



25th Annual North American Conference of the USAEE/IAEE

Fueling the Future:

Prices, Productivity, Policies, and Prophecies

Energy Efficiency and Renewable Energy Problems in the New EU Countries

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EUROPE



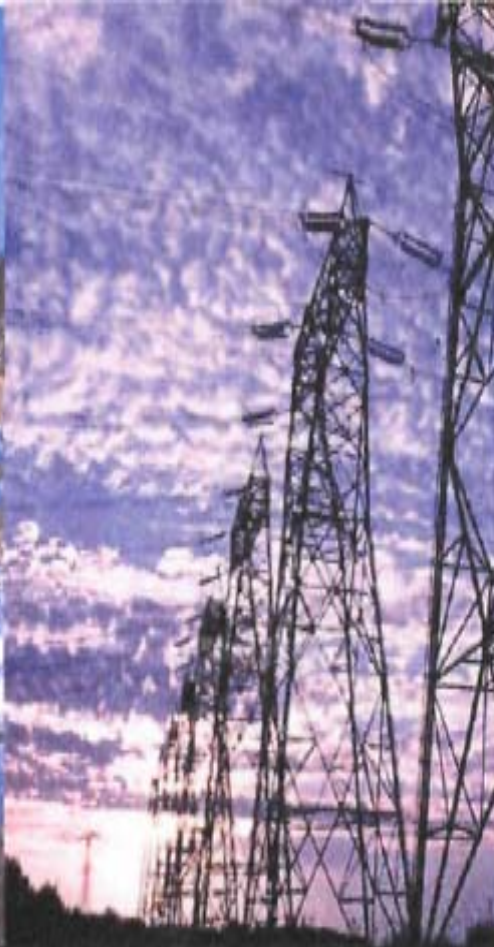
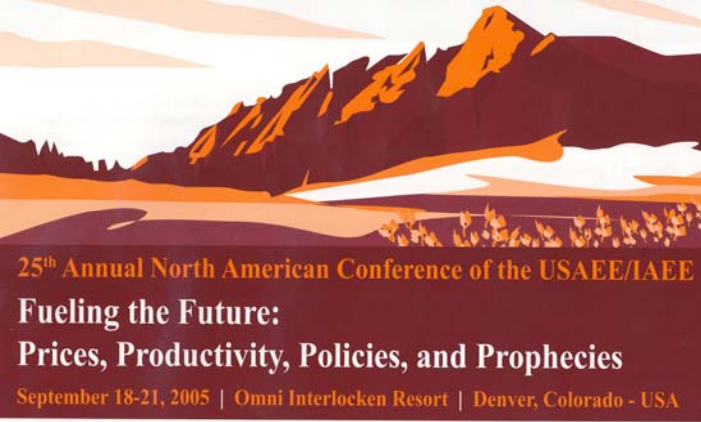


GENERAL DATA -LATVIA

General Energy Data	1990	2000	2010	2020	2030
Population [in million]	2.66	2.37	2.36	2.38	2.45
GDP 2000=100%		100	163	265	432
TPES Mtoe]	8.65	3.74	4.38	5.02	5.35
TPES/c [toe]	3.25	1.58	1.86	2.11	2.18
Electricity Supply [TWh]*	9.04	4.93	6.05	7.39	8.99
Electricity/c [MWh]	3.39	2.08	2.56	3.11	3.67

* end-use (netto)

European Energy Priorities



An outline of the European Commission's plans for 2005



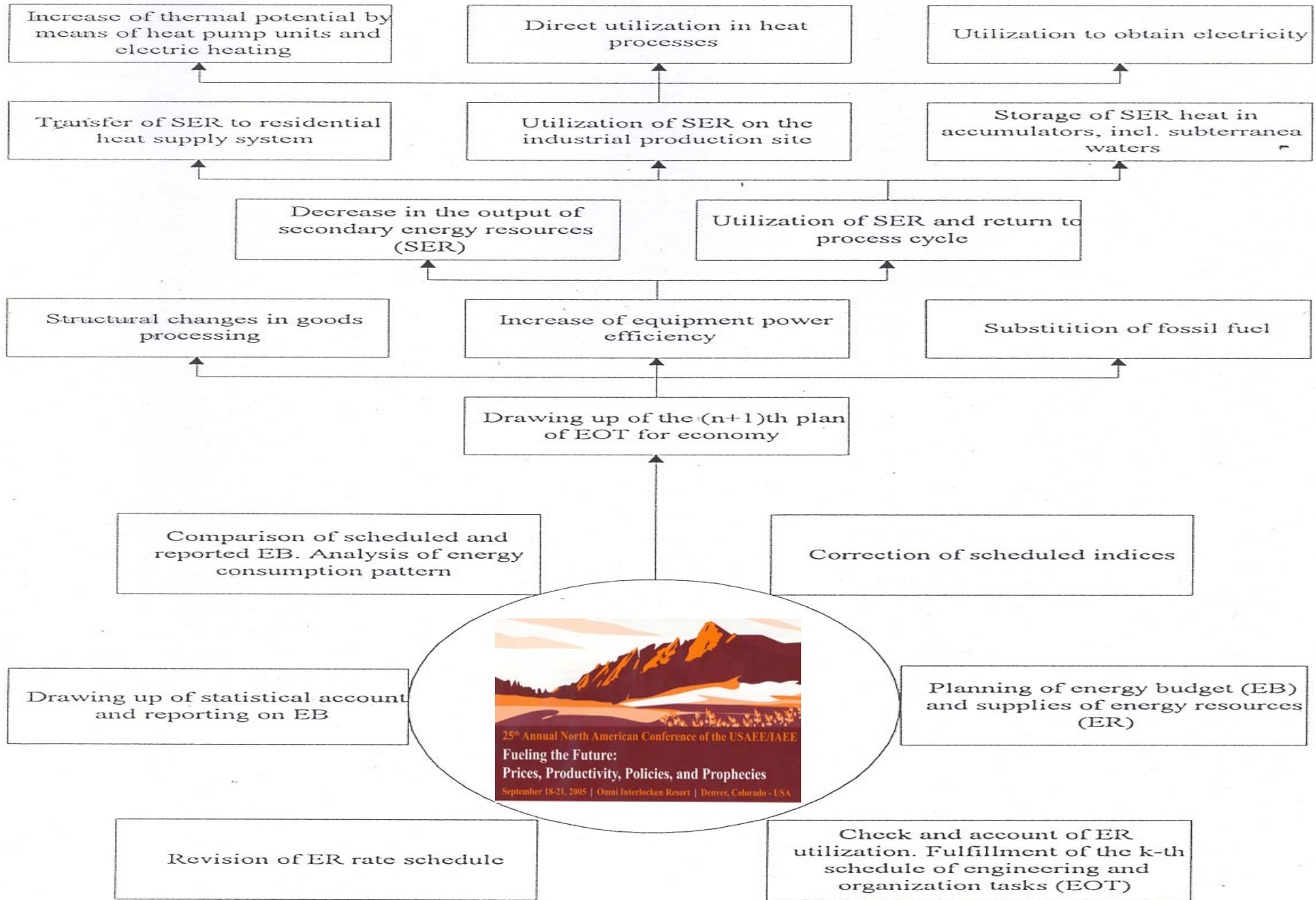
The ten-year strategy for economic, social and environmental renewal, known as the **Lisbon Strategy, is the priority of the new European Commission's mandate.**

The contribution that an effective energy policy can make to Europe's overall welfare cannot be underestimated.

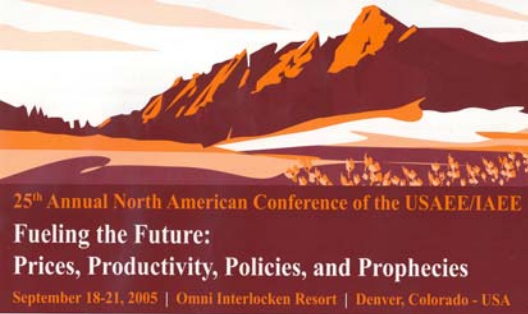


In order to address these changes, *Commissioner Piebalgs* has identified six key priorities on which the EU Commission's policy on energy will be focussed during the next five years and notably:

- 1. Increasing energy efficiency**
- 2. Achieving a properly functioning internal market for gas and electricity for the benefit of all our citizens**
- 3. Promoting renewable energy**
- 4. Strengthening nuclear safety and security**
- 5. Security of Europe's energy supplies and further developing external energy policy relations**
- 6. Improving the links between energy policies and environmental and research policies**



Model of the managing implementation process of the energy efficiency and renewable energy



Measures

Importance

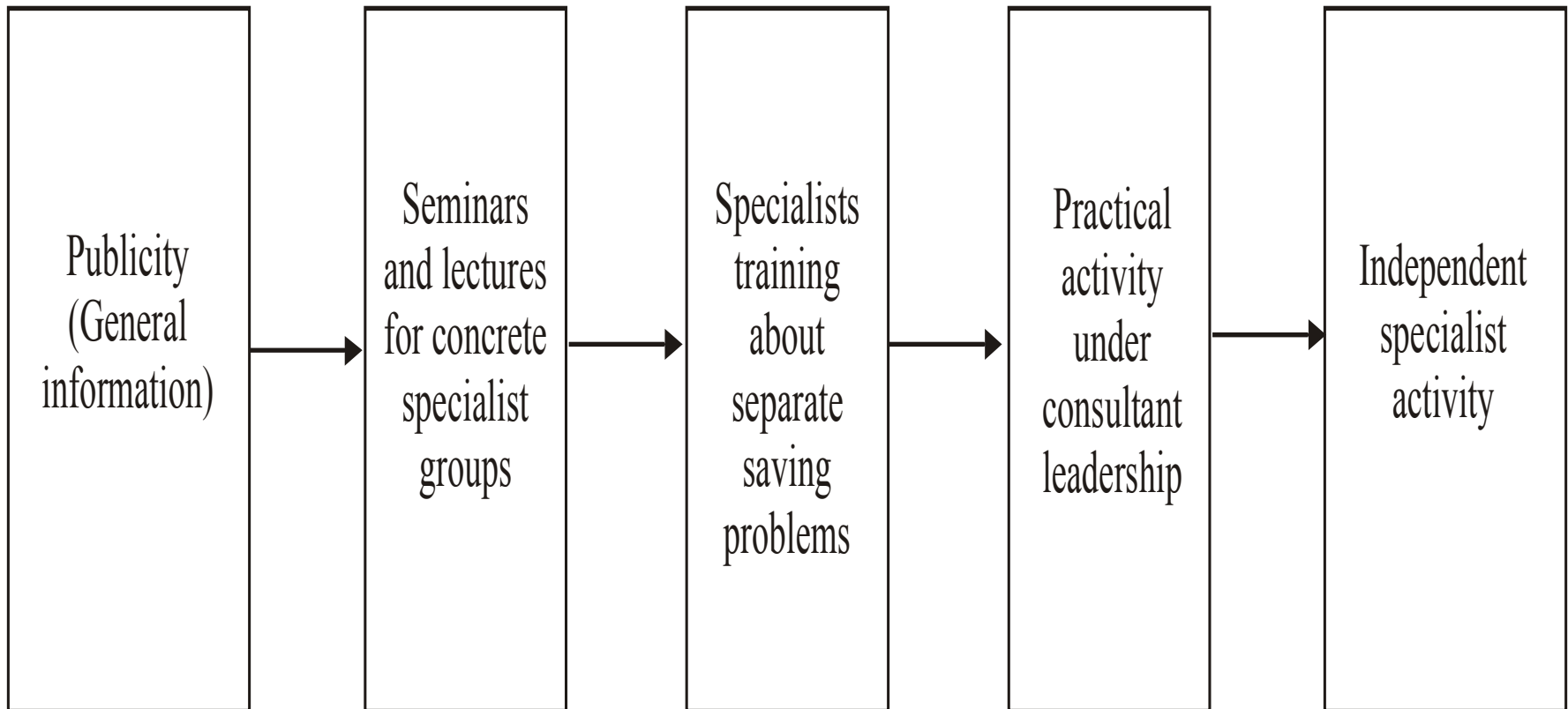
1	Education (general and professional)	XXX
2	Practice programmes help to get success in energy efficiency	XX
3	Comparative inform programmes develop of exchange of experiences	XX
4	Consumption reporting allow evidence of improvement of energy efficiency	X

XXX - highest priority

Priorities of some information – oriented measures



Developing of professional education of energy saving





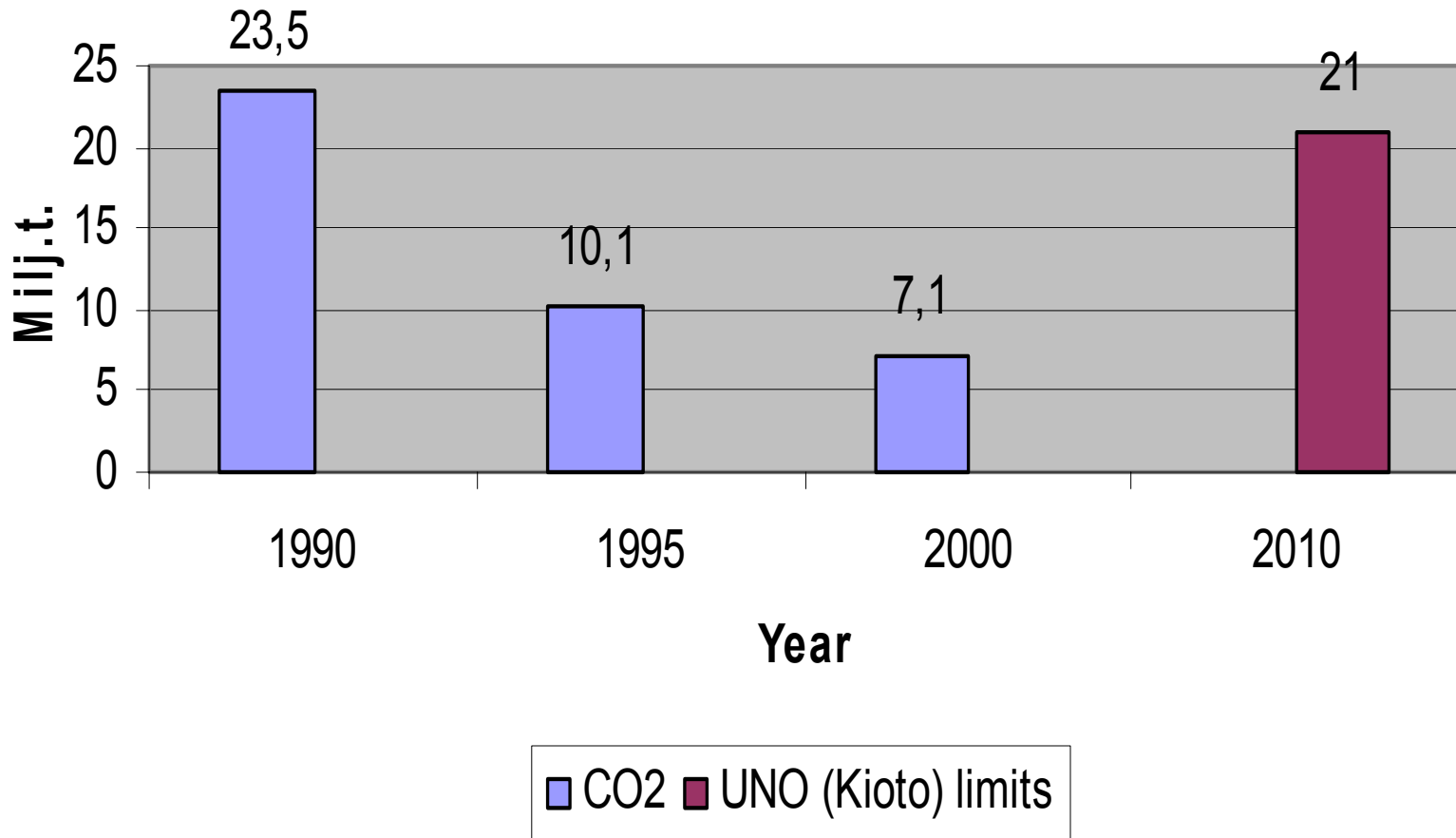
Emissions dynamics in the energetics sector

Emission	Unit	1990	1995	2000
CO₂	Milj. t	22.9	10.0	6.9
CH₄	Th.t	63.7	29.1	25.1
N₂O	Th.t	1.1	0.3	0.3
SO₂	Th.t	118	59	18
NO_x	Th.t	102	42	37
CO	Th.t	499	436	251



CO₂ emission dynamics

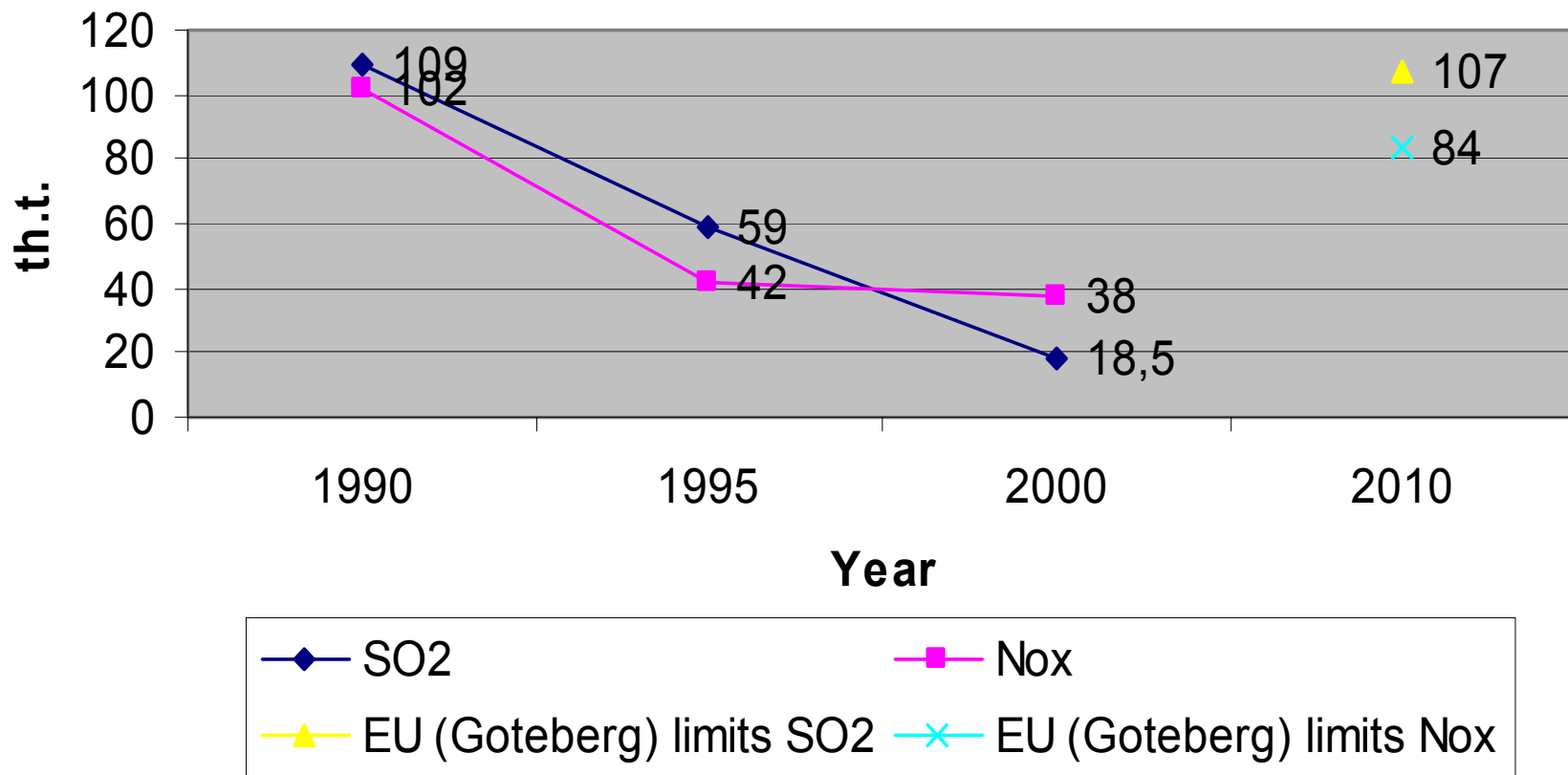
CO₂ Emissions Dynamics

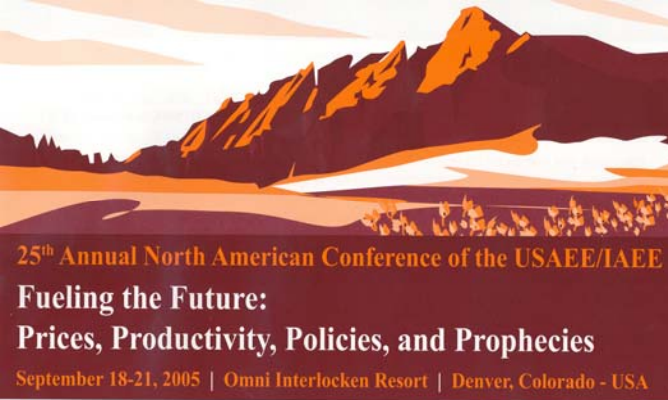




Emission dynamic prognostic

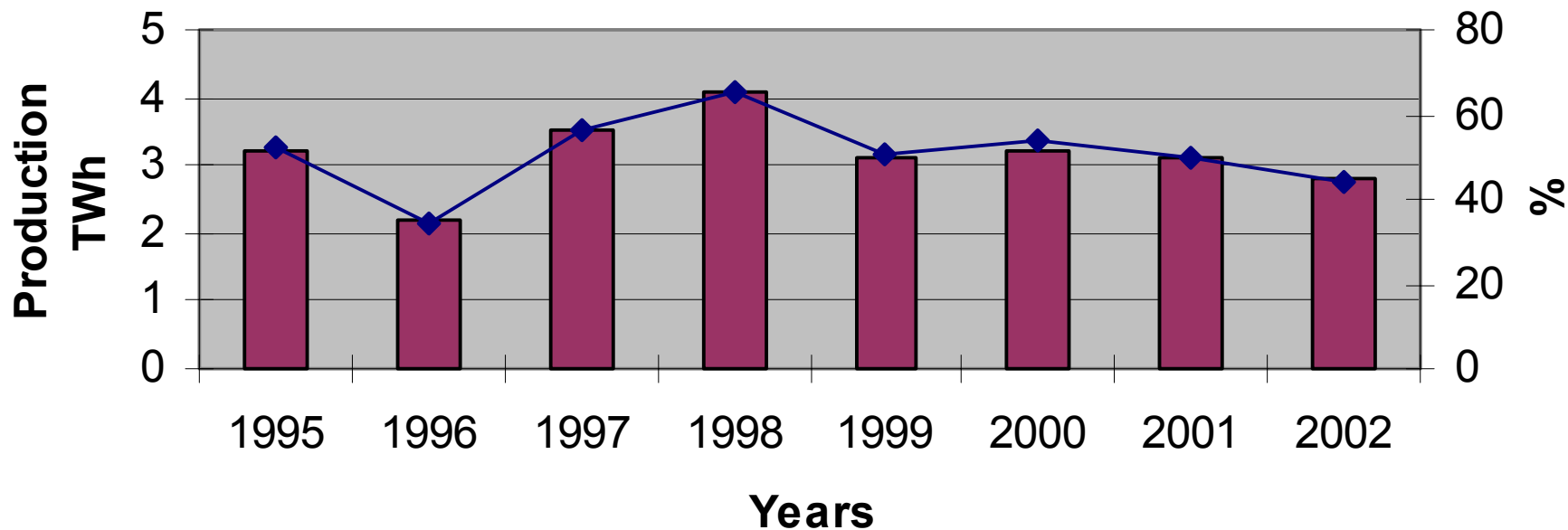
Emissions Dynamics





Fluctuation of the electricity production by the Latvian HPP

The Electric energy produced by the Latvian HPP



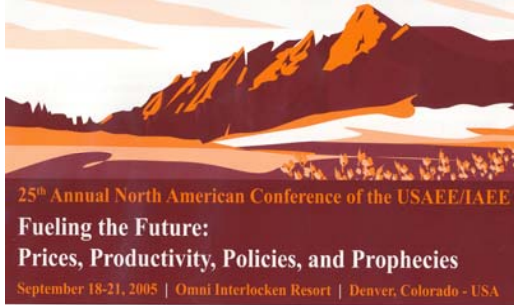
Production TWh —◆— %



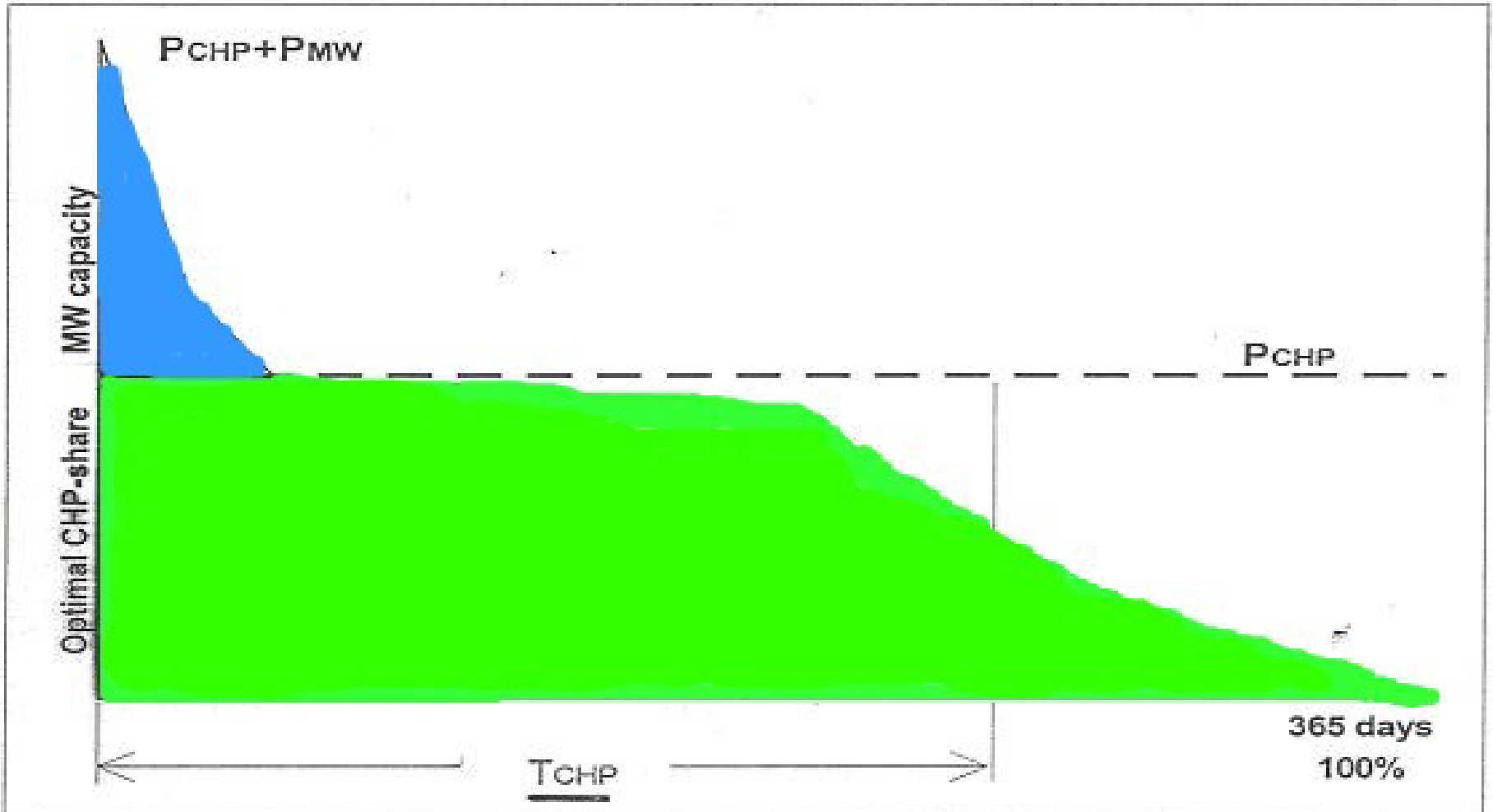
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The natural gas network of Baltic States and the Latvian underground gas storage potential



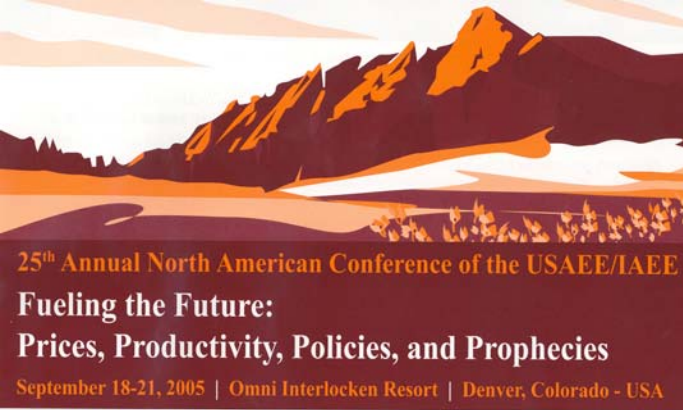


Heat demand duration curve

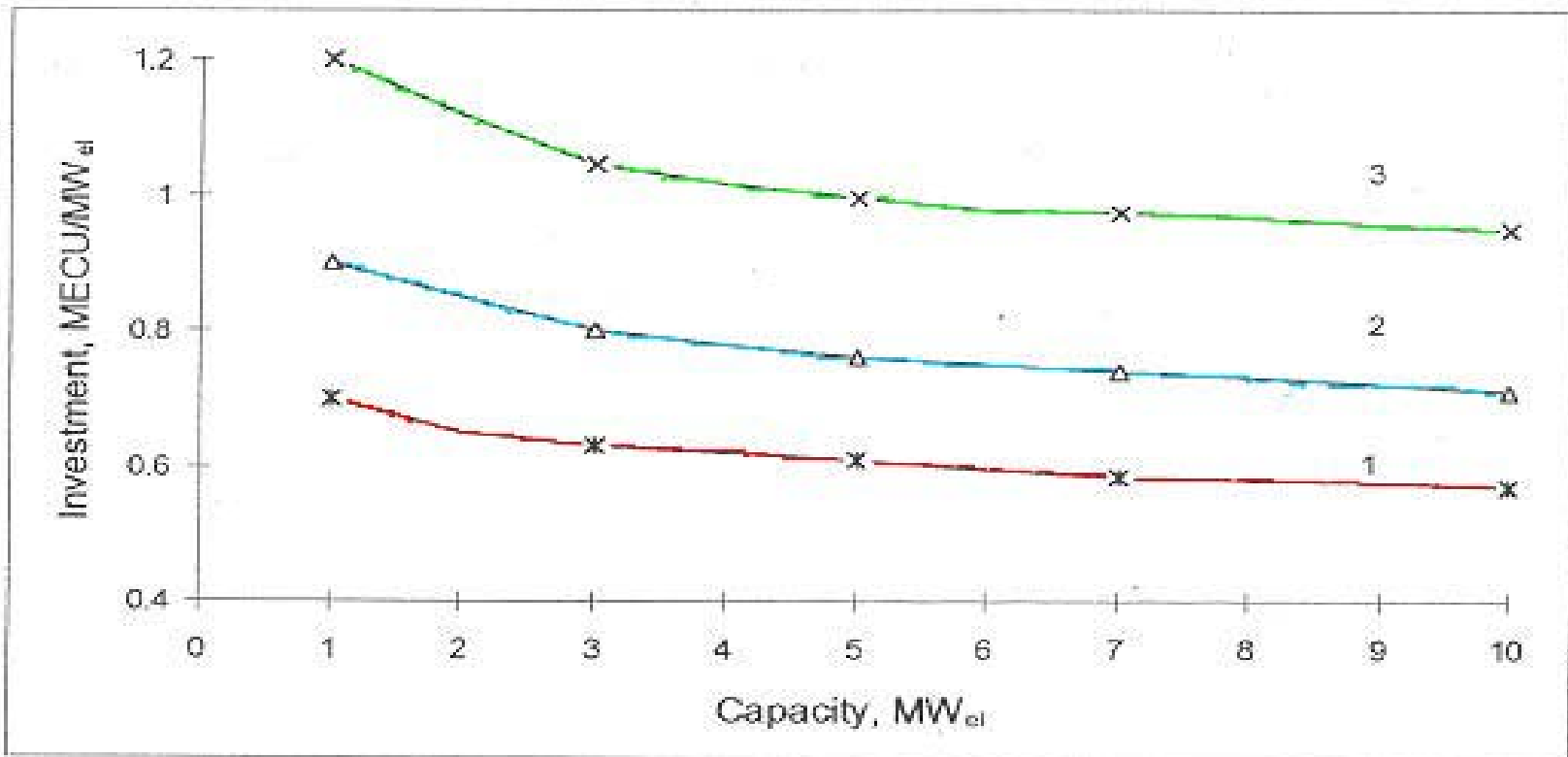


T_{CHP} – CHP maximal capacity utilization factor

$$\mathbf{T_{CHP} = W_{CHP} / P_{CHP}, \%}$$



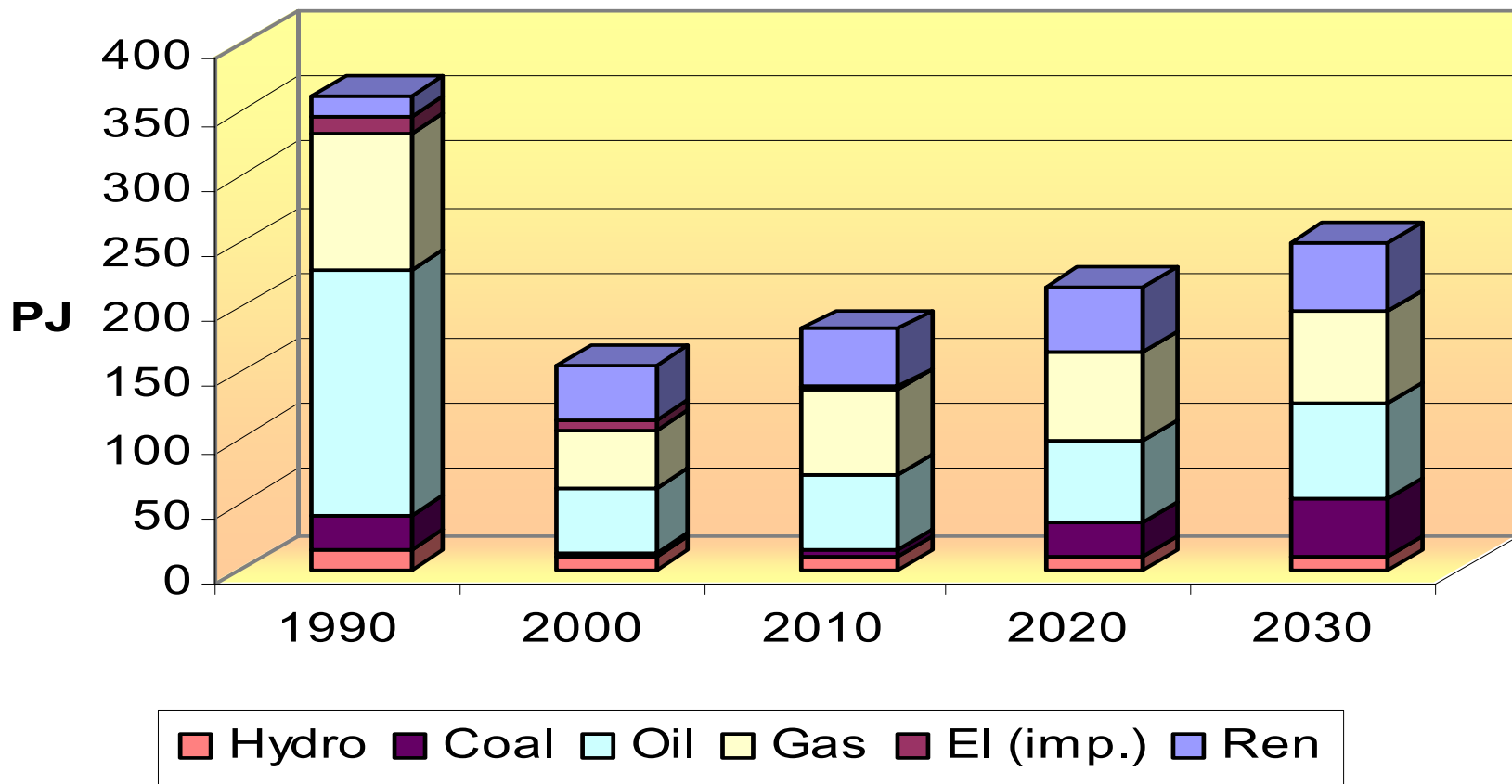
Investment in small capacity CHP for different cease



- 1 - Rebuilding DH plant to CHP, only technology;
- 2 - Rebuilding DH plant to CHP technology and partly building;
- 3 - New CHP.

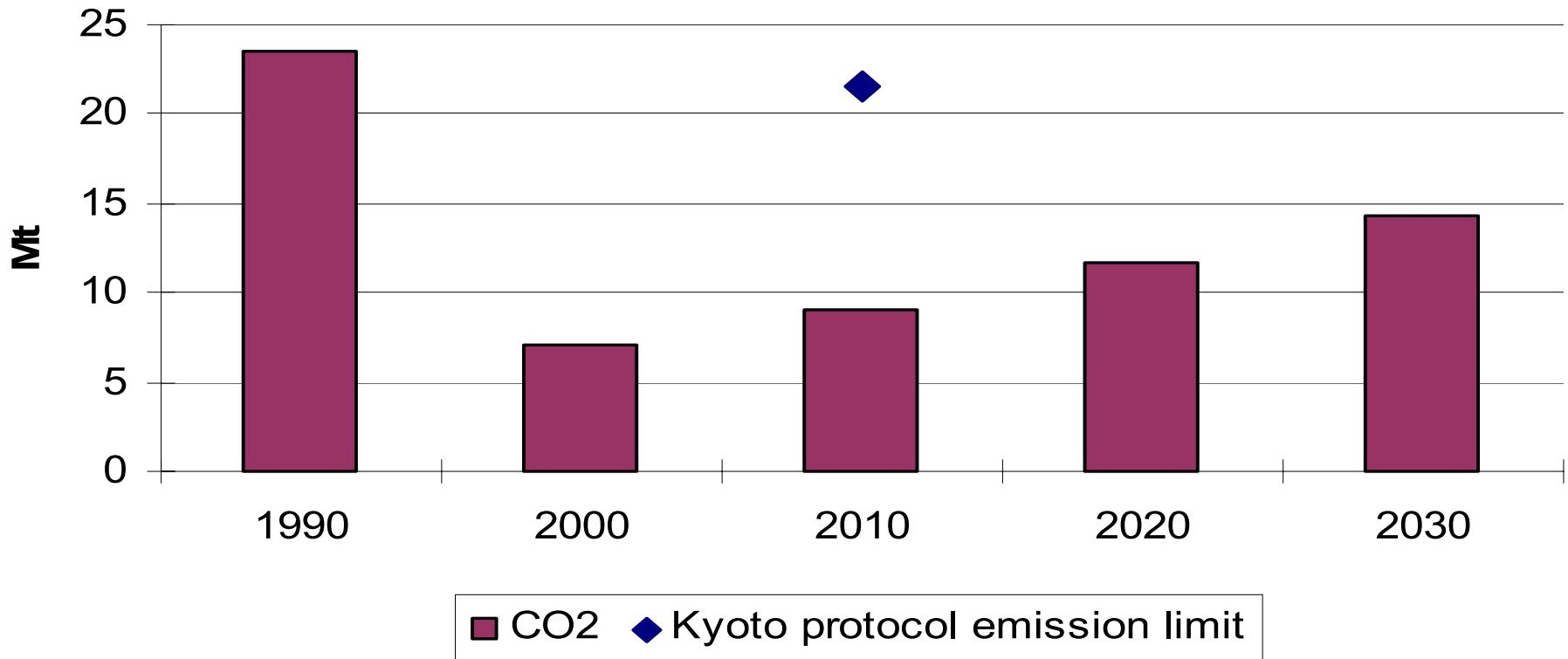


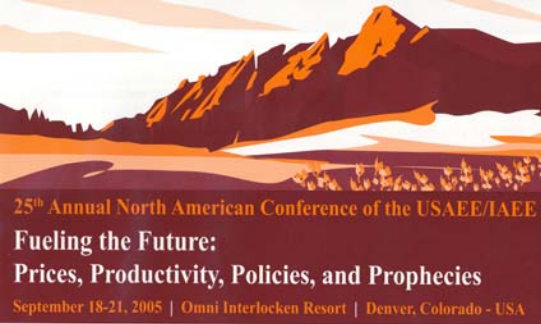
Trend of developing of Latvian primary energy balance and its structure



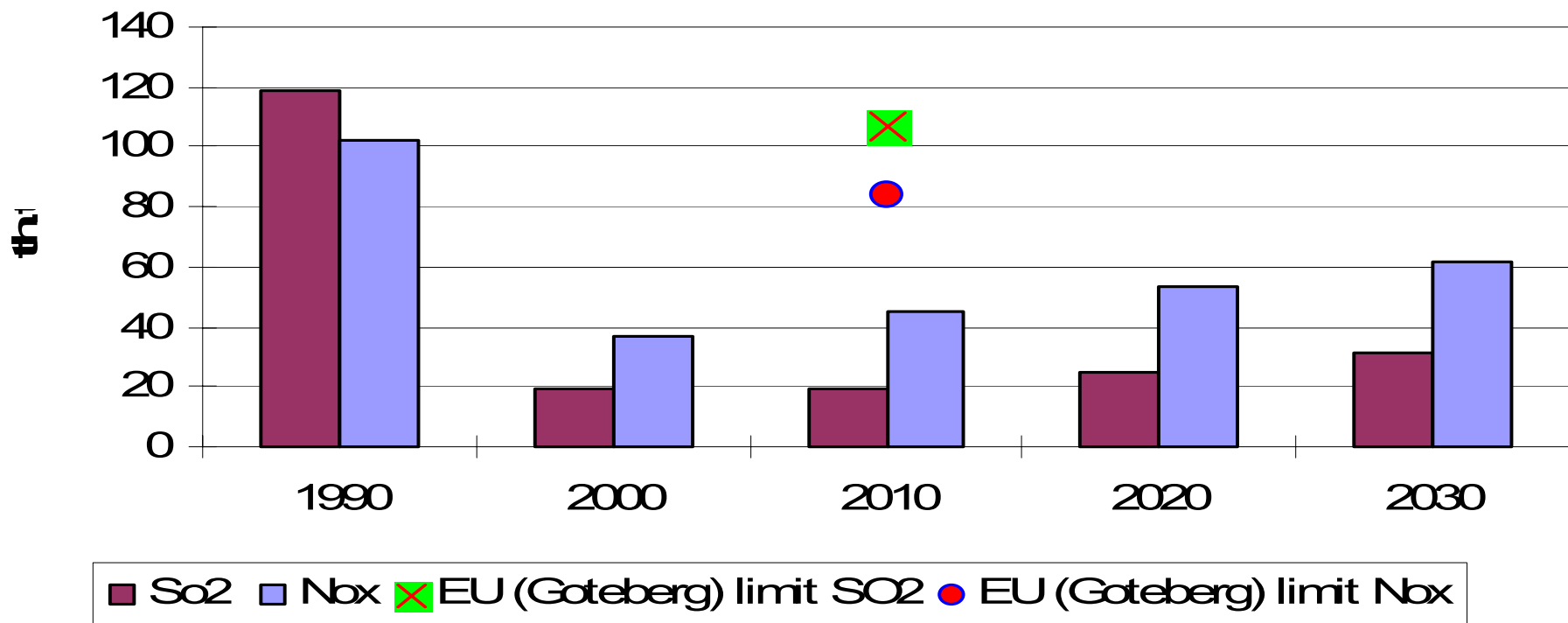


CO₂ emission from energy consumption in Latvia





SO₂ and NO_x emission from energy consumption in Latvia



**Thank you
for
attention!!!**

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