

A comparison of CENTREL national experiences

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- Background for CENTREL countries
- Country reports
- Barriers to local competition
- Barriers to regional market integration
- Conclusions

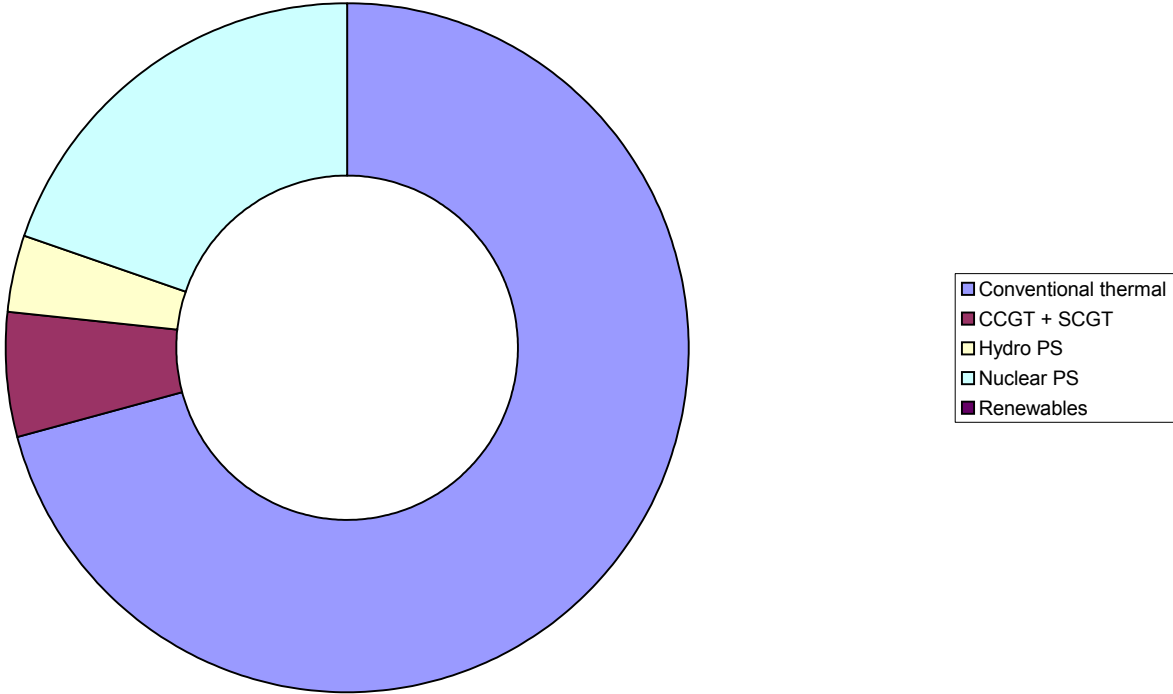
THE CENTREL POWER SYSTEM

Power System of CENTREL as a Part of the UCTE



FUEL BASIS FOR GENERATING 300 TWh

Breakdown of the 300 TWh electricity generation by fuel source, 2003



CENTREL KEY FIGURES, 2003

CENTREL Key Figures 2003	
Maximum net generating capacity	63,976 MW
Net electricity production	275.9 TWh
Net electricity consumption	228.3 TWh
Import (+) / Export (-) balance	-21.7 TWh

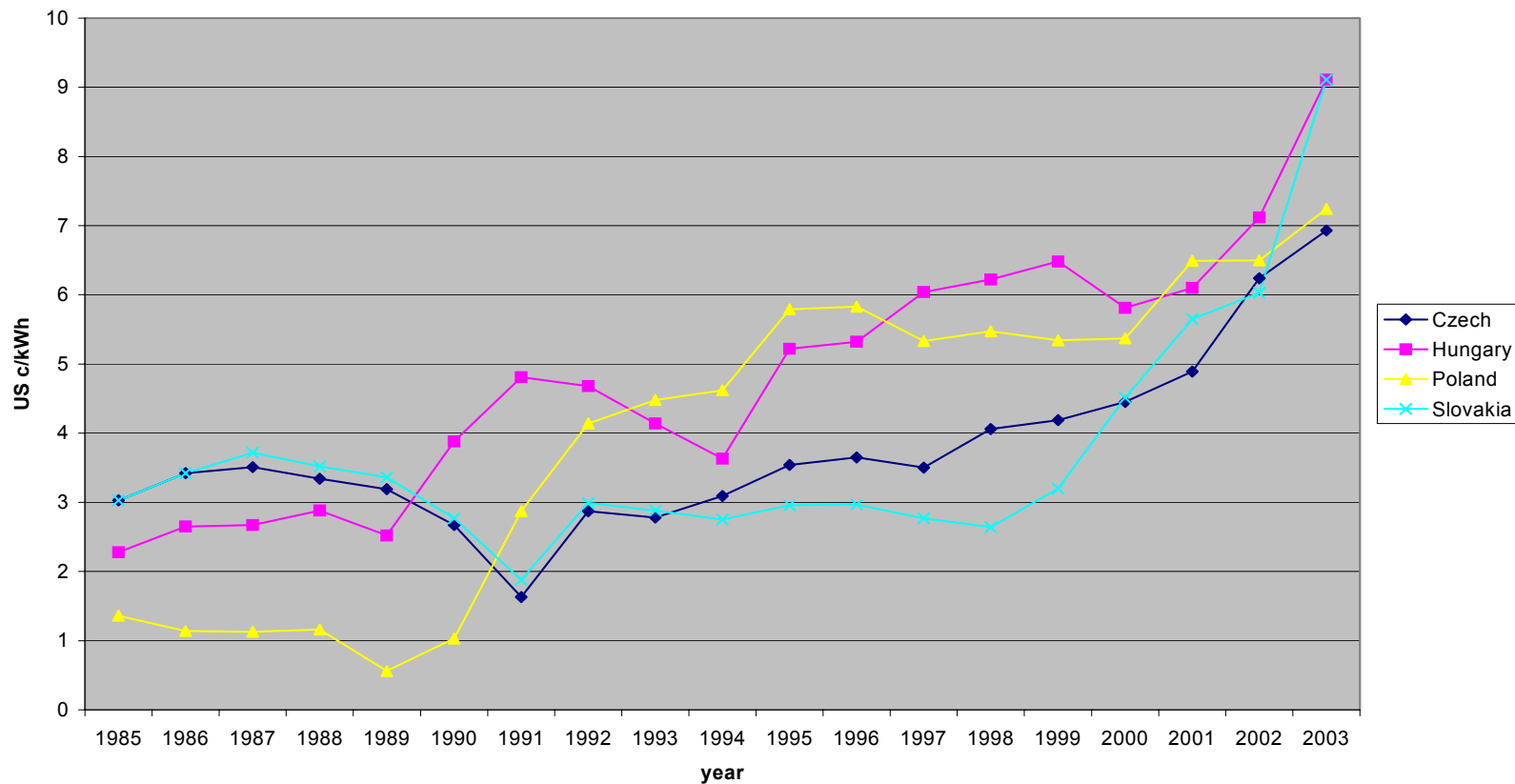
INTEGRATION OF CEE ELECTRICITY MARKETS

Country	Introduction of rTPA (first step %)	Physical integration	CBT/ EISO agreement	Restriction on imports	Surplus Capacity, MW*	Net exports, Gwh	Private participation
Czech Republic	2002, 33%	UCTE	Jan. 2003	n.a.	5196	16200	30% of CEZ privatized
Hungary	2003, 35%	UCTE	April 2004	Only physical	2540	-6939	Generation: 36%, Distribution: 87% private
Poland	1998, 47%	UCTE	July 2004	30% of eligible consumption is allowed	10344	10170	20% of generation private, distcos under bidding
Slovak Republic	2002, 35%	UCTE	April 2004	2003: 66%, 2004: 33%, 2005: 0%	3970	2255	49% of distribution is private, 66% of SE is offered for private investors
Slovenia	2001, 65%	UCTE	Jan. 2003	No restrictions from Jan. 2003	n.a.	-151	insignificant

CONCENTRATION OF GENERATION MARKET

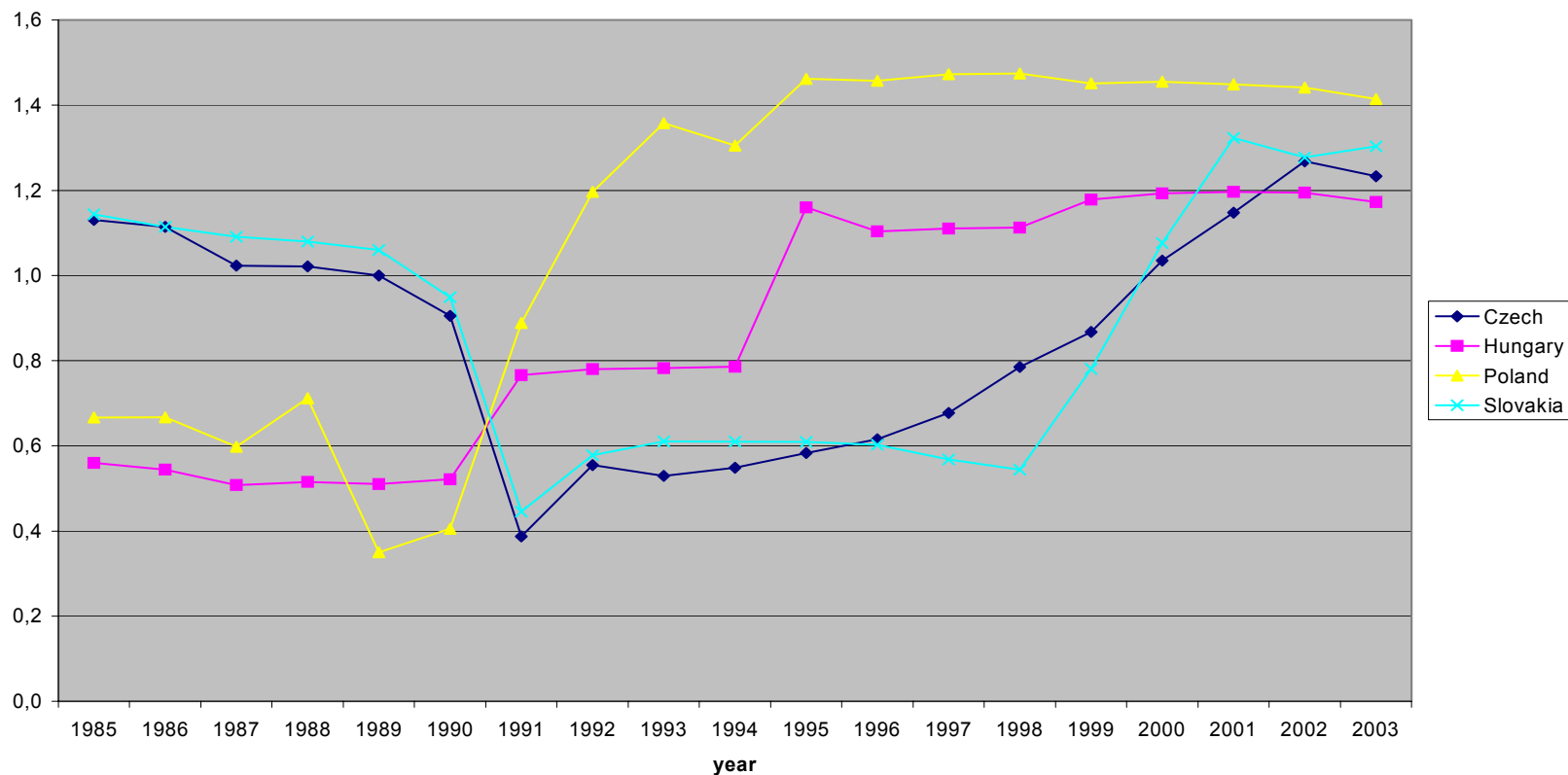
	Number of generator companies with installed capacity above		Number of generator companies, which are producing significant share of electricity	
	50 MW	100 MW	50%	75%
Czech Rep.	26	11	1	2
Hungary	12	10	2	4
Slovakia	6	5	1	1
Poland	54	39	4	8
Estonia	1	1	1	1
Latvia	1	1	1	1
Lithuania	6	5	1	1
Bulgaria	14	9	3	10
Romania	7	6	2	2-3
Armenia	5	5	2	3
Albania	1	1	1	1
Georgia	10	9	2	5
Kazakhstan	n.a.	n.a.	n.a.	n.a.

Average electricity prices for households (excl. taxes)

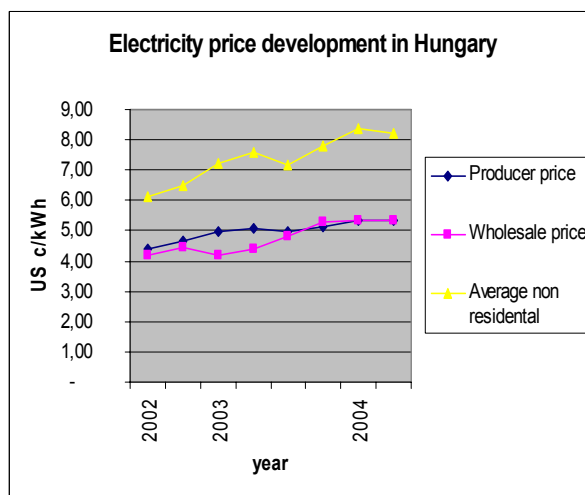
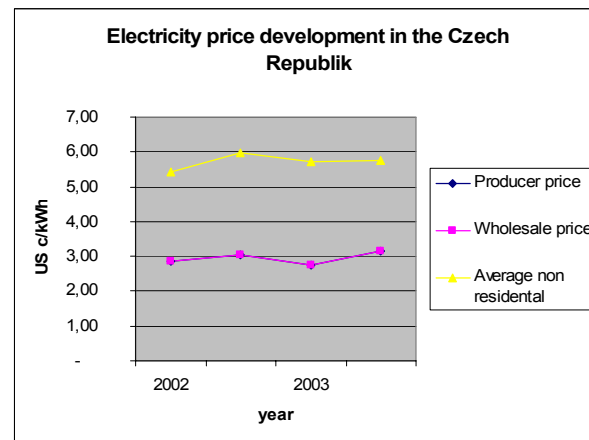
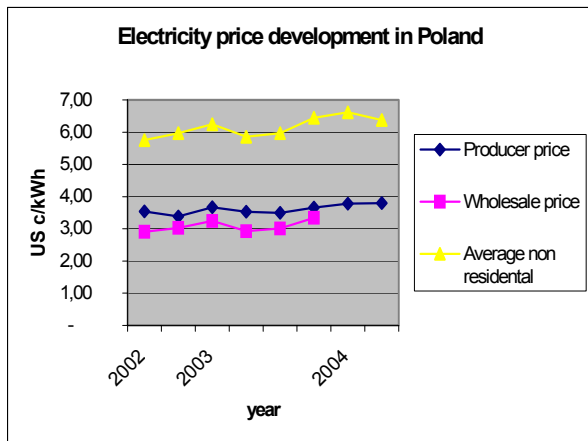


REMOVAL OF CROSS SUBSIDIES...

Ratio of ex tax household and industrial electricity prices



...BUT 'NON-PROFIT' INCUMBENTS




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ENERGY SECTOR REFORM AND ECONOMIC TRANSITION

- Gradual removal of price subsidies
- Unbundling and corporatisation
- Privatisation
 - Minimum requirements: transparent price regulation and / or PPAs; establishment of regulatory agency / commission
- Deregulation and competition

Eligible consumers	Market opening in %	In effect
Consumers > 40 GWh/y	30	January, 2002
Consumers > 9 GWh/y	40	January, 2003
<i>Consumers* > 1 GWh/y</i>	45	<i>January, 2004</i>
Consumers > 100 MWh/y	55	January, 2005
All end users	100	January, 2006

Market segments	Share of CEZ	Figures for CEZ	Figures for Independent
Installed capacity	70%	12153 MW	5191
Domestic production	74%	61399 GWh	21828
Wholesale purchases from domestic producers	88%	73177 GWh	
Sales for domestic customers / retailers	74%	44833 GWh	15677 GWh
Net exports		18 TWh	-1,7 TWh



- Prevailing state ownership
- CEZ: Regional champion? (second largest exporter in Europe)
- Independent sales of IPPs and net imports of the 'fringe' make up 26% of retail sales
- Strong interconnection with...
- ...and wholesale price integration with Germany

MARKET DEVELOPMENT IN HUNGARY

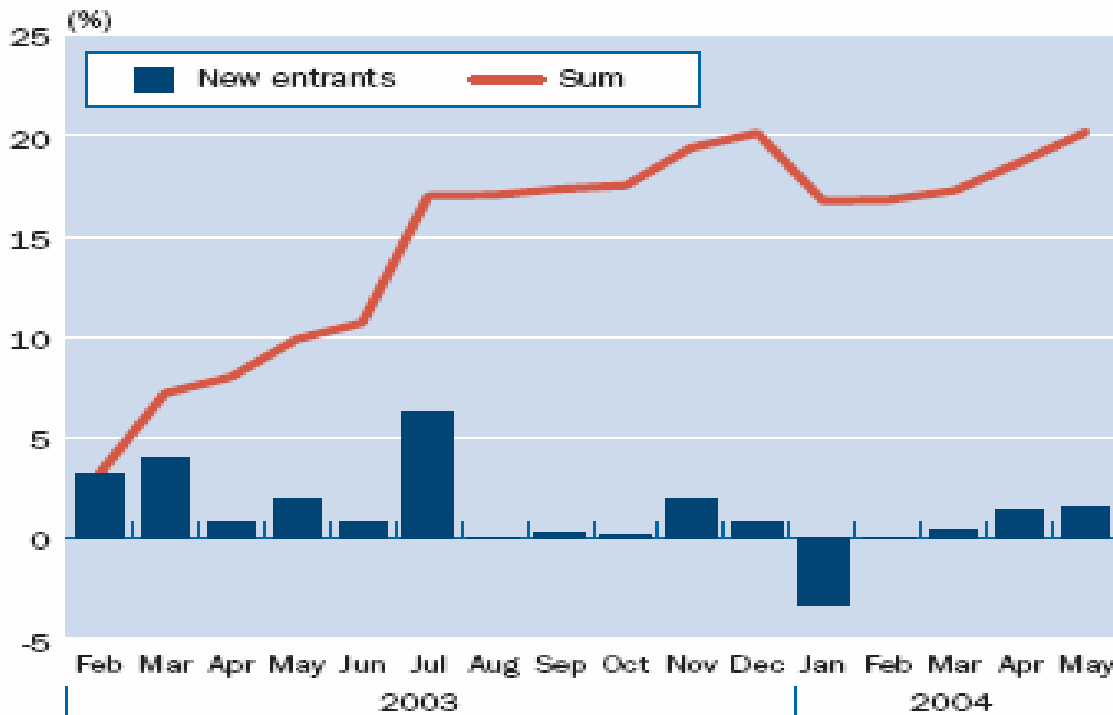
Eligible consumers	Market opening in %	In effect
Consumers > 6,5 GWh/y	35	January, 2003
All non-household customers	65	May, 2004
All end users	100	July, 2007

Market segments	Share of MVM	Figures for MVM	Figures for Independent
Wholesale purchases from domestic producers	89%	28289 GWh	3343 GWh
Sales for domestic customers / retailers	85%	32619 GWh	5963 GWh
Net exports		- 4330 GWh	- 2620 GWh



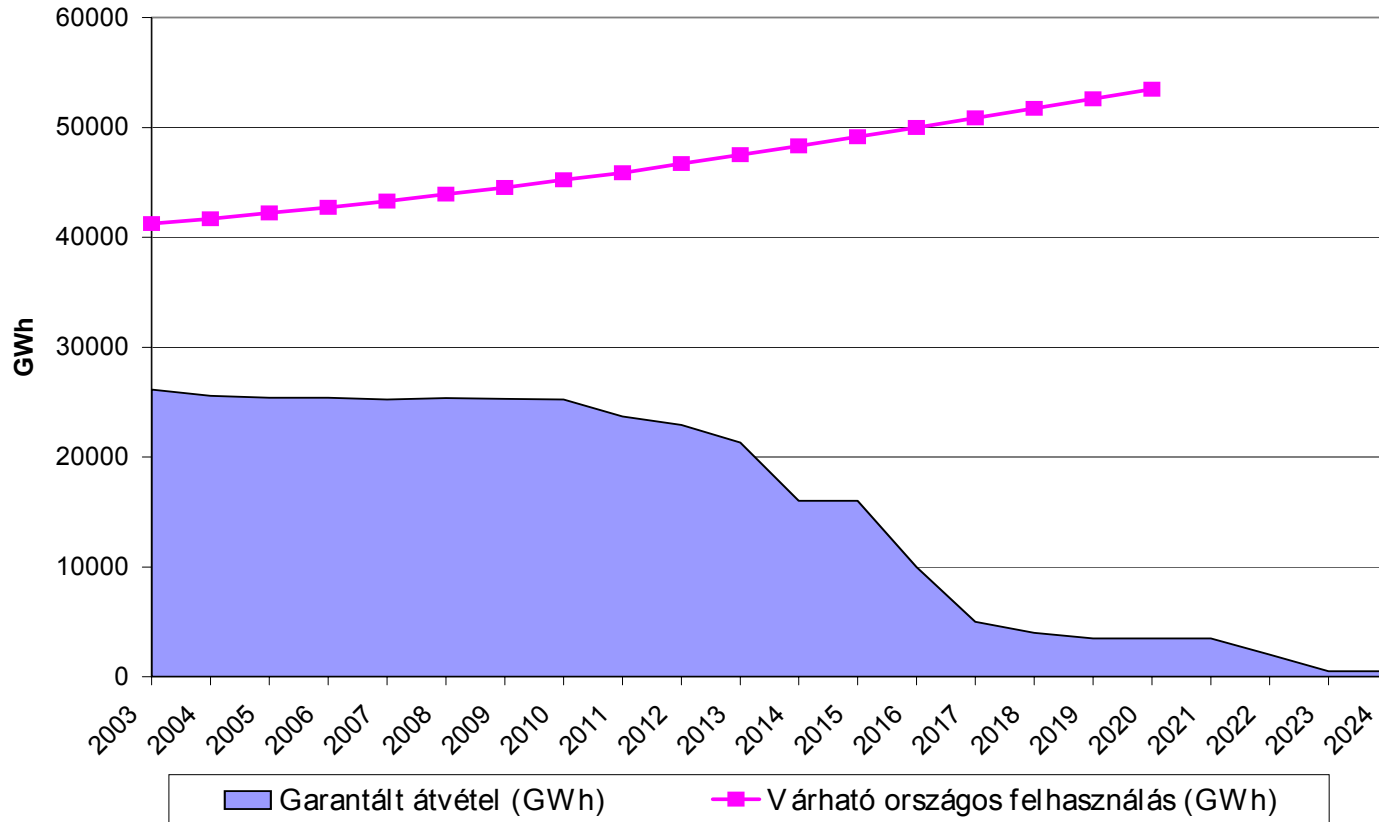
MARKET DEVELOPMENT IN HUNGARY

Figure 1: Market share of free market consumers on the Hungarian market (2003-04)



Source: Hungarian Energy Office

THE PPA PORTFOLIO



- Massive private presence
- MVM: small but decided incumbent
- Independent sales of IPPs and net imports of the 'fringe' make up 15% of retail sales
- High average producer prices...
- ...and intense import competition

- PSE is the transmission company and the dominant wholesaler
 - >50% of domestic generation is sold on PPA basis for PSE
 - No unbundling of TSO and CBT monopoly until May, 2004!
- Large market, active presence of private investors in trading
- Strange balancing and PX rules discriminate independent traders

Eligible consumers	Market opening in %	In effect
Consumers > 100 GWh/y	35	January 1, 2002
Consumers > 40 GWh/y	37	January 1, 2003
Consumers > 20 GWh/y	41	January 1, 2004
All consumers, except for households	72	January 1, 2005
All consumers (except for households?)	100	July 1, 2007

Market segments	Share of SE	Figures for SE	Figures for Independent
Installed capacity	87%	6881 MW	1074 MW
Domestic production	84%	26047 GWh	5100 GWh
Wholesale purchases from domestic producers	88%	27527 GWh	
Sales for domestic retailers	82%	21377 GWh	3248 GWh
Net exports		3574 GWh	-1319 GWh



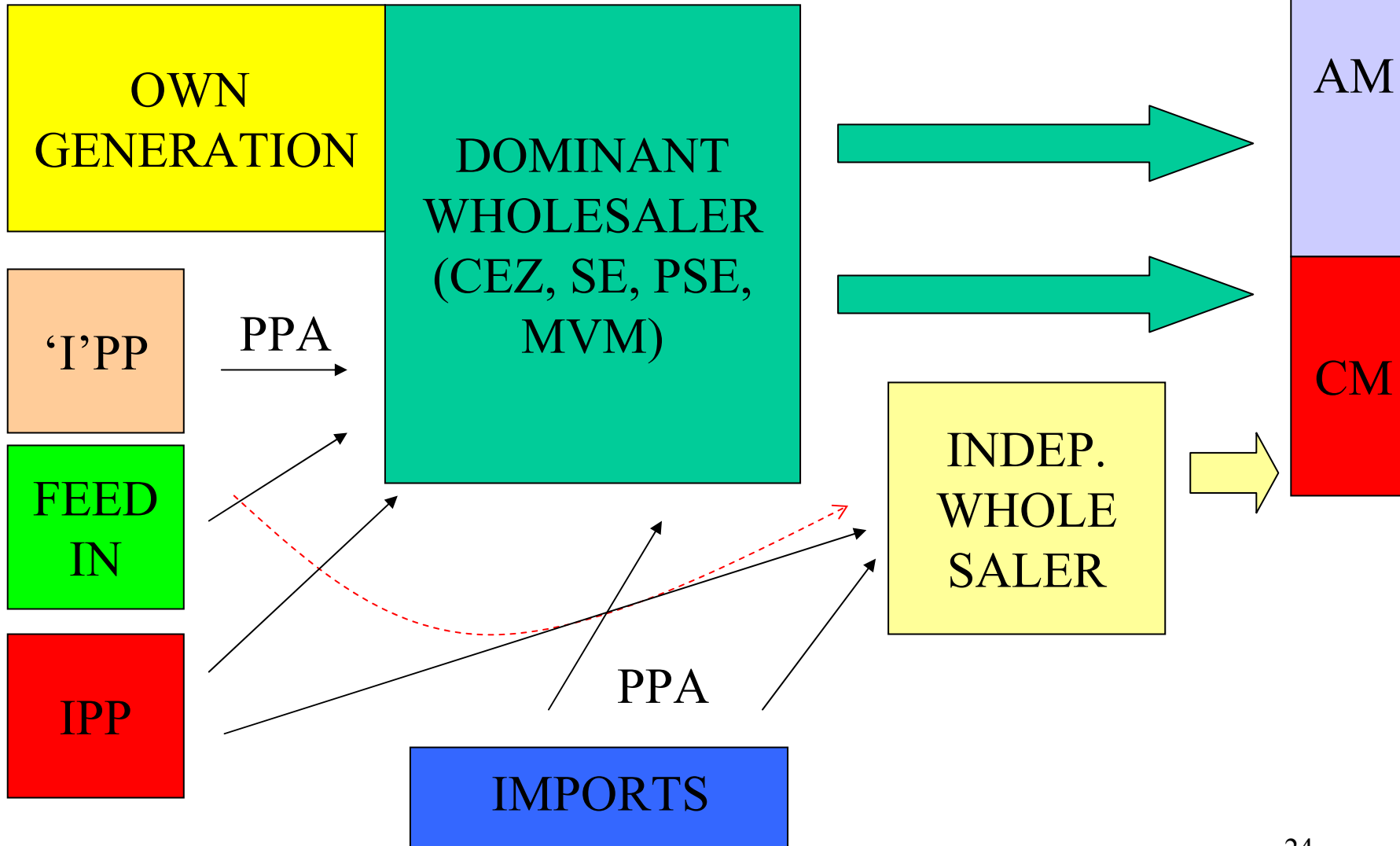
- Brave recent policies: pricing, privatisation
- Active eligible private DisCos
- Independent sales of IPPs and net imports of the 'fringe' make up 18% of retail sales

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BARRIERS TO LOCAL COMPETITION

- Dominant price leadership (ex SB)
- Dominant local players: CEZ, MVM, SE and PSE - >80%
- Vague definition of captive consumption – unfair competition between the captive and the free segments and players
- PPAs and other sales restrictions (feed in)
- Unnecessary purchase restrictions (DisCos in Hungary)
- Lack of transparency and liquidity on the free wholesale level

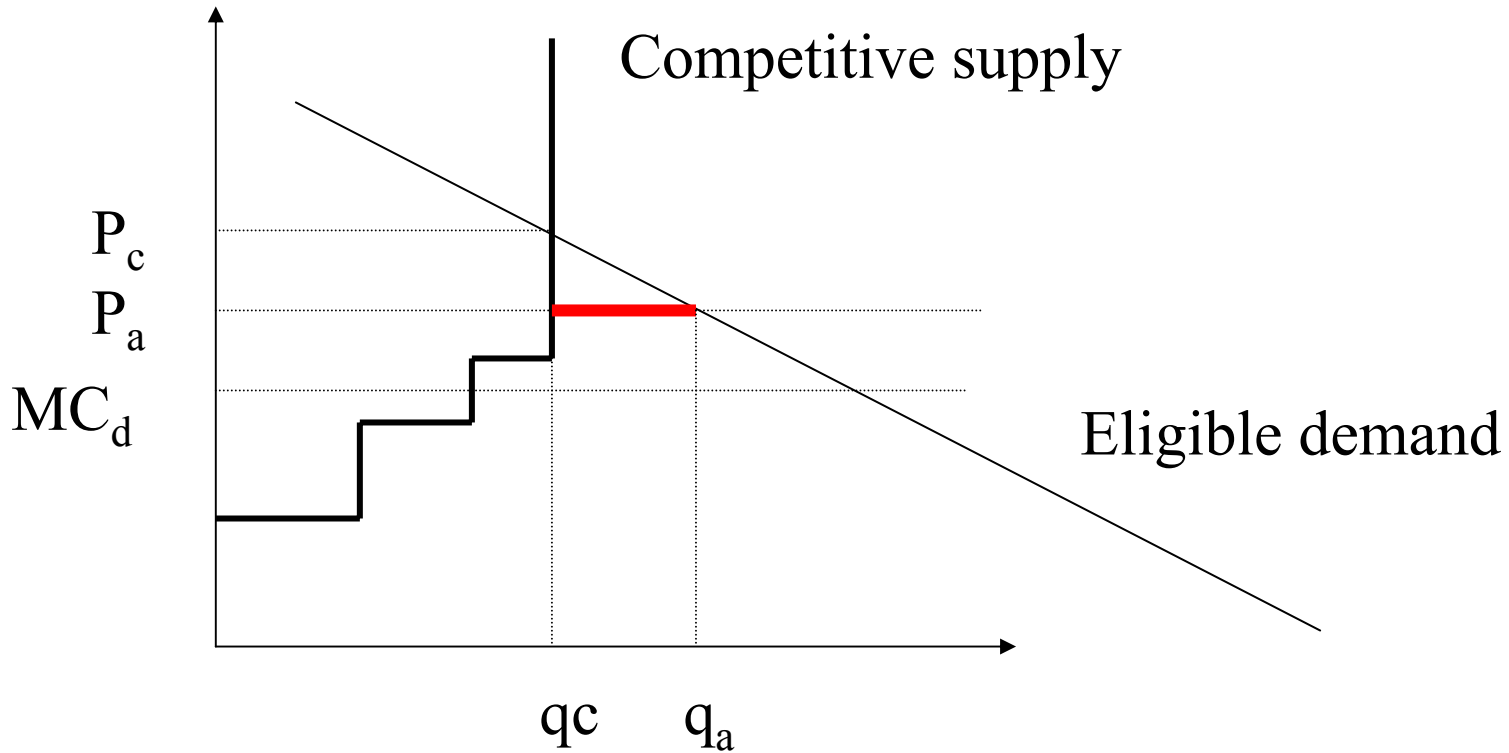
MARKET STRUCTURE



COMPETITION FOR ELIGIBLE/TARIFF CONSUMERS

- Eligible consumers have a low cost choice to purchase electricity at an administratively set (P_a) or at a competitive (P_c) price
- Consequences
 - P_c converges to P_a , $P_c < P_a$
 - Captive price sets the market price
 - Short supply on the CM bring back consumers into the AM

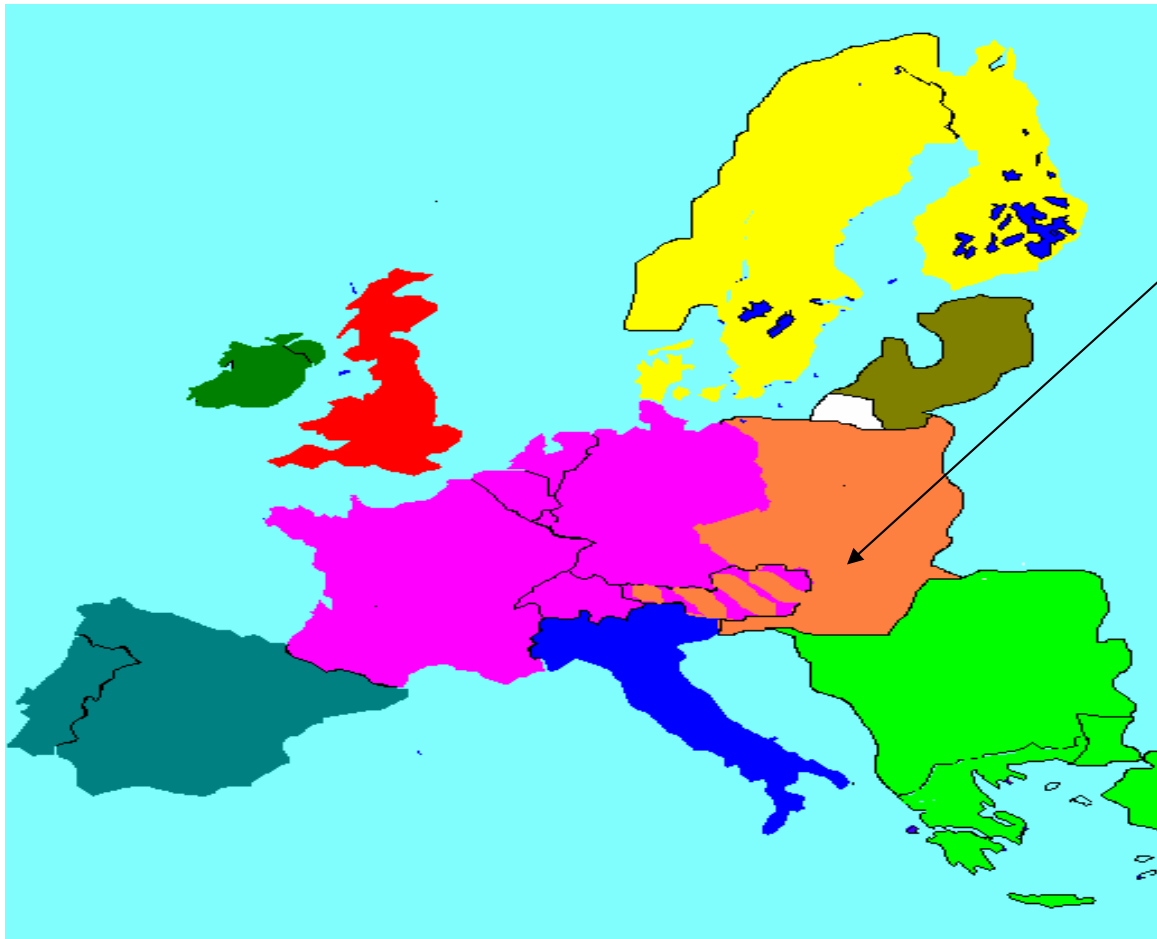
COMPETITION FOR ELIGIBLE/TARIFF CONSUMERS



- Neither market nor vertical integration
- Fight between (regional) private investors and state-owned „national champions”
- Short domestic supply and intense imports for the competitive market segment
- Consumer benefits on the CM from MC competition on this segment

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POTENTIAL REGIONAL MARKETS WITHIN THE EU

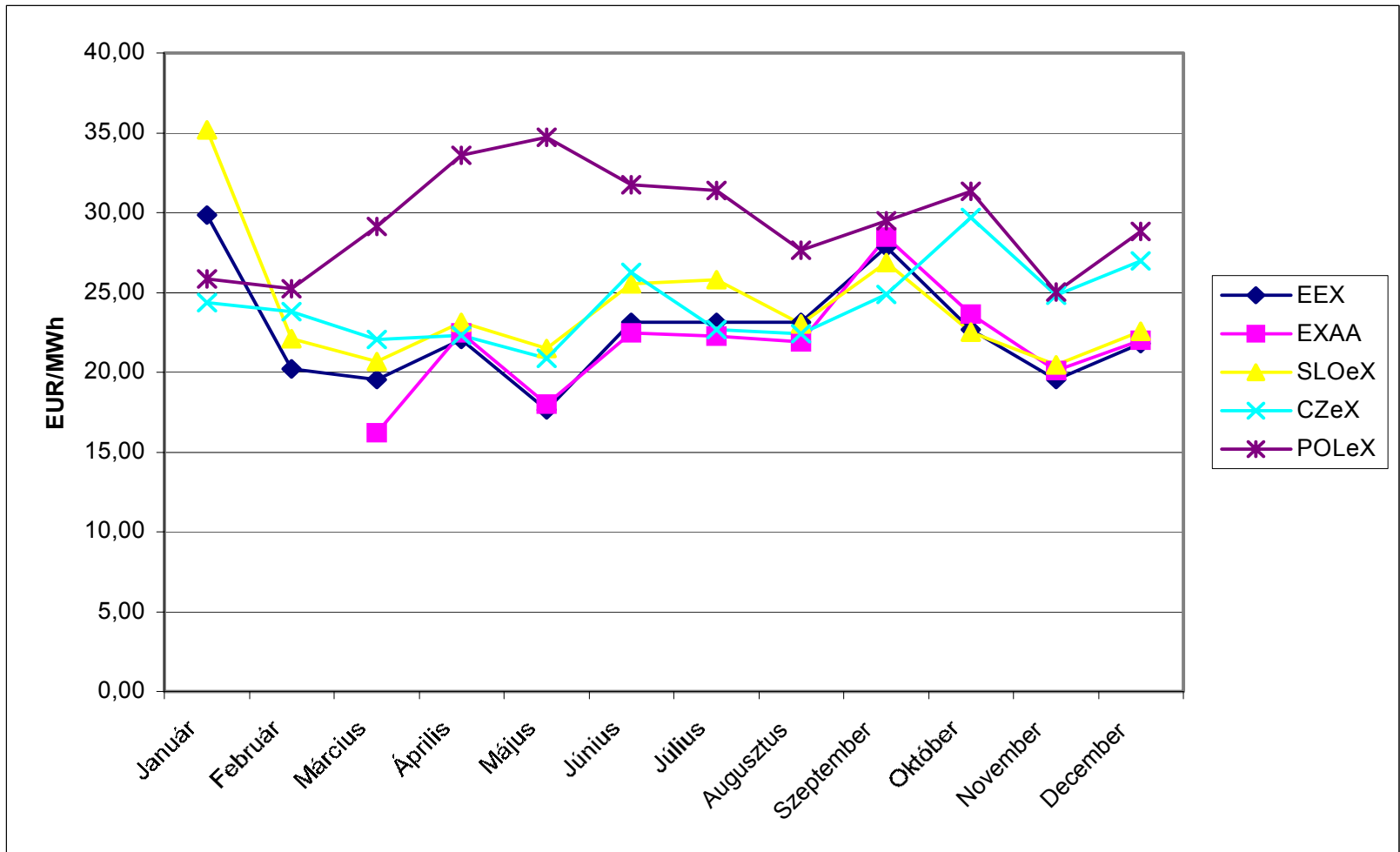


CEE Market by
2005-08?

(Czech R., Slovakia,
Hungary, Austria,
Slovenia, Poland)

- Basic precondition: strong interconnection
 - See price convergence of Austrian-German-Swiss markets
- Larger market means:
 - Potential for efficiency gains
 - Enhanced (private) investment opportunities in generation and network
 - Increased security of supply
 - Increased industrial competitiveness
- Others can join later

AVERAGE MONTHLY BASELOAD PRICES, 2002



BARRIERS TO REGIONAL INTEGRATION

- Long term CBT PPAs
- Non-EU dumping – a common tariff?
- Subsidisation of state-owned wholesalers
- Nuclear-captive link
- Access to retail customers and interconnections

- BUT...
 - ...locally dominant players might help in balancing the powers of the “seven brothers”

- CE electricity market is between vertical integration and competition
 - Promising start but...
 - Inconsistencies, inefficiencies
 - Endangers private investment and security of supply
- Potential for future: regional market development
- Regional mini-Fora set up by Brussels
- But: Brussels will not do it instead of us!

THANK YOU FOR YOUR ATTENTION!

REKK, the Regional Centre for Energy Policy Research was established by former regulators and researchers at the Corvinus University of Budapest. The mission of the Centre is to contribute to the creation of working energy markets and the establishment of efficient regulation by carrying out applied research, training and quality consultancy for all those interested persons and organizations that are active in the field.

The Centre intends to put a special emphasis on the research and dissemination of the experience Hungary and some other Central and Eastern European countries have gained through the restructuring and re-regulation of their energy markets. REKK also intends to become a regional research and training centre in this spirit.

REKK is already active in assisting the Hungarian Government in the application of the new European greenhouse gas emissions trading scheme. In cooperation with the Energy Regulators Regional Association (ERRA), the Centre is conducting training for regulatory staff from the region.

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