

The Future of GHG Emission Trading
Slovenski Energy Forum, Ljubljana, March 20-21, 2008

EU Target Sharing 2020 based on contraction and convergence criteria

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EU Target Sharing 2020

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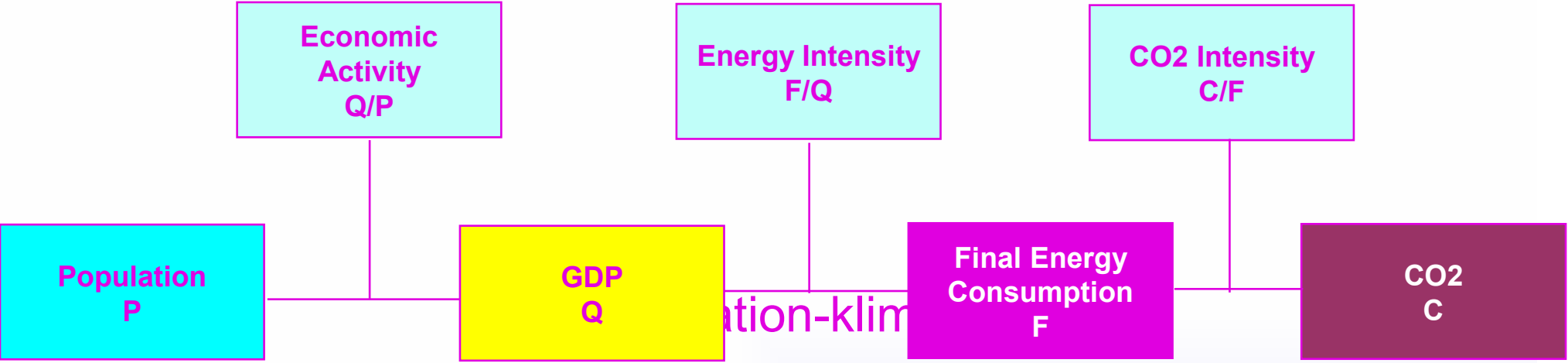
The ambitious 2020 energy and climate targets

- **The Community target**
 - -20 % CO₂ over 2005
 - 20 % share of renewables
- **The open issues**
 - The effort or sharing among Member States
 - The embedding of the ETS www.innovation-klima.at
- **The Commission documents of 23 January 2008**
 - A first evaluation of the proposed targets for the Member States
 - A framework for discussions about potential modifications

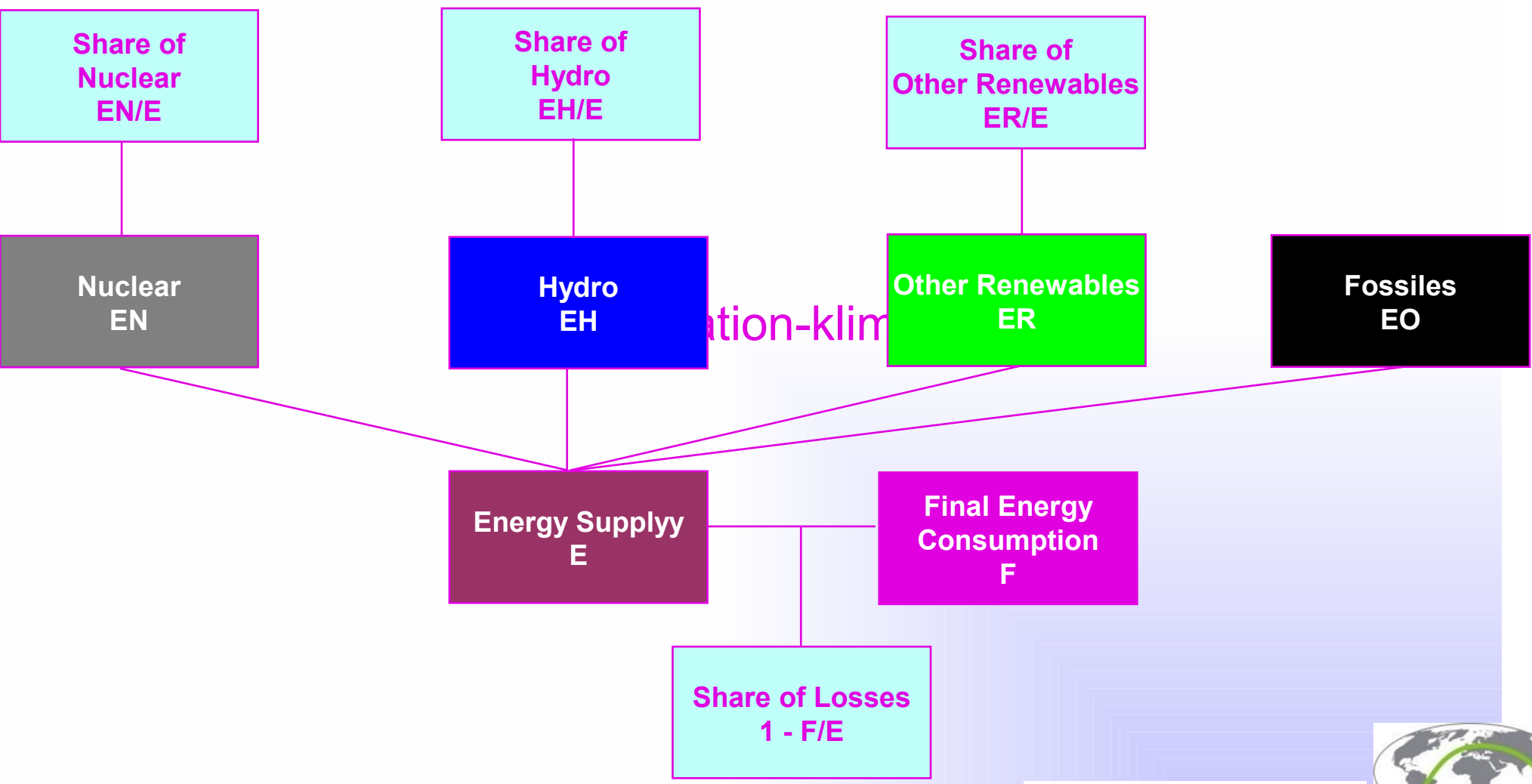
Model based structural indicators

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Demand side



Supply side



Simulation of Target Sharing Agreements

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Simulation of Target Sharing Agreements

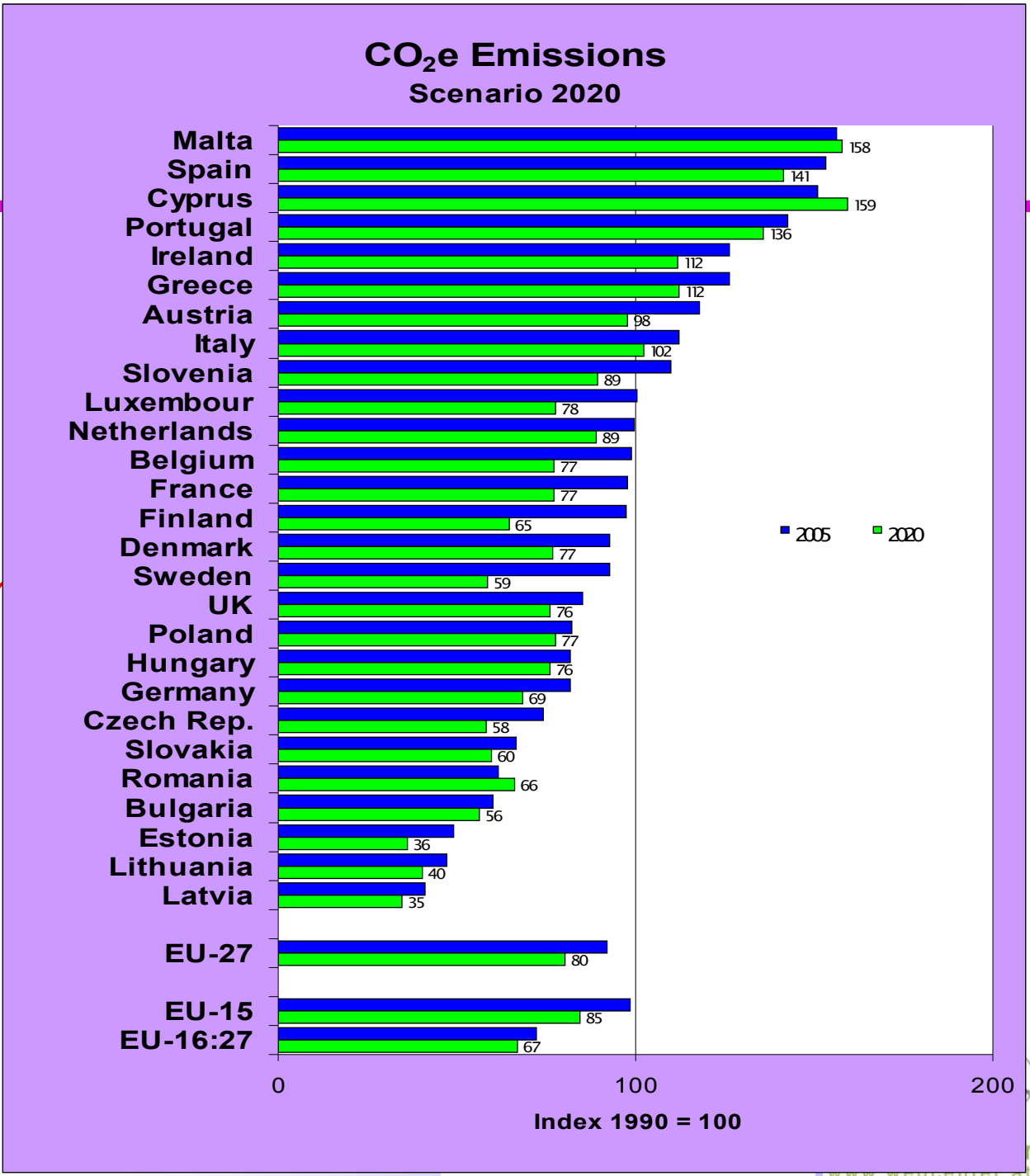
- **Step 1:**
Determine Community targets
e.g. 20 percent increase of energy productivity
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- **Step 2:**
Determine convergence to these targets
e.g. 30 percent

CO₂e 2020

Scenario 2020
-20 % CO₂e over 1990

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Population

Scenario 2020

-20 % CO₂e over 1990

Target

+0,26 % p.a.EU-27

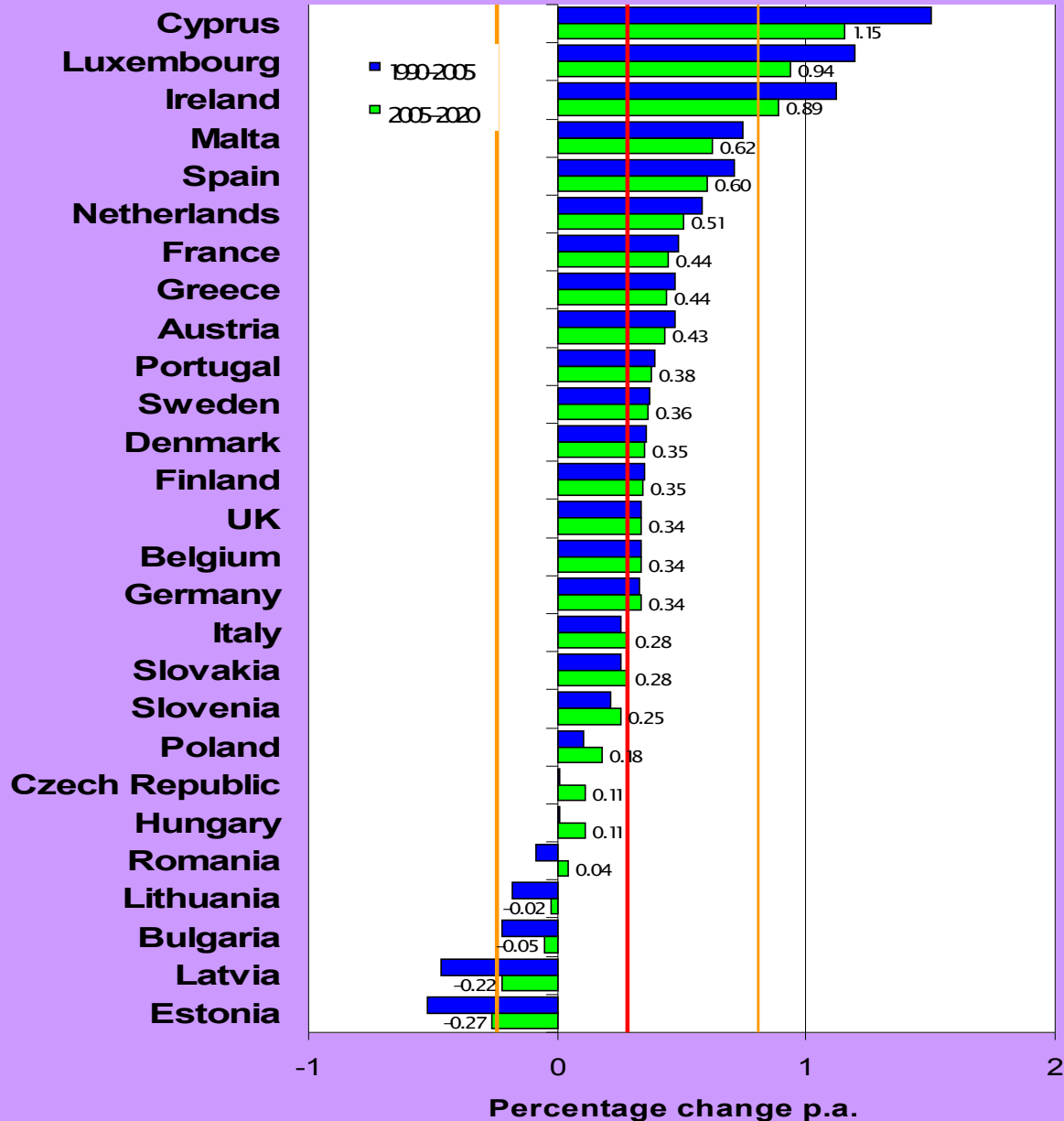
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Convergence

30 %

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Population Percentage Change p.a.



Economic Activity

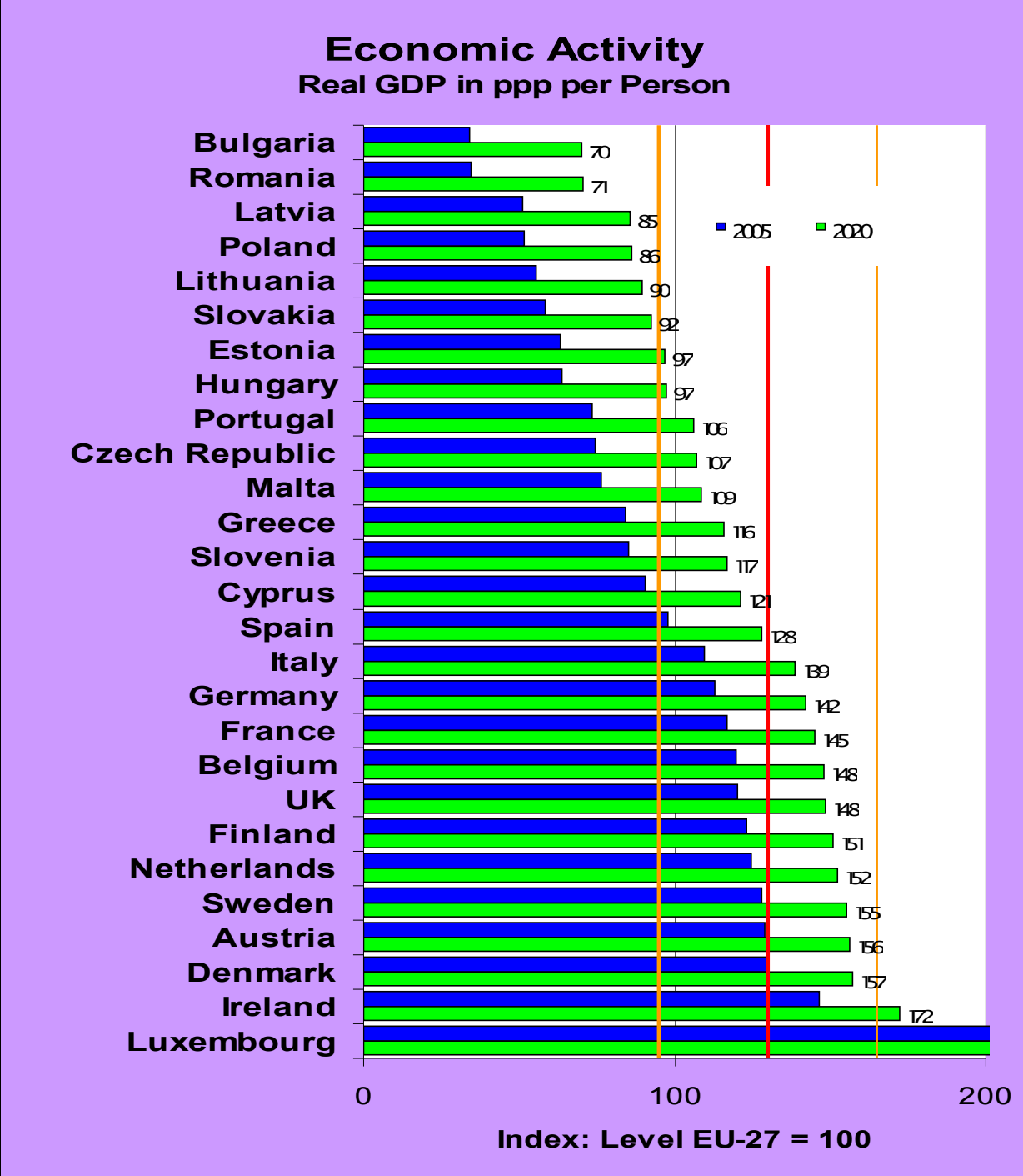
Scenario 2020
 -20 % CO2e over 1990

Target
 +30 % GDP real ppp
 per person

www.inra.fr

Convergence
 30 %

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Energy Intensity

Scenario 2020

-20 % CO₂e over 1990

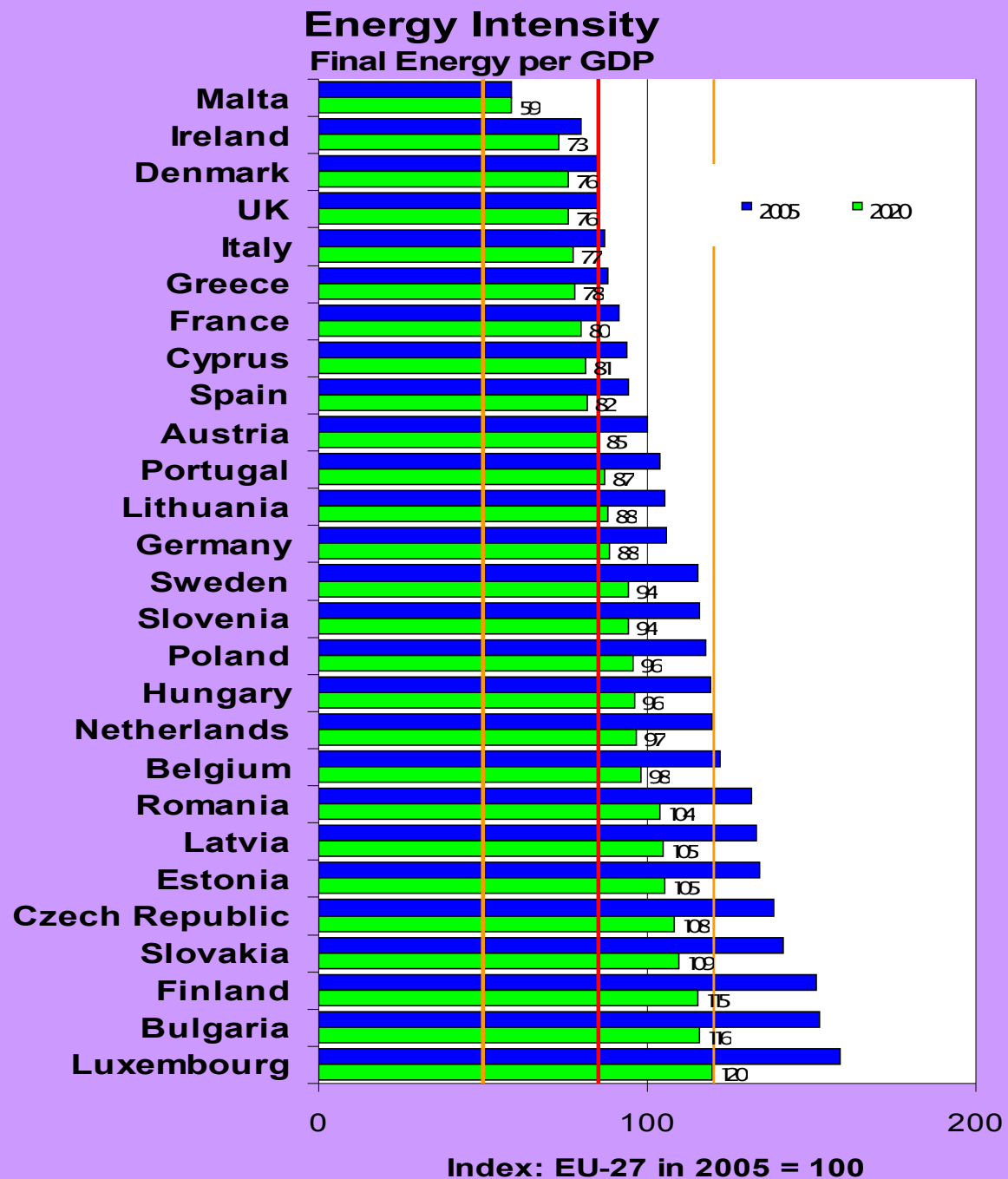
Target

-15 % final energy per real GDP www.inr

Convergence

30 %

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Share Losses

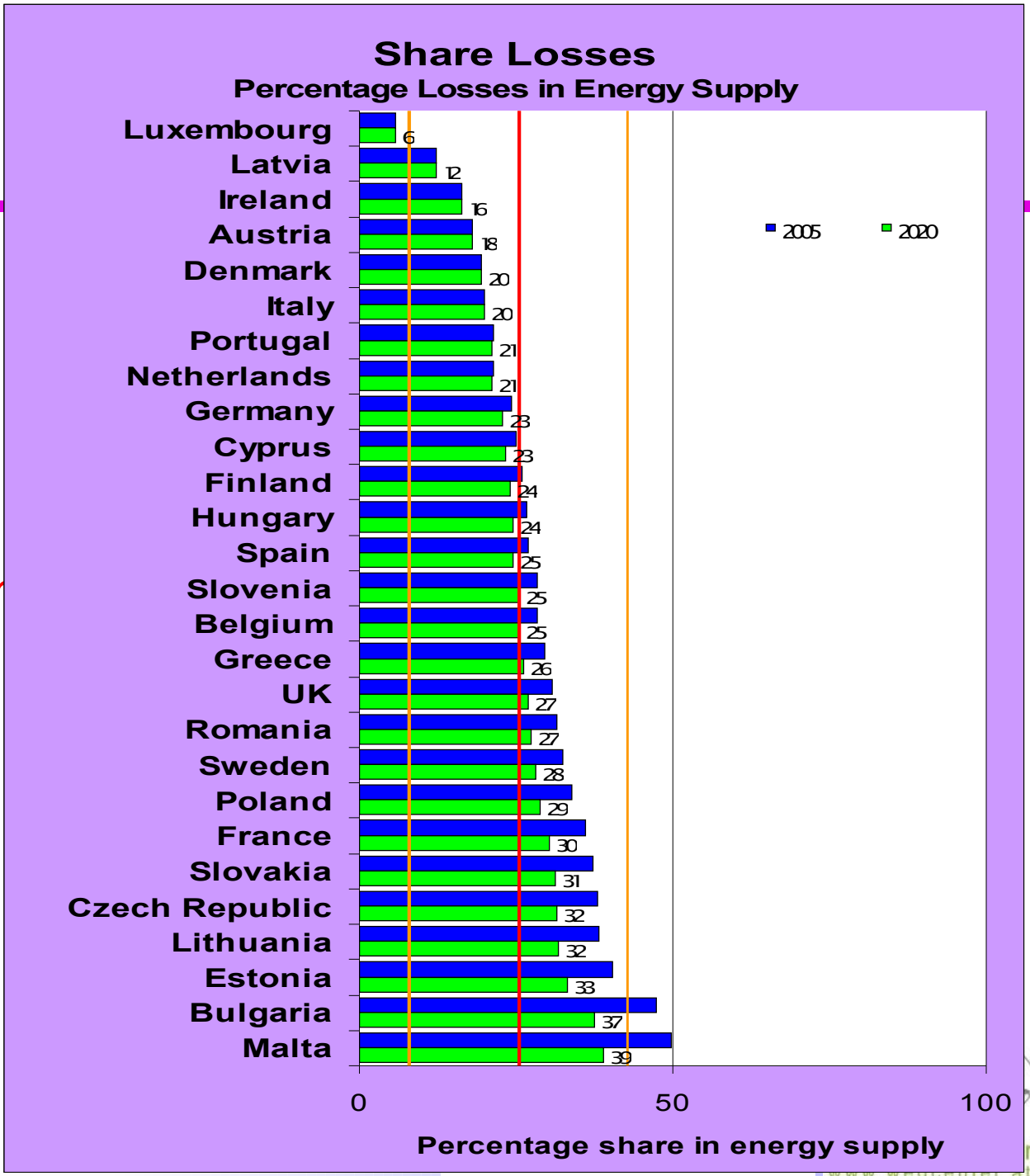
Scenario 2020
-20 % CO2e over 1990

Target
-10 % change

Convergence
30%

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Share Nuclear

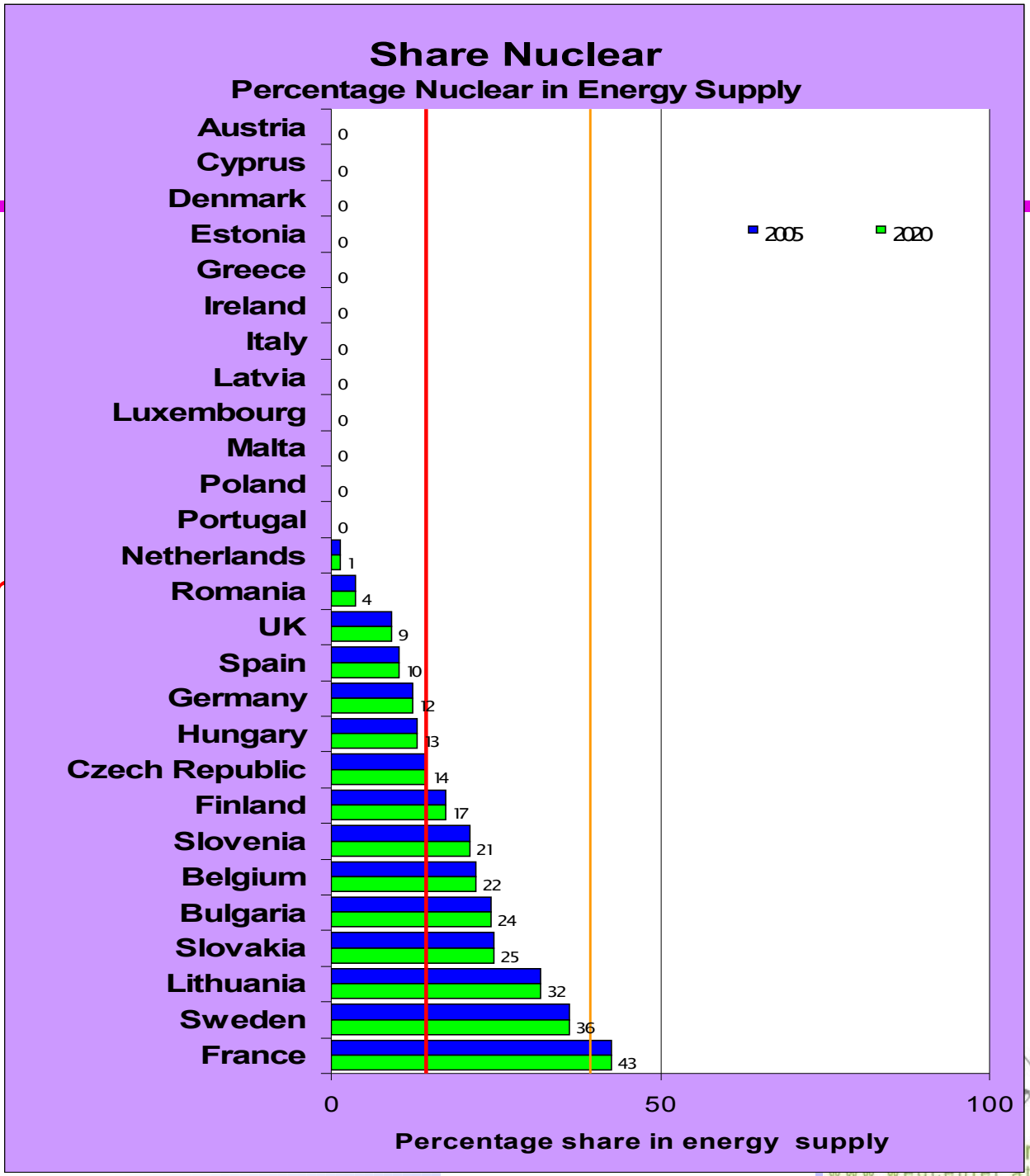
Scenario 2020
-20 % CO2e over 1990

Target
0 % change

Convergence
0%

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Share Hydro

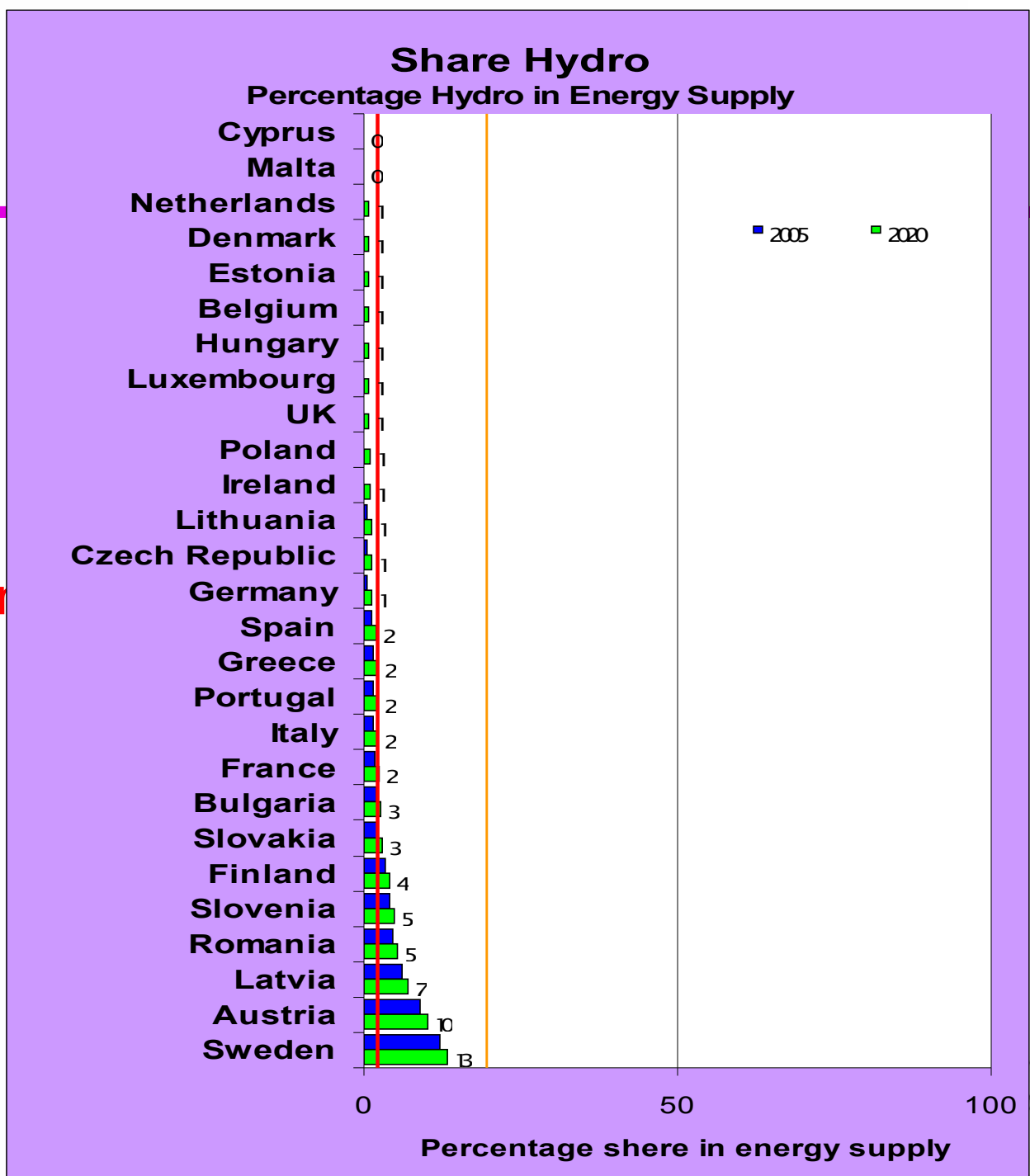
Scenario 2020
-20 % CO2e over 1990

Target
+50 % change

Convergence
30%

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Share Oth. Renew.

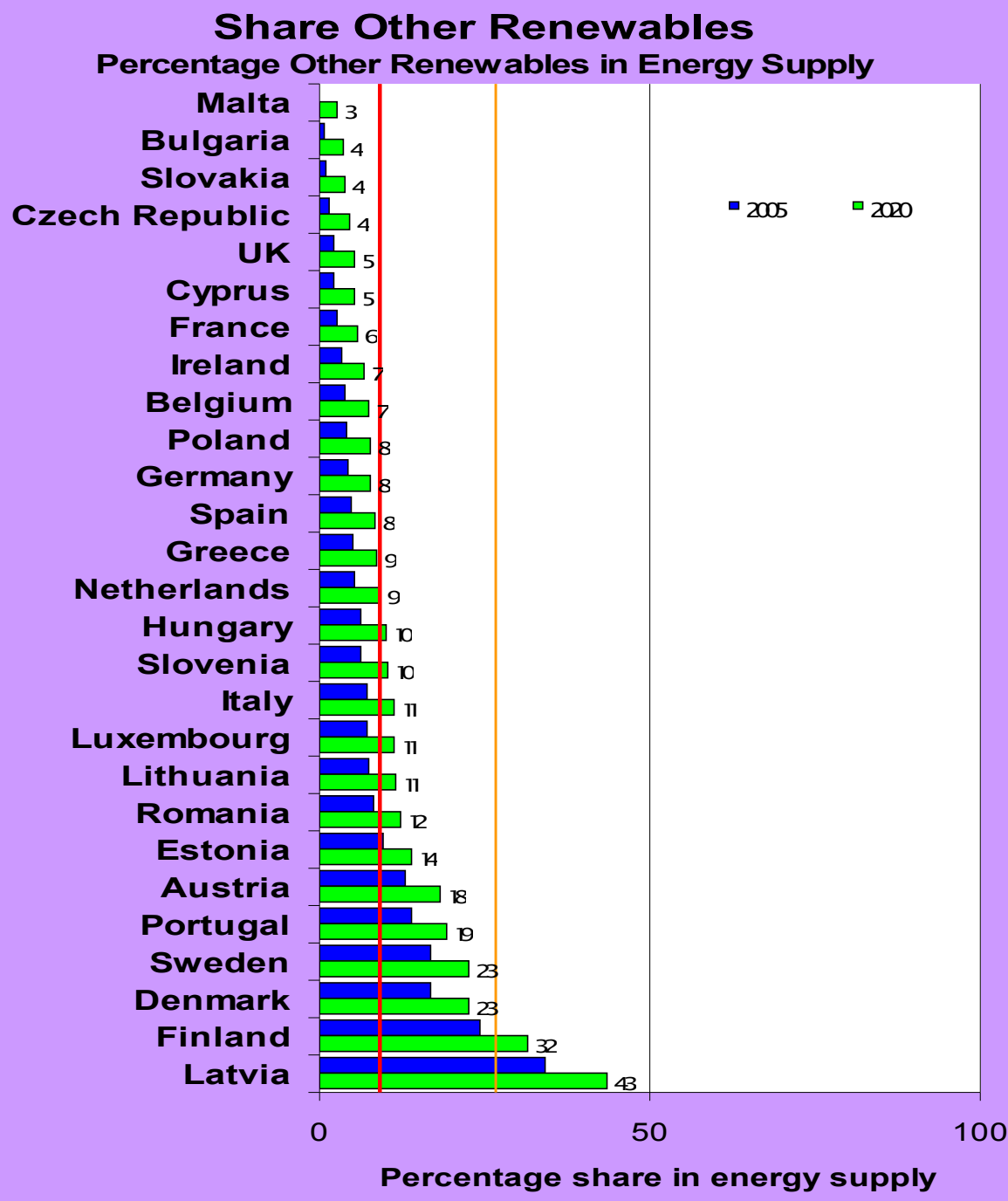
Scenario 2020
-20 % CO2e over 1990

Target
+70 % change

Convergence
30%

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CO₂ Intensity

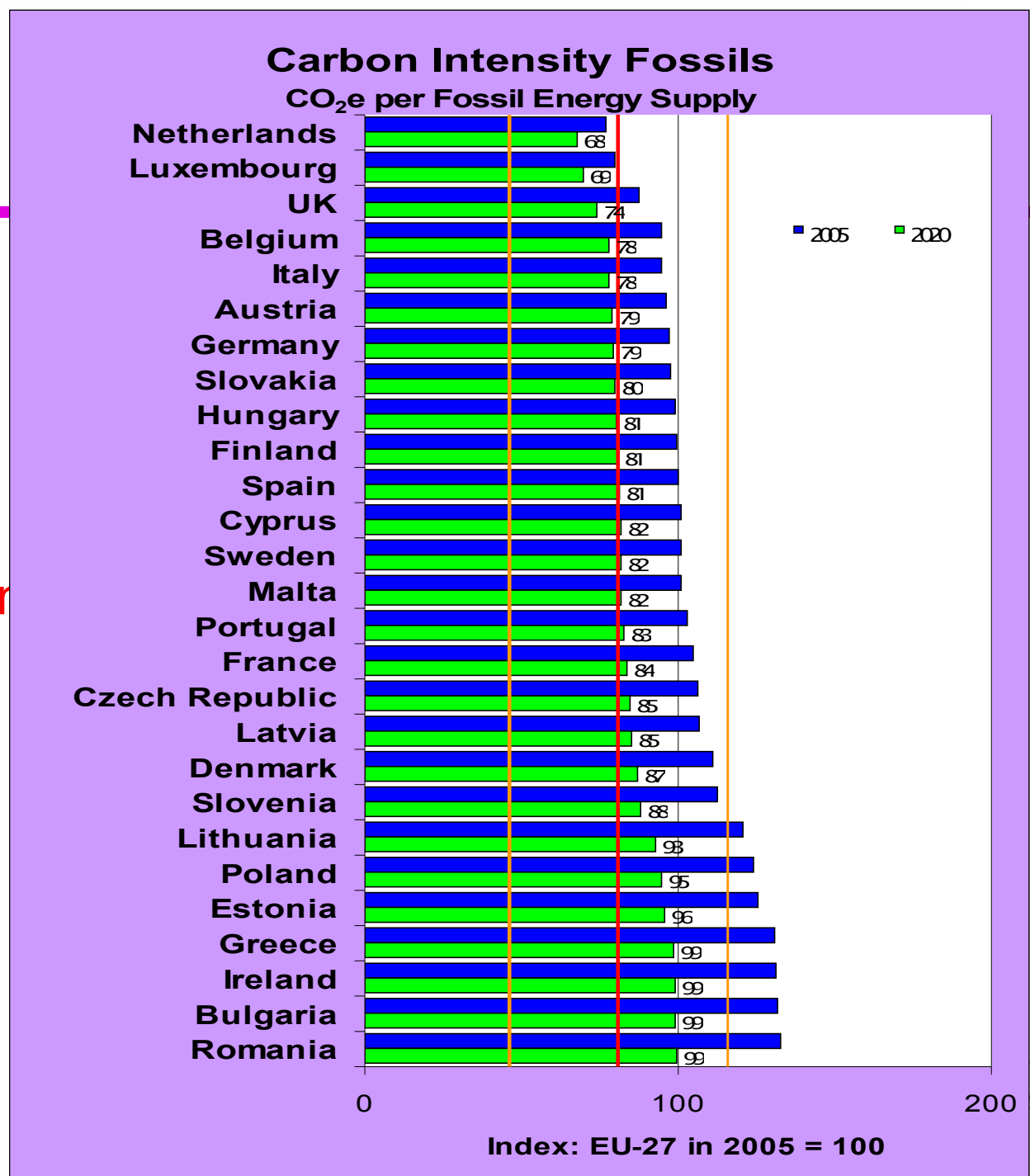
Scenario 2020
-20 % CO₂e over 1990

Target
-19 % CO₂e
per fossil energy

Convergence
30 %

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Some conclusions

- **Criteria for distribution are crucial**
 - **Convergence of economic activity and technologies**
 - **Ability to Pay of Member States**
- **We recommend contraction and convergence strategies**
 - **High potential for energy efficiency and carbon reduction in new MS**
 - **Relative higher economic activity in new MS**
- **Need to distinguish between relative and effective reduction targets**
 - **Relative reduction targets – with respect to other MS decided in Target Sharing**
 - **Effective reduction targets – with respect to Reference Scenario finally relevant for each Member State**

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Thank You.

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