

# Dansk energi- og klimapolitik i globalt perspektiv

Bjørn Lomborg

*[www.lomborg.com](http://www.lomborg.com)*

# Making a better world

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- n Rational, not fashionable
  - Doing good vs. feeling good
- n Remove our myths
  - Panic is unlikely to be a good guide to making smart choices
- n Spend our money best
  - Overworrying about some things mean underworrying about other things

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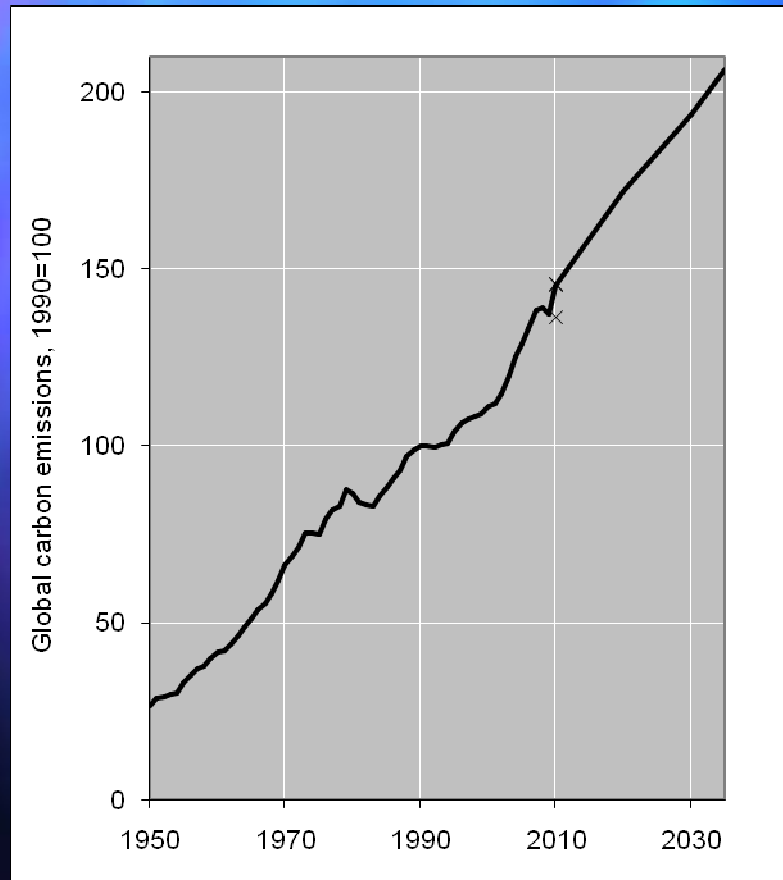
Det vi gør, er dyrt men ineffektivt

# Hidtidige politikker

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- n Rio løftet i 1992
  - Reducér til 1990-niveau i 2000
  - OECD overskød med 8%
- n Kyoto aftalen
  - Fungerede ikke

# Lille effekt af klima politik



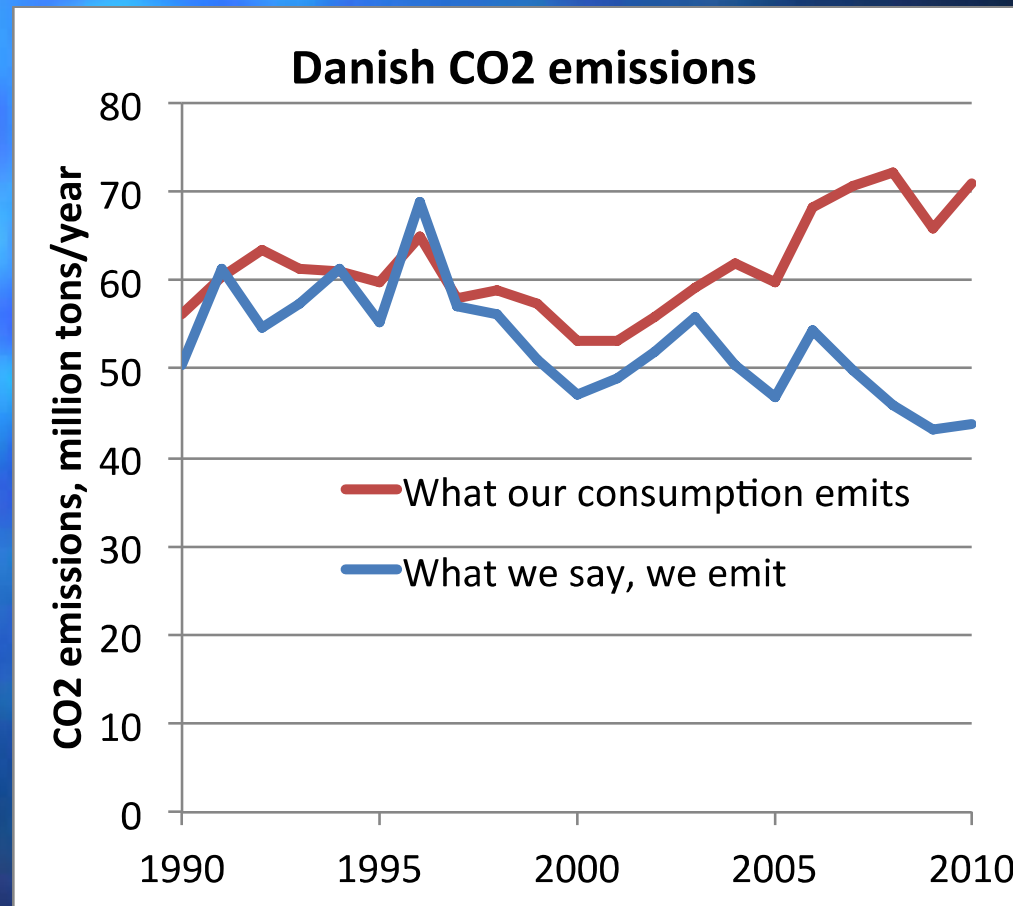
- n Faktisk Kyoto
  - Næsten ingen effekt

- n Hypotetisk
  - Kost: \$180 mia/år
  - Fordel: 0.004°C reduktion i 2100 (nu: 0.0002°C)

# Men har Danmark ikke levet op til Kyoto?

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- Men mest ved at 'snyde'
- Og ved at outsource til Kina



# There are really only two ways to reduce emissions

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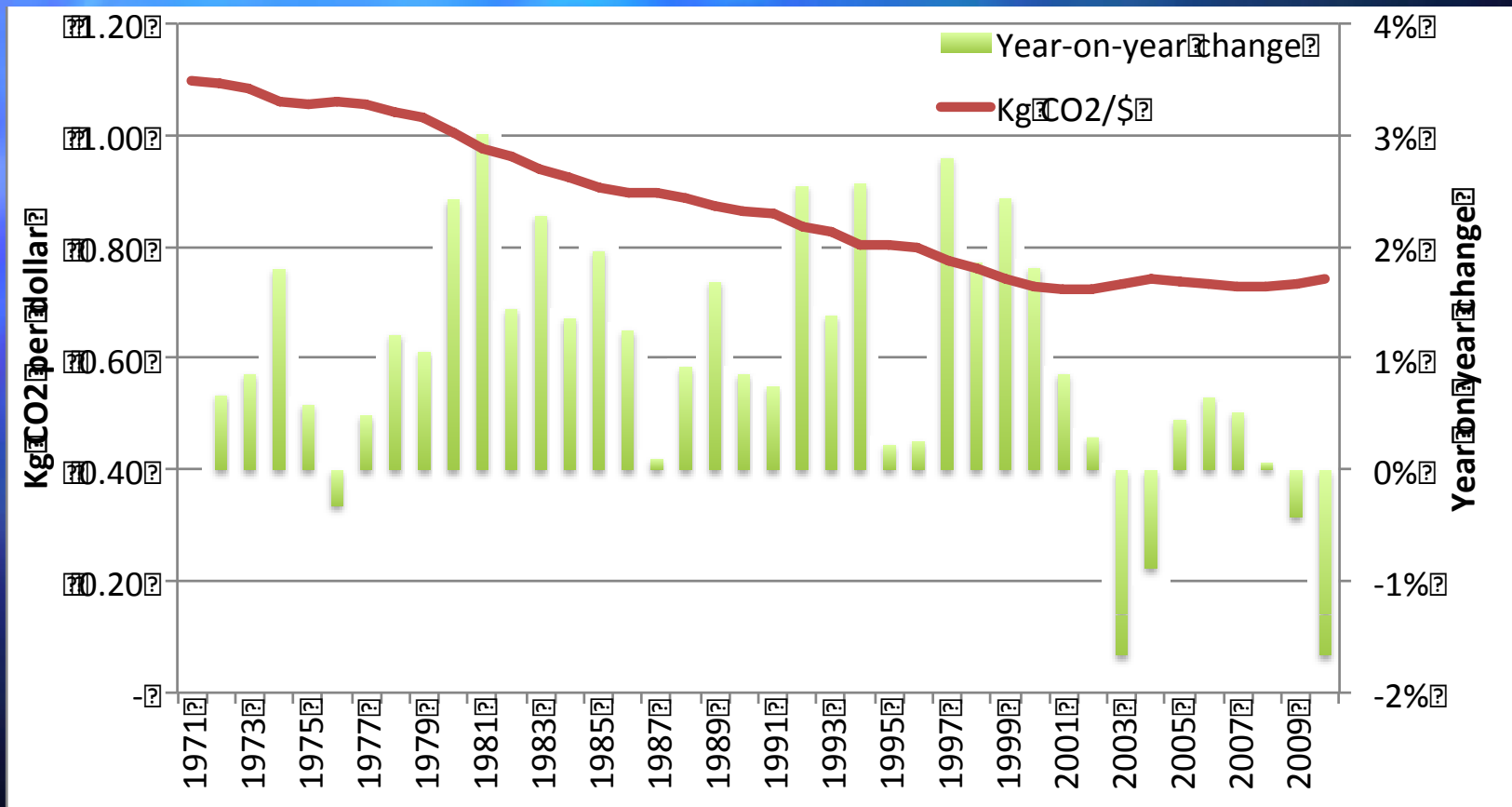
- n Kaya identity

- Emissions equal

- n GDP

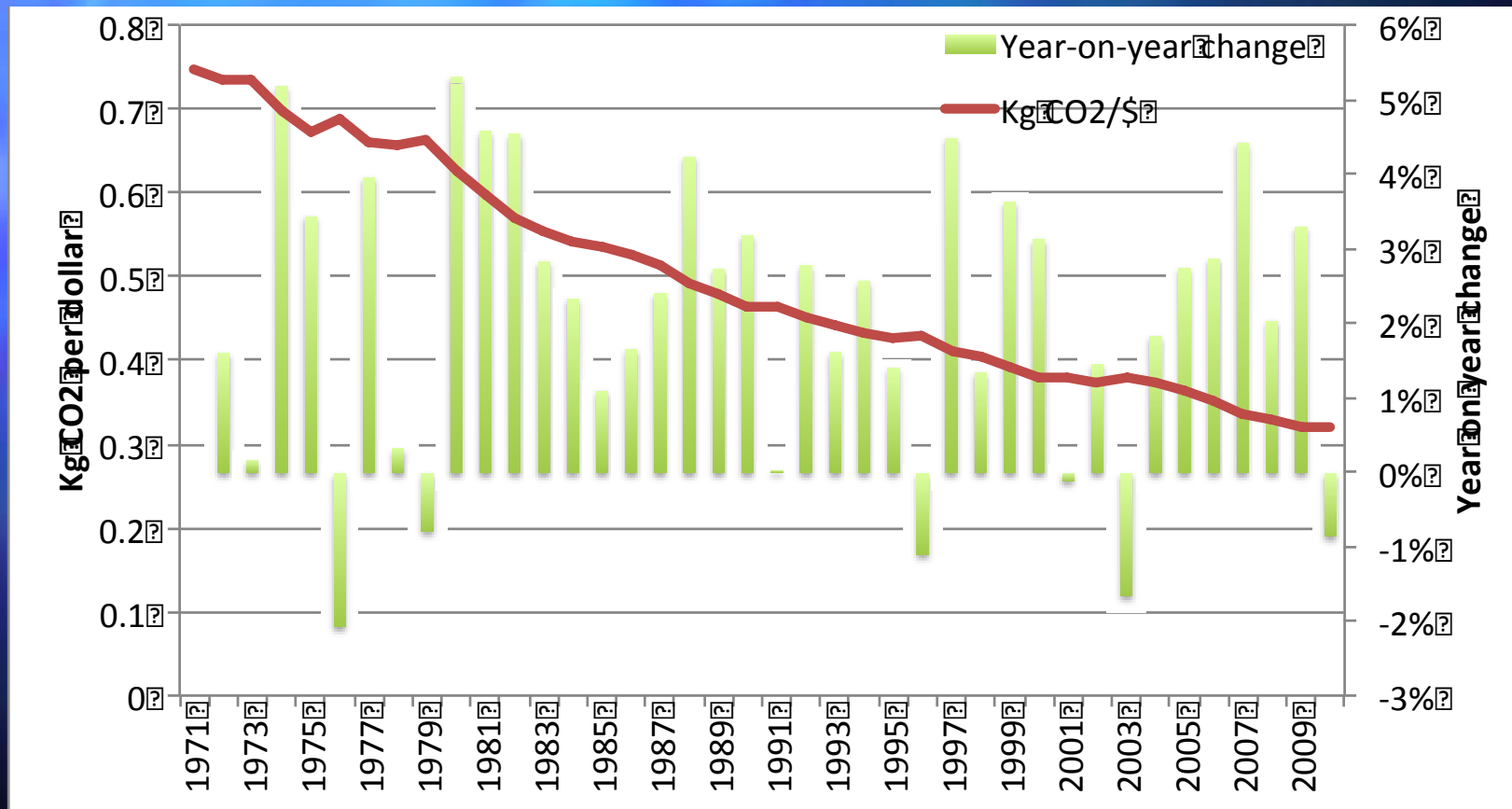
- n Carbon intensity of GDP

# Problem is, carbon intensity isn't dropping anymore





# And even in the EU, Kyoto didn't increase decarbonization

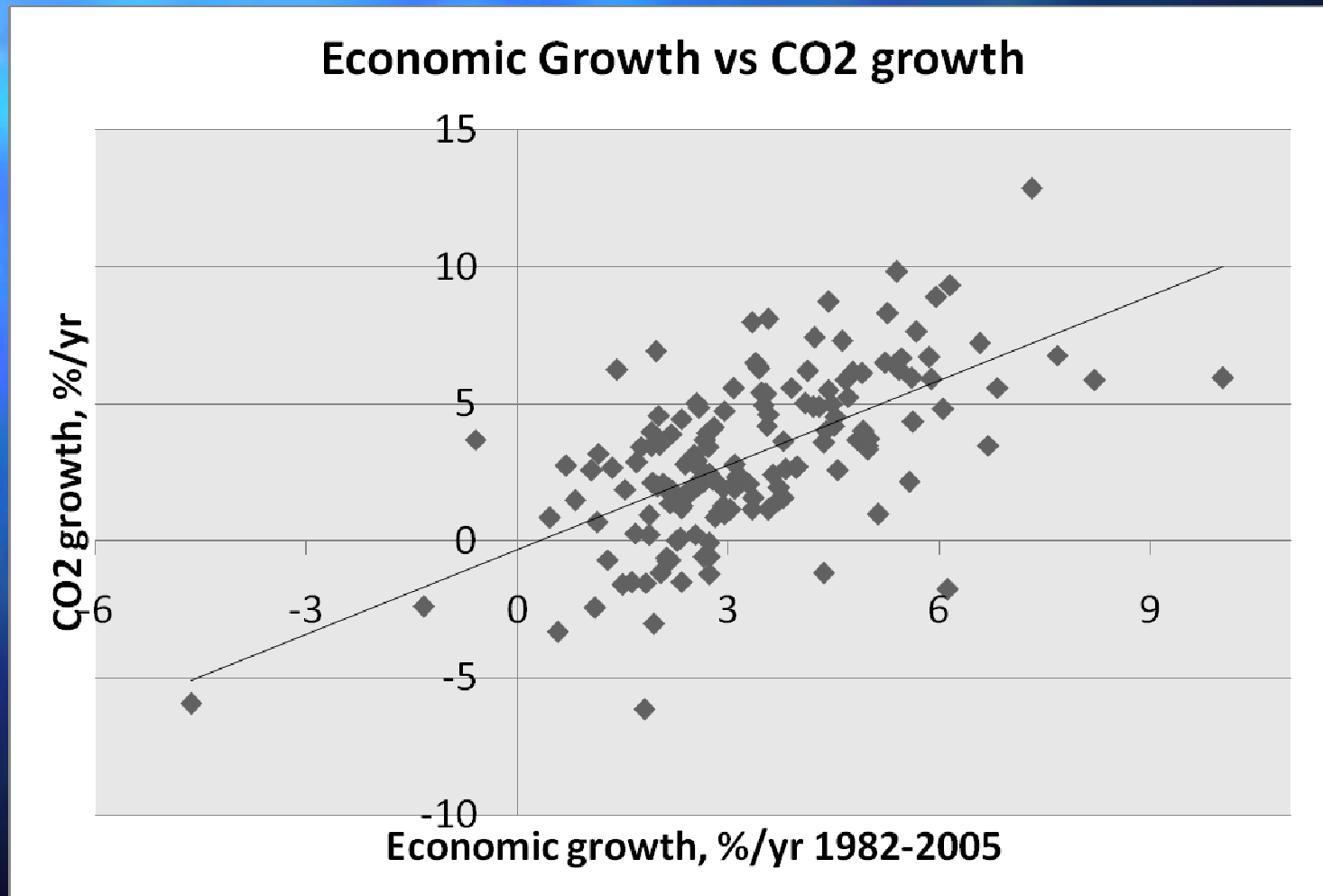


# Conclusion so far

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- n We will not see other countries reduce their emissions significantly
  - More people, more wealth, coal ever cheaper = much more co2
- n The impact EU has mainly comes directly from its emission reductions
  - Very little

# Grøn vækst?



# EU 20/20/20/20 aftale

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## n EU til 2020

- Reducér CO2 med 20% under 1990
- 20% andel af fornybar energi
- Forøg energi efficiens med 20% ifht BaU

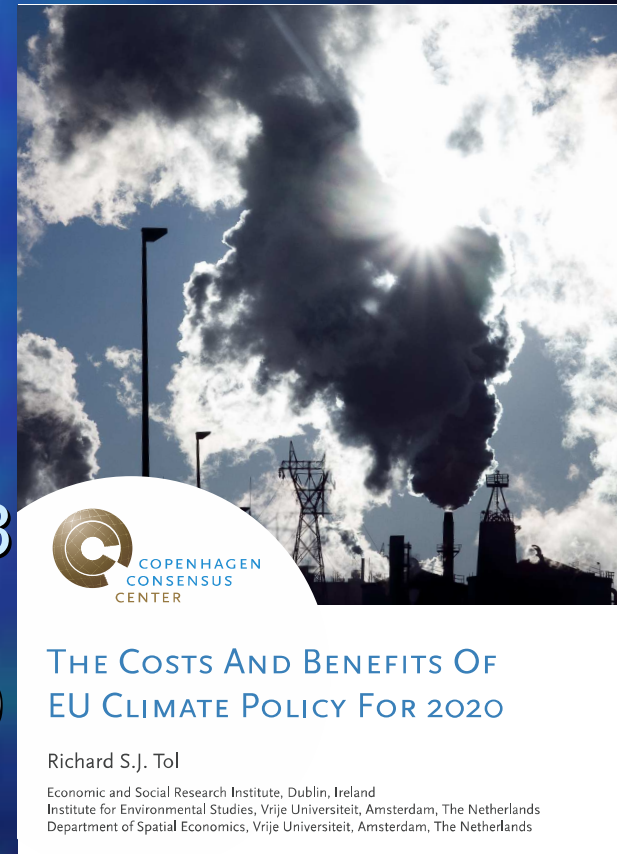
# Cost of EU 2020

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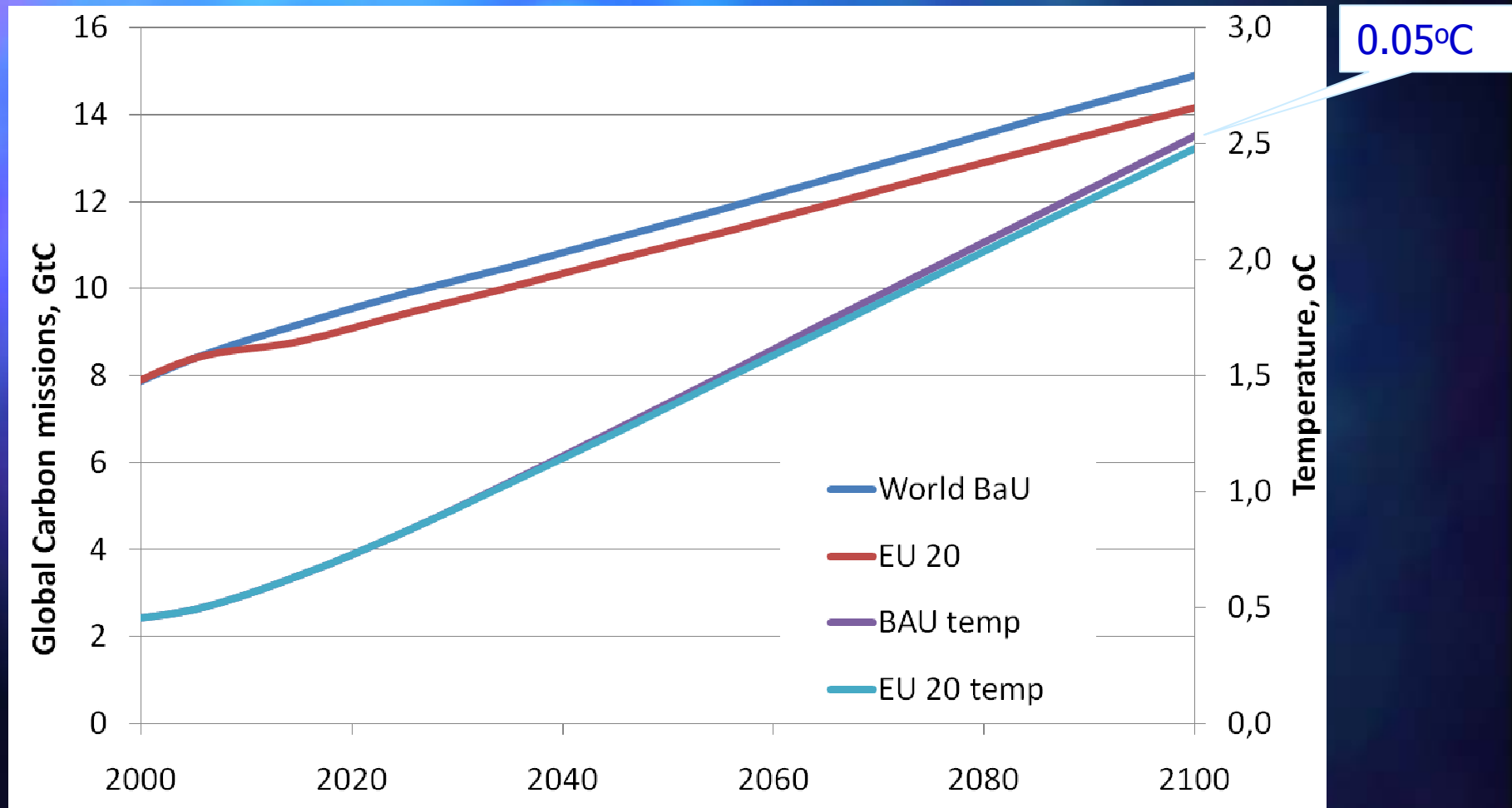
- n Cost of just CO<sub>2</sub> cut with full trading
  - 1.03% of GDP
- n With ETA, non-ETA in each country and renewable standard
  - 2.03% of GDP

# Pris på EU 2020

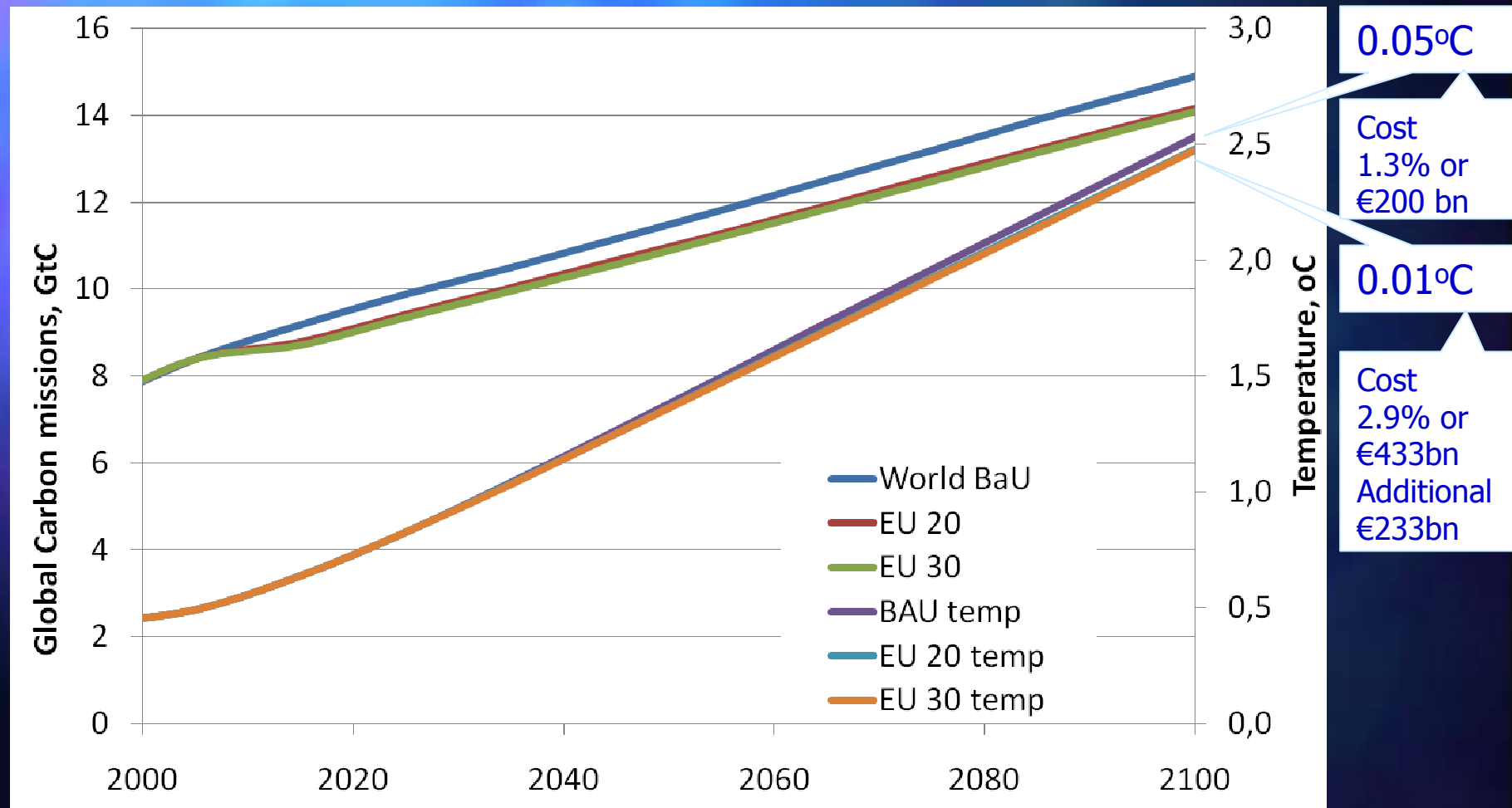
- n Omkostningsestimat fra 5 modeller
  - 1.3% or \$250 mia/år
- n Pris for Danmark
  - 26 mia DKK/år (1.2%)
- n For hver krone brugt, afværger vi 3 ører klimaskader
  - Danmark vil ende med at betale 2.000 mia kroner for at udskyde global opvarmning med 8,5 dage i 2100



# Climate effect of EU 2020



# Climate effect of EU 2020, 30%





# Grønne jobs?

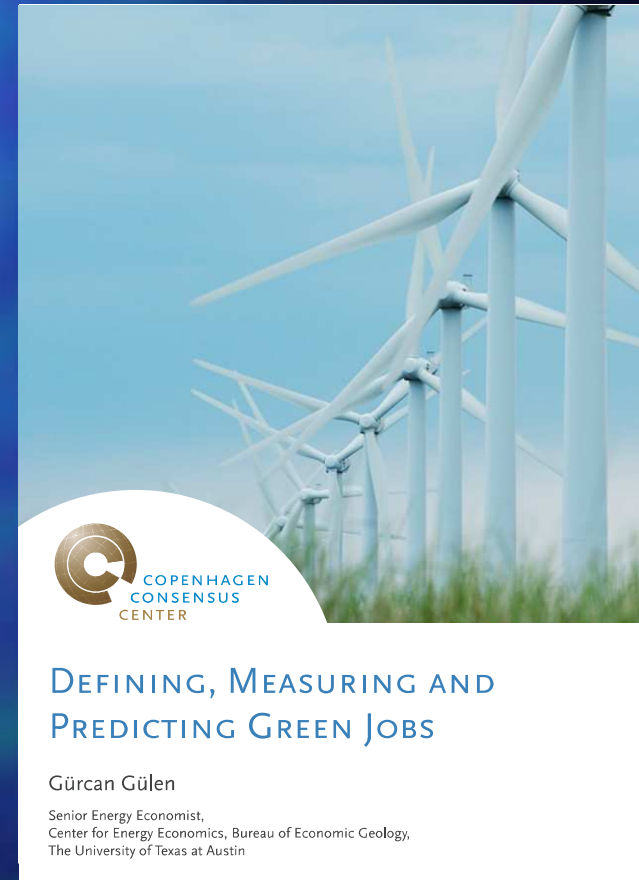
## n CCC paper

- “Adding “net jobs” cannot be defended as another benefit of investing in green energy

- n Short term employment benefit

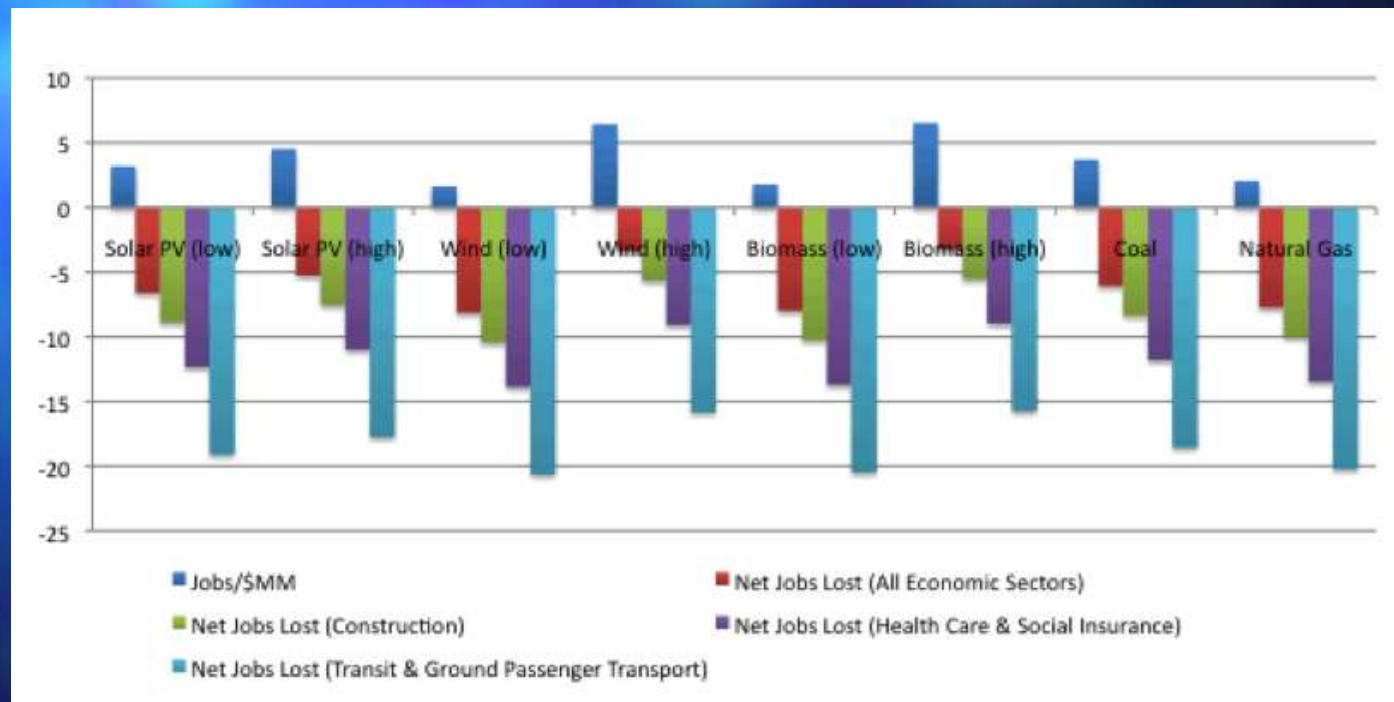
- n Long run employment disbenefit

- If you subsidize some jobs, you have to tax other areas to pay for it, which leads to layoffs elsewhere



# Investering i jobs

## n Alternativomkostninger af grønne investeringer



# Energi-sikkerhed

- n Bekymringen er om olie, ikke gas og kul
- n Vind og sol erstatter ikke olie
  - Men kul
- n Kyoto
  - Har gjort EU mere afhængig af russisk gas



ENERGY SECURITY: AN IMPACT  
ASSESSMENT OF THE EU CLIMATE  
AND ENERGY PACKAGE

Christoph Böhringer & Andreas Keller

Department of Economics, University of Oldenburg

# Energi sikkerhed

- n CCC paper
  - Two out of three measures show *diminishing energy security*
  - All very modest impacts
- n Hvis sikkerhed er målet
  - Brug kul



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# Opsummering: DK succesfuld klimapolitik?

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## n Klima

- Ubetydelig, langt bedre politikker

## n Energi sikkerhed

- Ubetydelig, langt bedre politikker

## n Jobs

- Ingen, langt bedre politikker

## n Økonomi

- Dusin milliarder spildt om året

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What role does the notion  
of 'green growth' play in current  
policies?

# Green growth

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- n Need to distinguish

- Political story:

- n Great sell

- n Rio+20

- Reality

- n On average everyone can't win by producing less efficient, more costly technologies

# Green growth

## n OECD

- Sustainable development
- Resource depletion
- Pollutants

n 1970s





# Green growth

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## n Crucial issues

- Damage from environmental problems
- Damage from solutions to these problems
  - n Weigh the two
- Risk of damage to free trade
- Why only green growth
  - n Why not educational growth, health growth, happiness growth, opportunity growth
  - n Oh wait, we already have a concept for that
  - n GDP growth

# Green growth for Rio+20

## n UNEP

- Low carbon, resource efficient and socially inclusive
- Honestly?
  - n China didn't get rich from wind turbines but coal
  - n Most people in the third world still struggle to survive, get food and education



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Hvordan kan vi gøre det bedre?

# Tackle klima

## n Fire veje

- Skær udledninger
- Grøn F&U
- Geo-engineering
- Tilpasning



## SMART SOLUTIONS to CLIMATE CHANGE

Comparing Costs and Benefits

Edited by

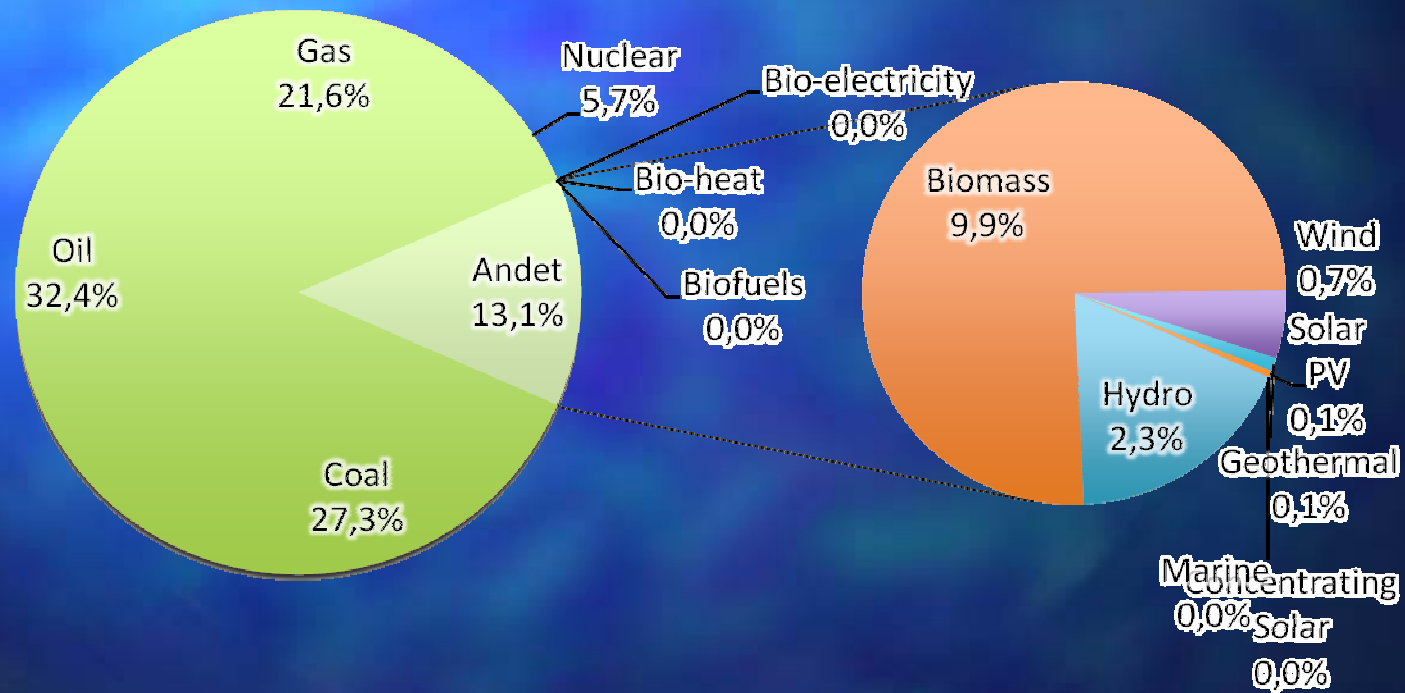
**Bjørn Lomborg**

# Skære udledninger

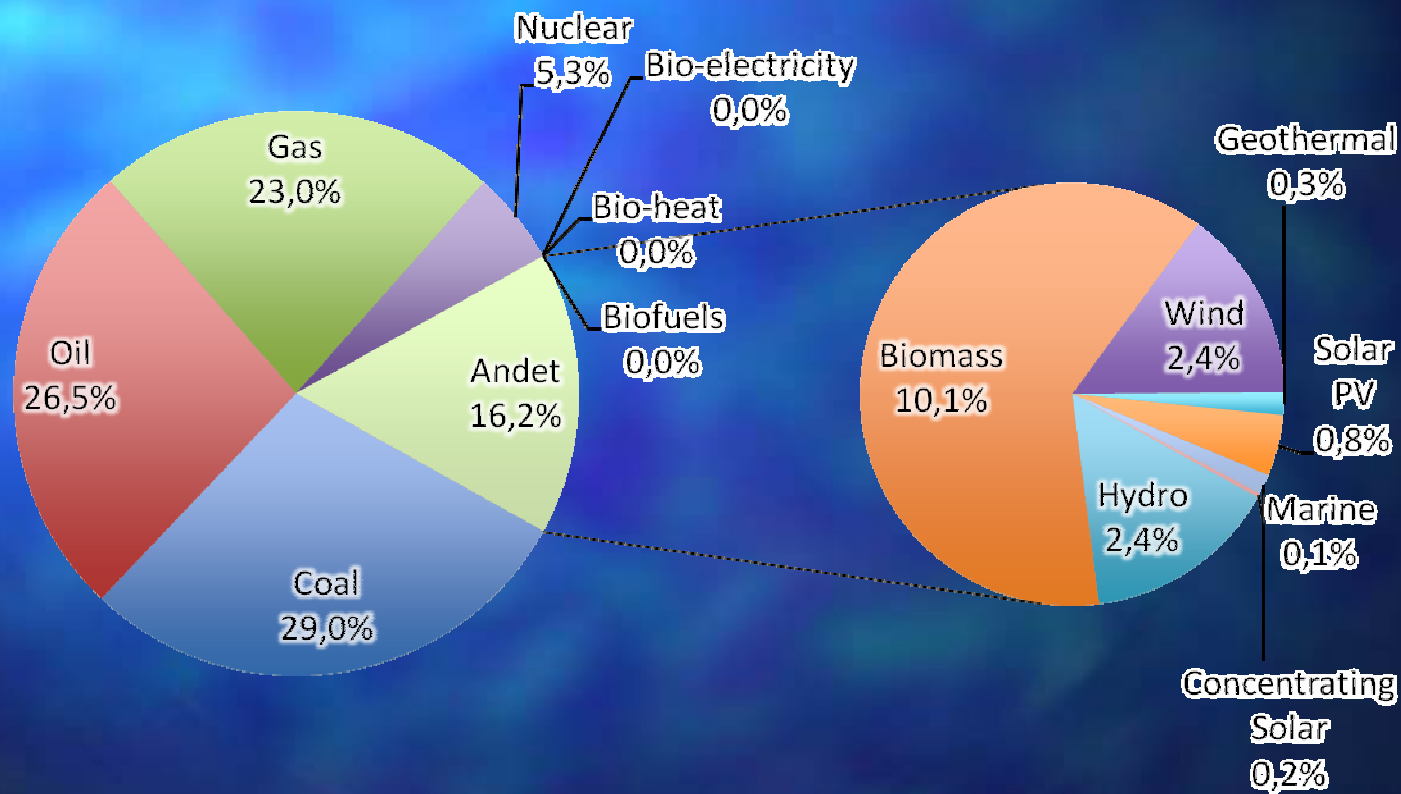
## n Grundlæggende fakta

- Ingen snarlig omlægning fra fossile brændstoffer
- Så længe grøn energi er dyrere end fossile brændsler vil de ikke blive vidt udbredte
  - n Hvis de var billigere, ville alle bruge dem

# Vi får det meste energi fra fossile brændsler (2010)



# Og stadig mest fossil i IEAs mest optimistiske scenario 2035



# Skære CO2

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- n Skat på \$5/ton CO2
  - Effektivt
  - Men gør næsten ingen forskel på klima
- n Hvis vi går efter 2°C
  - Omkostningen vil øge til \$40.000 mia mod slut-århundredet
  - For hver dollar, kun undgå 2 skader



# Andre løsninger: tilpasning

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- n Ikke så sexet, men langt billigere, hurtigere og mere effektiv til at tackle
  - Oversvømmelse
  - Hedeølger
  - etc.
- n Fordele 2-3 kroner på kronen

# Andre løsninger: geo-engineering

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- n Eneste forsikring
- n Ikke nu, men vi bør undersøge mulighederne
- n Fordele omkring 1000 kroner per krone
  - Hvis det virker, så kunne vi potentielt fikse all klimaforandring for \$6 mia

# Andre løsninger: grøn F&U

- n Med mindre vi gør grøn energi billigere, så får vi aldrig skåret fossile brændsler
  - Vi bruger omkring \$10mia/år på F&U nu
  - Nobellerne foreslår \$100mia/år (0.2% af BNP – 2 mia kroner fra DK)
    - n Dette ville formentlig gøre grøn energi billigere end fossile brændsler over de næste 2-4 årtier
- n Løser opvarming på mellemlangt sigt
- n Fordele 11 kr per krone

# F&U eksempel: skiffer gas

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## n Fracking gas in US

- Price drops of 3-5 times over past 5 years
- Gas emits 40% less CO<sub>2</sub> than coal
- US cut 400-500Mt CO<sub>2</sub>
  - n Compare to 250Mt from *entire* Kyoto (incl EU)
- Saves \$100bn/yr

# Konklusion

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- n Gør ikke de nuværende politikker
  - Dyre med få fordele
- n Håndter klimaet
  - Ikke ved at skære direkte
  - Men ved at gøre grøn energi billigere