

The Italian Experience of Market Monitoring and Market Power

EPRG Spring Seminar 2025
Cambridge, 22-23 May 2025

Session 1 – Zonal Pricing in Electricity Market Design

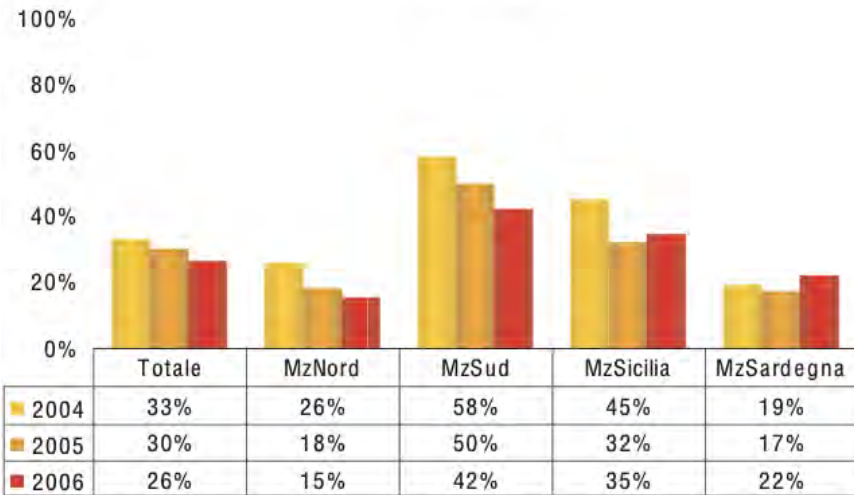
Clara Poletti

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THE EARLY YEARS: LIMITED MARKET COMPETITION

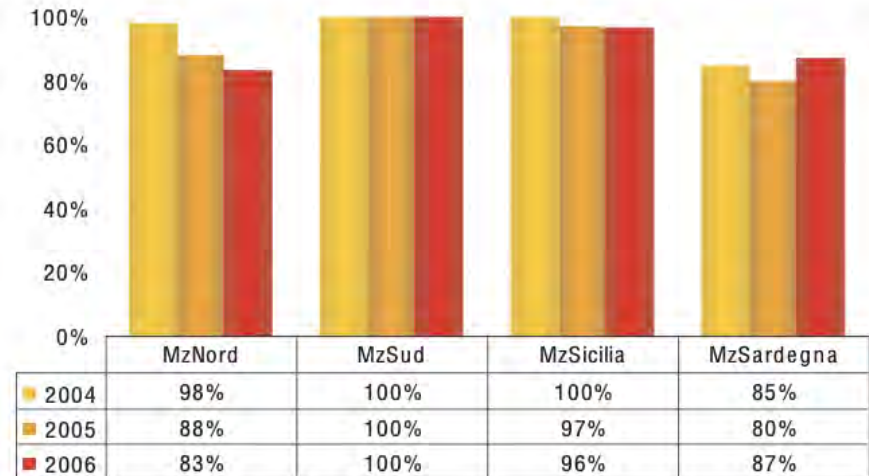
% of H with at least 1 pivotal mrk operator

(IORq)



% of Q sold under pivotality

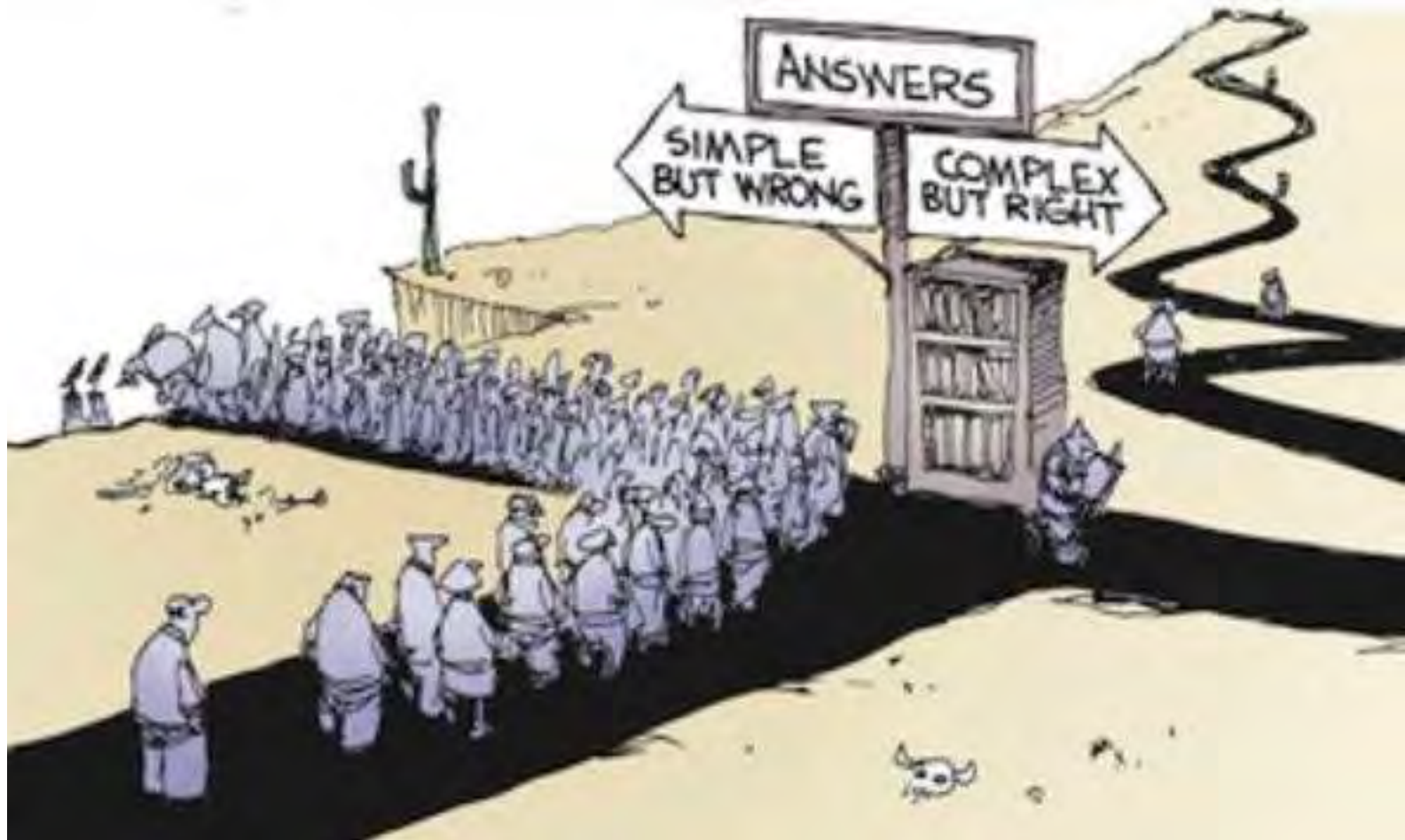
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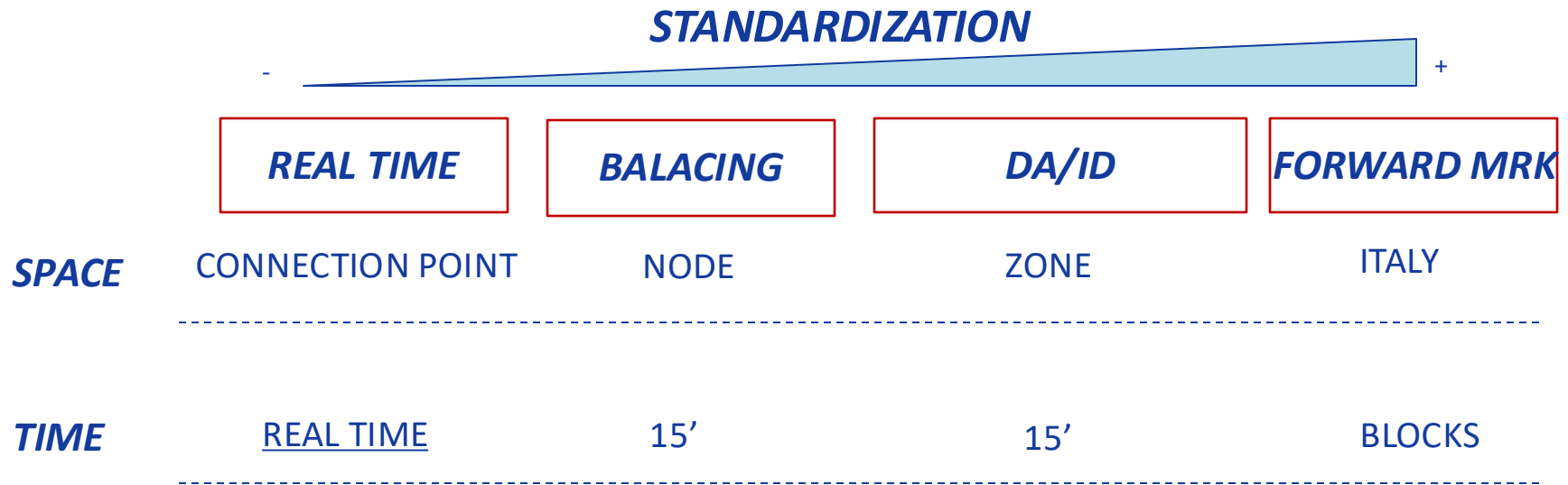
EX ANTE MEASURES: SOME EXAMPLES

- **"Generation congested zones"** to improve efficiency and transparency
- **Must run regulation**, still in place - generation units pivotal in the ancillary services market are subject to regulation
- **Virtual Power Plants**: in 2010 Enel was required to auction financial contracts that granted third-parties virtual access to its generation capacity
- **Sicily**: from 2015 till June 2016 all generation units > 50 MW regulated as must run

THE INTERPLAY BETWEEN MARKET DESIGN AND COMPETITIVENESS



DA BIDDING INFLUENCED BY BALANCING PRICES AND ANCILLARY SERVICES MRK EXPECTATIONS



- **DA markets don't' operate in isolation**
- Their competitiveness can be undermined by mrk power in subsequent markets

Report on procurement of resources for voltage regulation in Italy (282/2020/E/eel)

- Very high dispatching costs (1,3 mln euros in 2018-2019; 60% for voltage regulation)
- Re-dispatching mainly due to the need of **presence in service of a minimum number of production units** for voltage regulation
- Analysis of the residual demand for “presence in service” to identify pivotal suppliers (frequency and extent)
- Period: 2011-2019
- Geographic area: Southern Italy

MARKET POWER IN THE SUPPLY OF «PRESENCE IN SERVICE» FOR VOLTAGE REGULATION

- **Empirical results:** high number of hours vulnerable to the exercise of market power since 2011

Producers pivotal in the procurement of voltage regulation have an economic **incentive to remain out of the merit order in the DA market**

Table 1 - Most significant results of the pivotality tests for individual UoDs (period 2011-2019)

Area	Single UoD	PIVOTALITY		
		Nr. hours	Nr. days	Average Nr. EPU
Brindisi	Enel	41.755	1.883	1,2
Calabria	Axpo	2.450	146	1,0
Campania	Tirreno Power	5.187	469	1,0
	Axpo	1.148	117	1,0
Foggia	Sorgenia	1.259	114	1,0
	A2A	318	29	1,0
Lazio	Enel	1.630	132	1,0
	Tirreno Power	491	48	1,0
	Sorgenia	349	28	1,0
Brindisi-Campania-Foggia	First 2 UoDs	293	26	1,1

OPPORTUNISTIC IMBALANCES IN SARDINIA - 2012

Market operators with imbalances > 20% (gen-july 2012)

UDD in prelievo	Programma (MWh)	Prelievo (MWh)	Sbilanciamento (MWh)	% sul programma	% sui prelievi
EDELWEISS ENERGIA SPA	-12,49	0,00	12,49	100%	9315670%
ELECTRADE SPA	-26,34	0,00	26,34	100%	741561%
NOA ENERGIA	-2,09	0,00	2,09	100%	333886%
AZIENDA ENERGETICA TRADING SRL	-63,28	-0,20	63,07	100%	30799%
C.U.R.A. CONSORZIO UTILITIES RAVENNA SCRL	-0,40	0,00	0,40	99%	18147%
ITALGEN SPA	-0,91	-0,02	0,89	98%	5329%
DSE SRL	-97,96	-2,57	95,39	97%	3713%
ASSOUTILITY SRL	-2,99	-0,13	2,86	96%	2267%
ESPERIA SRL	-1,91	-0,17	1,74	91%	1003%
YOUTRADE SPA	-28,17	-2,64	25,53	91%	966%
CENTOMILACANDELE SCPA	-8,08	-0,88	7,20	89%	817%
EGEA COMMERCIALE SRL	-3,72	-0,41	3,31	89%	814%
EUROPE ENERGY SPA	-4,99	-0,58	4,41	88%	766%
OTTANA ENERGIA SPA	-0,86	-0,12	0,73	86%	609%
CONS. ENERG. INDUSTRIALI RIUNITI SCARL	-4,46	-0,64	3,83	86%	602%
ELECTRA ITALIA SPA	-41,25	-5,99	35,26	85%	588%
TELENERGIA SRL	-37,34	-6,49	30,85	83%	475%
ENEL PRODUZIONE SPA	-11,32	-4,13	7,19	64%	174%
ABENERGIE SPA	0,00	-0,04	-0,04	*	100%
BLUENERGY GROUP SPA	0,00	0,00	0,00	*	100%
ENERGY.DIS SRL	0,00	0,00	0,00	*	100%
GELSIA SRL	0,00	0,00	0,00	*	100%
PANDORA SPA	0,00	0,00	0,00	*	100%
EXERGIA SPA	-4,47	-2,86	1,60	36%	56%
ACAM CLIENTI SPA	-1,89	-1,24	0,65	34%	52%
ENERGETIC SOURCE SPA	-20,56	-13,51	7,05	34%	52%
METAENERGIA SPA	-1,88	-1,25	0,63	33%	50%
TRENTA SPA	-0,02	-0,04	-0,02	83%	45%
GALA SPA	-5,08	-8,72	-3,64	72%	42%
GDF SUEZ ENERGIE SPA	-5,51	-4,01	1,50	27%	37%
ALPIQ ENERGIA ITALIA SPA	-14,51	-11,04	3,47	24%	31%
HELIOS SRL	-0,01	-0,01	0,00	39%	28%
EDISON ENERGIA SPA	-44,23	-34,73	9,50	21%	27%
EPIU ¹ SPA	-0,18	-0,24	-0,06	31%	24%
GREEN NETWORK SPA	-73,82	-60,87	12,94	18%	21%

*Nota: * valore indeterminato in corrispondenza di programmi nulli e sbilanciamenti negativi*

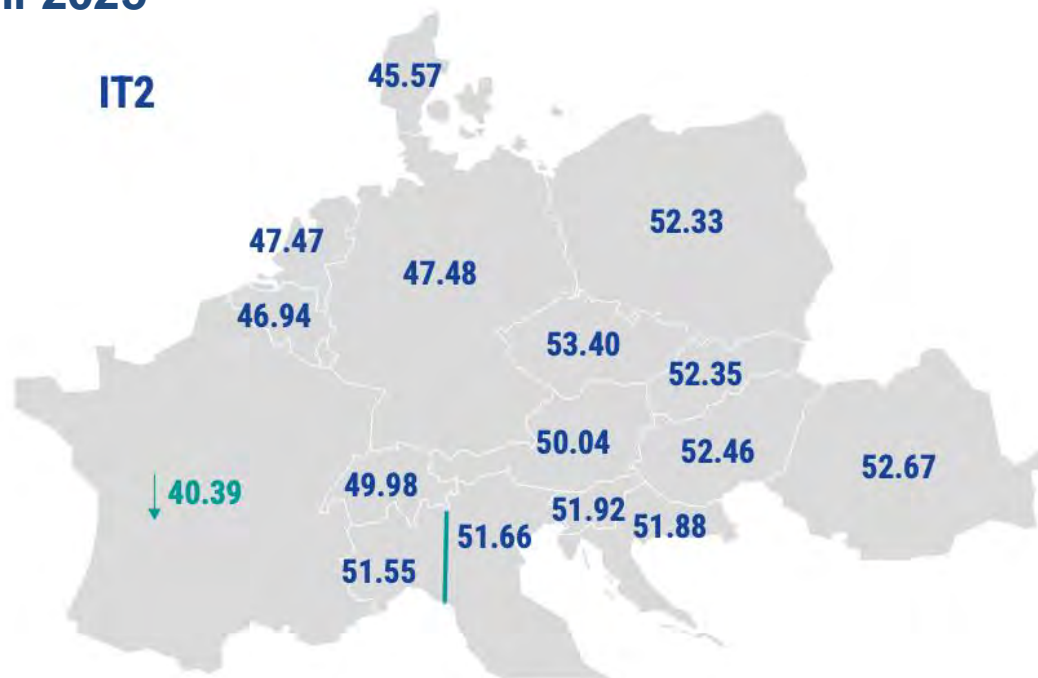
*** % in valore assoluto*

Provision 197/2013/E/eel

DOES SPLITTING A CONGESTED ZONE REDUCE COMPETITION? THE NORTH ZONE

- Long lasting discussion on splitting the North (2008 Terna proposal)
- Intrazonal structural congestions between East and West

Avg market clearing prices per bidding zone (ENTSO-E Bidding zone review April 2025)



DOES SPLITTING A CONGESTED ZONE REDUCE COMPETITION?

- **In general:**
 - market operators should anticipate in DA the potential activation in the balancing market
 - no offers in DA below the expected remuneration in the balancing market
- **Caveat:**
 - Not all market operators active in DA are allowed to supply balancing services
 - Balancing market difficult to predict (again standardization matters)

DOES SPLITTING A CONGESTED ZONE REDUCE COMPETITION? CONSTRAINED GENERATION AREAS

- Injection only zones with generation capacity higher than transit capacity

Zona di riferimento	Altre zone	2004	2005	2006
Sud	Nord	47,0%	28,5%	37,8%
	Sicilia	61,1%	56,0%	59,9%
	Sardegna	73,6%	25,8%	29,3%
Nord	Monfalcone	0,6%	0,0%	1,3%
	Turbigo	1,3%	0,1%	0,1%
	Francia	6,1%	10,1%	37,3%
	Svizzera	6,1%	4,7%	41,2%
	Austria	6,5%	8,5%	20,8%
	Slovenia	6,5%	3,3%	3,8%
	ENW	6,1%	0,1%	0,0%
	ENE	6,5%	0,9%	0,0%
Sud	CentroNord	13,0%	12,0%	4,0%
	CentroSud	0,1%	0,3%	0,7%
	Calabria	23,0%	7,7%	23,7%
	Rossano	7,0%	2,6%	17,3%
	Brindisi	18,5%	3,3%	21,4%
	Foggia	-	-	2,8%
	Grecia	19,5%	9,2%	28,1%
	ESD	-	3,8%	27,8%
Sicilia	Priolo	5,1%	5,1%	15,3%
Sardegna	Corsica	7,7%	6,1%	7,2%

The zonal pricing mechanism encourages producers to offer quantities below the max export limit, in order to avoid separating from the adjacent zone and thus gain access to its more lucrative price (GME Annual Report 2006, p 45)

- **DA market fragmentation has decreased**
- **We are still on the learning curve**
- **Cooperation with the Competition Commission is key (who does what?)**

Thank you for your attention

cpoletti@arera.it