

Global Benefits from Local Action

Advancing profitable solutions from district energy

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District Energy Summit - Copenhagen
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Overview

- Today's energy challenges
- The role of District Energy and CHP
- Local leadership a key to success

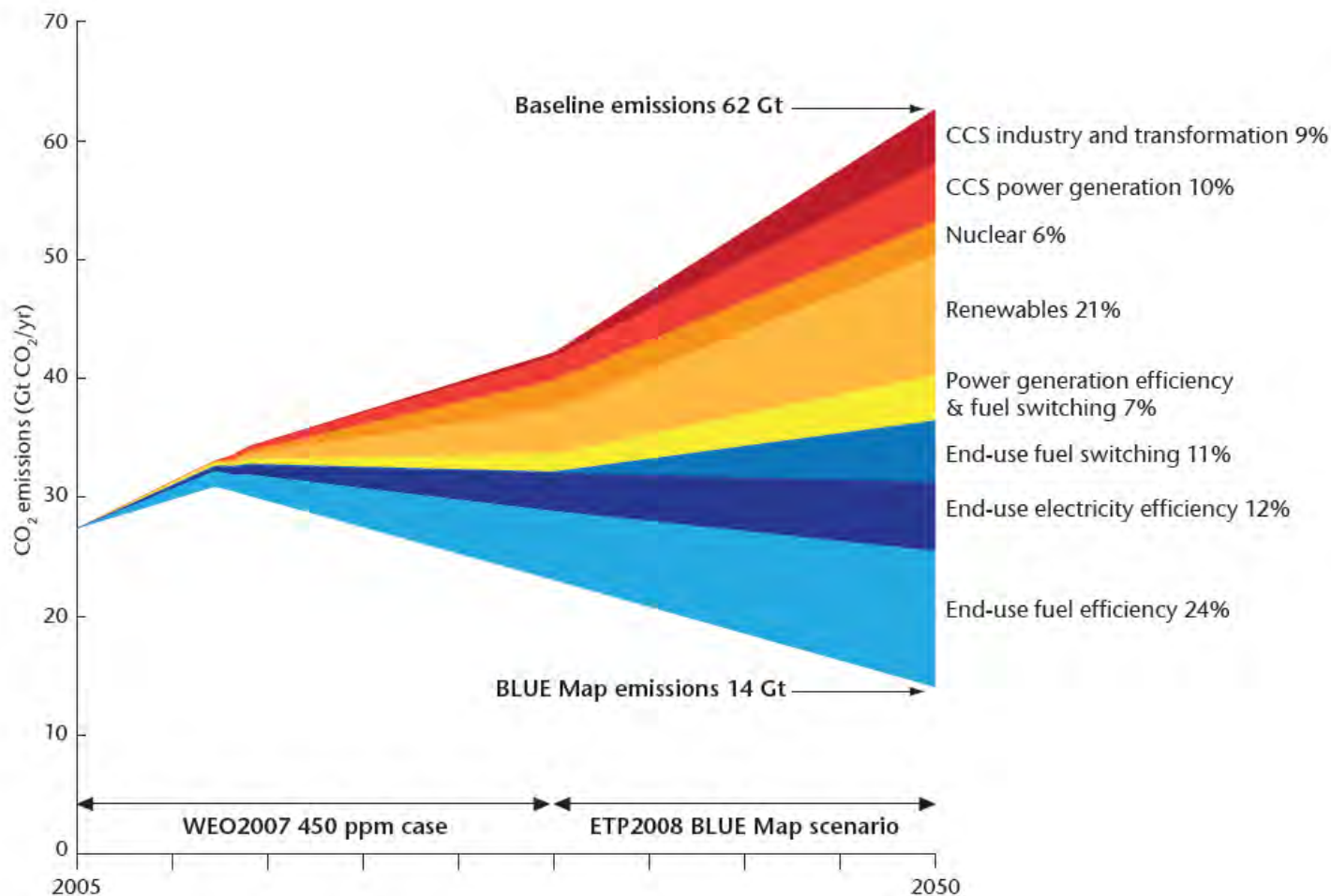


Cogeneration
and
District Energy
*Sustainable energy
technologies
for today
...and tomorrow*



An energy revolution is needed

Cutting Energy-Related CO₂ Emissions



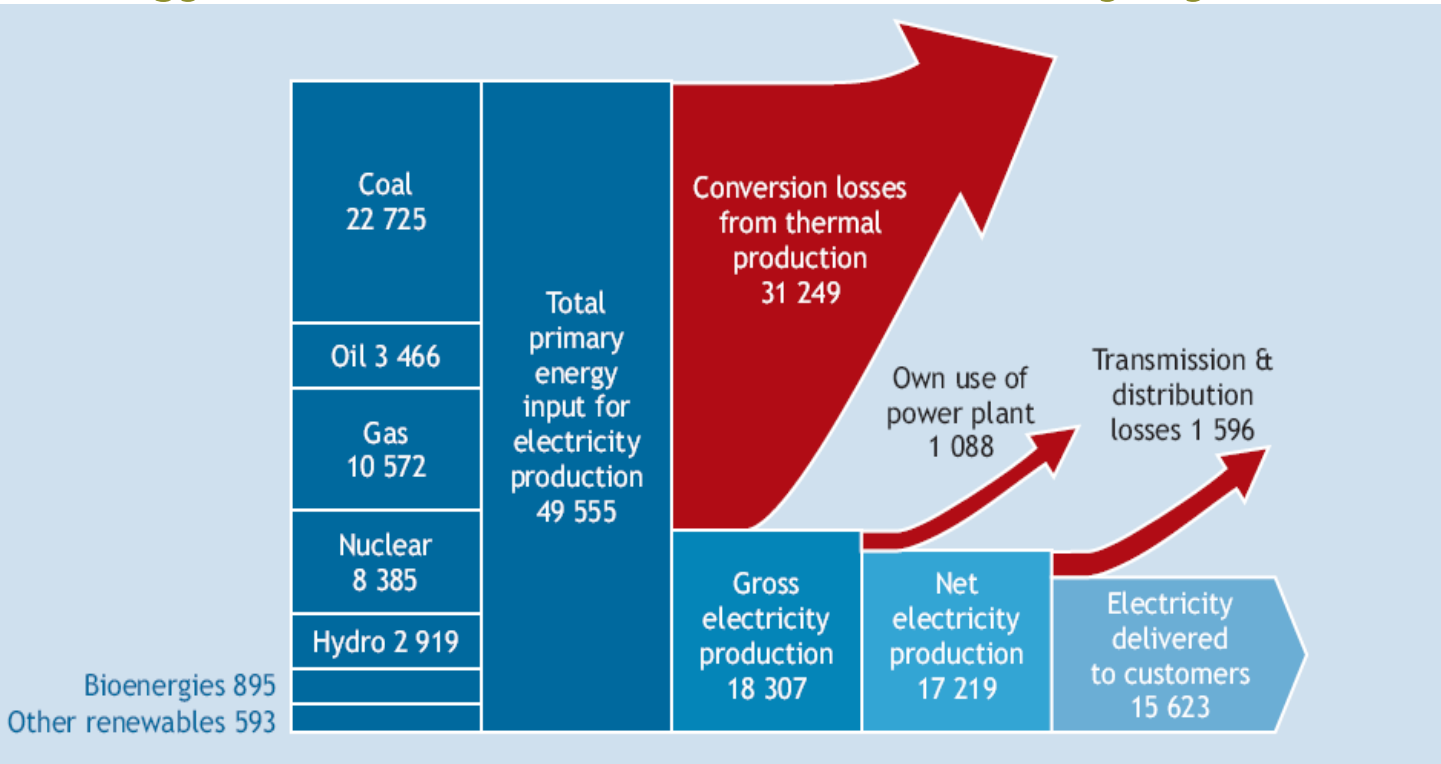
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Source: IEA, *Energy Technology Perspectives* (2008).

Improving energy supply efficiency is a must



Energy Flows in the Global Electricity System



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Sustainable energy technologies for today ...and tomorrow

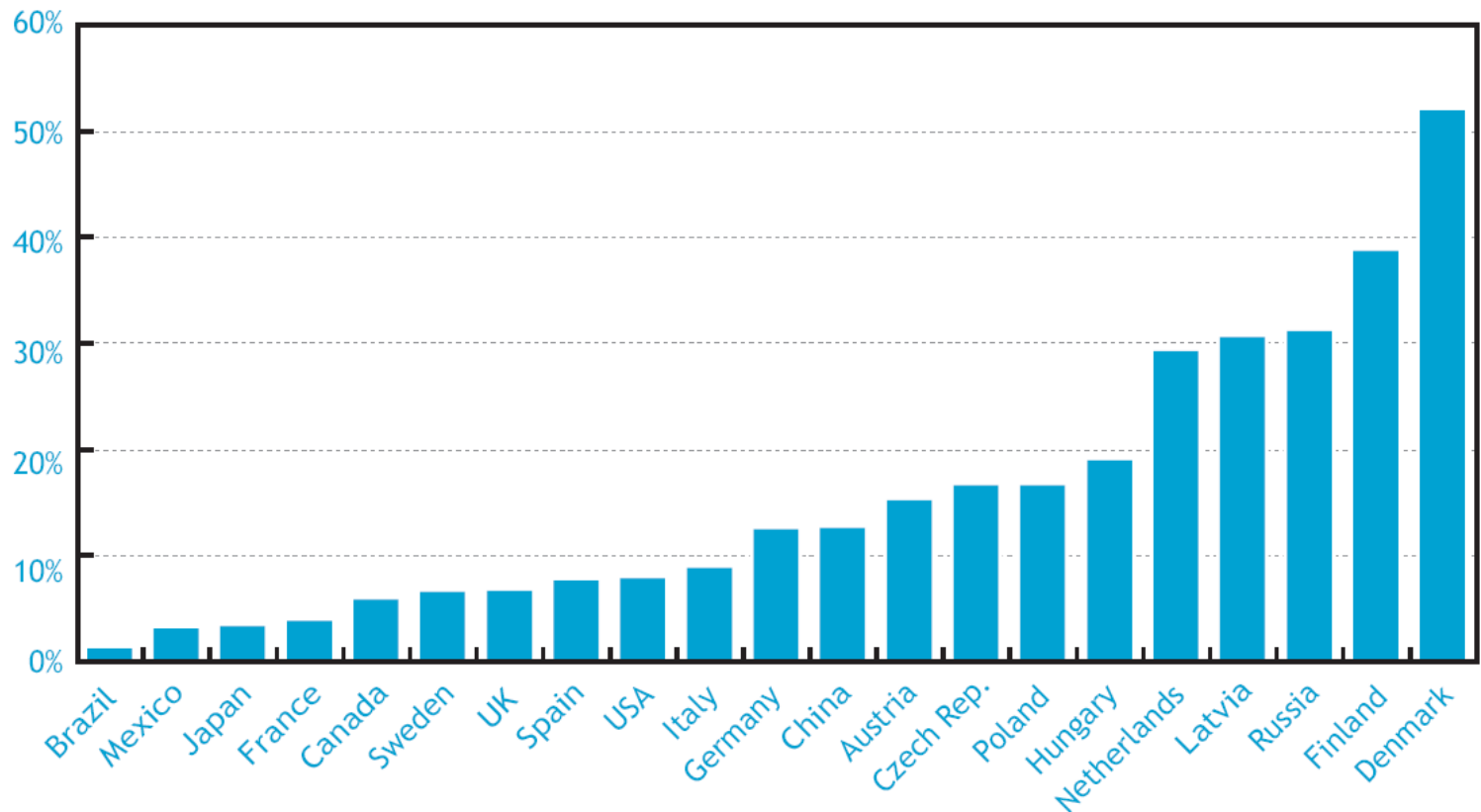
Source: IEA, CHP: Evaluating the Benefits of Greater Global Investment (2008).

2/3 of the fuel we use to produce power is wasted -- CHP and district energy more than double this efficiency



CHP generates just 9% of global electricity

CHP share of national power production



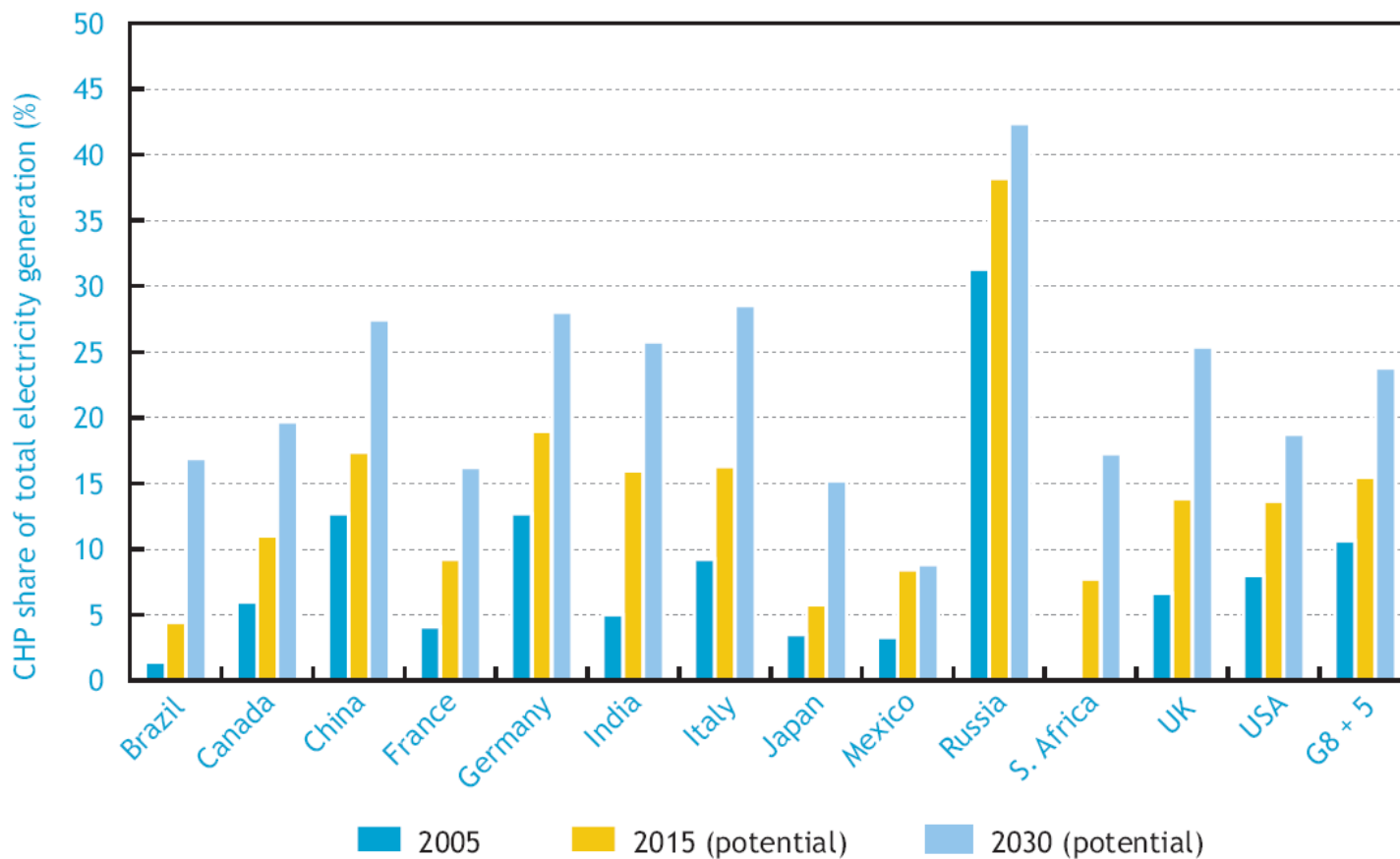
Source: IEA, *CHP: Evaluating the Benefits of Greater Global Investment* (2008).

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There is significant additional potential

CHP potentials -- accelerated CHP scenario



Source: IEA, *CHP: Evaluating the Benefits of Greater Global Investment* (2008).

...So why are we at 9%?

- Lack of information about cost savings, environmental benefits
- Difficulties connecting to the electricity grid
- CHP/DE benefits difficult to recognize in GHG regulation
- Lack of strategic heat resource planning

Government champions needed

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Lessons learned

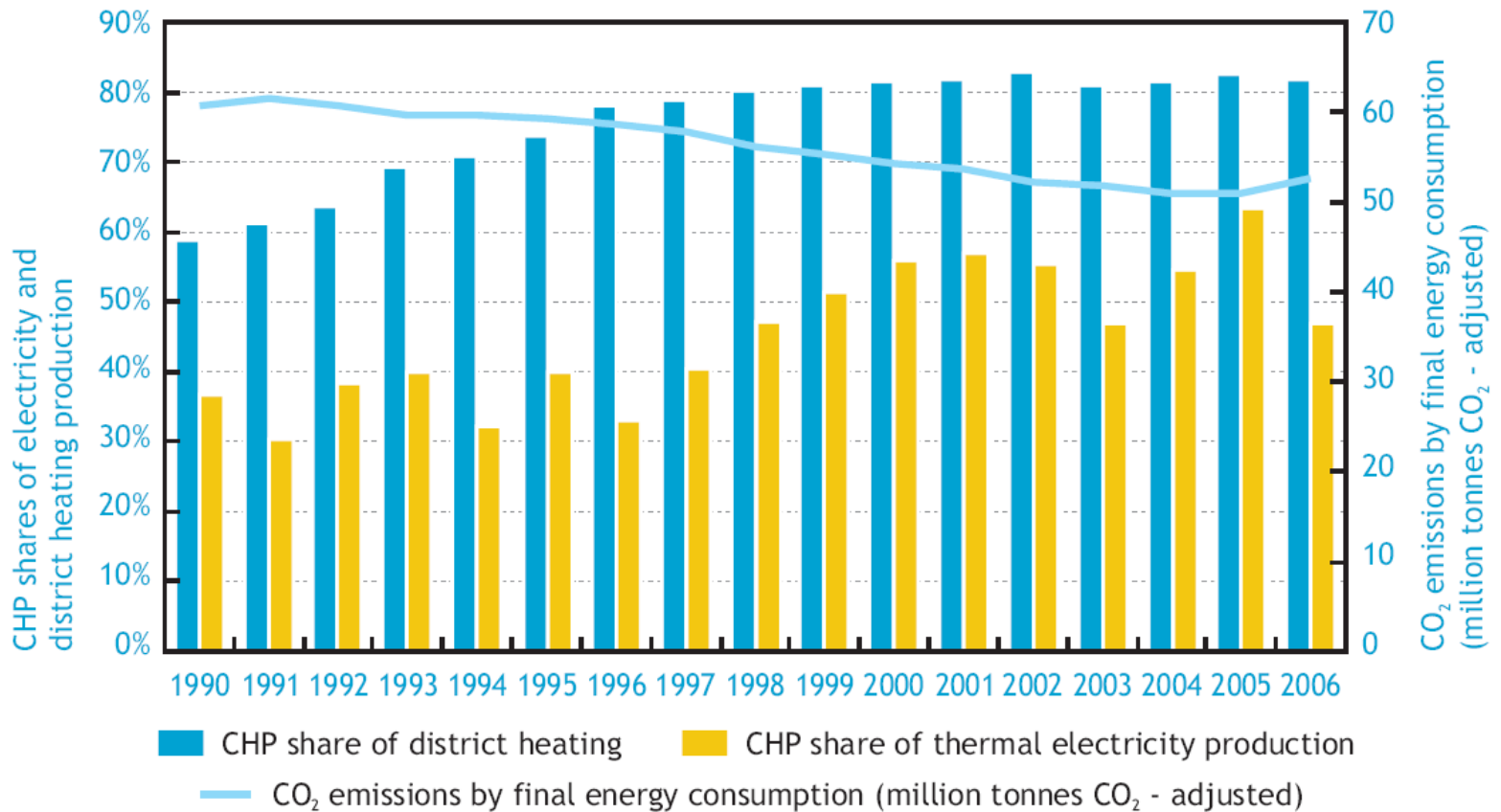
- Need to better explain how CHP/DE are transitional technologies to a clean energy/low-carbon future
 - Industrial parks with CHP/DE, CCS
 - The transition to renewable fuels
 - Smaller-scale applications
- Local government leadership on DE is high; should be even more of a focus
- Heat/infrastructure planning is critical
- Governments need to lead



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Denmark's win-win-win approach



Source: IEA, *CHP: Evaluating the Benefits of Greater Global Investment* (2008).

Enhanced energy security

Reduced GHG emissions

Use of local resources

Steps to success

- Create a Champion
- Design a strategic framework
- Identify the potential
- Identify barriers to this potential
- Design and implement targeted policies



*CHP Plant:
Arvind Textile Mill, India*

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District energy climate awards

- First time this award has been issued
- Many deserving systems
- Recognises the following:
 - Local leadership
 - Innovation
 - Performance in CO₂ reductions, energy efficiency
 - Vision for a sustainable future
- IEA was pleased to chair the review panel
- Good luck!



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For More Information

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*Visit the IEA International
CHP/DHC Collaborative at*

www.iea.org/G8/CHP/chp.asp

*Visit the IEA DHC Implementing
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www.iea-dhc.org

