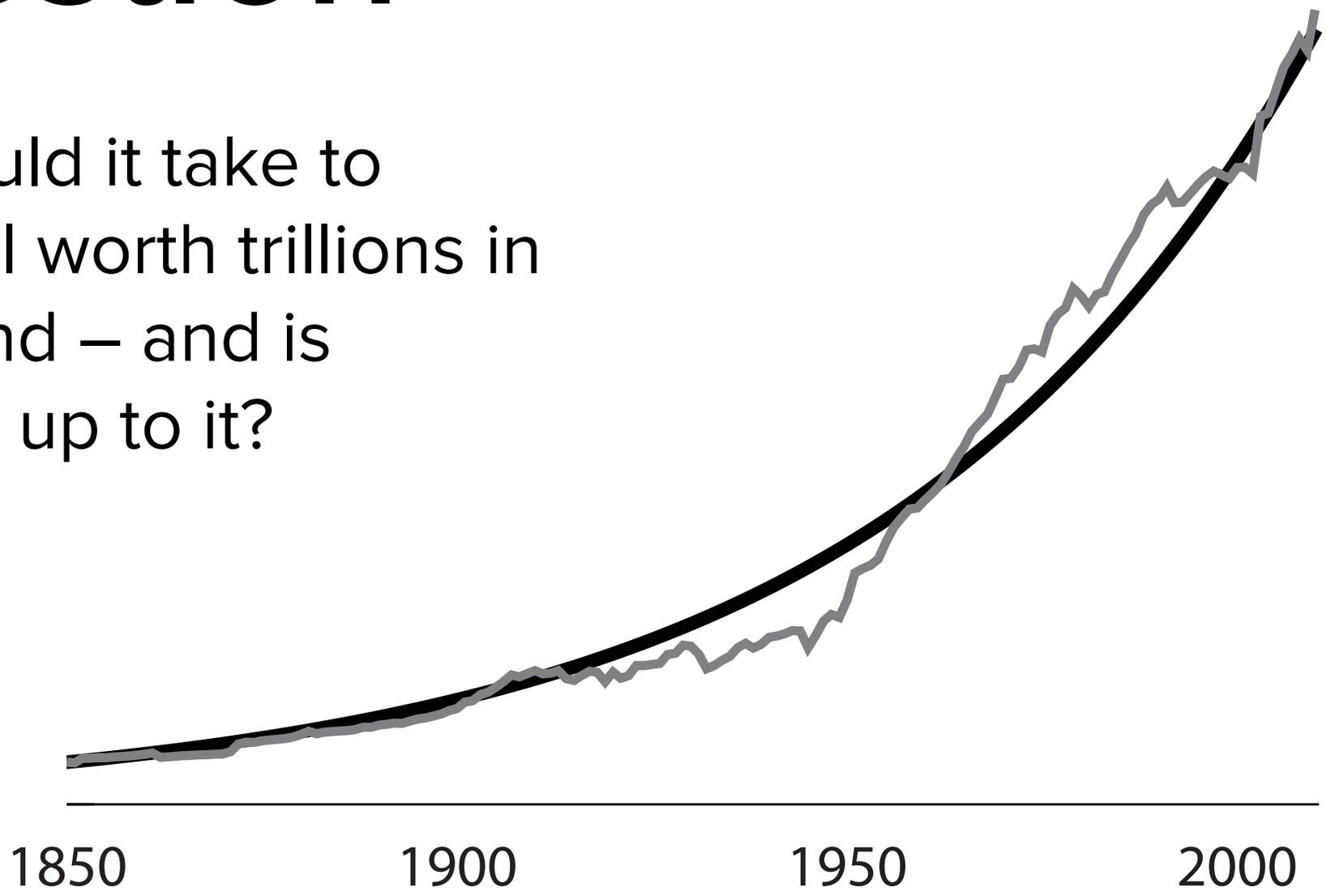
The Burning Question

What would it take to leave fuel worth trillions in the ground – and is humanity up to it?



About me

Author

Journalist (Guardian/Kiln)

UCL

All charts and facts from The Burning Question by Duncan Clark and Mike Berners-Lee (Profile Books,2013)

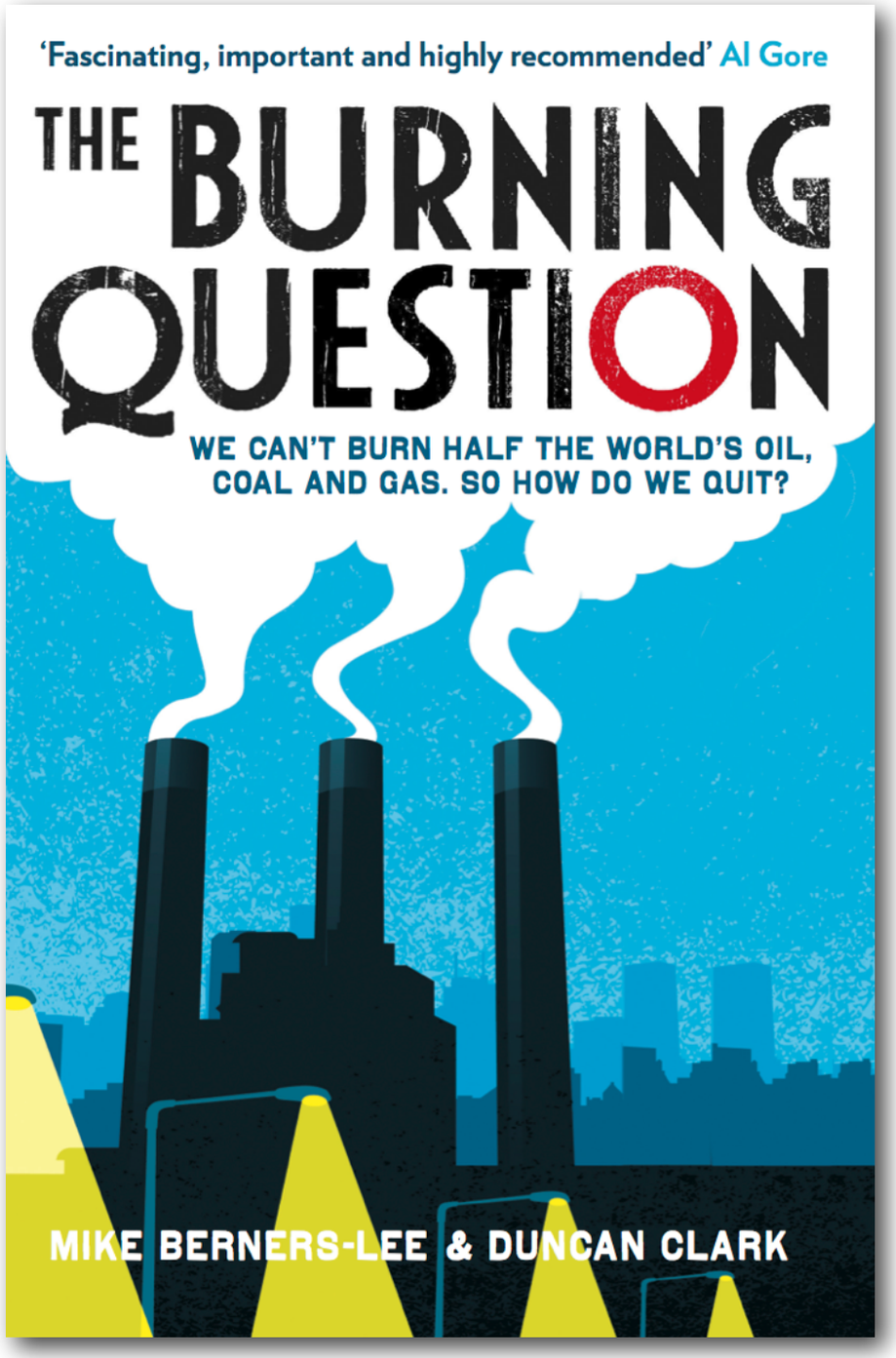
The book – and the talk

1 – Where are we at with climate change?

2 – What solutions do and don't work?

3 – What are the barriers to action?

4 – What should we do?



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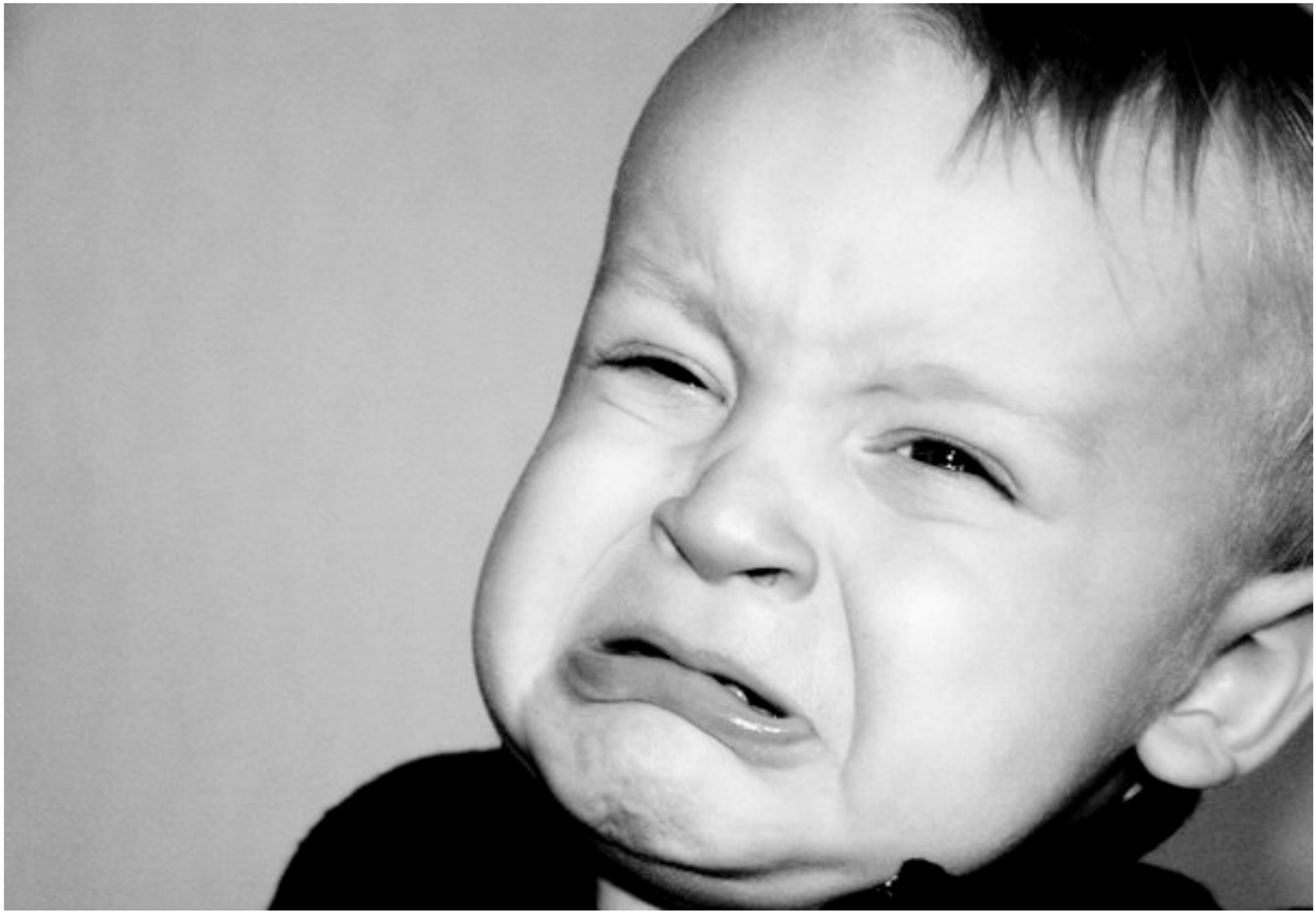

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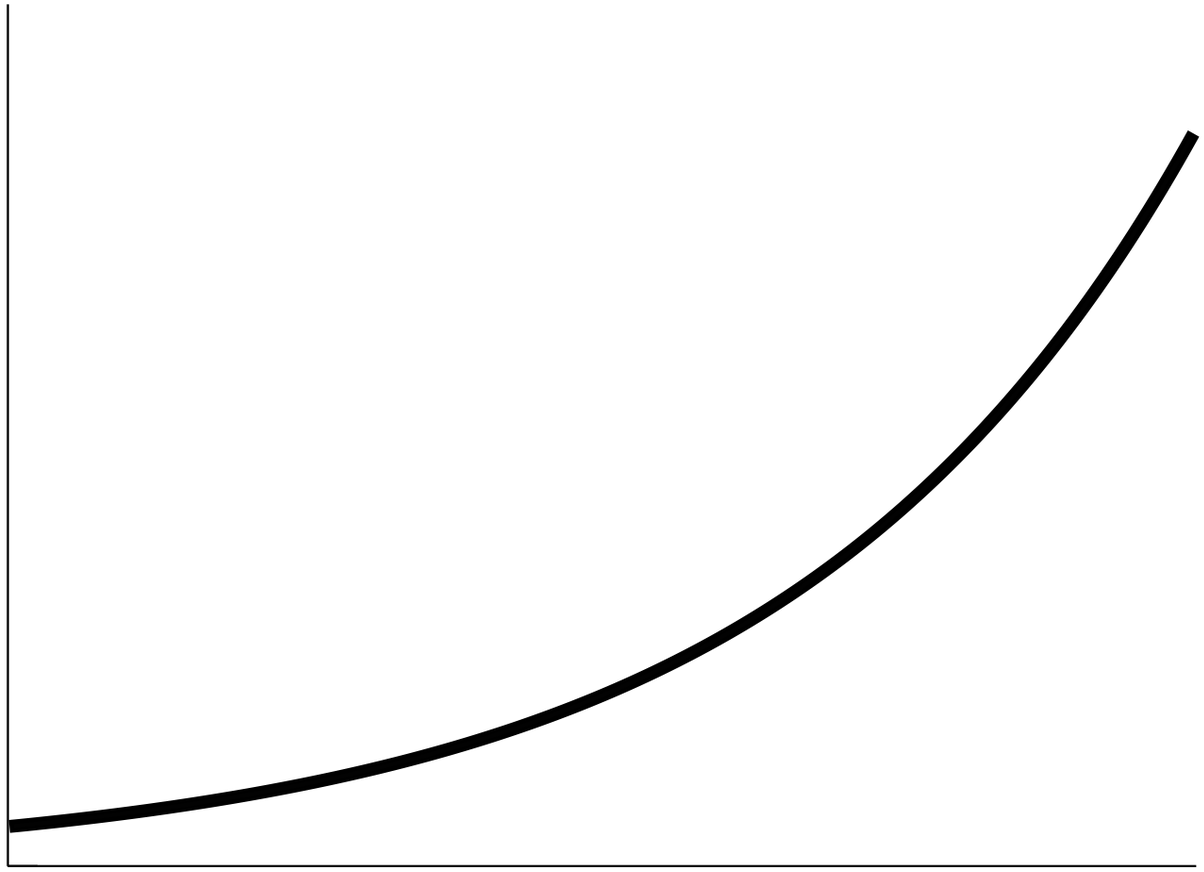
How are we doing solving climate change?

All charts and facts from The Burning Question by Duncan Clark and Mike Berners-Lee (Profile Books,2013)

Exponential curve



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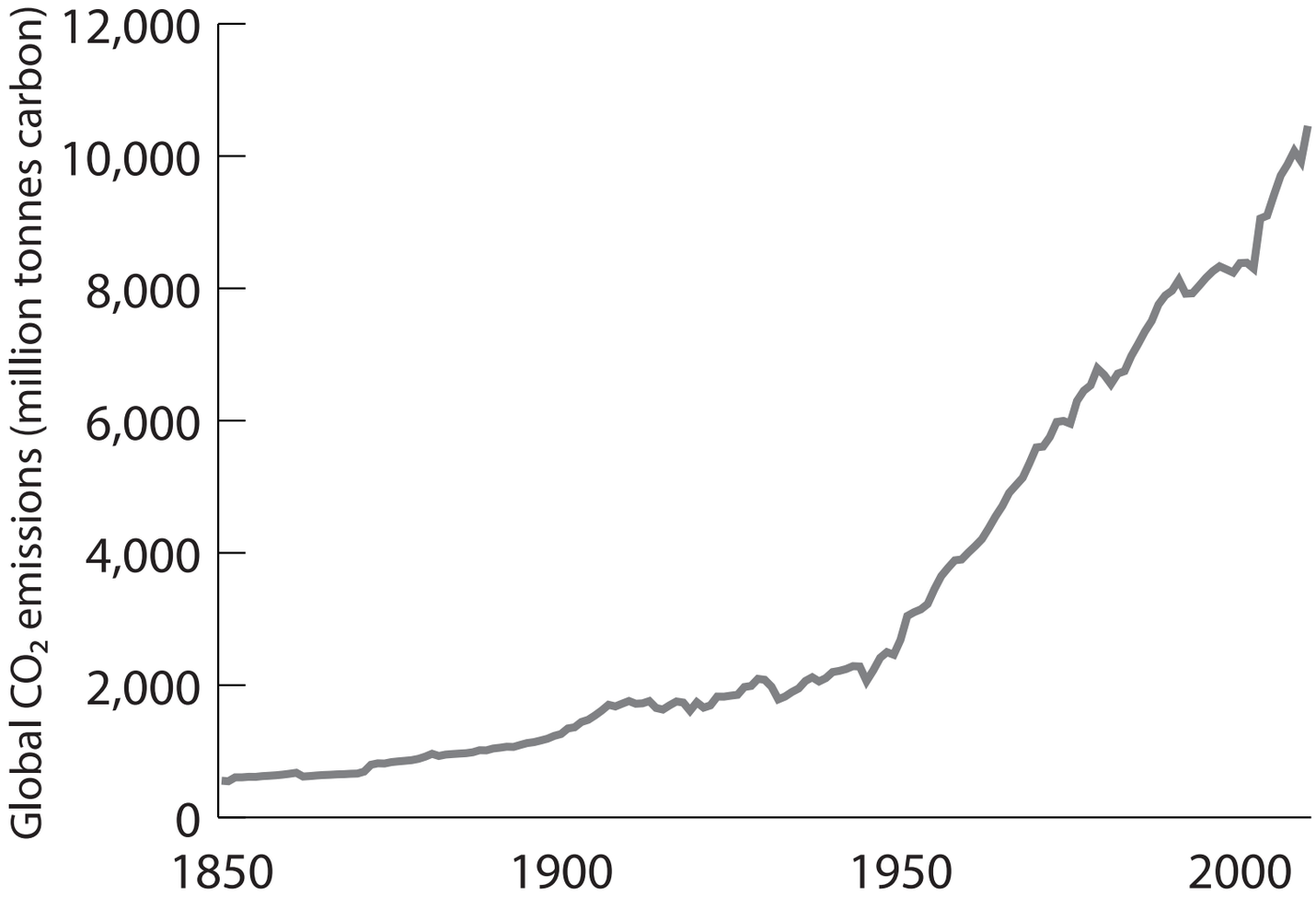
Total CO2 emissions since 1850



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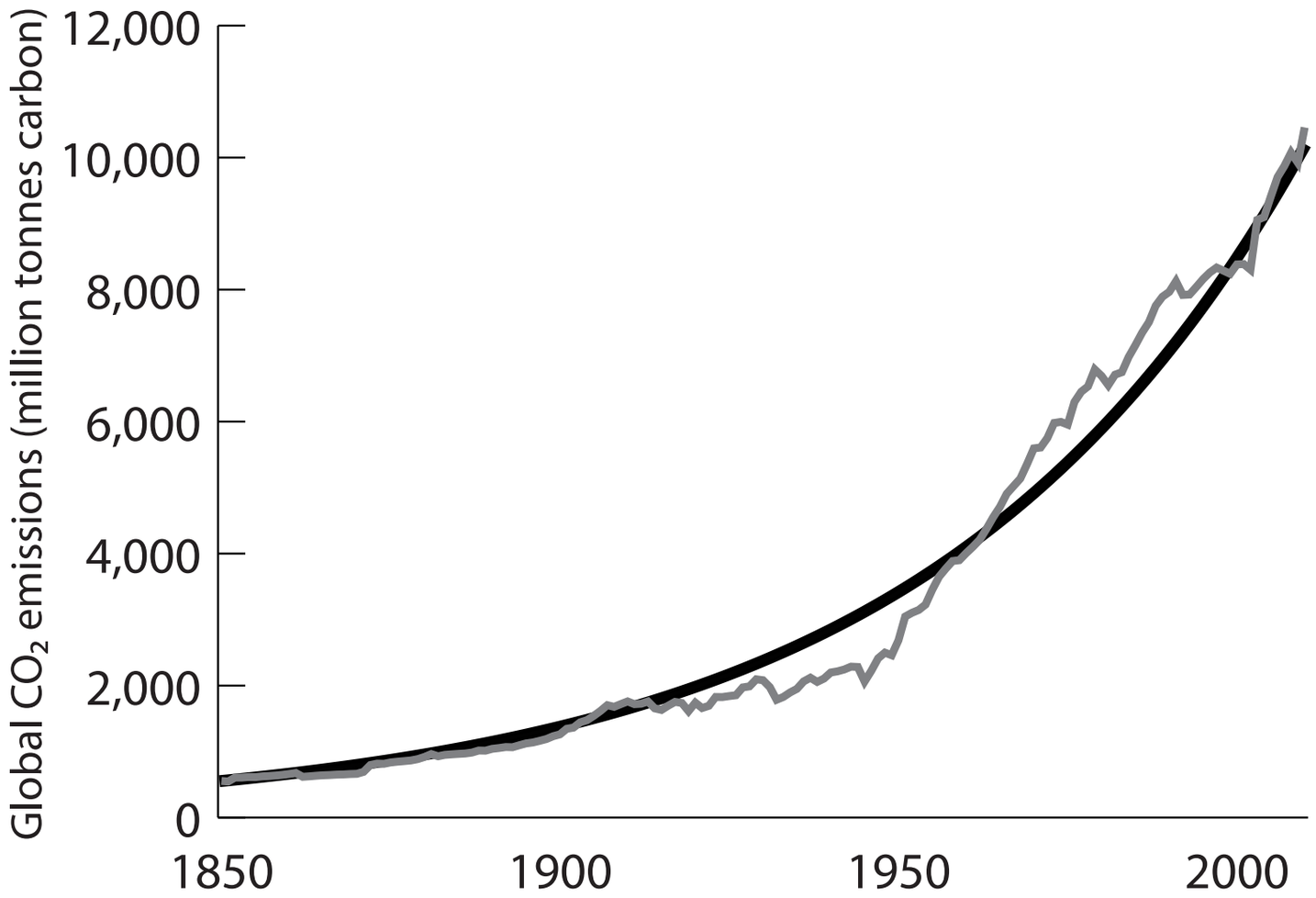

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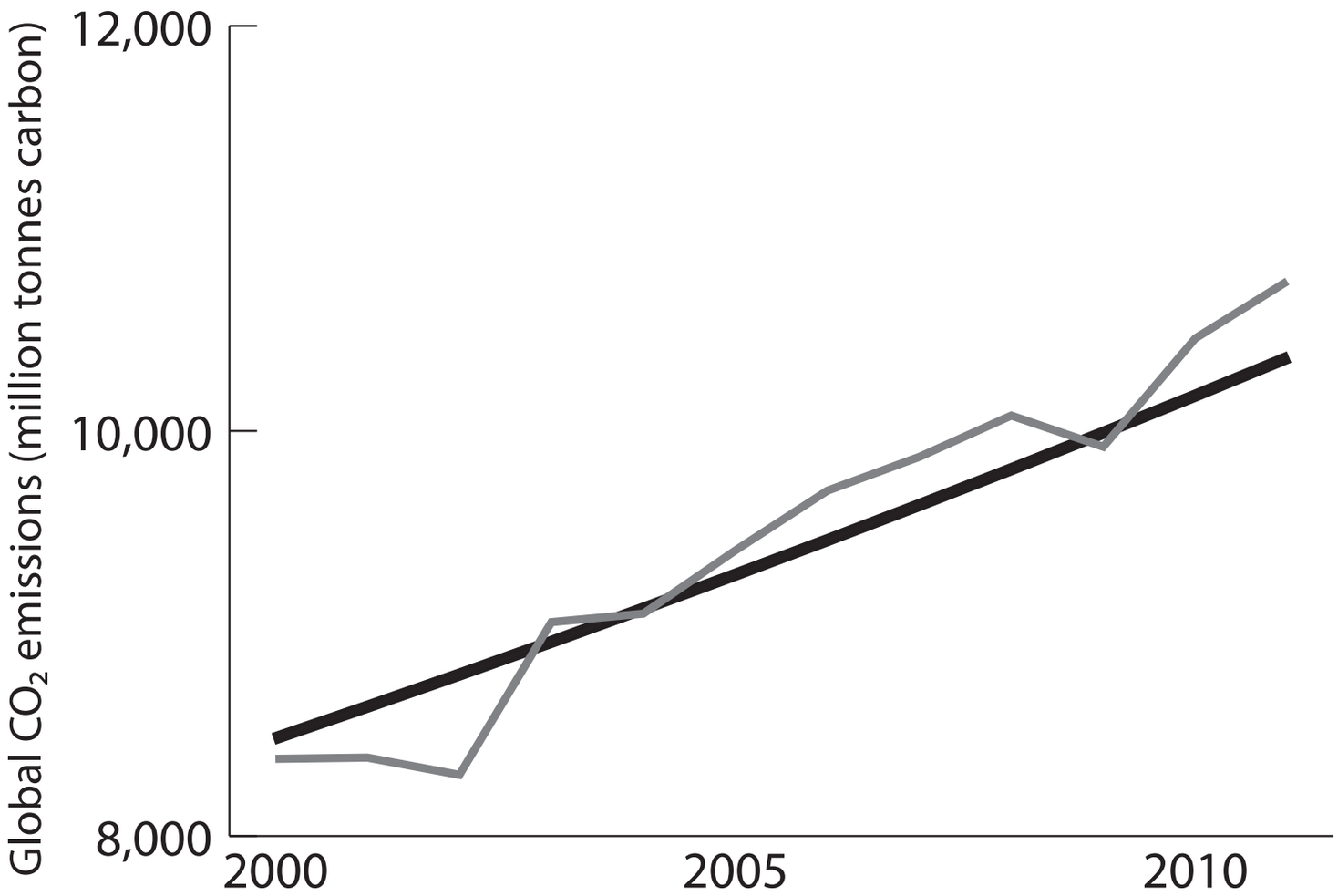
Total CO2 emissions since 2000



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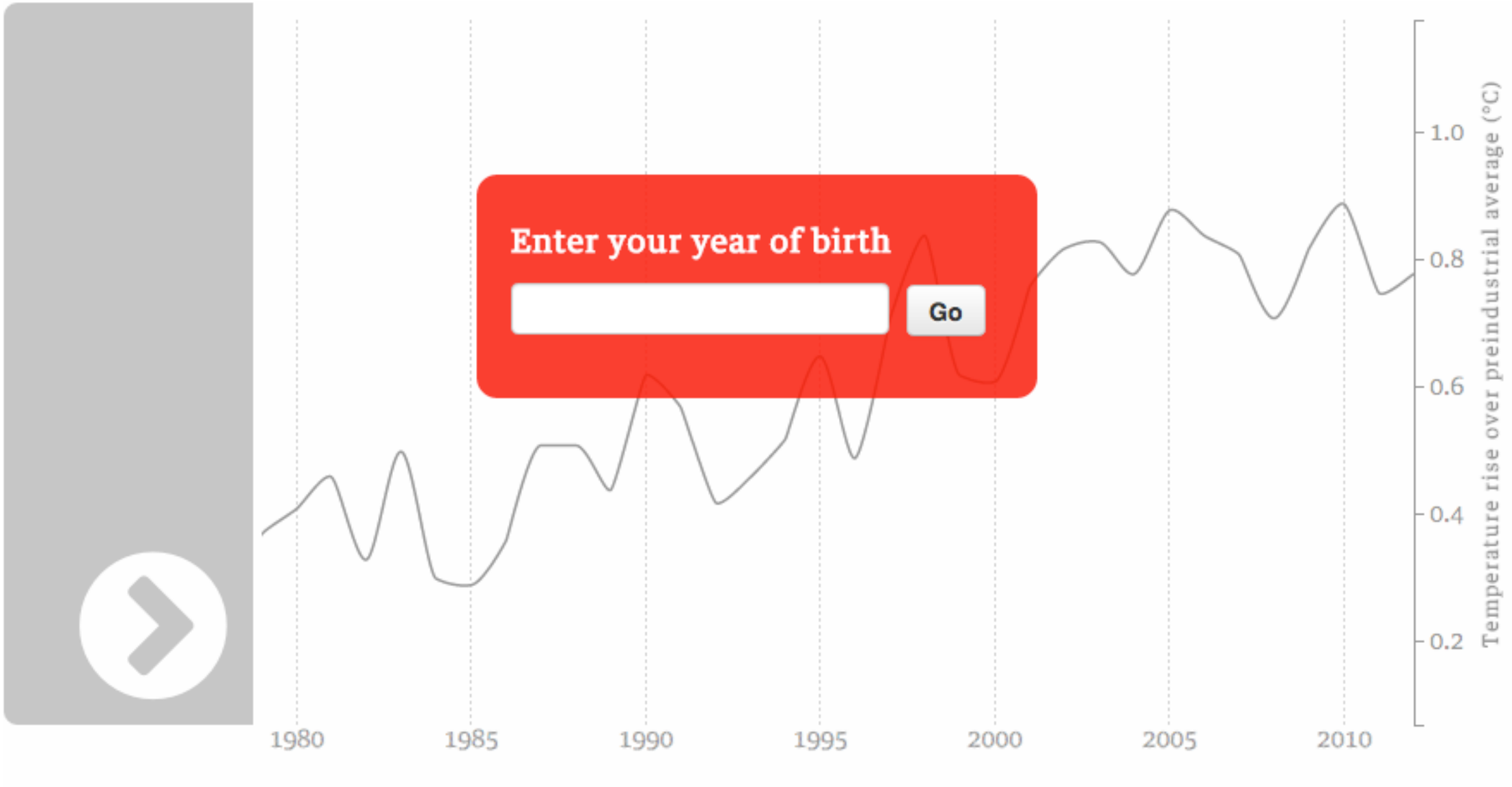
What if we stay on that curve?



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4

degrees Celsius

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= temperature increase since the Last Glacial Maximum

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So instead we're aiming for

2

degrees Celsius

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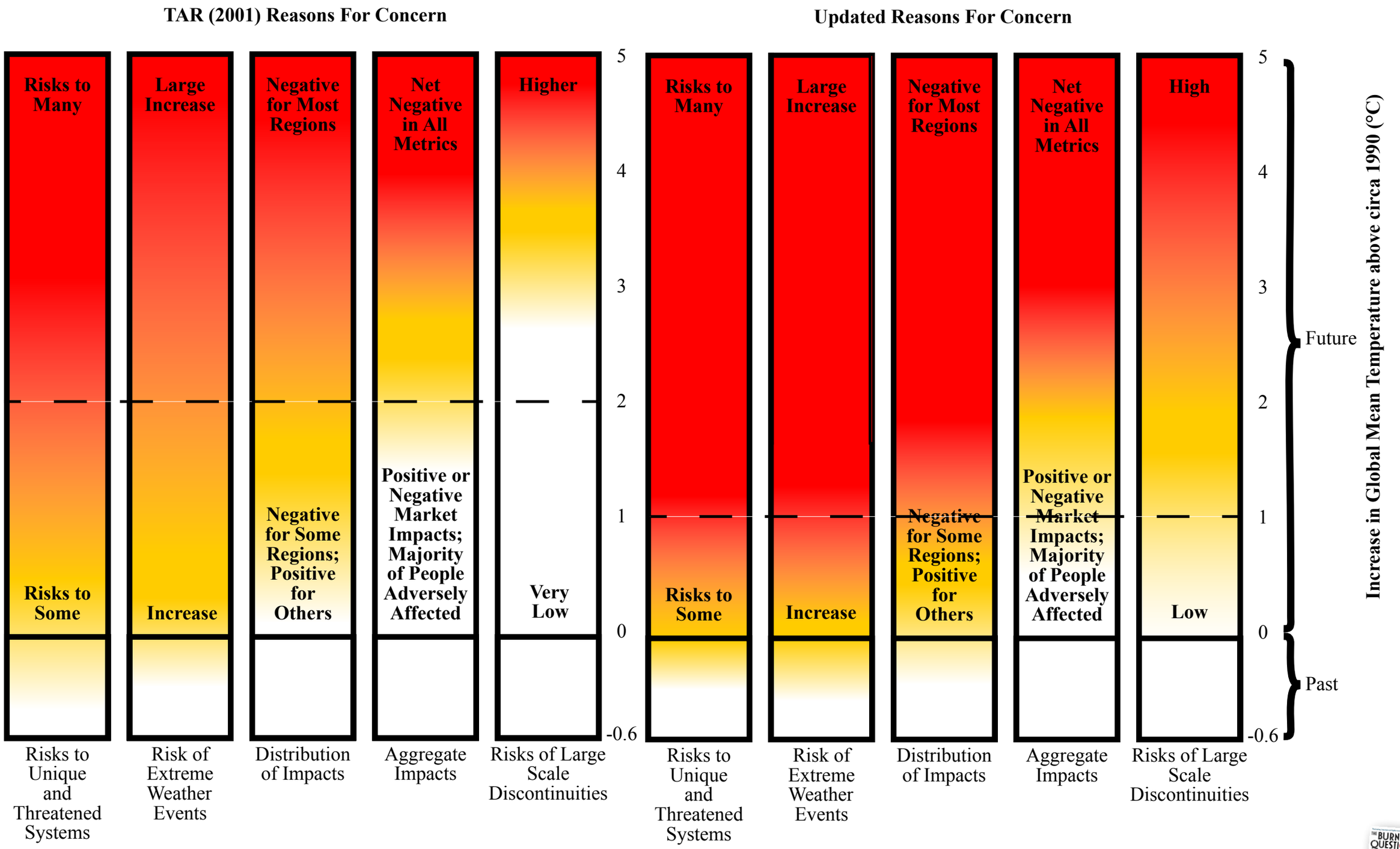
...which is better but not “safe”



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The remaining budget

Emissions so far

2000
billion tonnes of CO2

Future emissions

1600
billion tonnes of CO2

Coin-flip scenario
(50% chance of success)

700
billion tonnes of CO2

Double coin-flip scenario
(75% chance of success)

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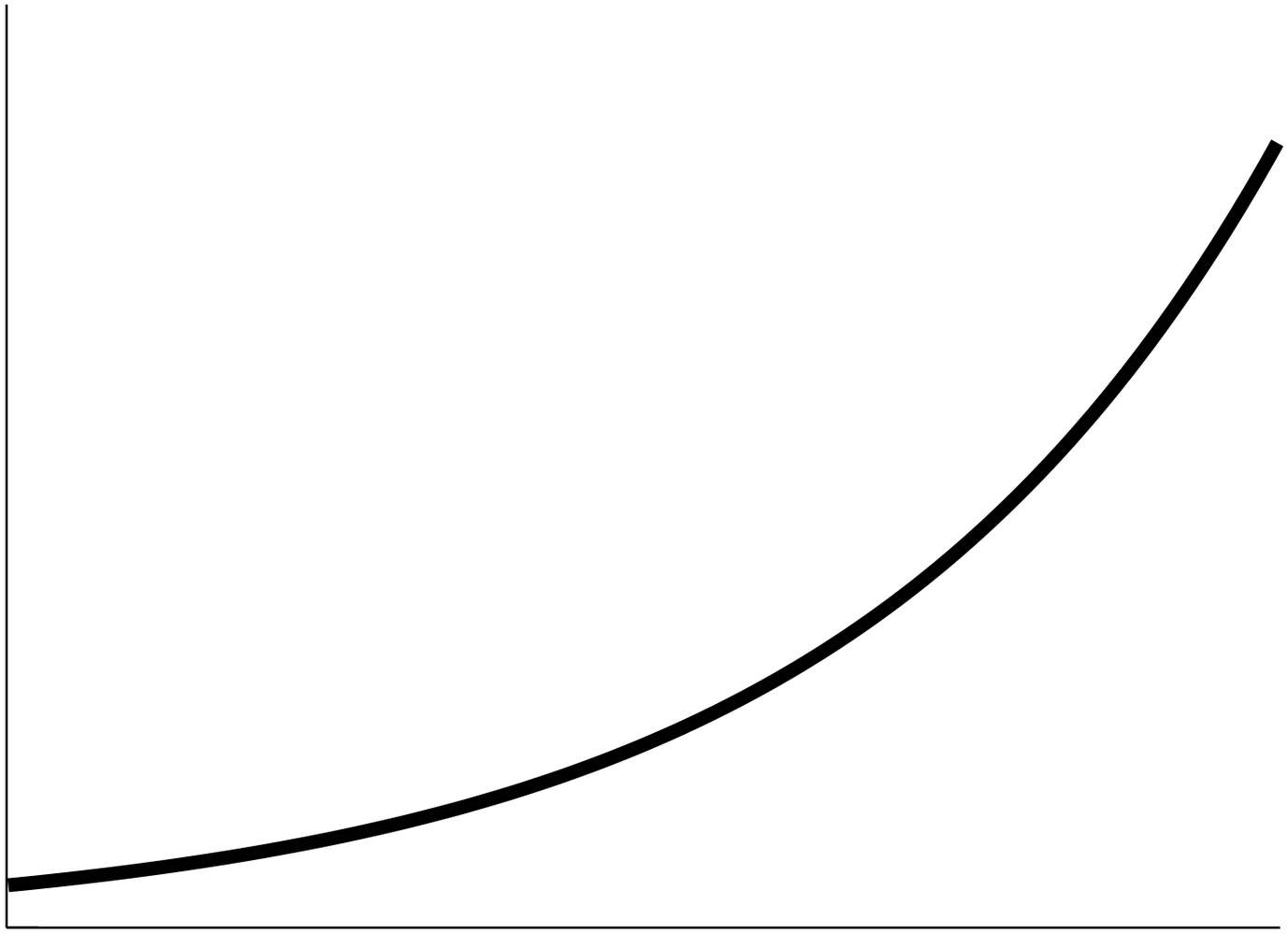
Total CO2 emissions since 1850



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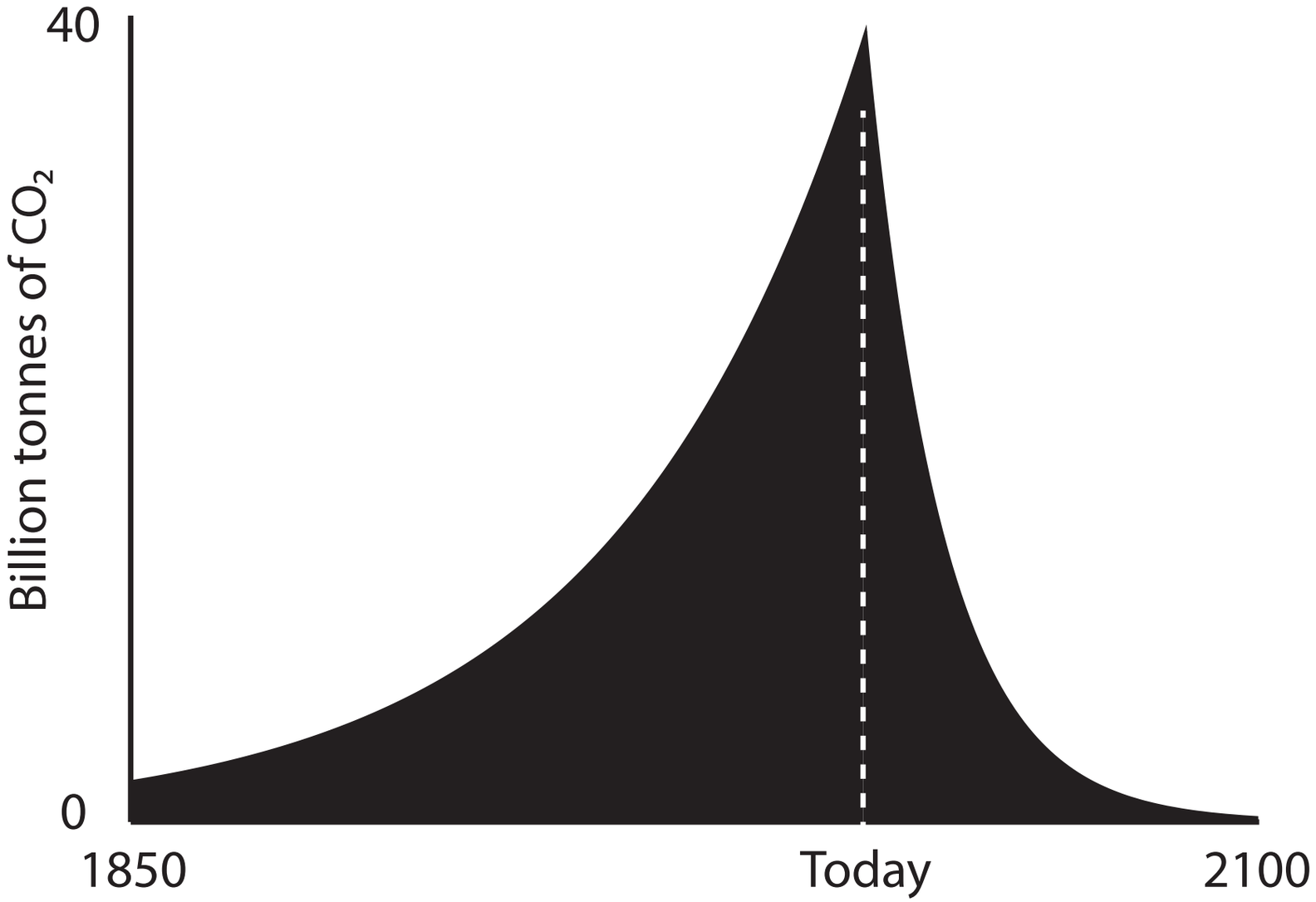

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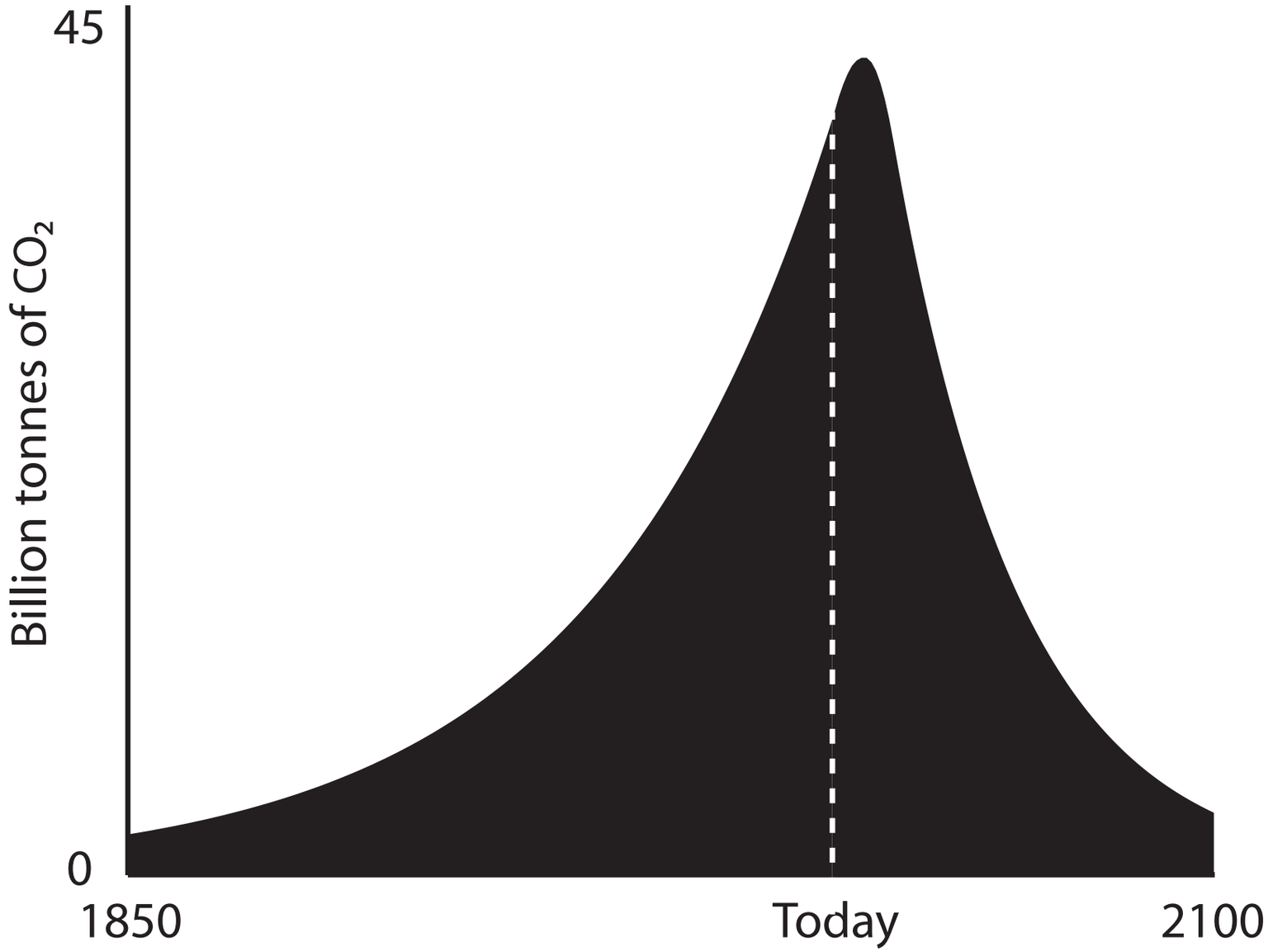

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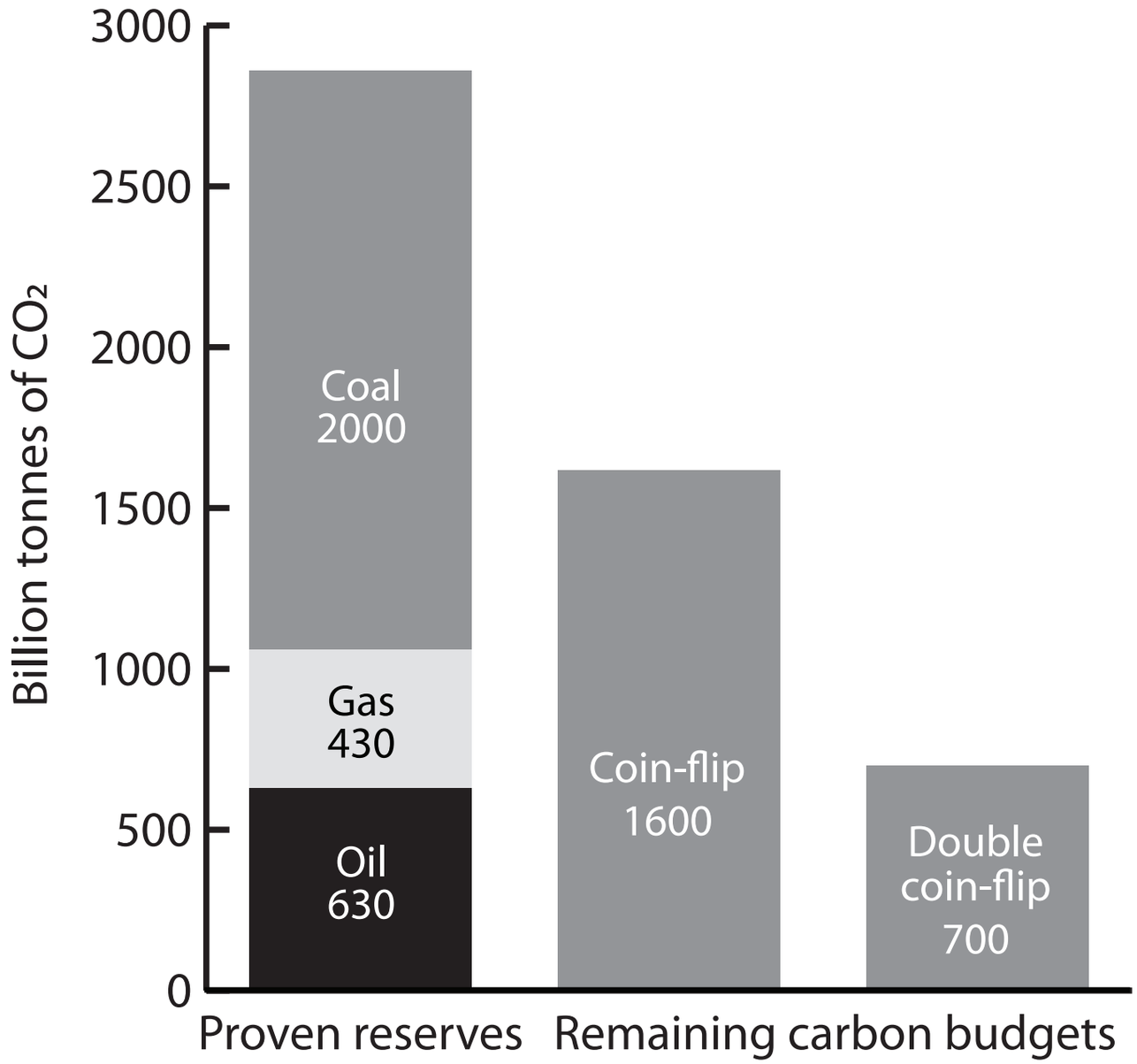
Might we run out of fuel?



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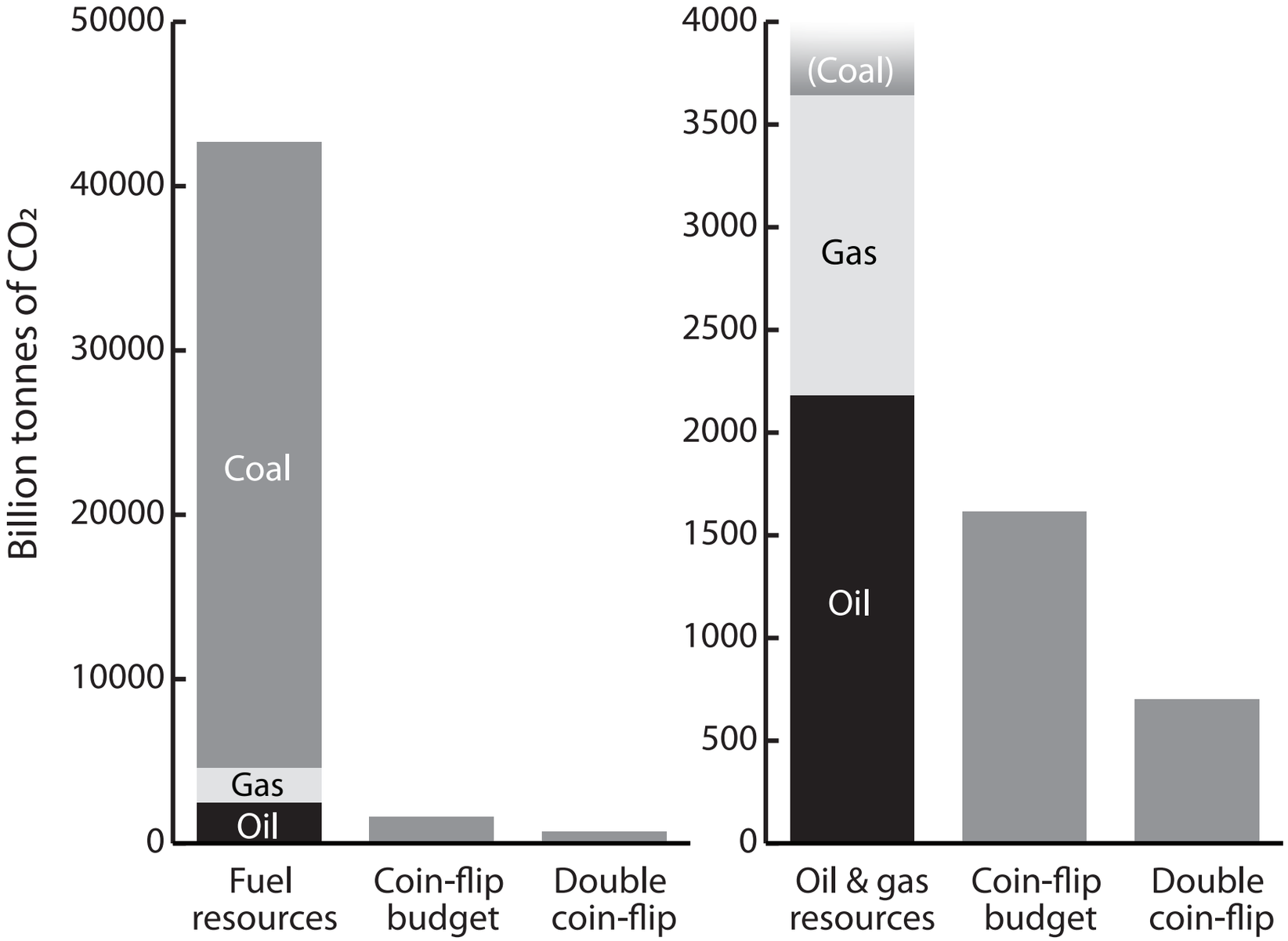

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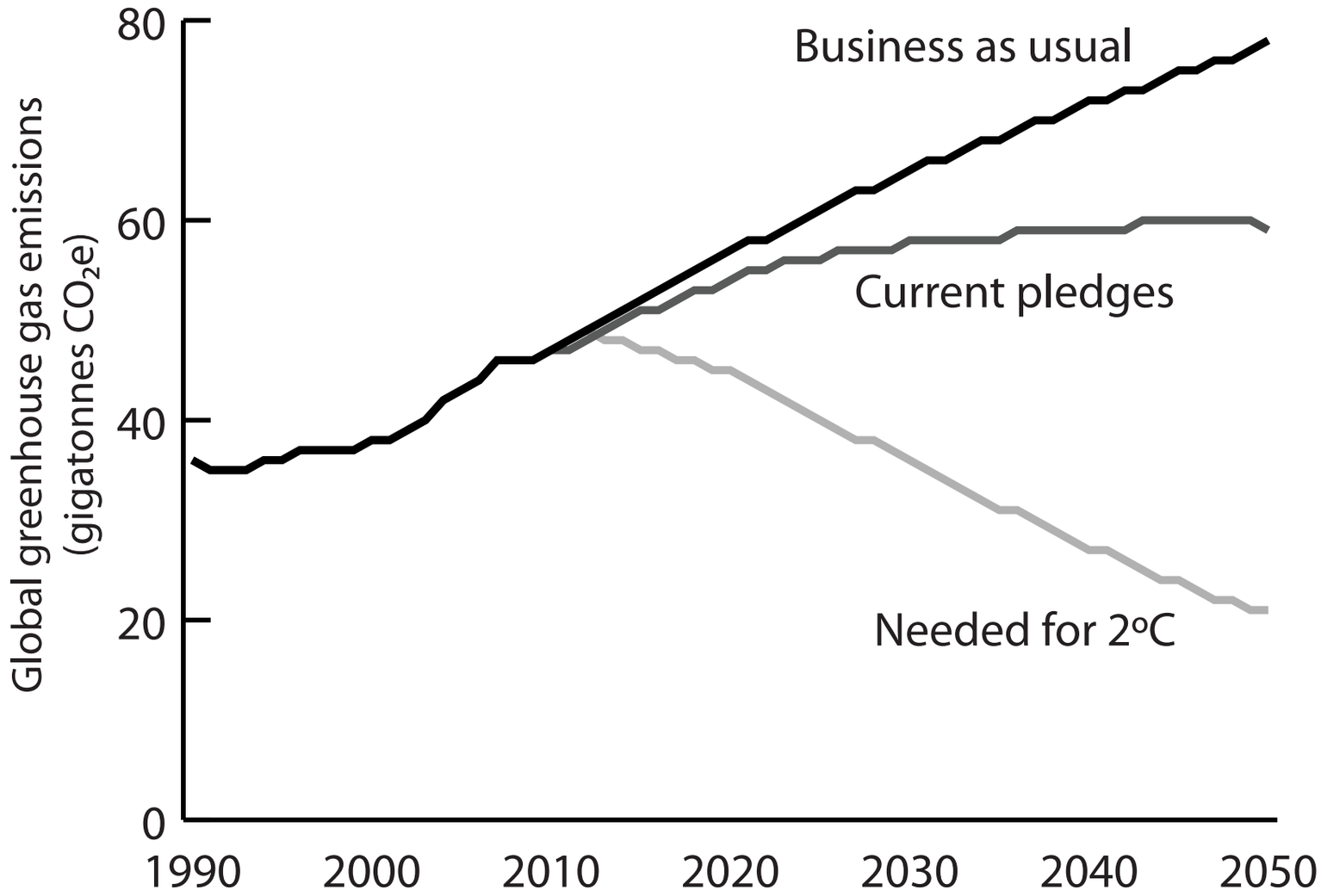
Are the global talks on track?



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What solutions do and don’t work?

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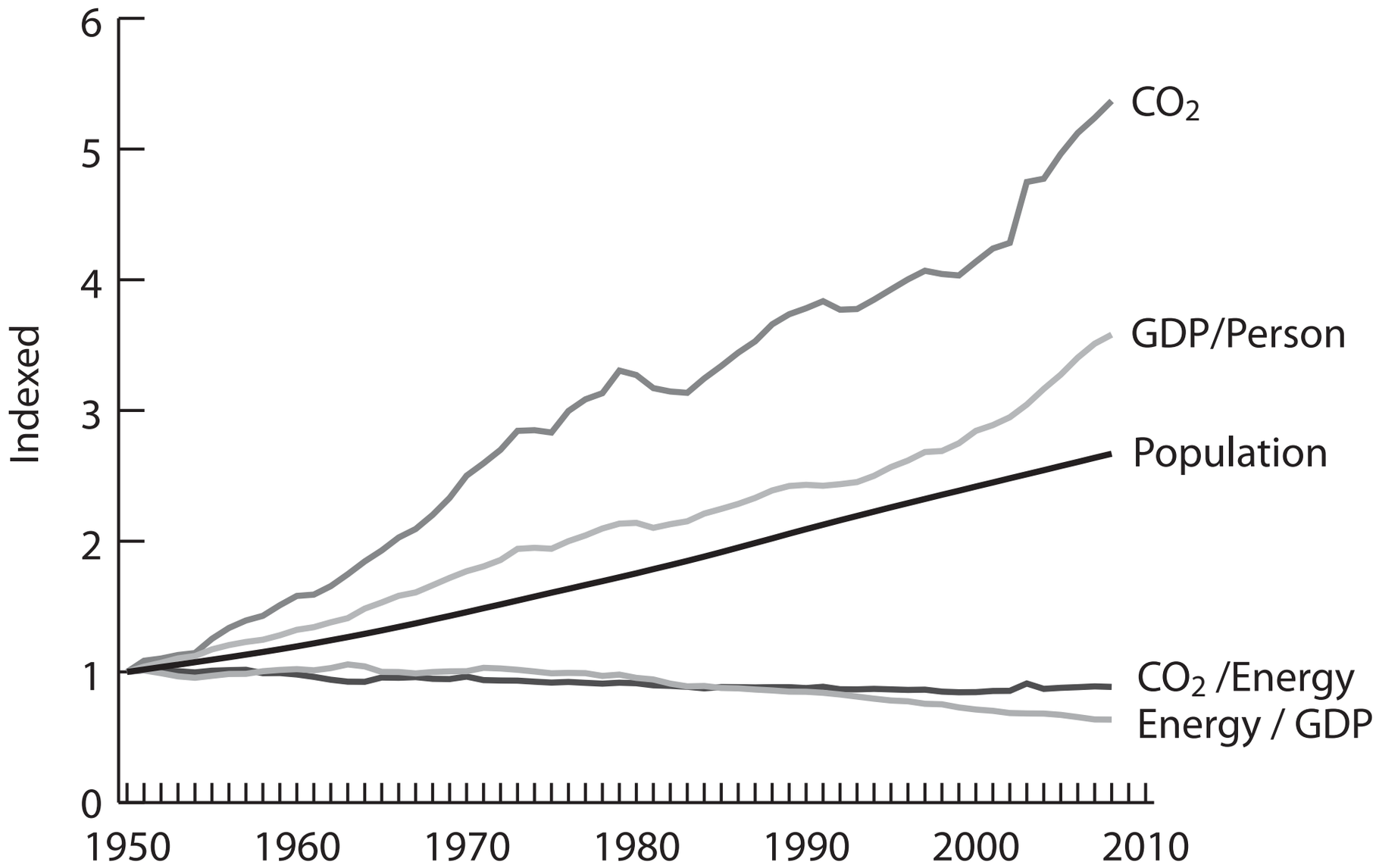
What drives the curve?



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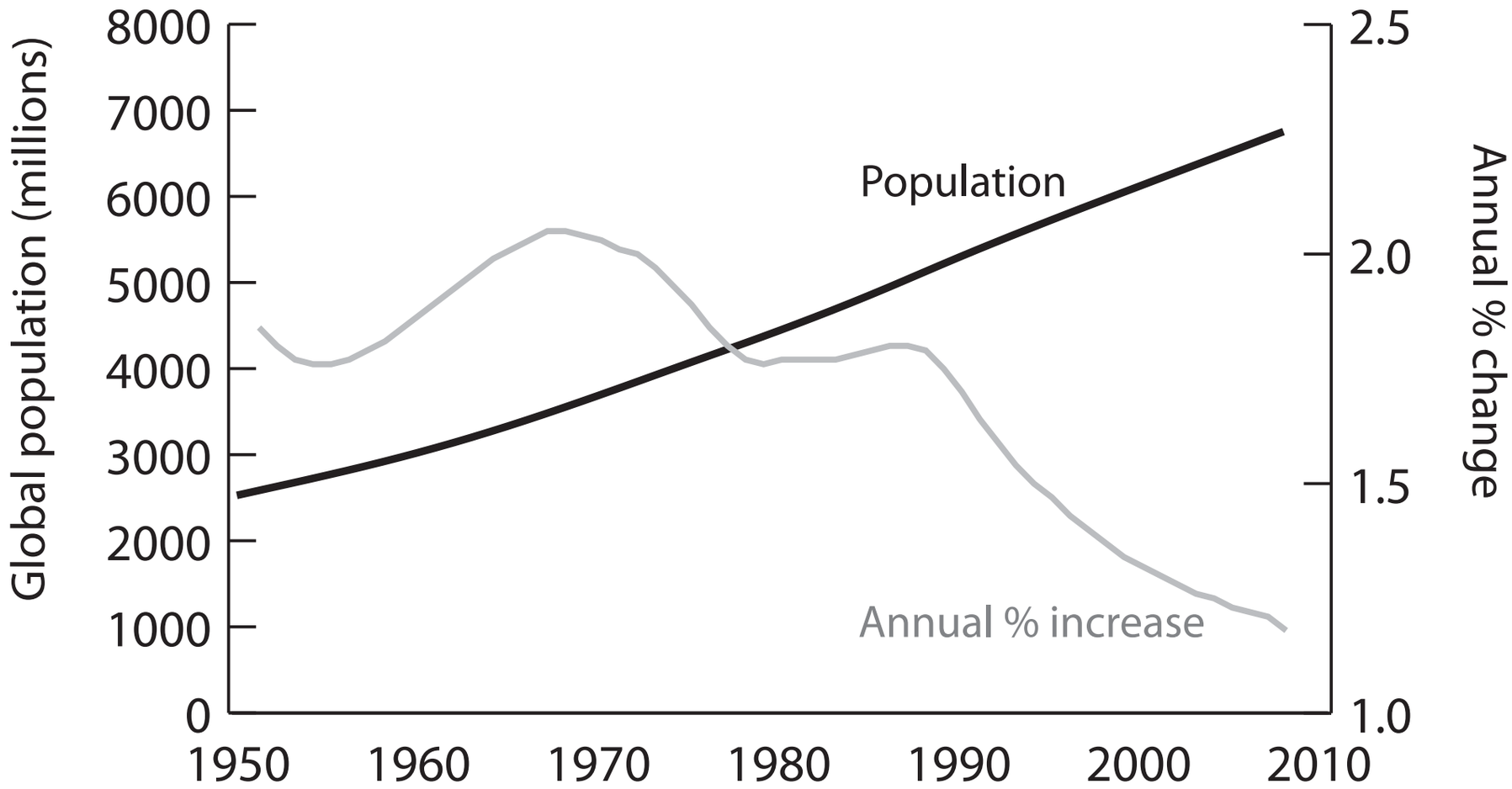
Population



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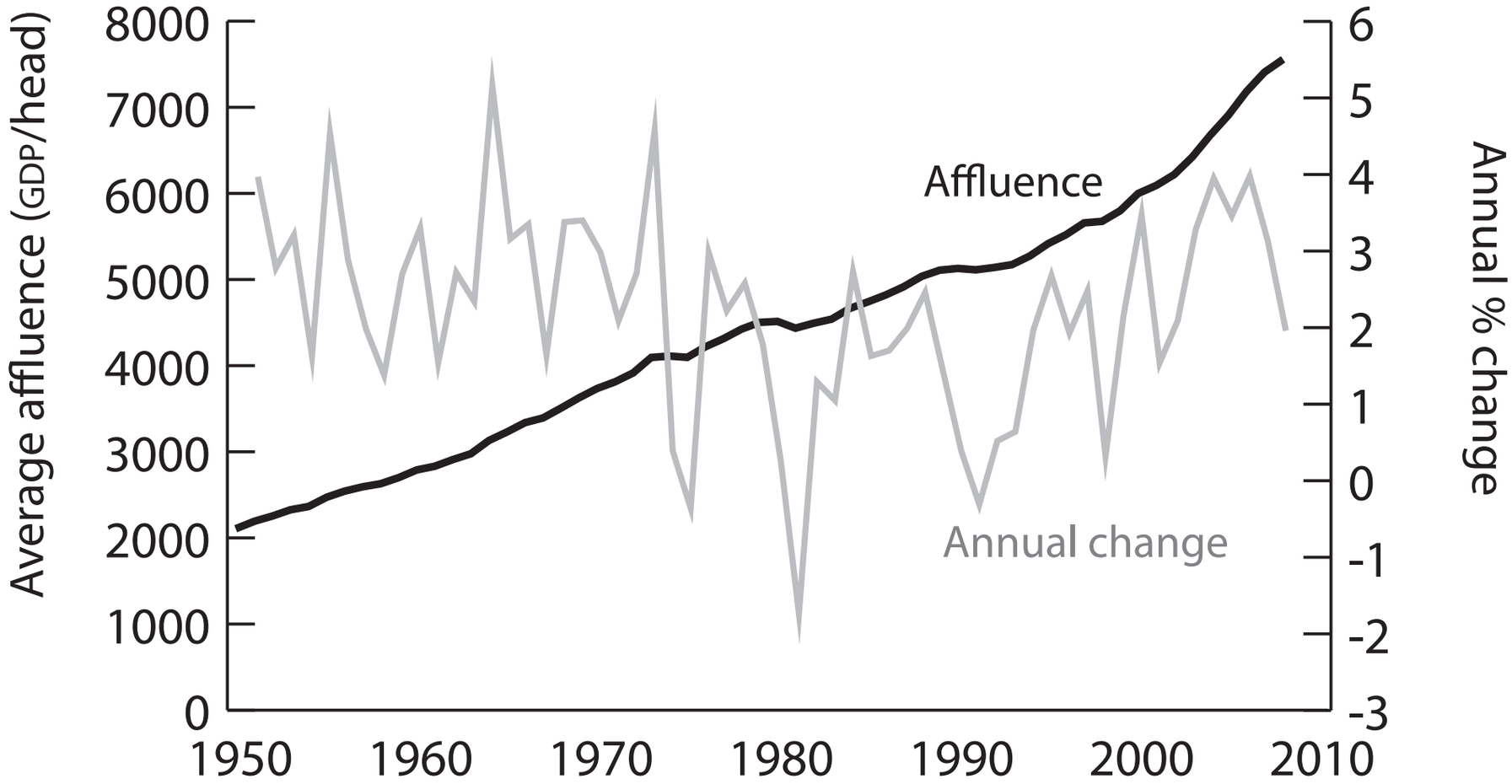
Affluence (economic growth)



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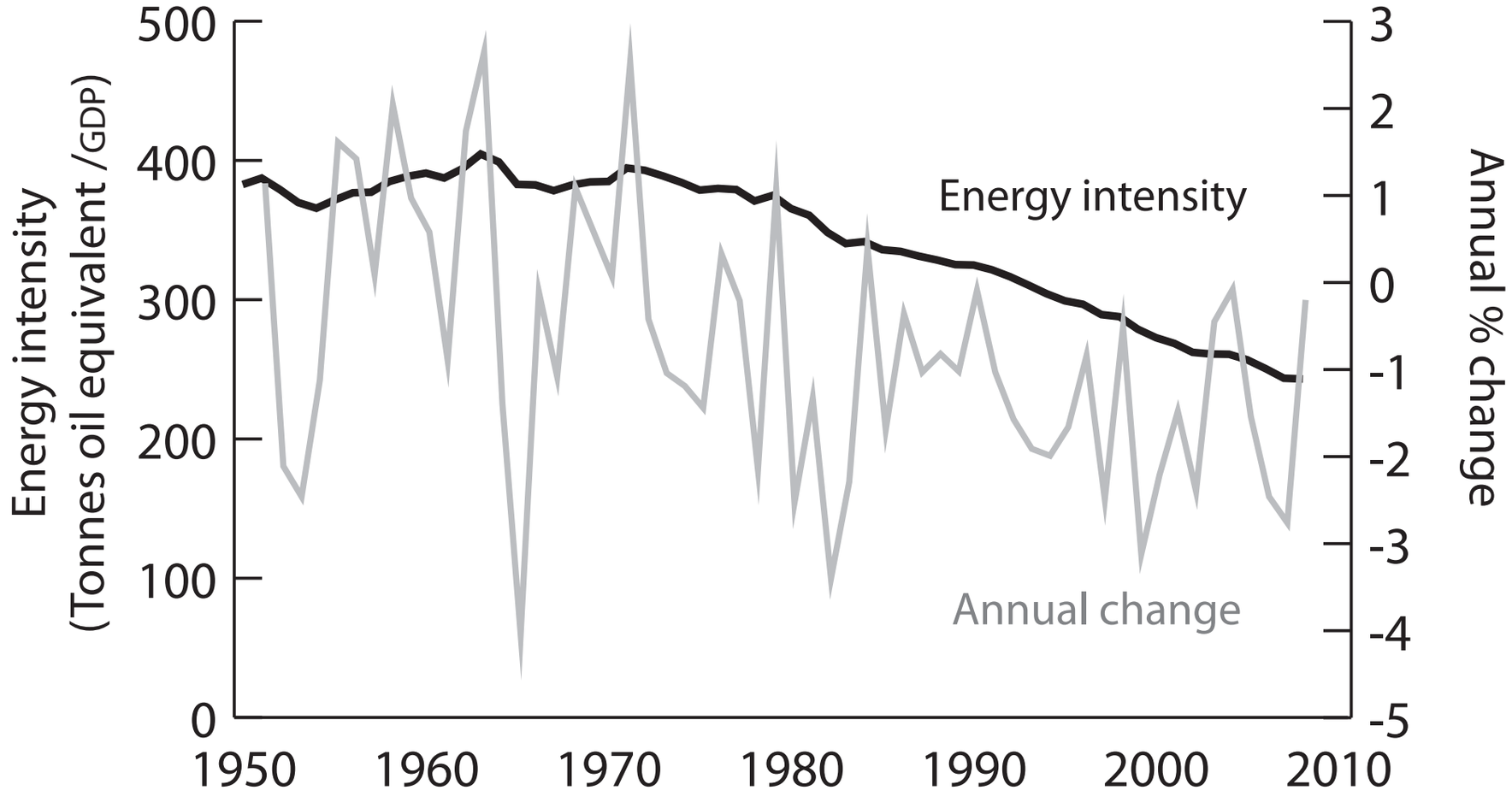
Energy intensity (efficiency)



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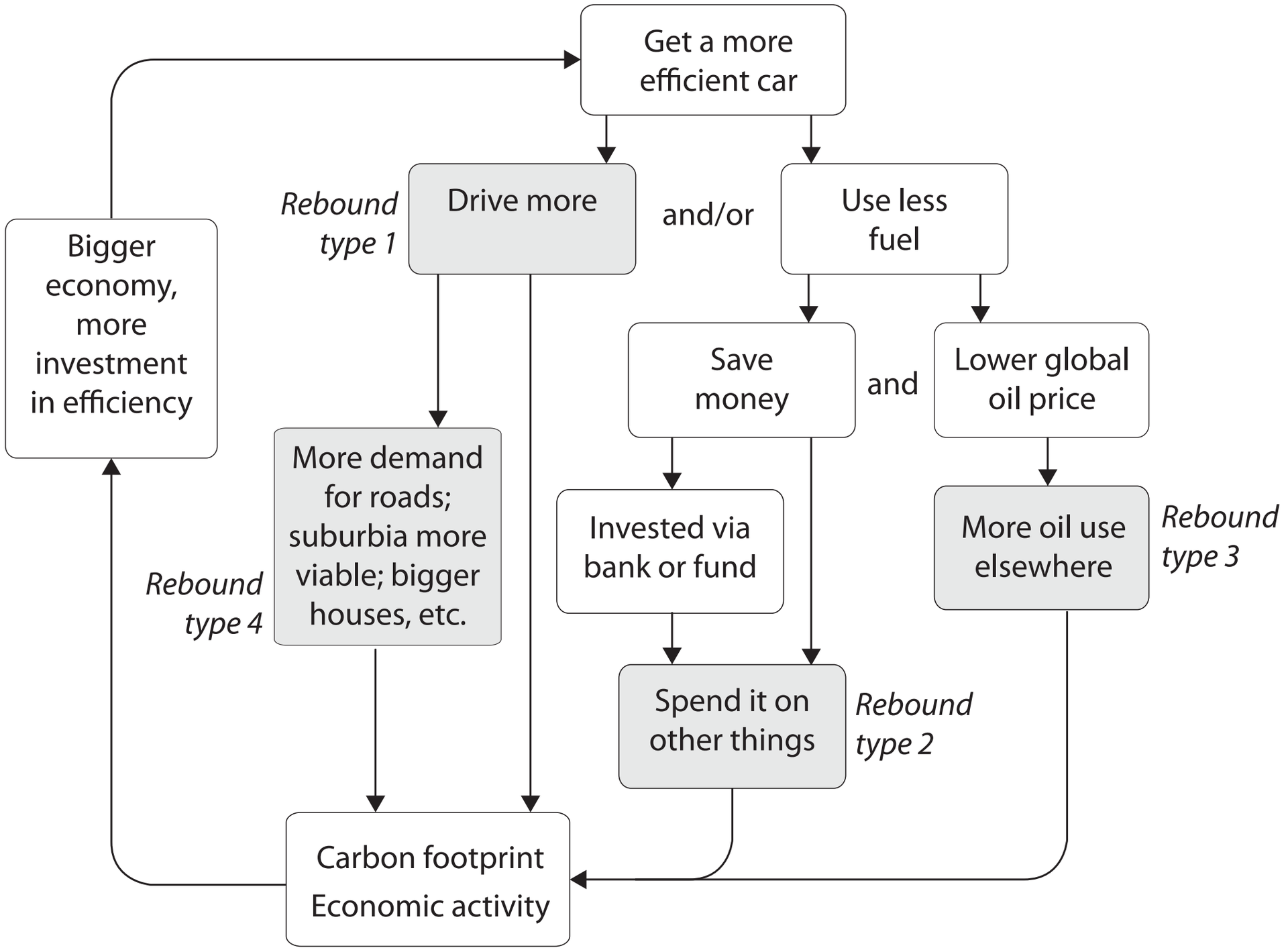
Rebounds and ripples



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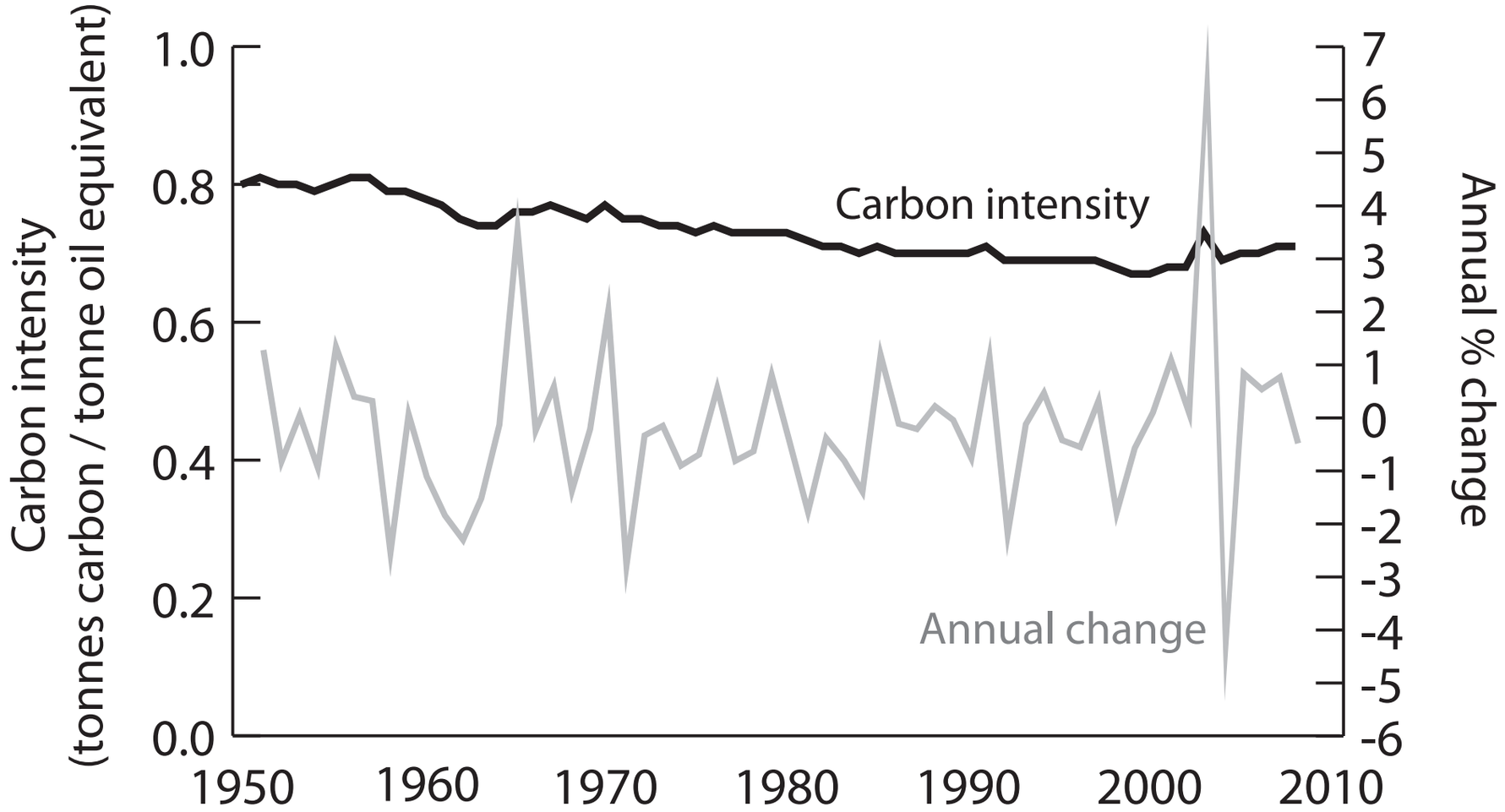
Carbon intensity (clean energy)



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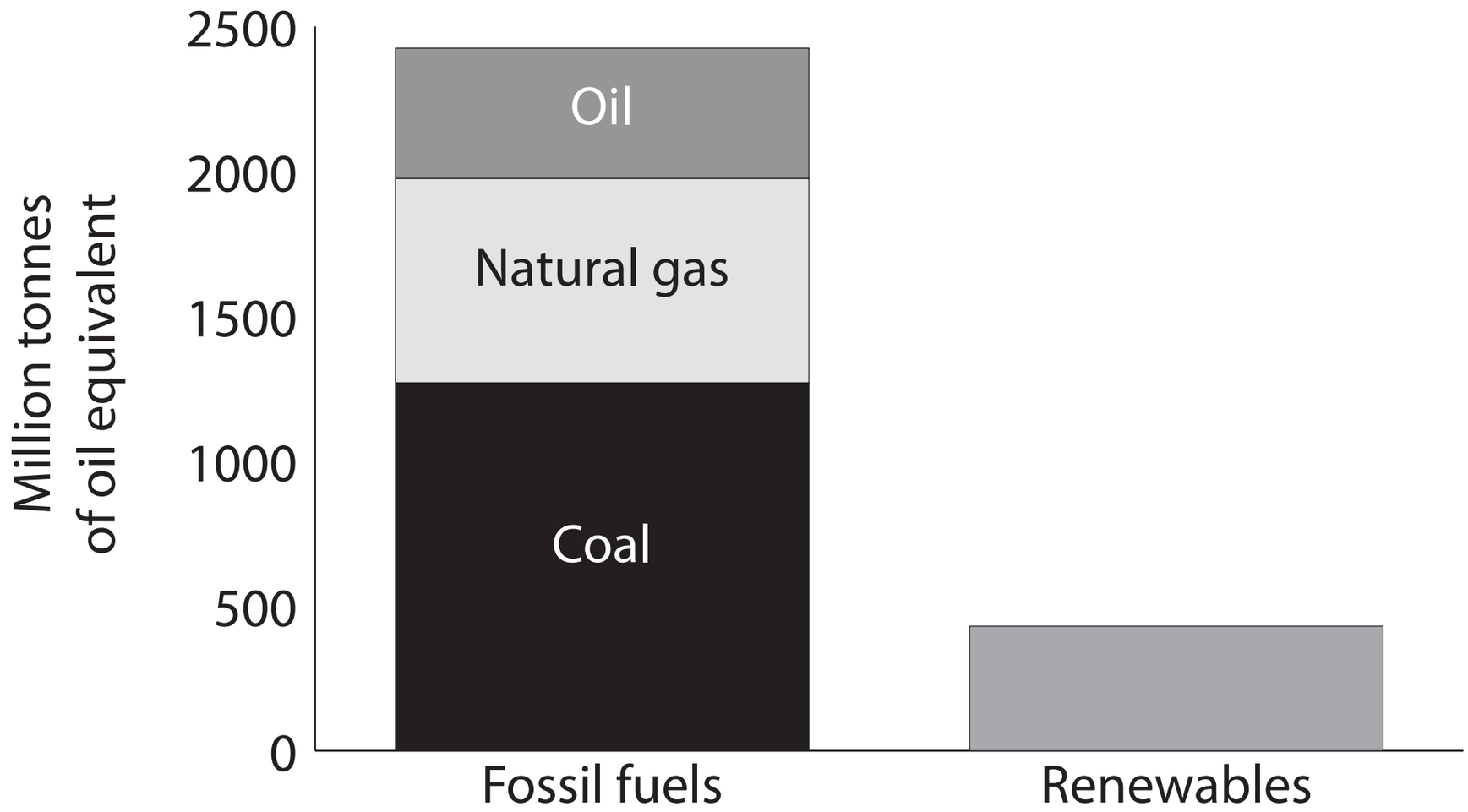
New energy capacity 2000–2011



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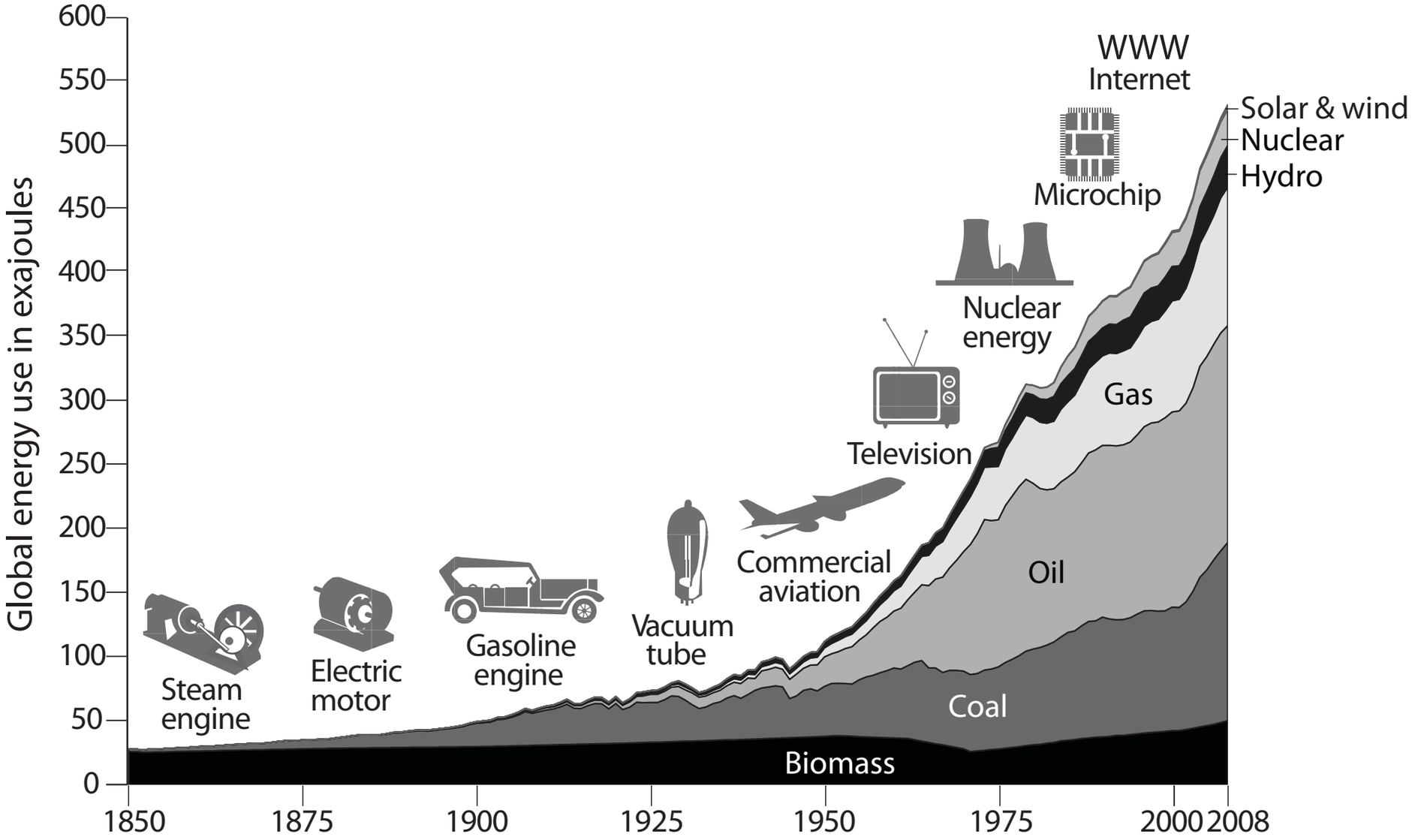
An age-old feedback



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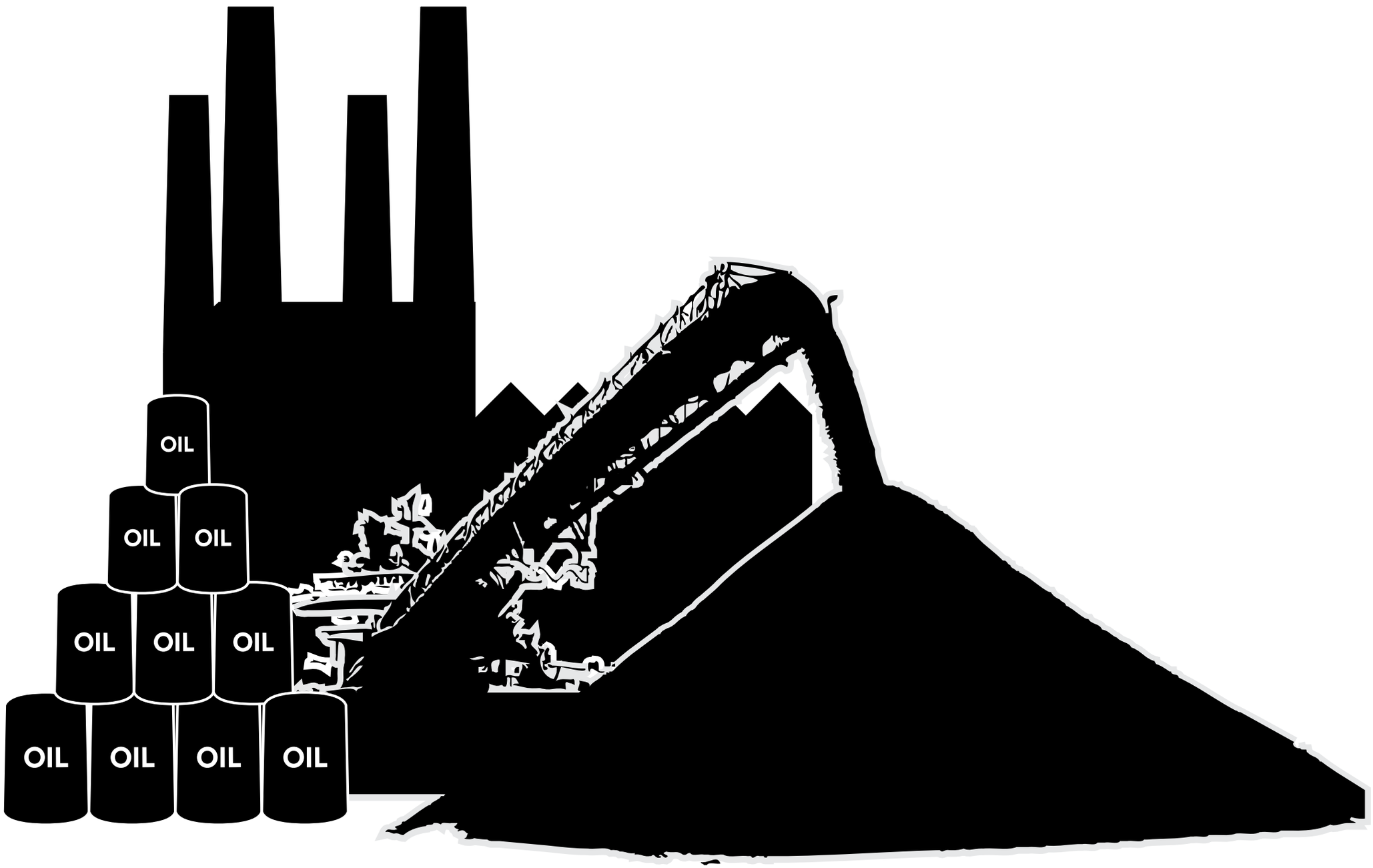

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Who's responsible for fossil fuel use?

End consumers?

Industry?

Fossil fuel sector?

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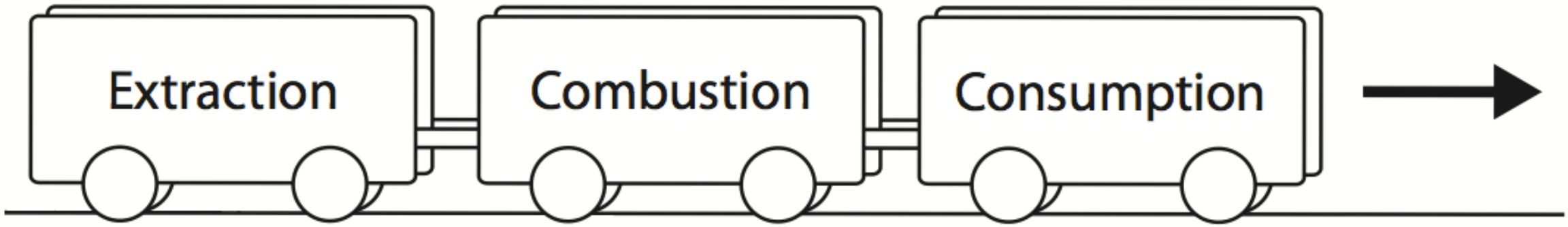
Who's responsible for fossil fuel use?



Fuel industry Infrastructure Lifestyles

We can't minimise the consumption of fossil fuel while also maximising supply!

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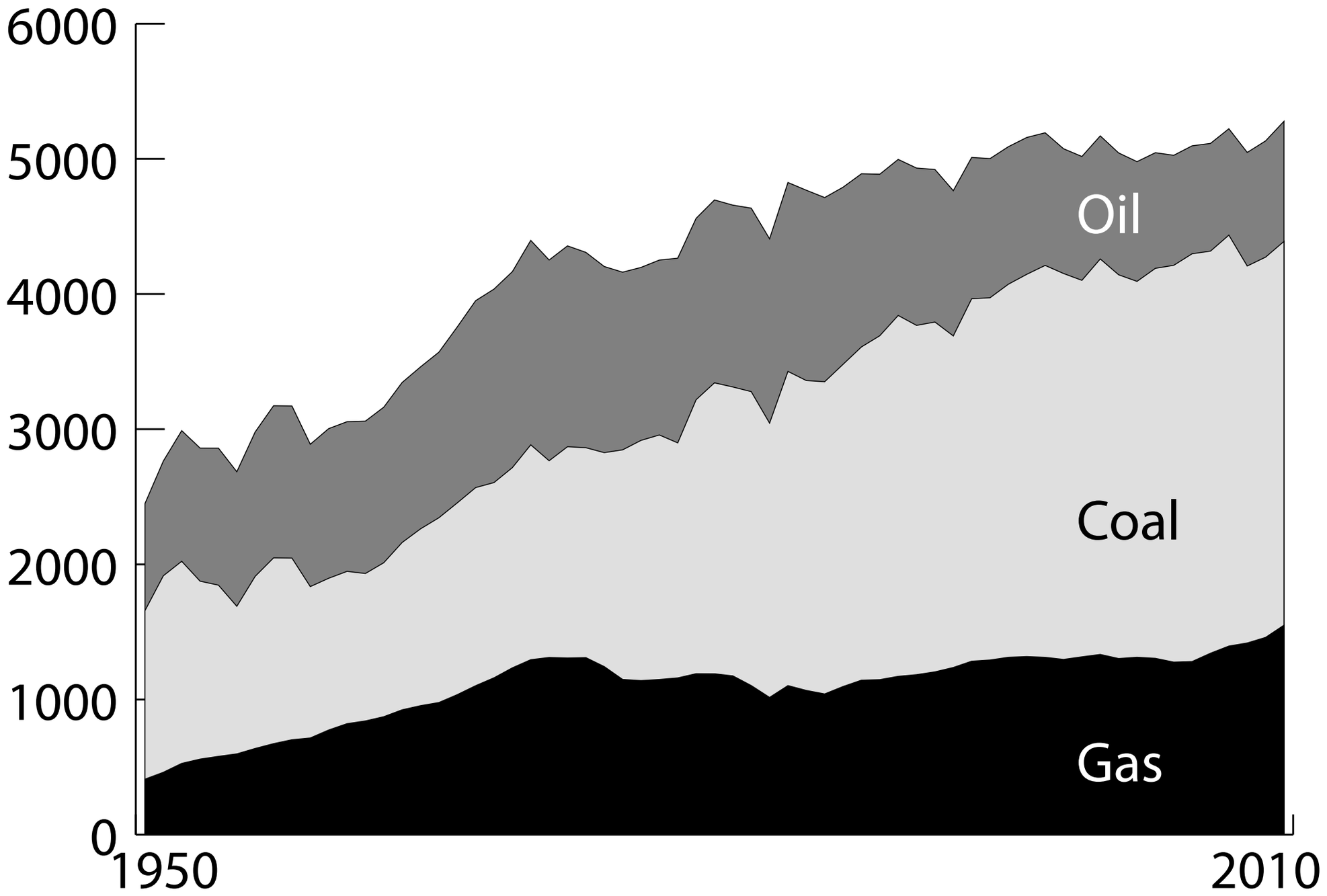
US carbon emission are falling. But its carbon *extraction* is still rising



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What are the barriers to action?

All charts and facts from The Burning Question by Duncan Clark and Mike Berners-Lee (Profile Books,2013)

1. Value of reserves and infrastructure

2. Prioritization of economic growth above ecological health

3. Psychological and social barriers

4. How to sharing the remaining pie?

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Value of reserves and infrastructure

$10–100

trillion

All charts and facts from The Burning Question by Duncan Clark and Mike Berners-Lee (Profile Books, 2013)

Value of reserves and infrastructure

$764 billion each year on developing NEW reserves!

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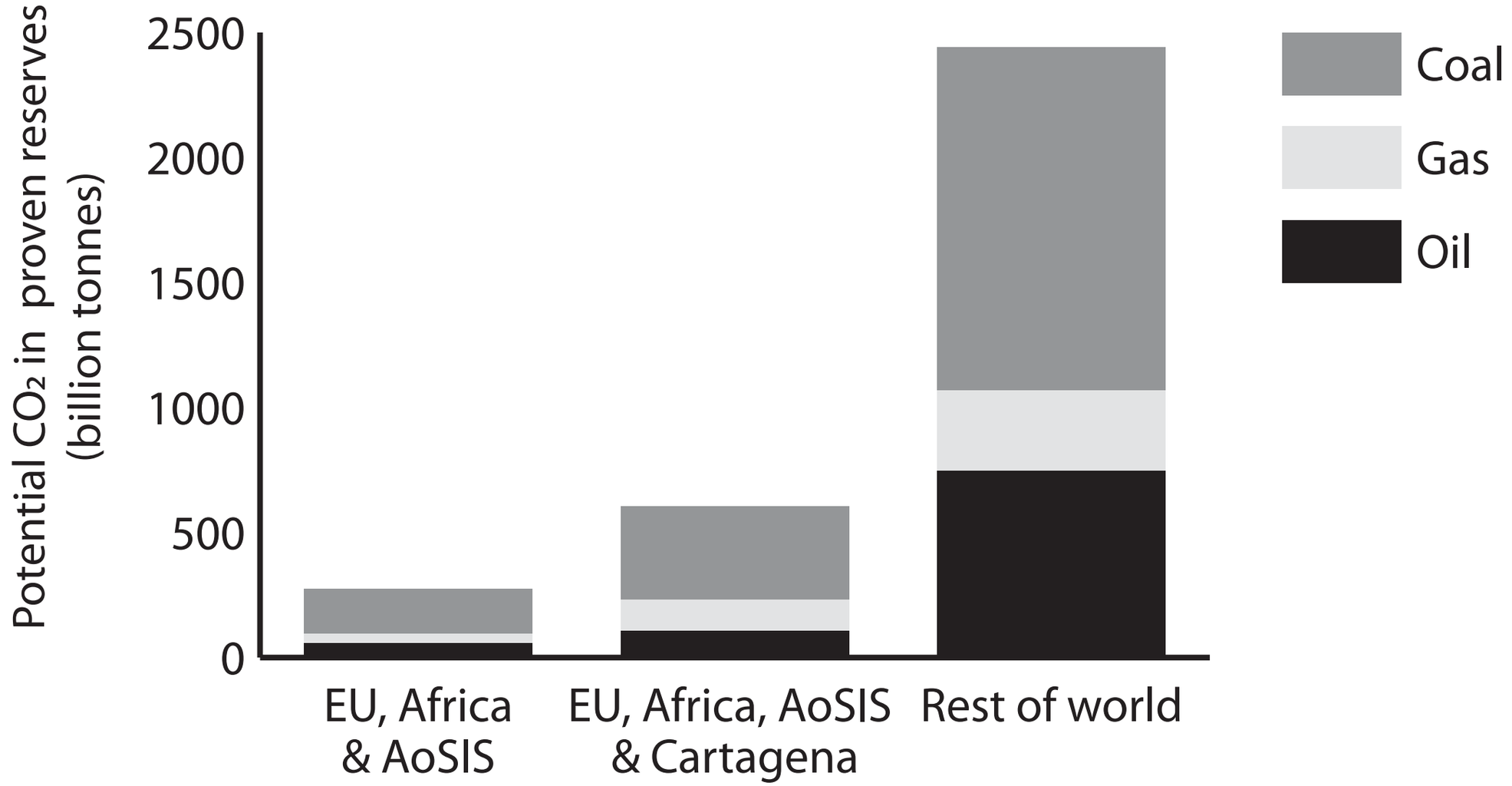
Value of reserves and infrastructure



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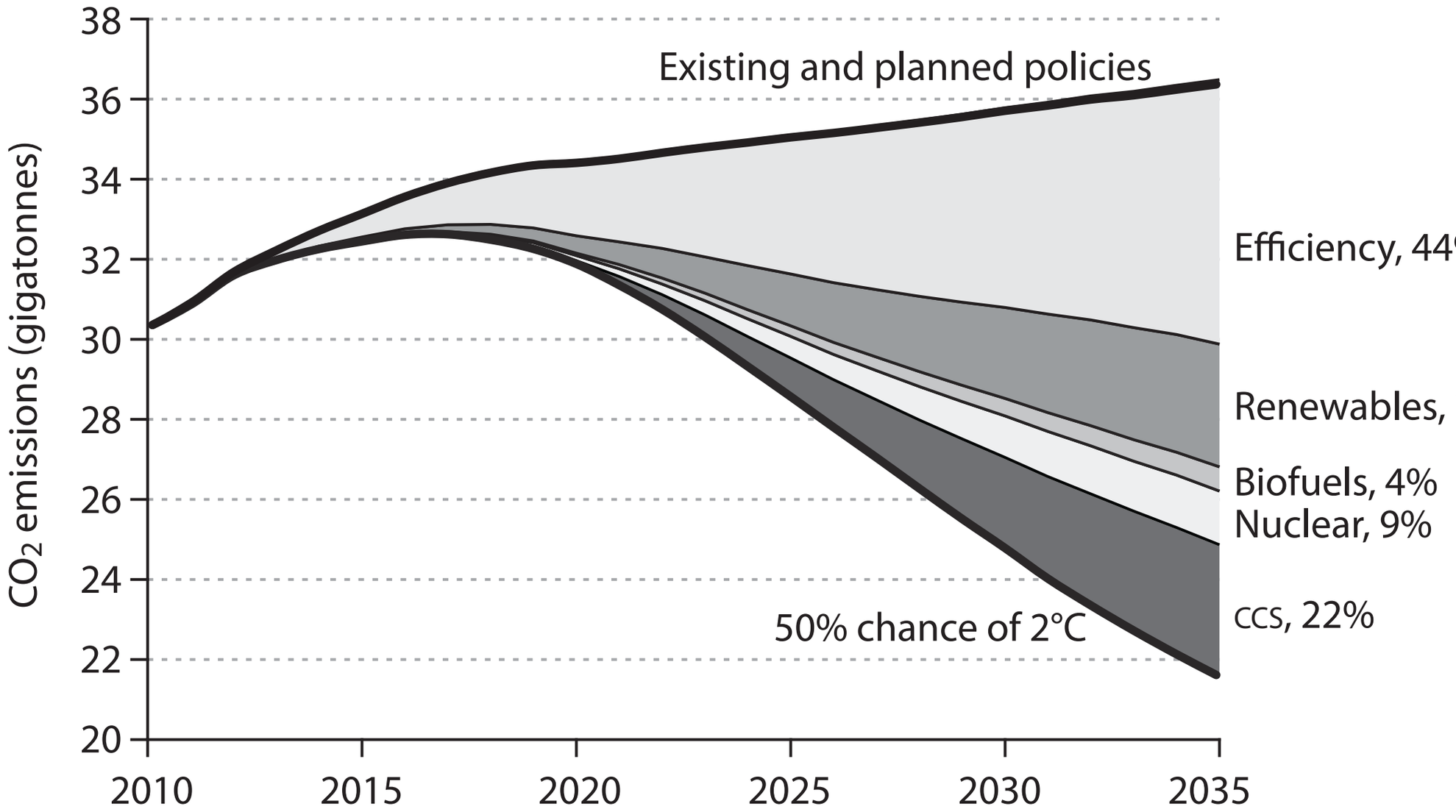
Economic growth – can it be done?



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David Cameron's effort to introduce alternative metrics

- "Every department a growth department"

- Calls on OPEC to *increase* oil output – for growth

- New place for Heathrow – for growth

- Commissions report on increasing oil and gas extraction – for growth

All charts and facts from The Burning Question by Duncan Clark and Mike Berners-Lee (Profile Books, 2013)

Social and psychological barriers to action

- Optimism bias
- Now bias
- Confirmation bias
- Social inertia bias

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Sharing the pie

Lots of options...

- National pledges
- Global cap and trade
- Global carbon tax
- SAFE Carbon

... but none is a silver bullet for burden sharing. We need to find ways to encourage others to participate – such as trade.

All charts and facts from The Burning Question by Duncan Clark and Mike Berners-Lee (Profile Books, 2013)

What should we do?

All charts and facts from The Burning Question by Duncan Clark and Mike Berners-Lee (Profile Books,2013)

What should we do?

- Waking up!
- Capping the carbon
- Pushing the right technologies – hard
- Sorting out food, land and smoke
- Prepare a plan B
- Leadership ...

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Is a tipping point coming?

1.1% increase in reported fossil fuel carbon emissions in 2012

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