



International
Energy Agency

Energy Transformation: A 'Collective' Marathon

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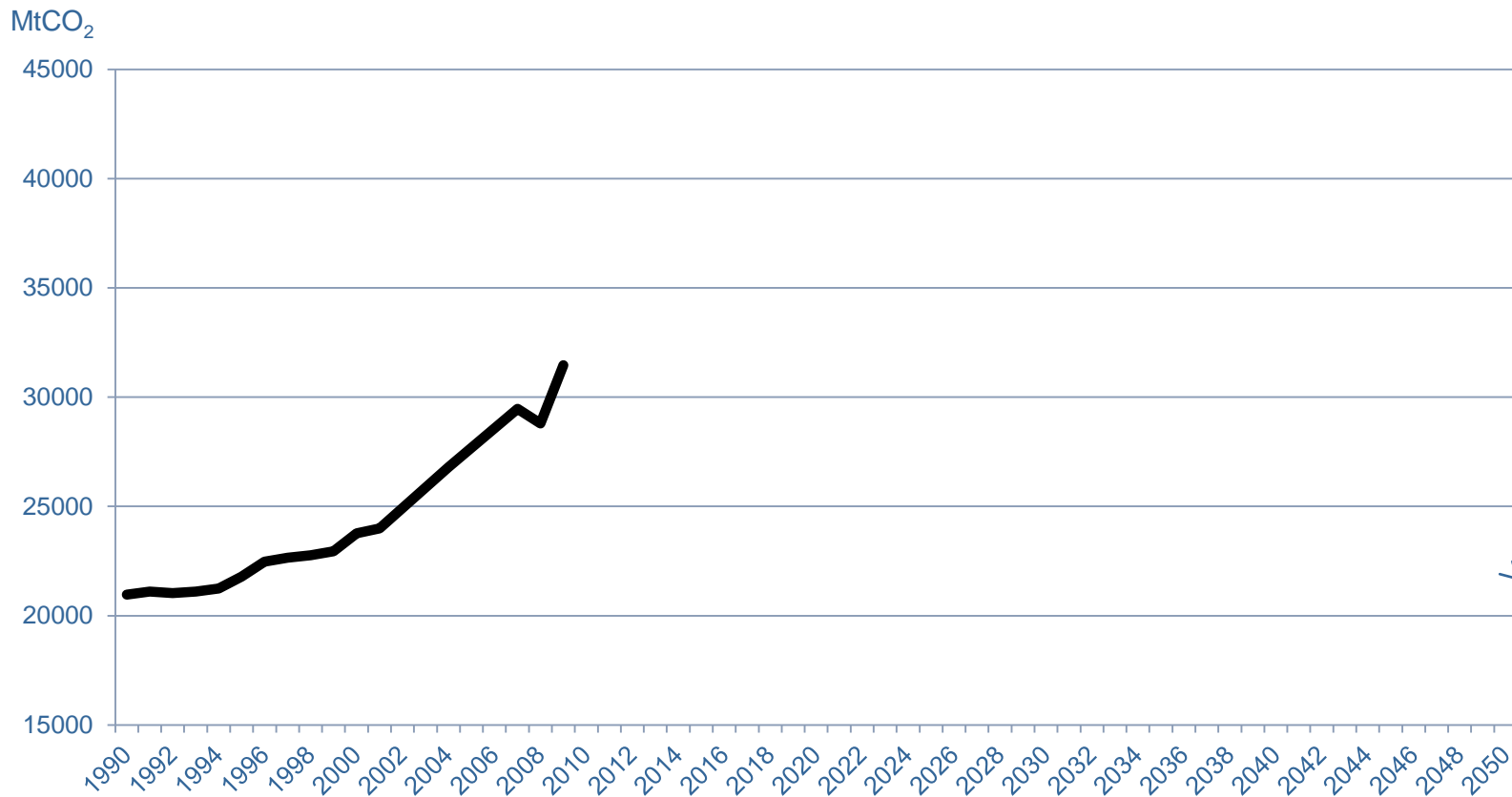
**International
Energy Agency**

Collective efforts

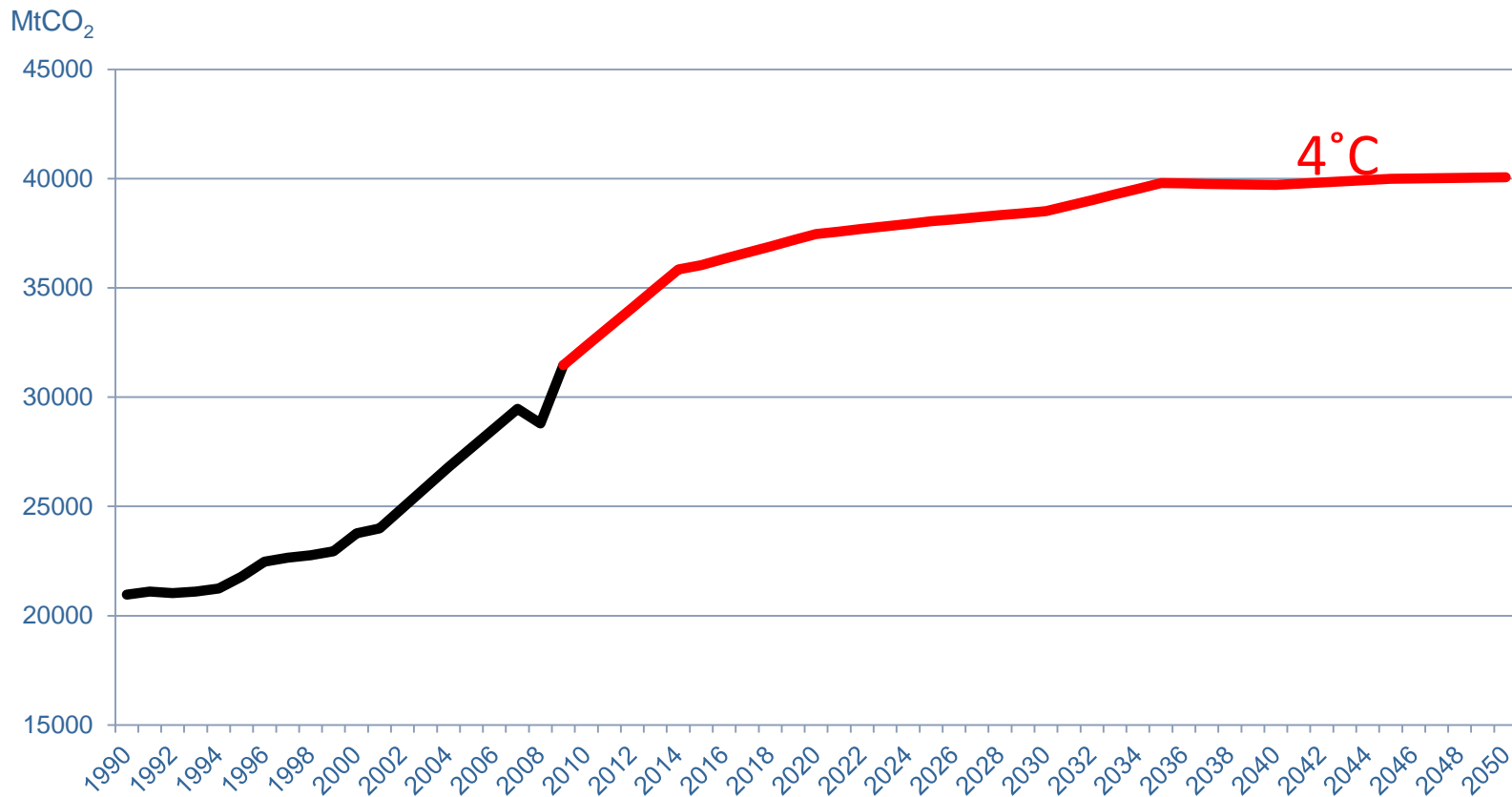


(e.g., UNSE4All)

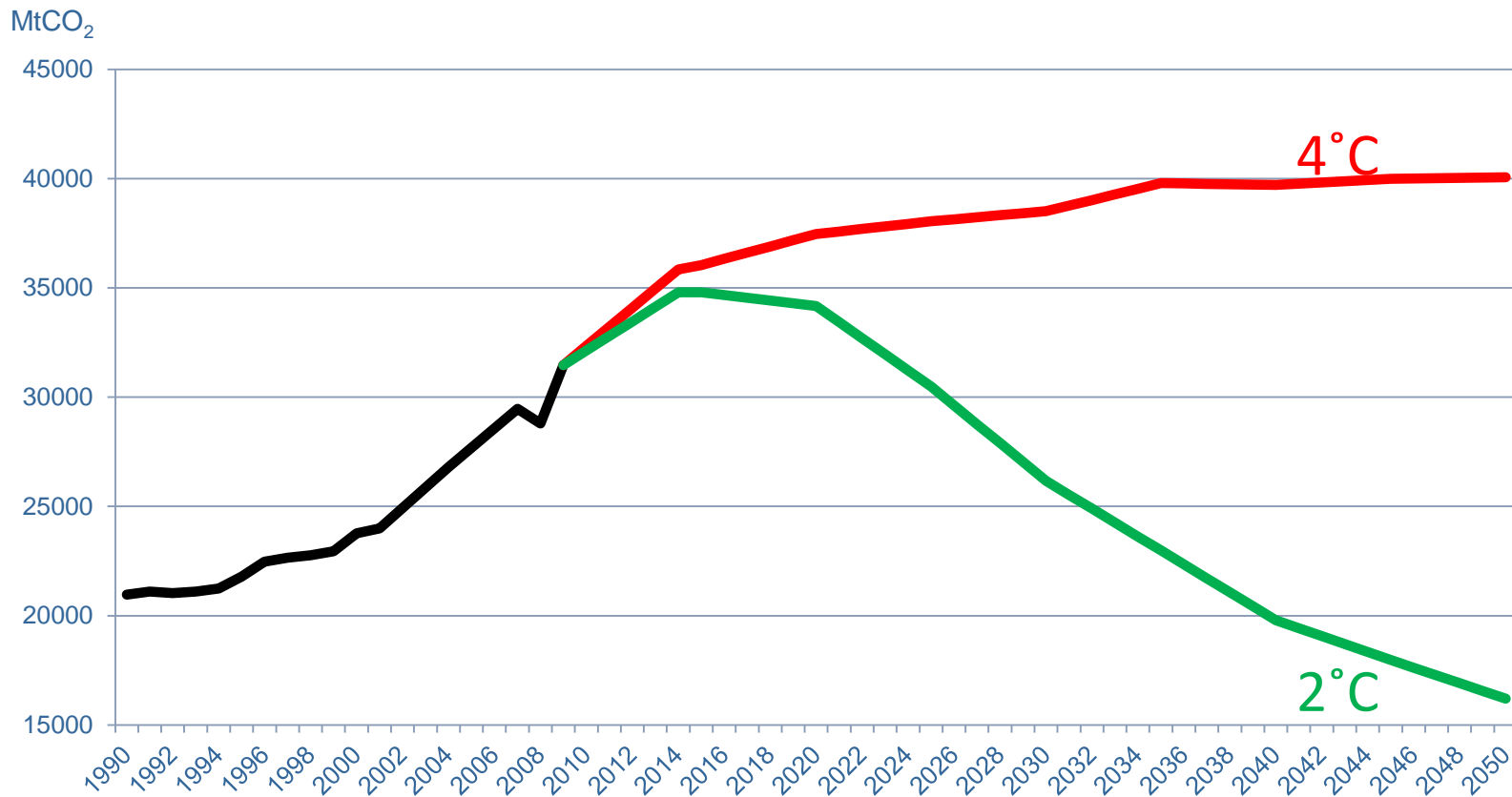
Energy emissions



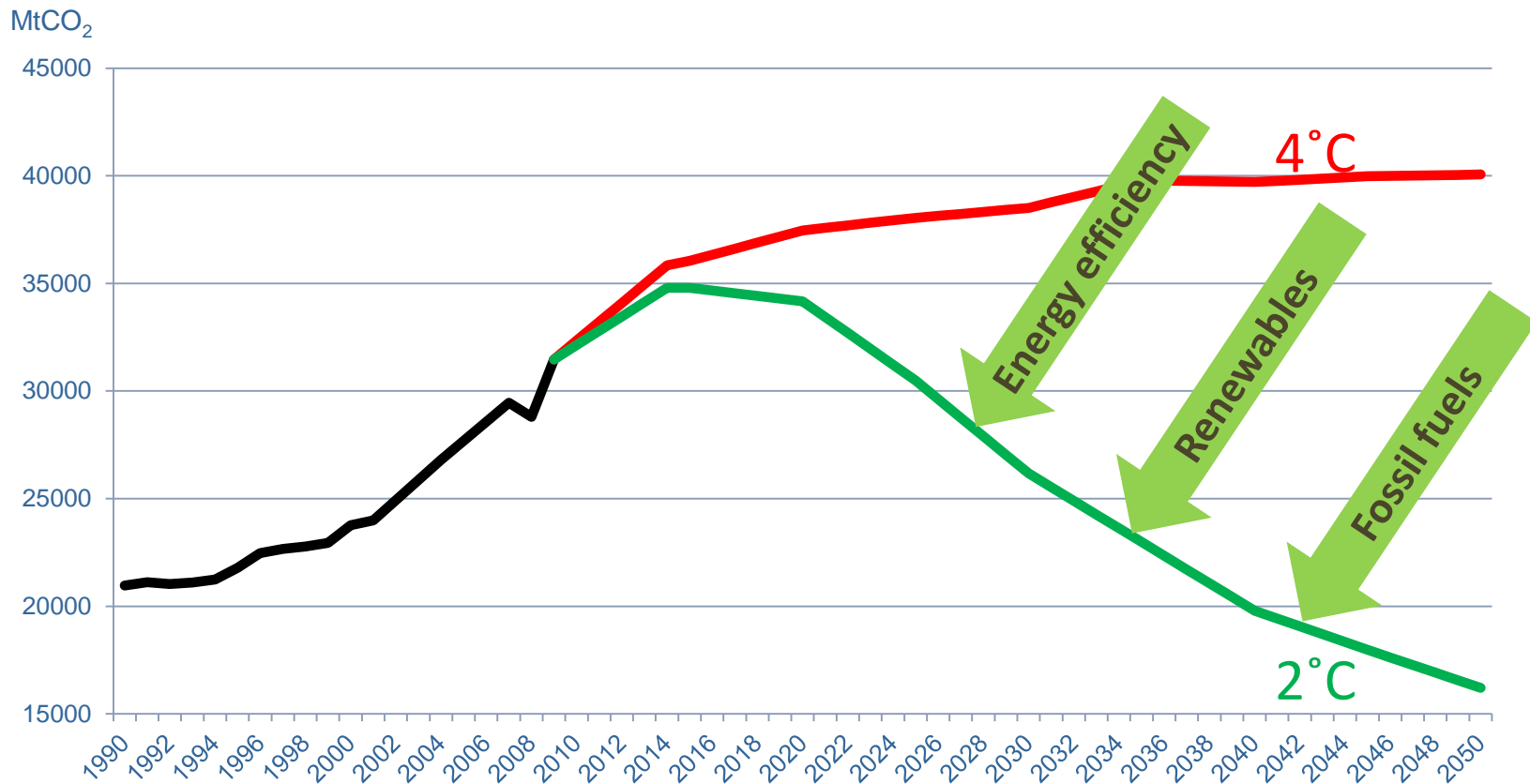
Energy emissions



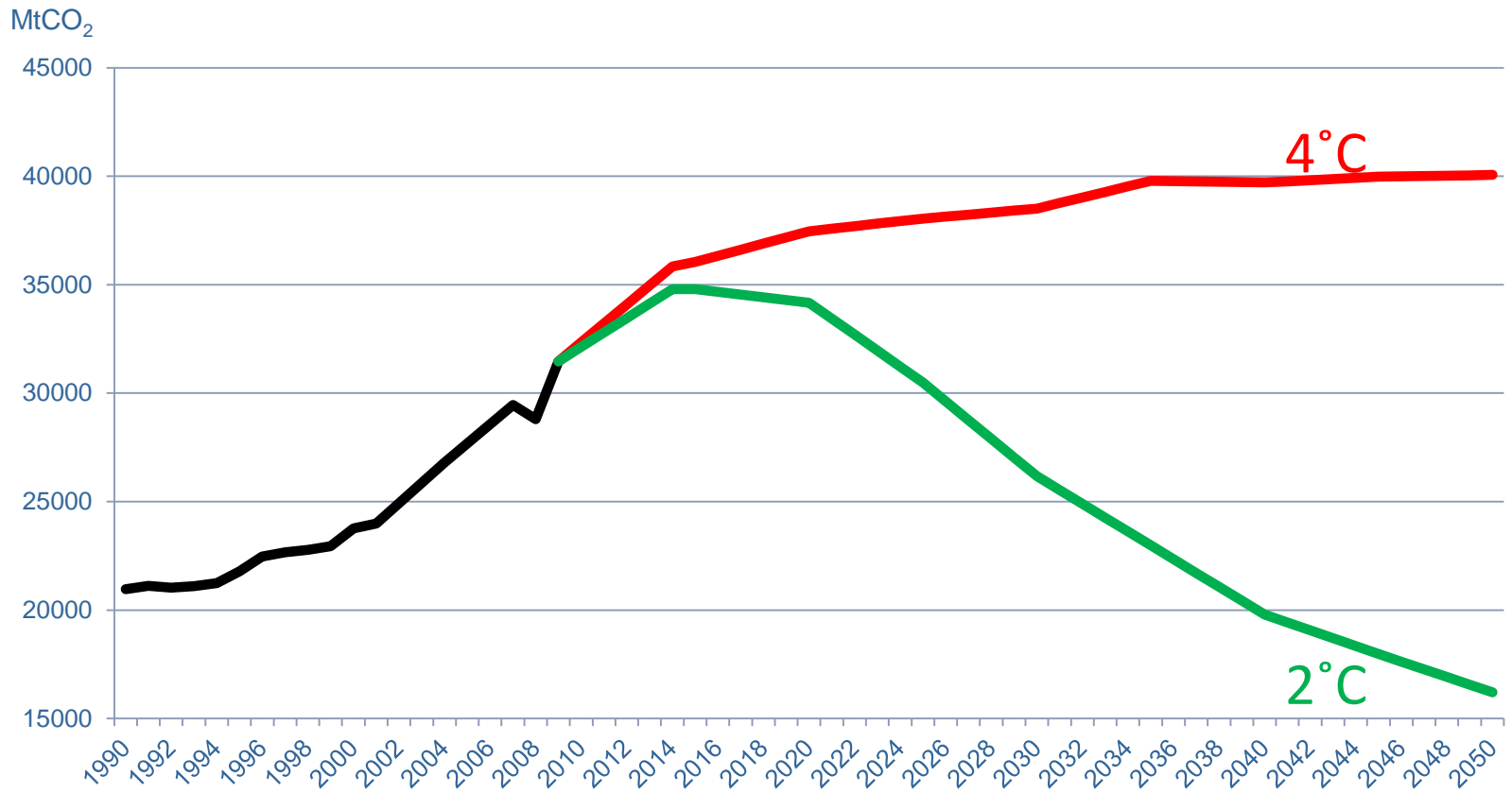
Energy emissions



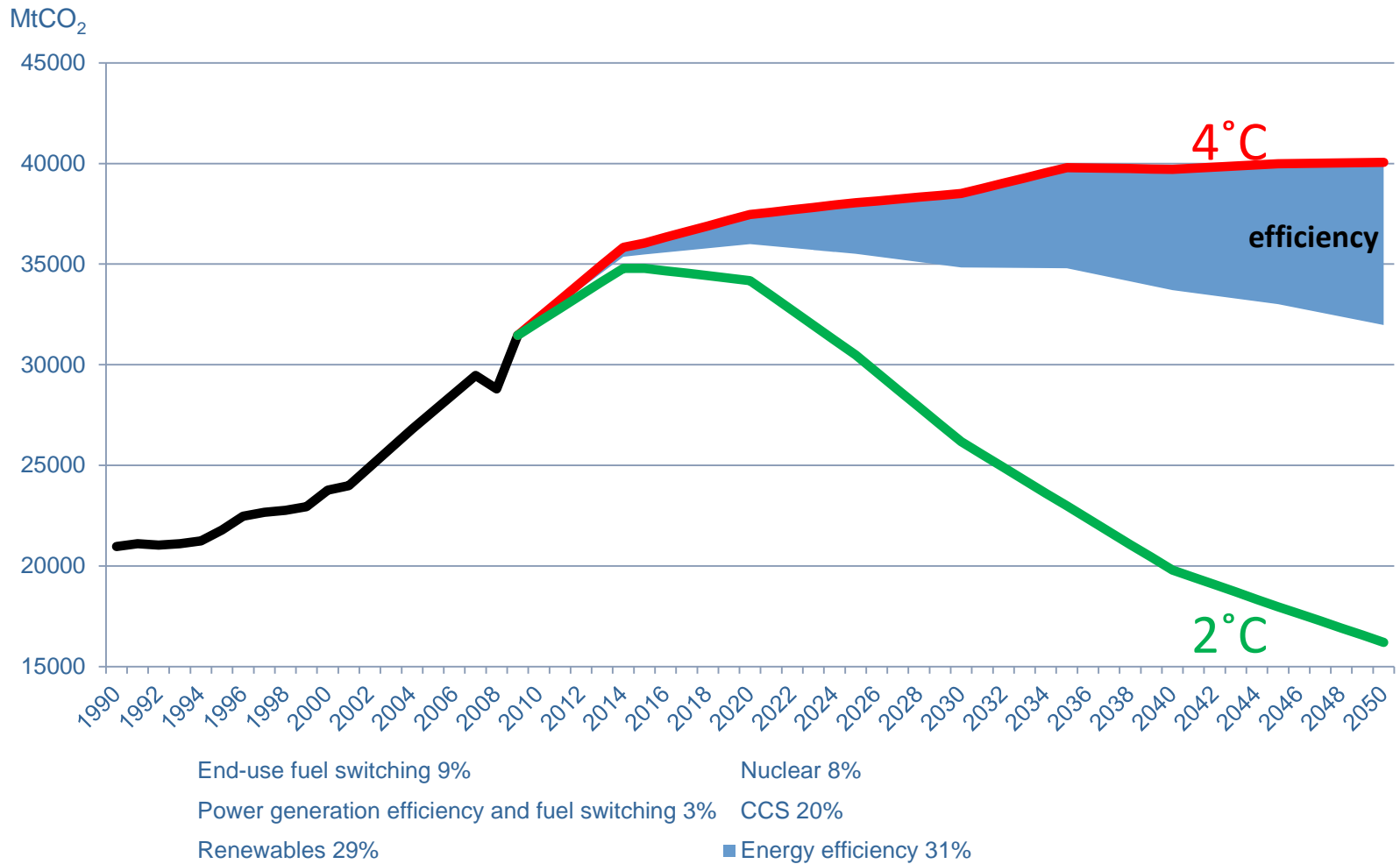
Energy emissions: three keys



Energy efficiency



Energy efficiency



25 EE policy recommendations

Cross-sectoral

1. Energy efficiency data collection and indicators
2. Strategies and action plans
3. Competitive energy markets with appropriate regulation
4. Private investment in energy efficiency
5. Monitoring, enforcement and evaluation of policies and measures

Buildings

6. Mandatory building energy codes and minimum energy performance requirements;
7. Aiming for net zero energy consumption in buildings
8. Improving the energy efficiency of existing buildings
9. Building energy labels or certificates
10. Improved energy performance of building components and systems

Appliances and Equipment

11. Mandatory MEPS and labels for appliances and equipment
12. Test standards and measurement protocols for appliances and equipment
13. Market transformation policies for appliances and equipment

Lighting

14. Phase-out of inefficient lighting products and systems
15. Energy efficient lighting systems

Transport

16. Mandatory vehicle fuel efficiency standards
17. Measures to improve vehicle fuel efficiency
18. Fuel-efficient non-engine components
19. Improved vehicle operational efficiency through Eco-driving and other measures
20. Transport system efficiency

Industry

21. Energy Management in industry
22. High efficiency industrial equipment and systems
23. Energy efficiency services for small and medium enterprises
24. Complementary policies to support industrial energy efficiency

Utilities and end-use

25. Energy Utilities and end-use energy efficiency

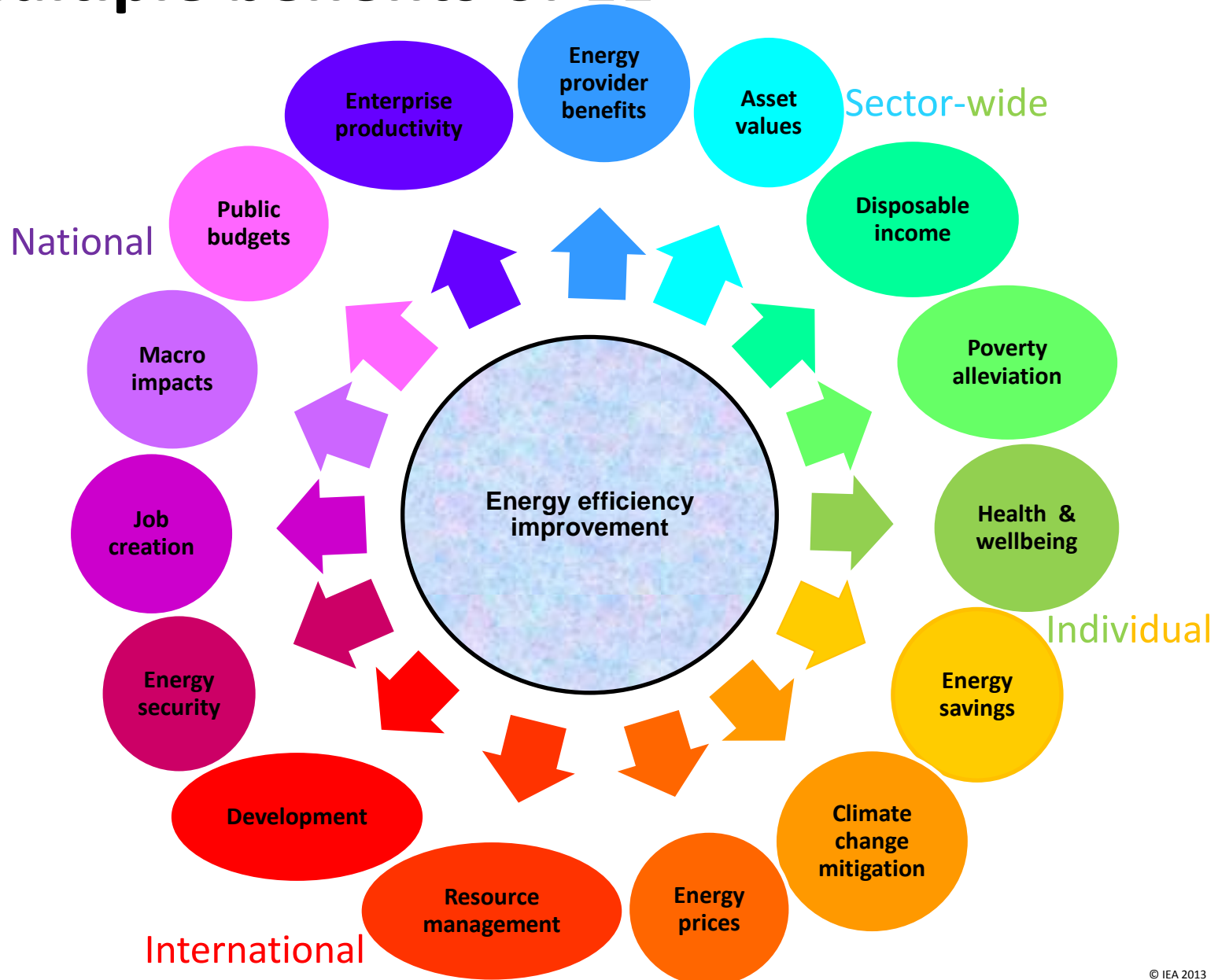


Key to scaling up EE . . .

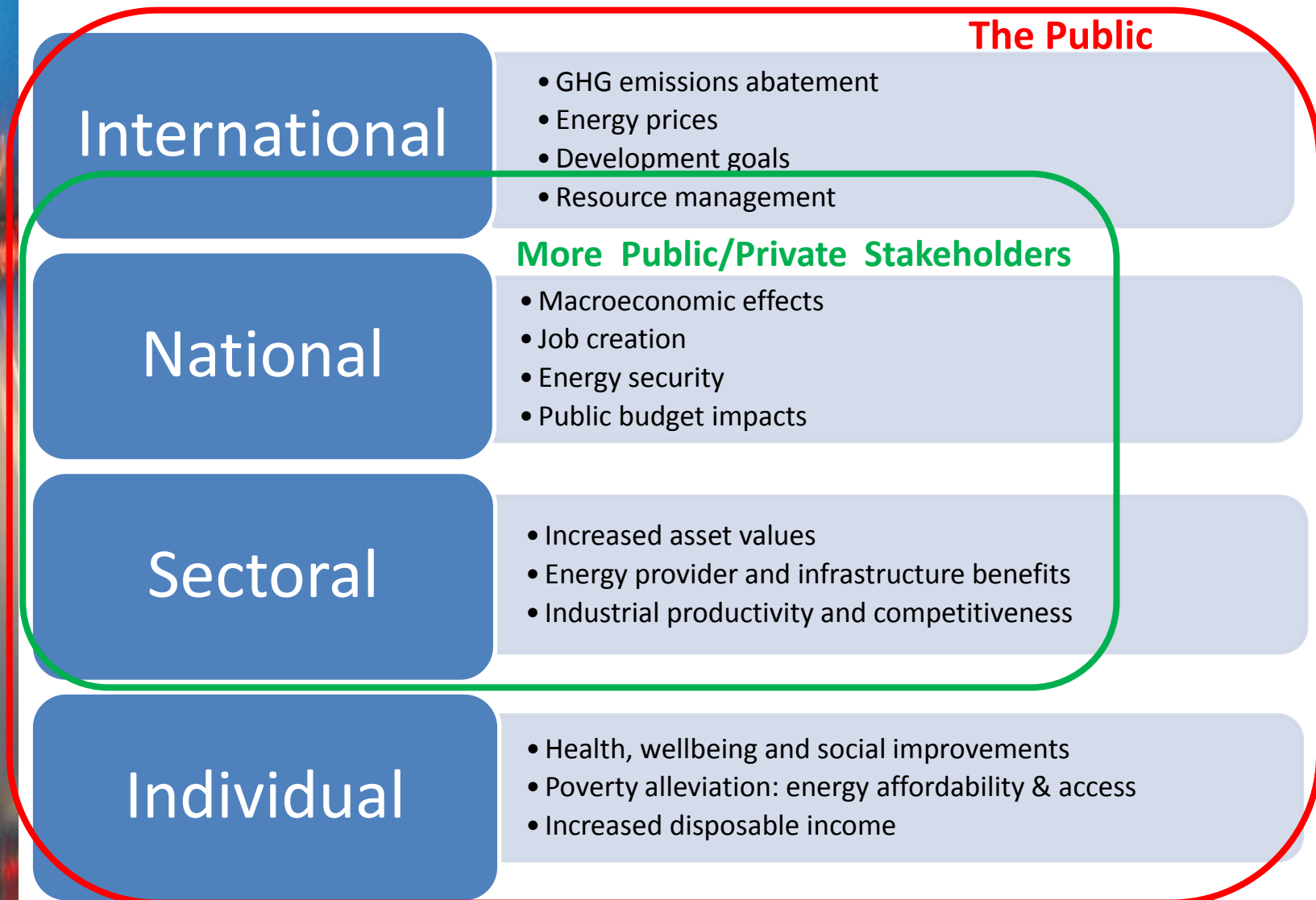
Increase Motivation

- 1. Multiple benefits / multiple stakeholders*

Multiple benefits of EE



Multiple benefits at multiple levels



Key to scaling up EE . . .

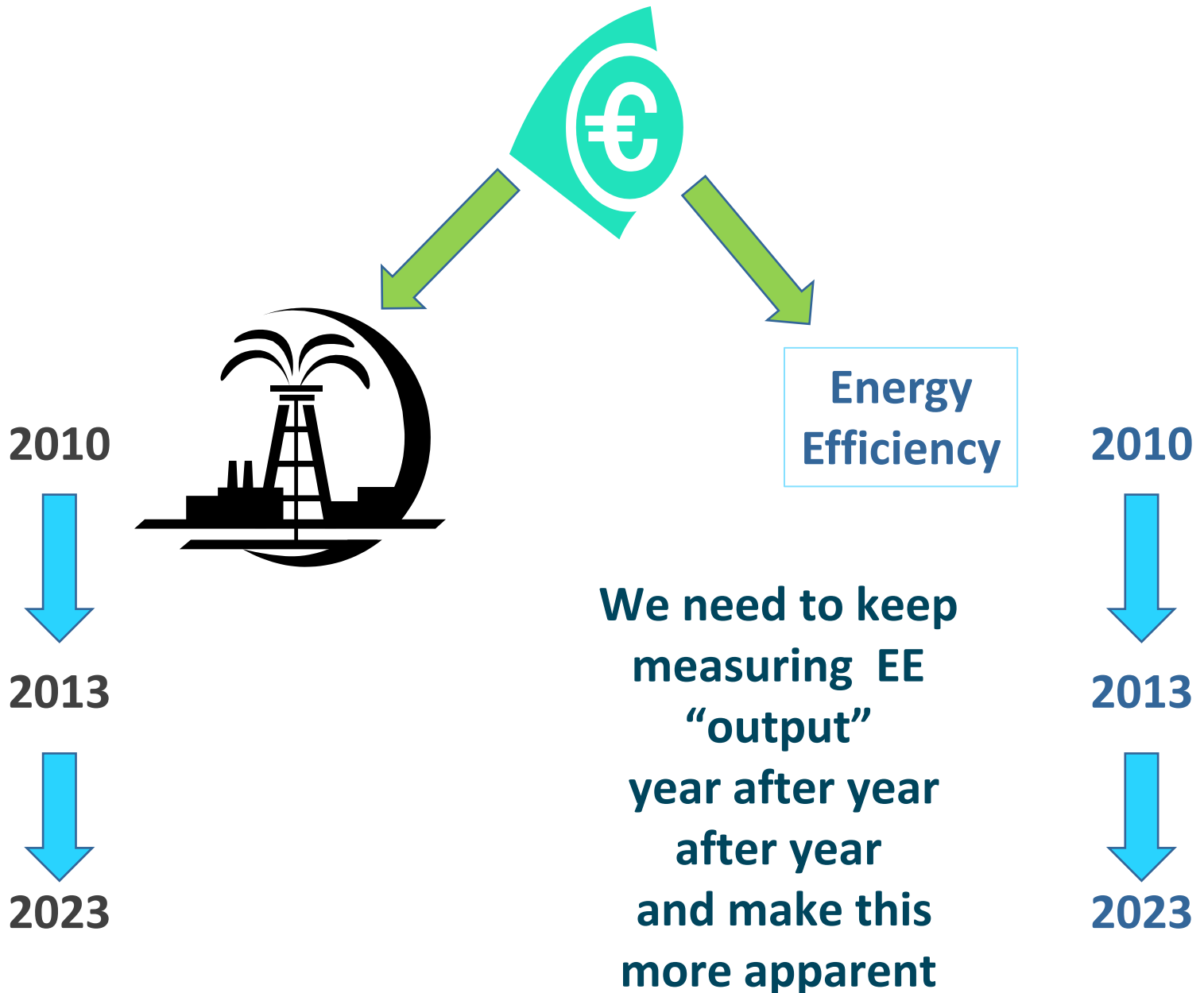
Increase Motivation

2. Repositioning EE in the 'fuels competition'

IEA fuel market reports



EE keeps producing . . .



Energy efficiency is . . .



Microsoft.com



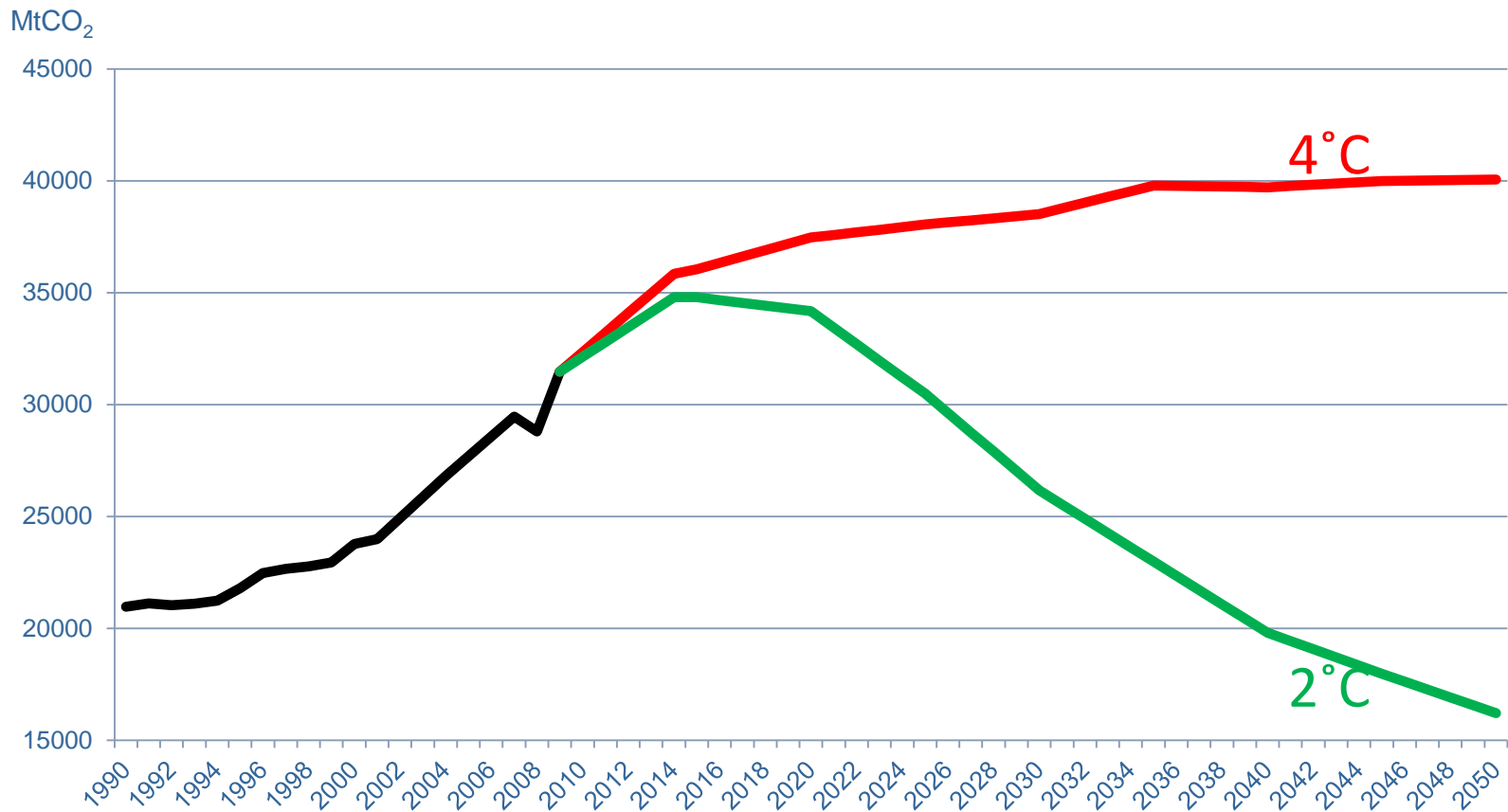
**a domestic fuel
(‘the home-grown fuel’)**



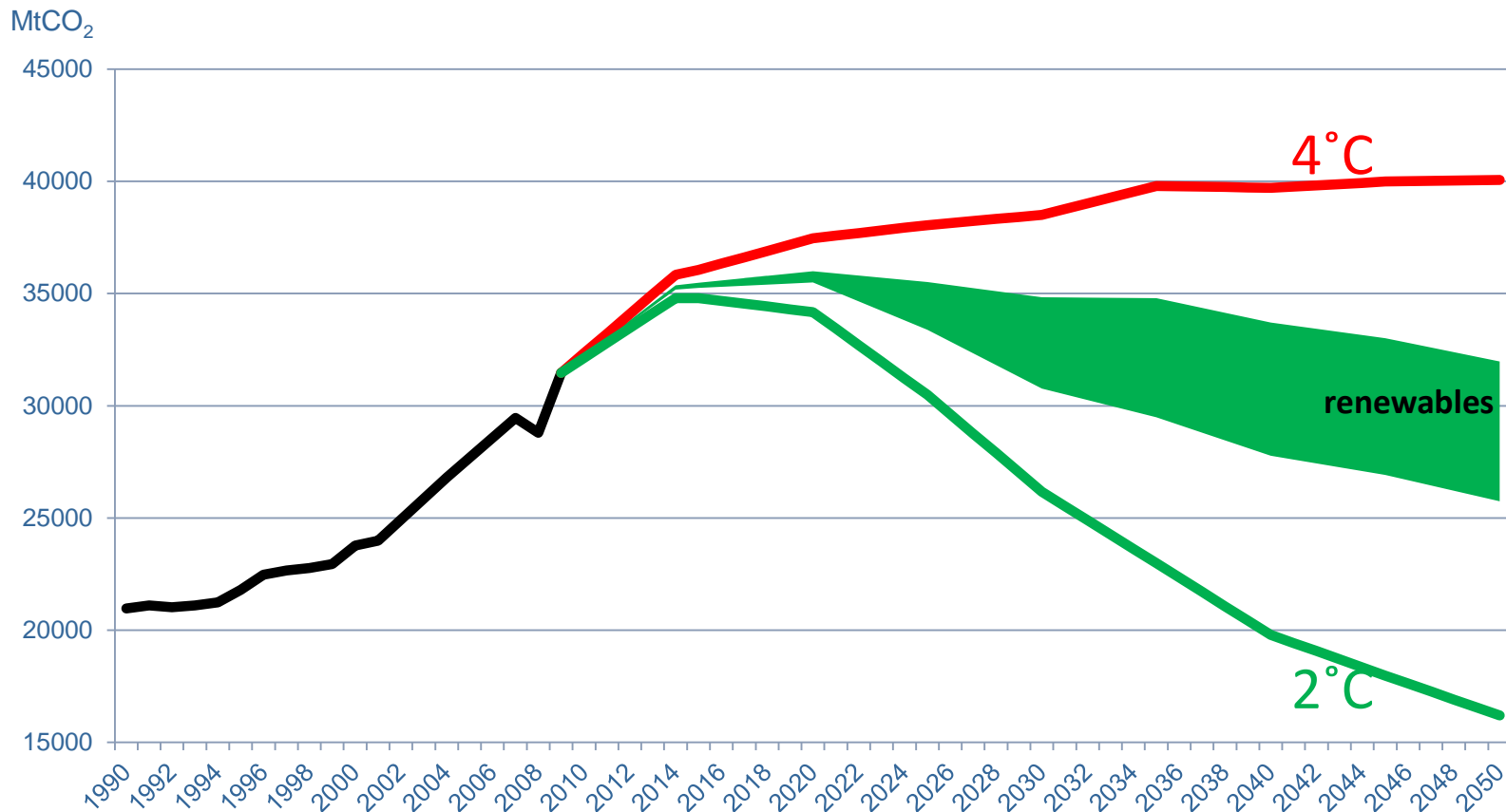
Renewables



Renewables

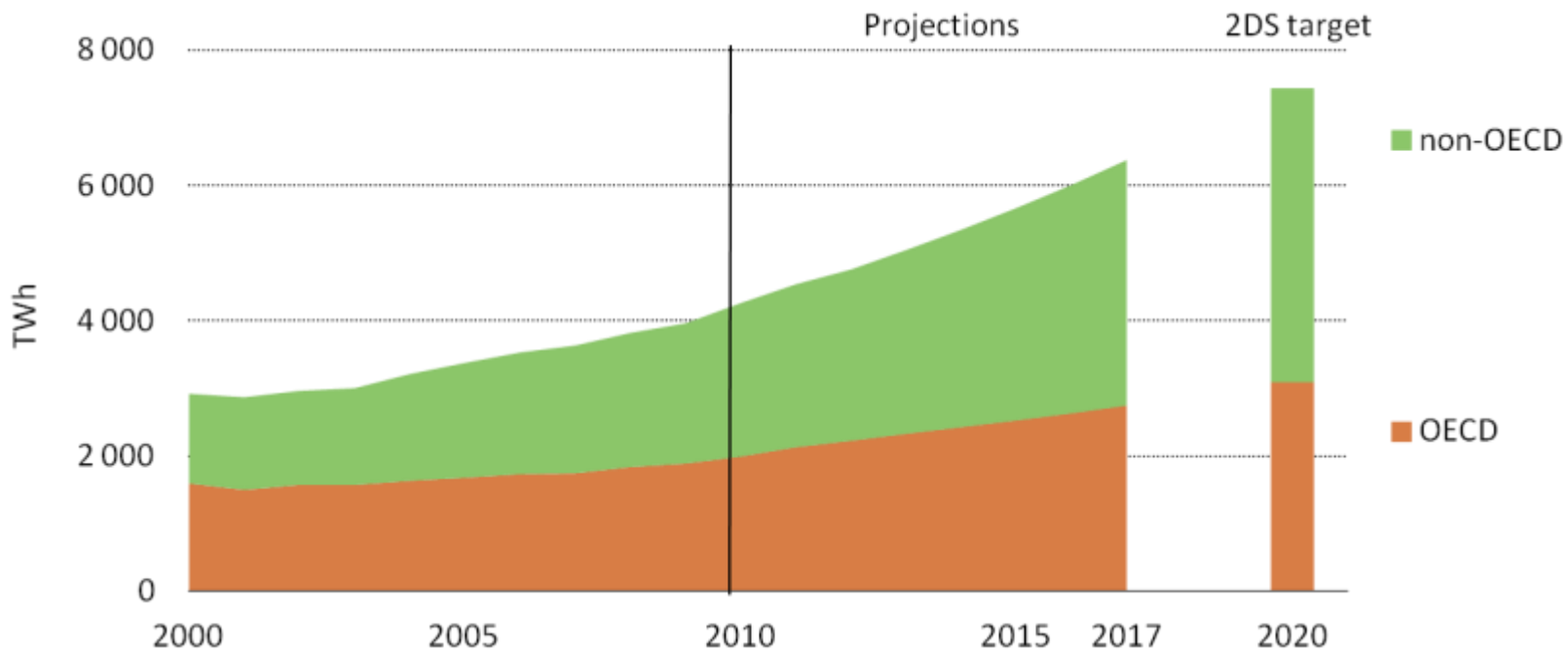


Renewables



- End-use fuel switching 9%
- Power generation efficiency and fuel switching 3%
- Renewables 29%
- Nuclear 8%
- CCS 20%
- Energy efficiency 31%

Renewable power doing well

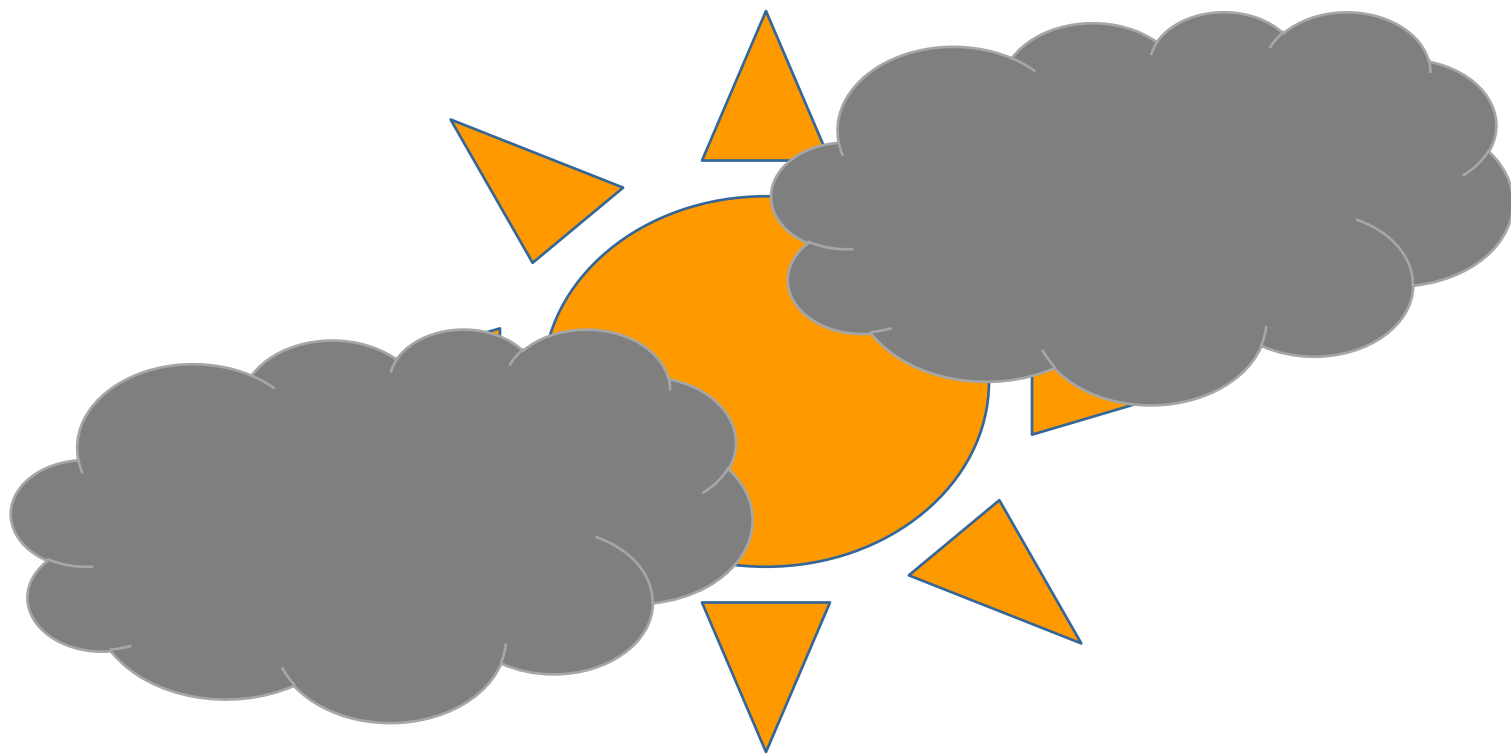


42%

Solar PV capacity growth 2012

19%

Wind capacity growth 2012




Some uncertainties/challenges

- Globally, investment in non-hydro renewables fell by 11% in 2012
- Policy uncertainty and “stop-and-go” decisions
- Incorporation of large shares of variable renewable generation into energy systems
- Different countries present different opportunities
- Further RD&D for certain technologies

**Outlook remains relatively robust
- but vigilance/perseverance required**

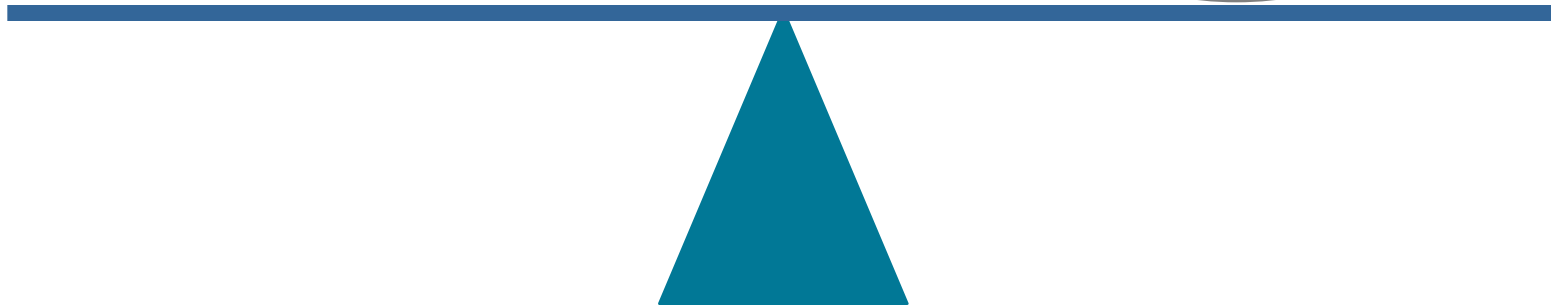
Renewables . . . and the rest

A large green circle containing text, representing the weight of Renewables on a balance scale.

RENEWABLES
420 GW installed
between
2000 and 2011

A large grey circle containing text, representing the weight of Coal on a balance scale.

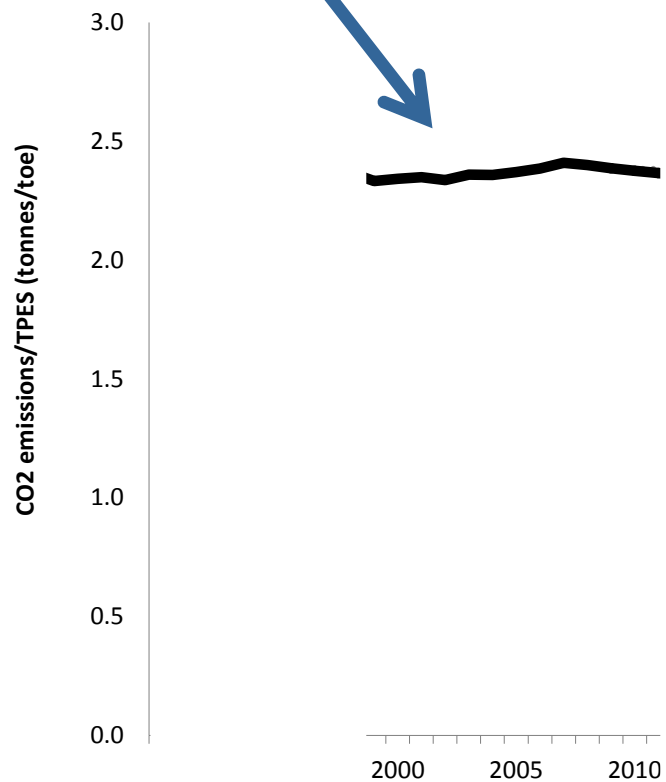
COAL
716 GW installed
between
2000 and 2011



Energy Sector Carbon Intensity Index (ESCII)

- ESCII measures the carbon intensity of our energy production and use
- in tons of CO₂ per *ton of oil equivalent* (tCO₂/toe)
- How 'clean' is our energy use

ESCII: The story over time

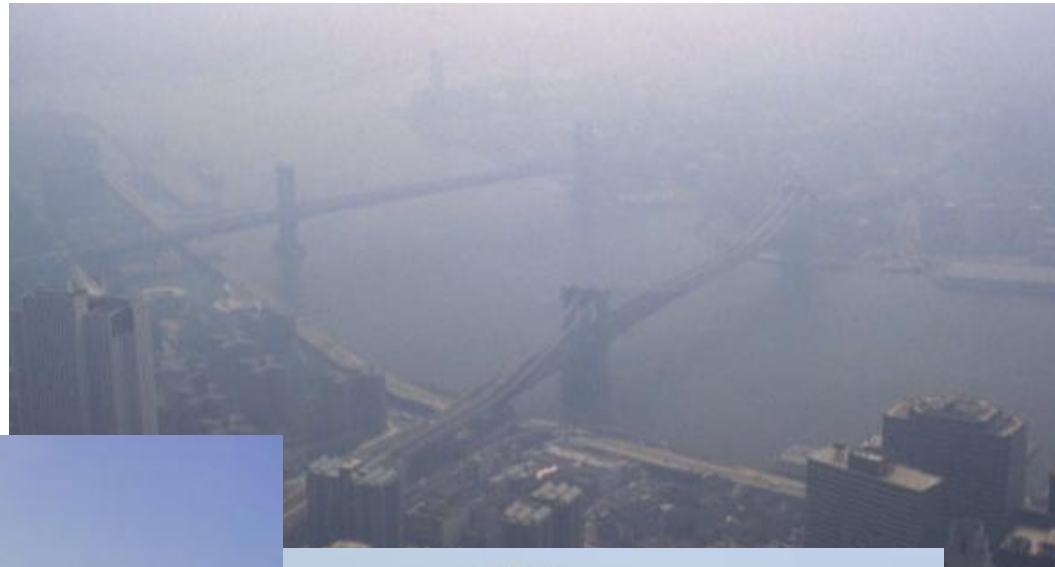


Over the long-term

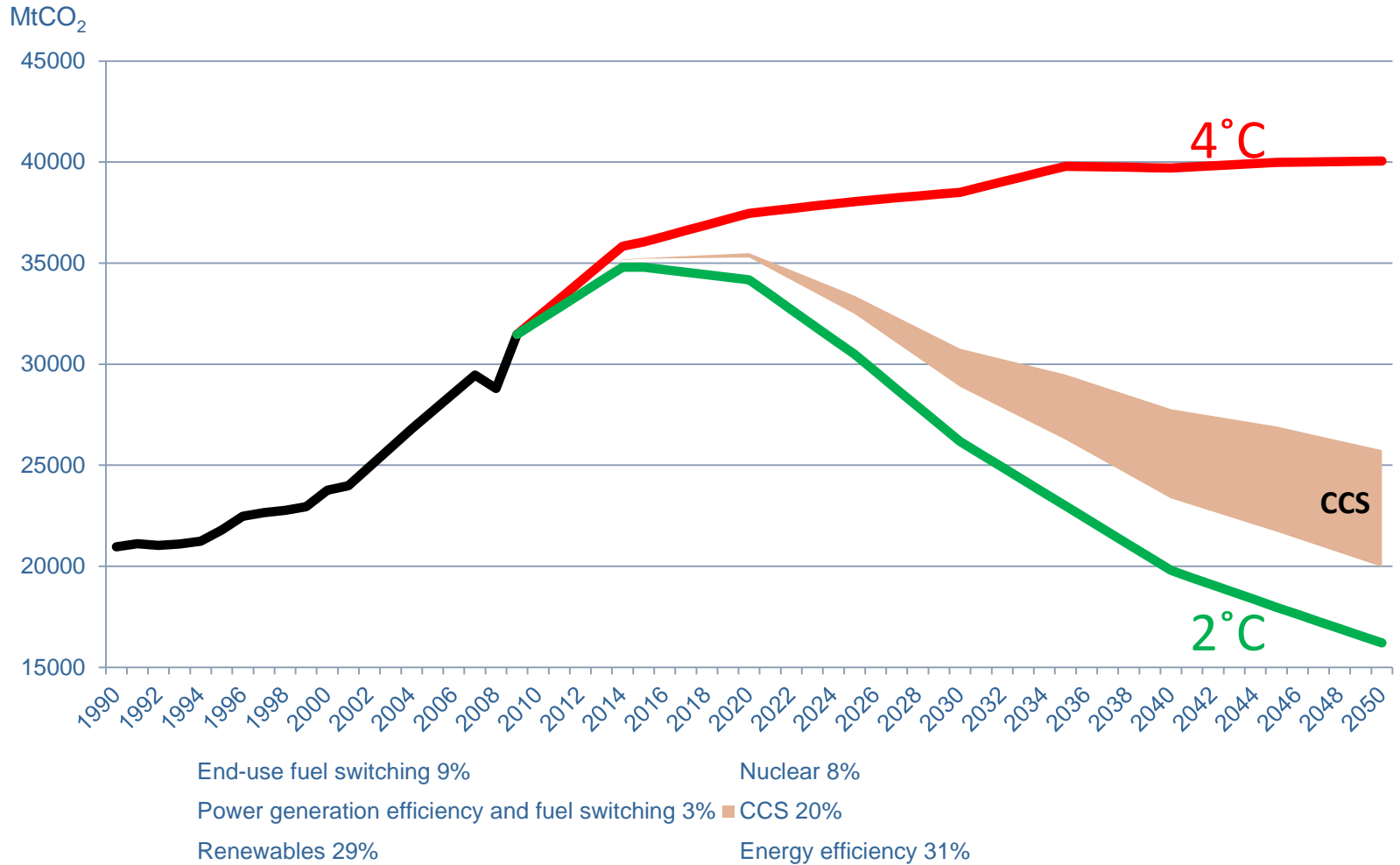
- Renewables + energy efficiency insufficient



The fossil fuels agenda . . .



Carbon capture and storage



Cooperative initiatives: Part of the 'How'

- Share experience
- Share knowledge
- See what is possible
- Create new possibilities
- Improve our approaches

... increase impact

... support greater ambition

Concluding thoughts . . .

The marathon has already begun...

Thank You

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