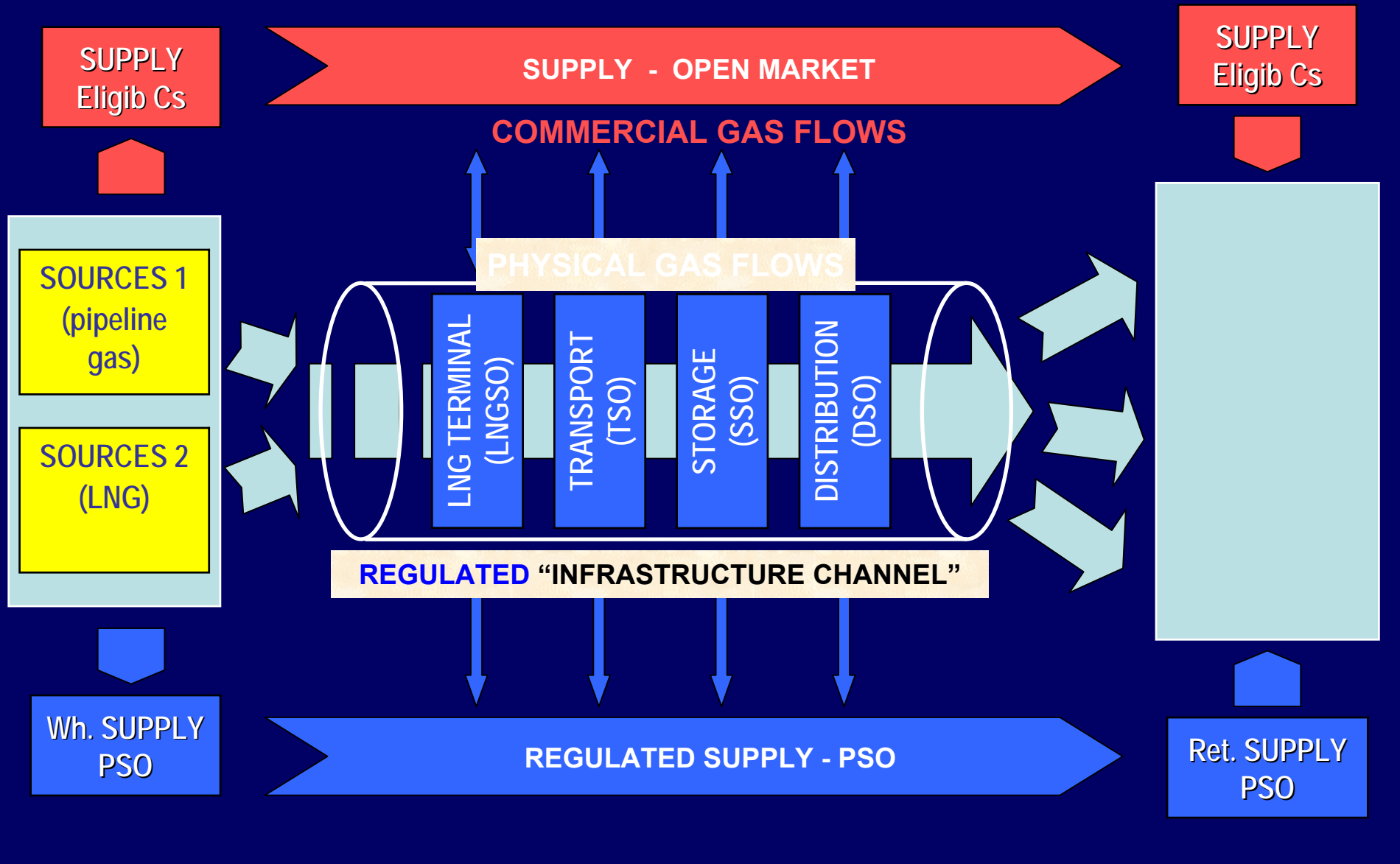
2 network codes (TSO + DSO), 2(3) regulations





CROATIAN GAS MARKET MODEL

(expected* open gas market structure)





On-going projects

Infrastructure:

- Further gas transportation system development
 - Next phase of national transportation system
 - Import interconnections

New production/supply:

- North Adriatic off-shore gas fields (INAgip)





New projects

Infrastructure:

- Gas storage development
 - New local gas storage project (0.5 Bcm)
 - Regional storage development project (2 Bcm)

New production/supply:

- Krk island LNG regasification terminal





New and on-going projects: offshore & LNG

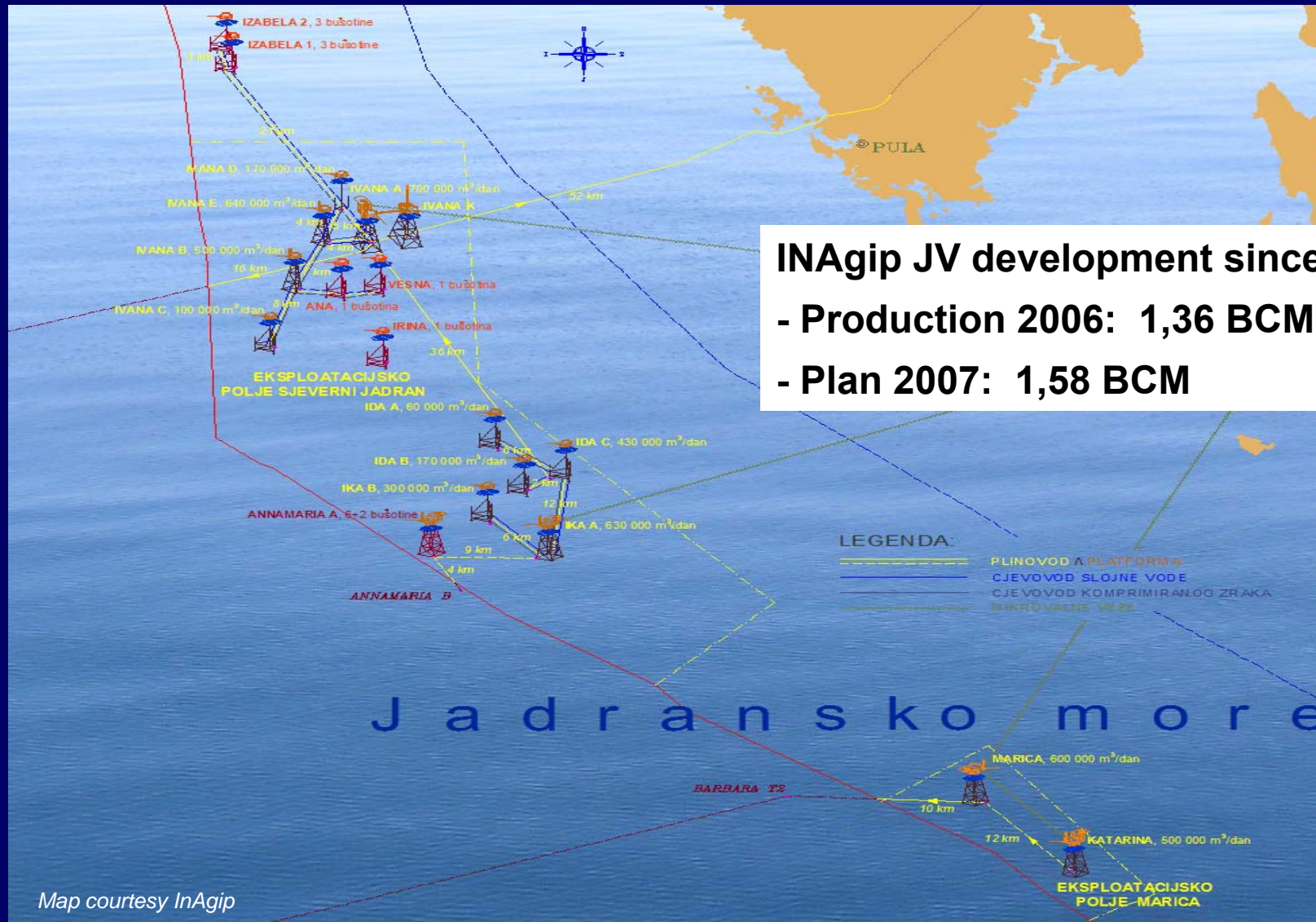


Map courtesy InAgip





North-Adria off-shore fields (INAgip)



INAgip JV development since 1998
- Production 2006: 1,36 BCM
- Plan 2007: 1,58 BCM

Map courtesy InAgip





Krk island LNG project



- LNG regas terminal on the island of Krk
- Adria LNG consortium + Croatian partners (?)
- Start-up in 2012 (?)





Conclusions

Difficult but interesting years ahead !

- Finalization of EU-harmonised legal framework
- Start-up of the new (gas related) investment cycle ⇒ pipelines, storage, LNG
 - Gas system development in southern part of Croatia
 - Transit capability/role of Croatian gas system
 - Role in regional gas storage



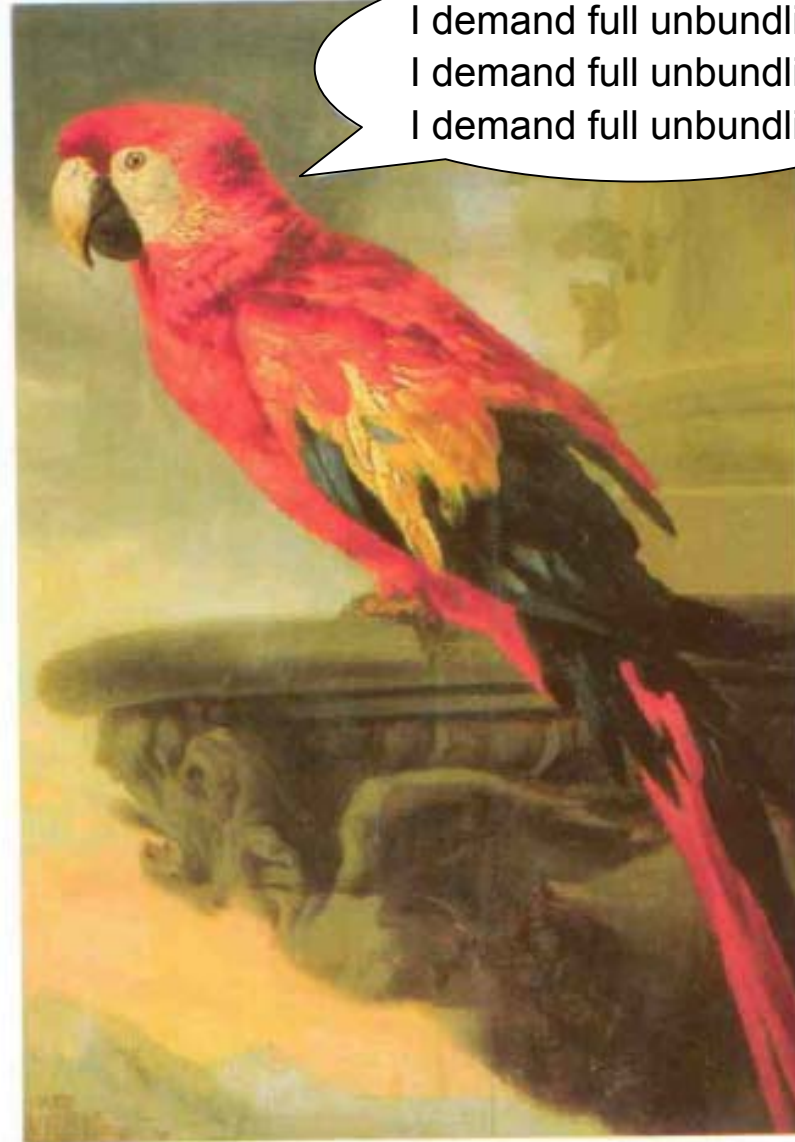


Difficult years ?





Energy Markets Liberalisation: The EU Commission Speaks



I demand full unbundling !
I demand full unbundling !
I demand full unbundling !

