

# Global Benefits from Local Action

*Advancing profitable solutions from district energy*

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International Energy Agency (IEA)

*District Energy Summit - Copenhagen*  
*3 November 2009*



# Overview

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

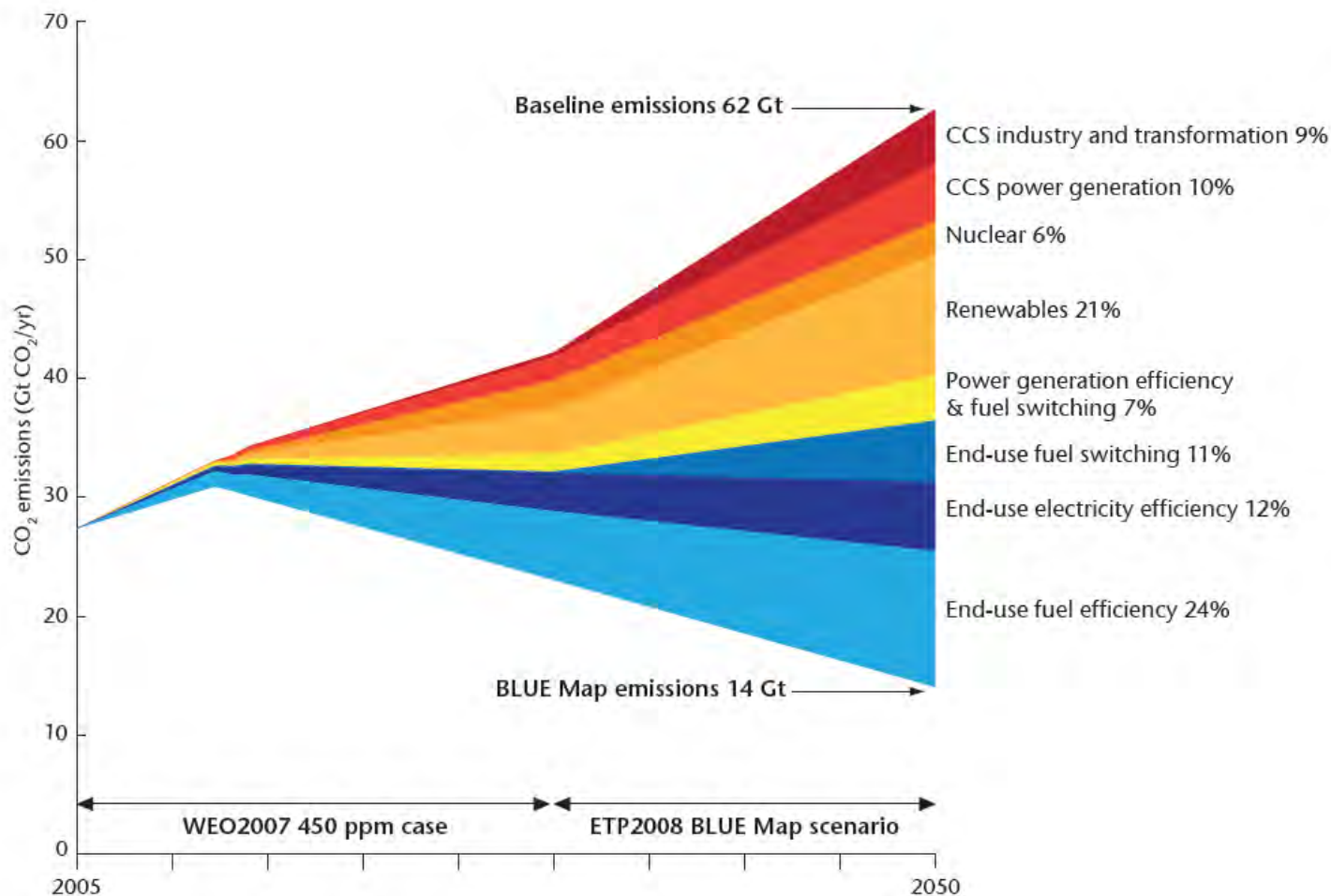


Cogeneration  
and  
District Energy  
*Sustainable energy  
technologies  
for today  
...and tomorrow*



# An energy revolution is needed

## Cutting Energy-Related CO<sub>2</sub> Emissions



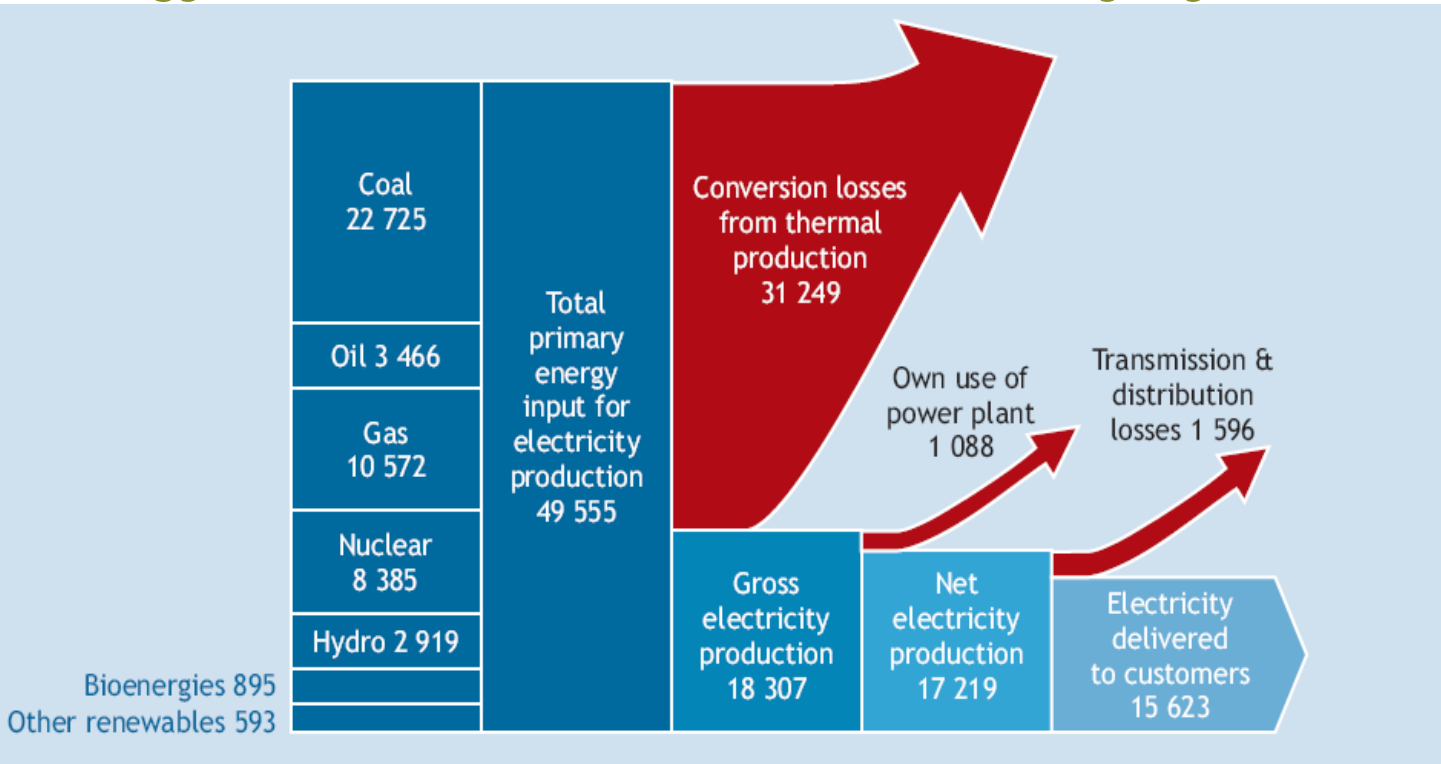
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Source: IEA, *Energy Technology Perspectives* (2008).

# Improving energy supply efficiency is a must



## Energy Flows in the Global Electricity System



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

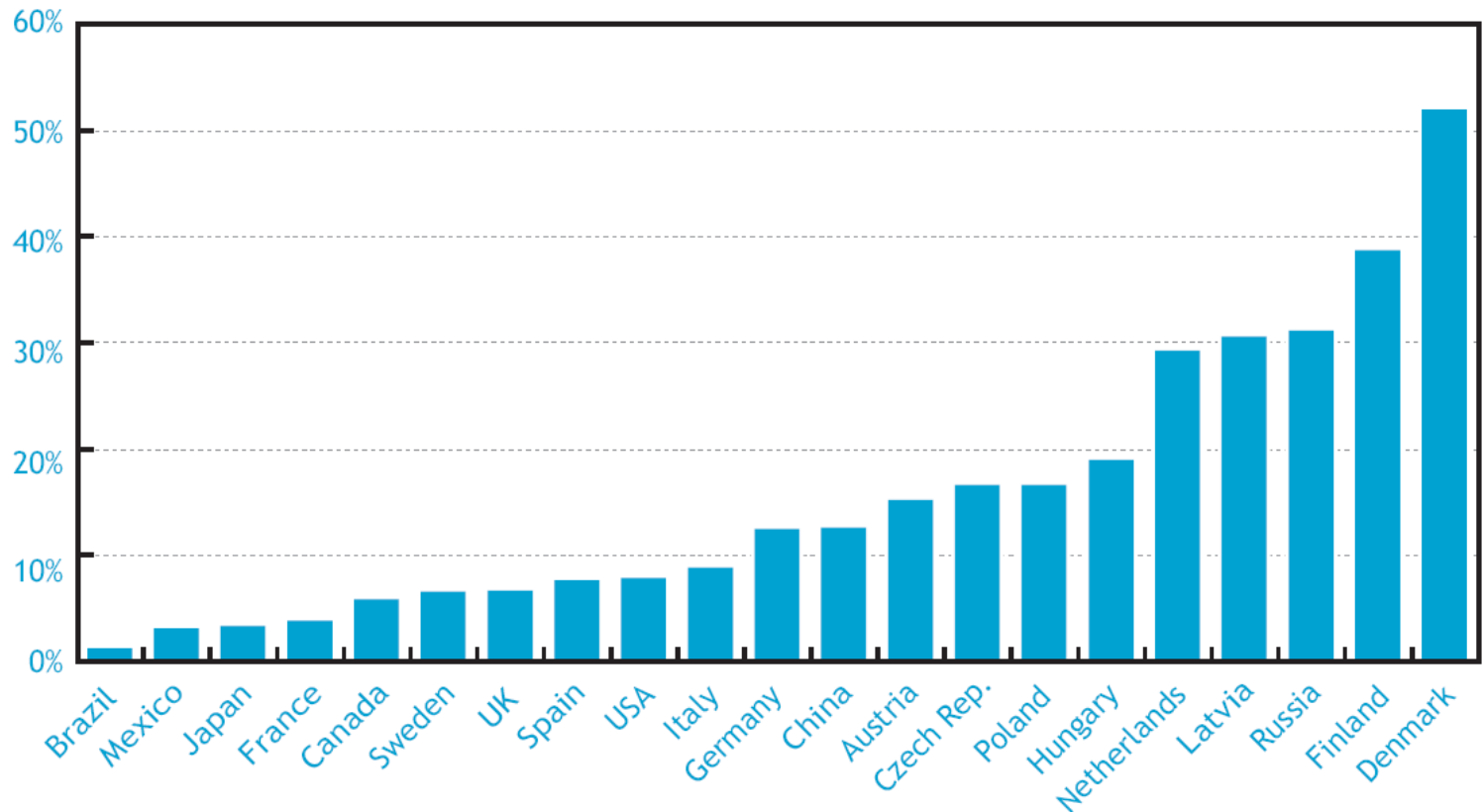
Source: IEA, CHP: Evaluating the Benefits of Greater Global Investment (2008).

*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



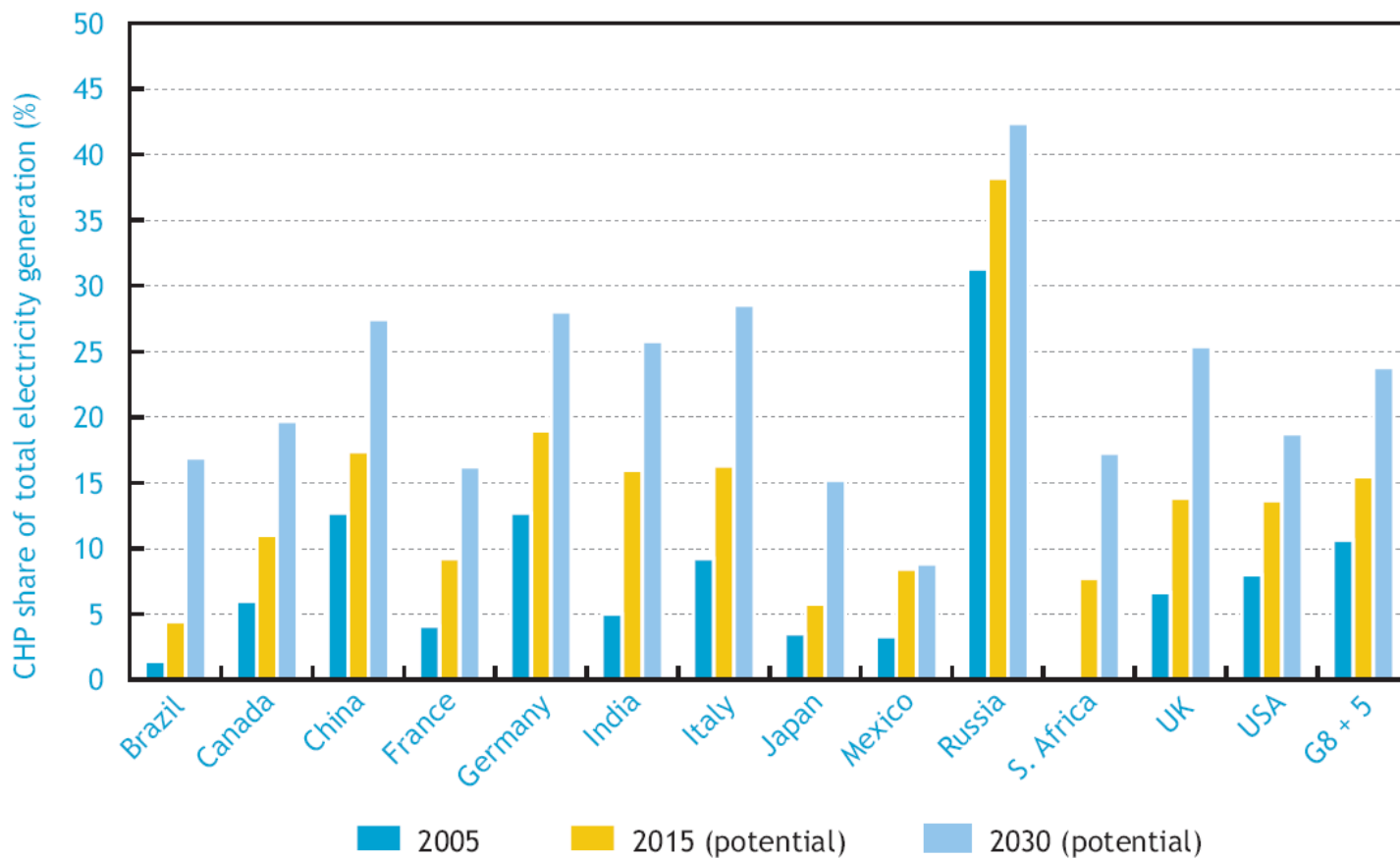
Source: IEA, *CHP: Evaluating the Benefits of Greater Global Investment* (2008).

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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

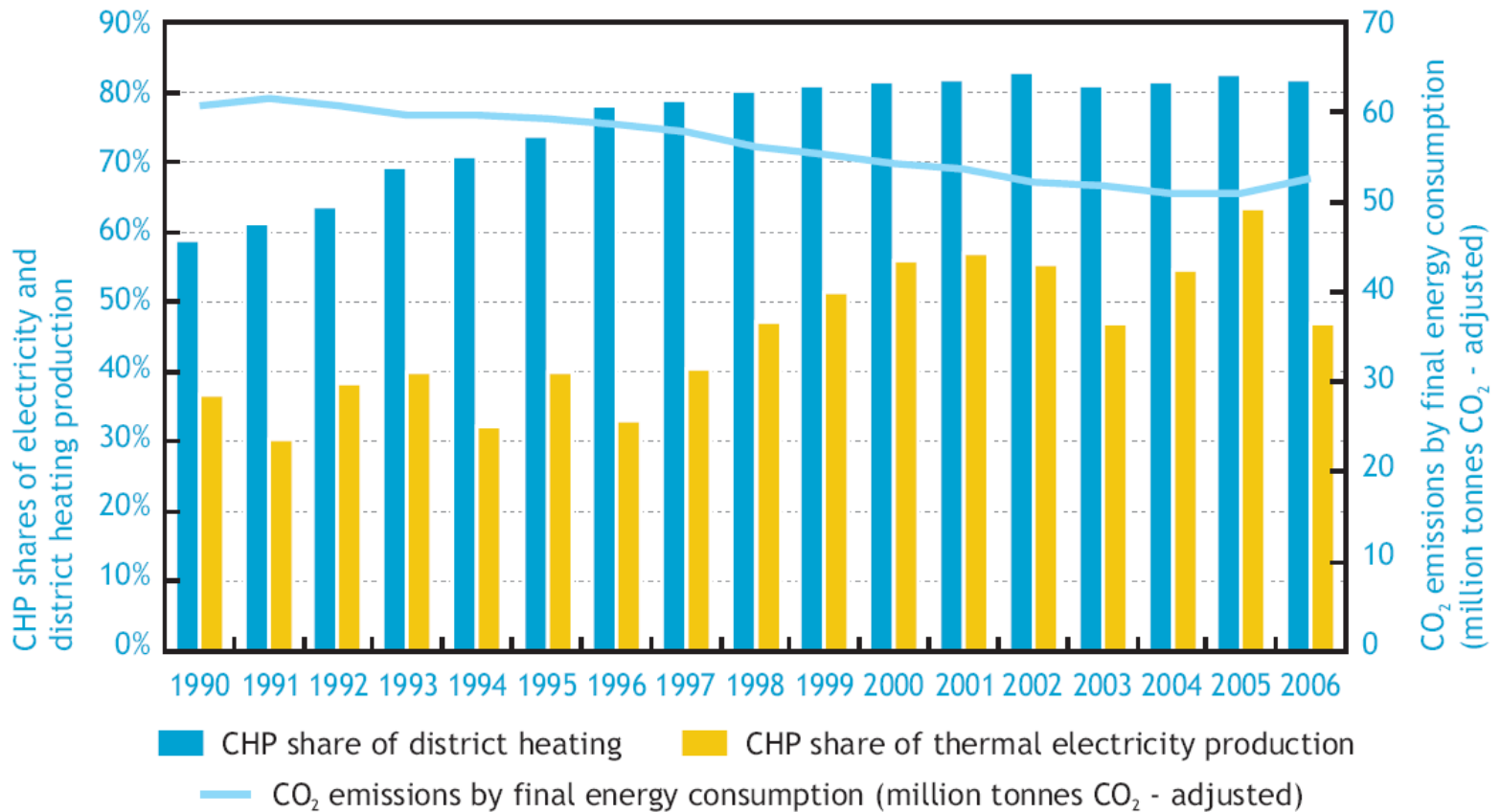


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# Denmark's win-win-win approach



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 CO<sub>2</sub> 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](http://www.iea.org/G8/CHP/chp.asp)

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