

No Limits to Growth?

A Societal Transformation Scenario
to limit global warming to

1.5°C

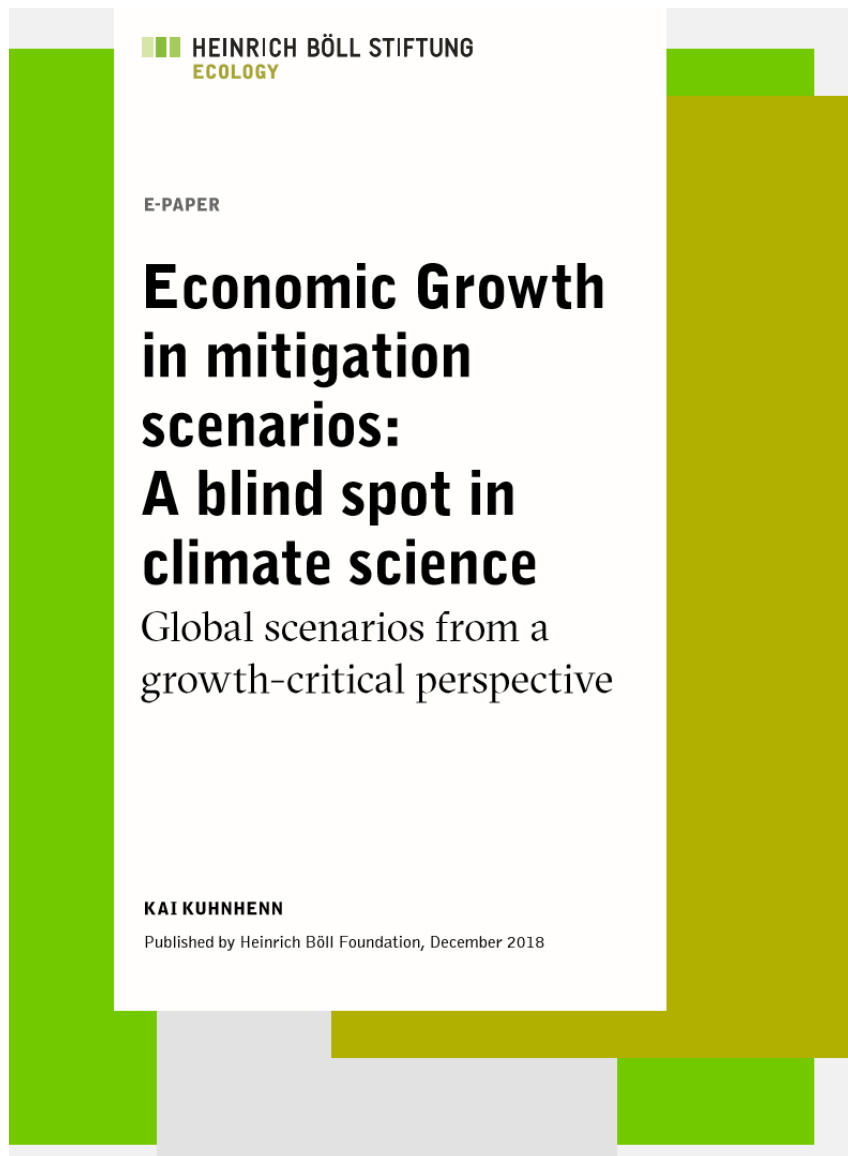


The Konzeptwerk Neue Ökonomie (Laboratory for new economic ideas)



- NGO-collective in Leipzig
- 30 employees
- Decision making by grass-roots democracy
- „Short fulltime“ – 20-30 hours/week
- Needs-oriented salaries
- Project grants, fees, sponsoring members

Why a Societal Transformation Scenario?



- Economic growth is THE driver for GHG emissions
- IPCC scenarios all assume continued economic growth even in high-income countries (0.6-2.8% leading to 1.6-8 fold increase over 80 years)
- To meet climate targets scenarios rely on risky “negative emissions technologies” and nuclear power
- Societal change towards “less” is ignored.

Key Premises

Key Premises

1

Countries of
Global North
have to act

2

Consumption &
Production have
to be reduced

3

A good life for
all with less is
possible

4

Exclusion of
nuclear &
“neg. emissions”

2

Consumption & Production have to be reduced

GHG-Emissions

=

Person

*

Products & Services
Person

*

Energy demand
Products & Services

*

GHG-Emissions
Energy production

-

Sequered emissions

Societal Change

Sufficiency

Efficiency

Consistency

Negative emission technologies

Technological solutions

2

Consumption &
Production have
to be reduced

Products & Services
Person



=

Recession/
Crisis/Social
hardship

i.e.

Is a good life for
all with less
consumption and
production in the
Global North
imagineable?

3

A good life for all with less is possible

a

Production and consumption can be decoupled from emissions

b

material wealth correlates with well-being

c

Without more production and consumption we face a recession, crisis, social hardship

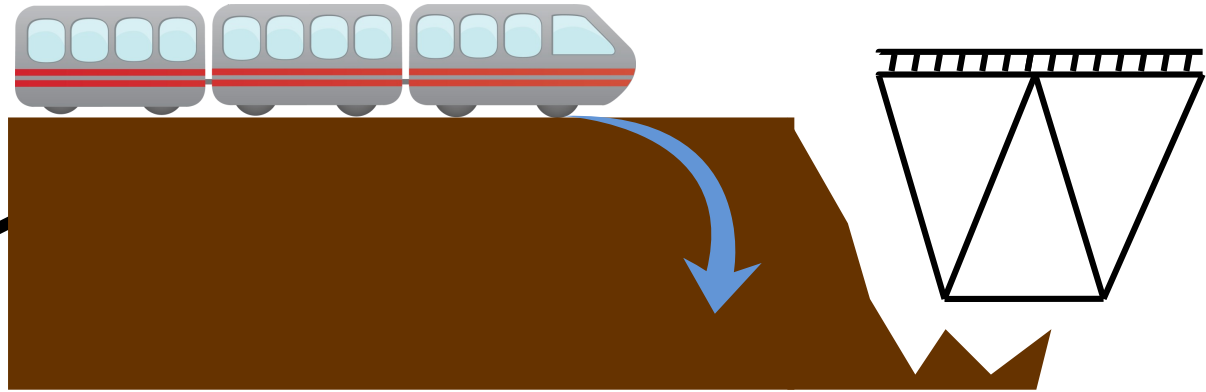
No or at least not to the extent needed

1) not in saturated societies
2) well-being is multidimensional. We sacrifice many of our needs, e.g. protection, creativity, idleness, freedom, participation to produce more

Yes, if not part of a socio-ecological transformation

4

Exclusion of nuclear & "neg. emissions"



Negative Emission Technologies/ Geoengineering

- BECCS
- CCS
- CDR
- Solar Radiation Management

Reducing consumption and production – democratically planned process

VS

Reliance on governments and corporations to develop technology, create legal framework and incentives and employ responsible

Methodology

Integrated Assessment Models

- Complex models
- Black Box
- Optimization based on costs
 - Cost estimates
 - Moral & ethical choices i.e. do more now or later? Time vs. consumption...

→ good tool for short/midterm but not long term scenarios

Global Calculator

- Simple model
- Open Source
- No optimization – decision lie with user
- Enables open discussion - how do we want to live in 2050/2100

Assumptions

Transport

	Changes up to 2050
Parameter	Annex I countries
road-based passenger transport	-17% to 2030 (1990 levels), another -20% til 2050
share of cars	-81% cars in urban areas, -52% in rural areas
occupancy	1.6 to 2.5 persons/car between 2015 and 2050
flights per person	falls to 1/a by 2025 and 0,33/a in 2050
ground freight transport	-62% (1990 levels)

Housing + Food

	Changes up to 2050
Parameter	Annex I countries
living space	-25%/person
# of appliances per person	Halving # of appliances per person.
food production	-24% calorie consumption (reducing food wastage and adoption of healthier diets)
meat consumption	-60% by 2030, then constant

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# of appliances per person	Halving # of appliances
food production	-24% calorie production adoption of food waste and
meat consumption	-60% by 2050 constant

+Ambitious technological Development (efficiency, renewables)

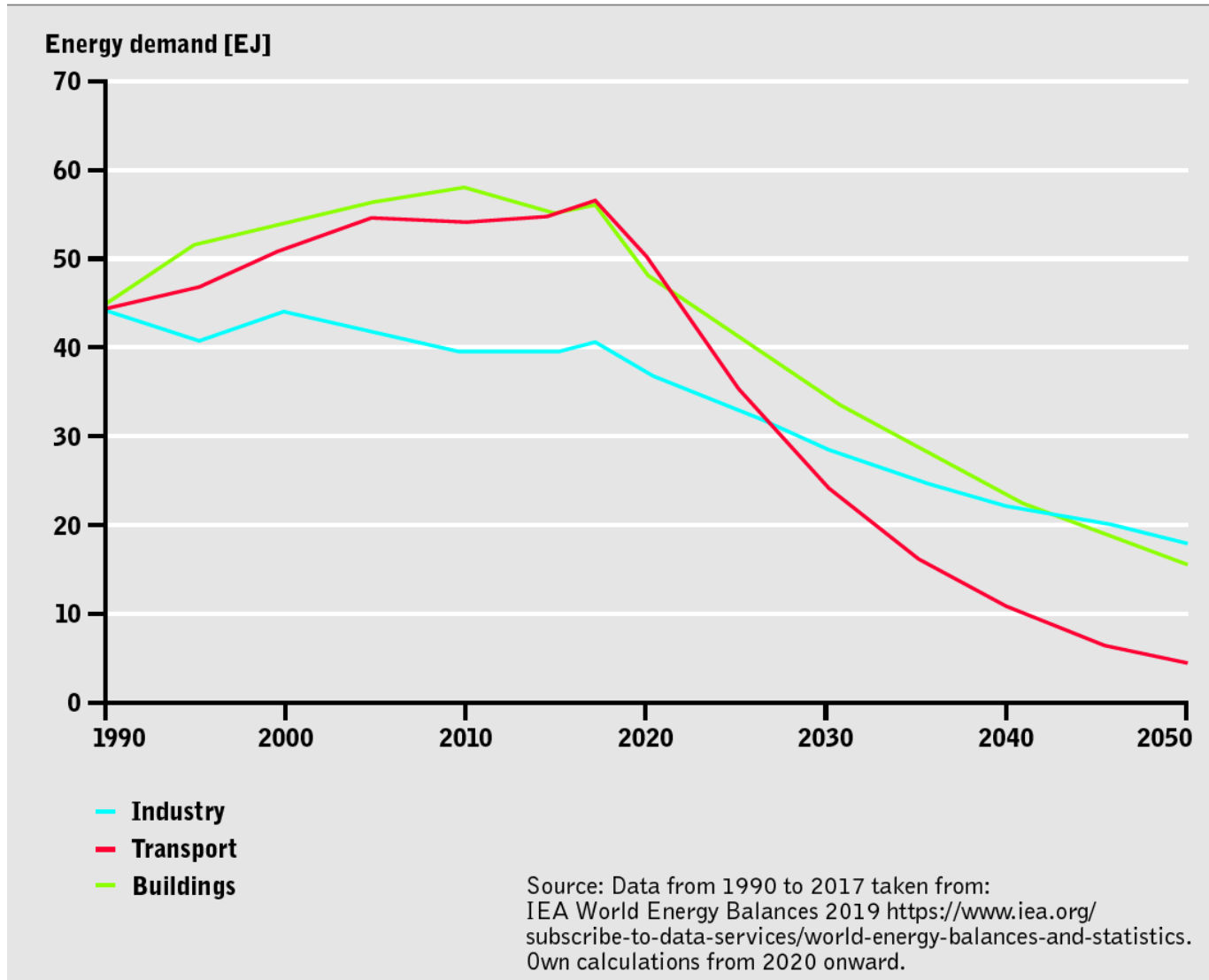
Socio-ecological Transformation

- Refocus society to fulfil human needs
- fostering cooperation, care, solidarity and sustainability in order to achieve a good life for all
- First steps
 - Ecological taxes
 - Reduction of working hours
 - Basic income, maximum wage
 - Deceleration of life
 - Democratisation of decision making

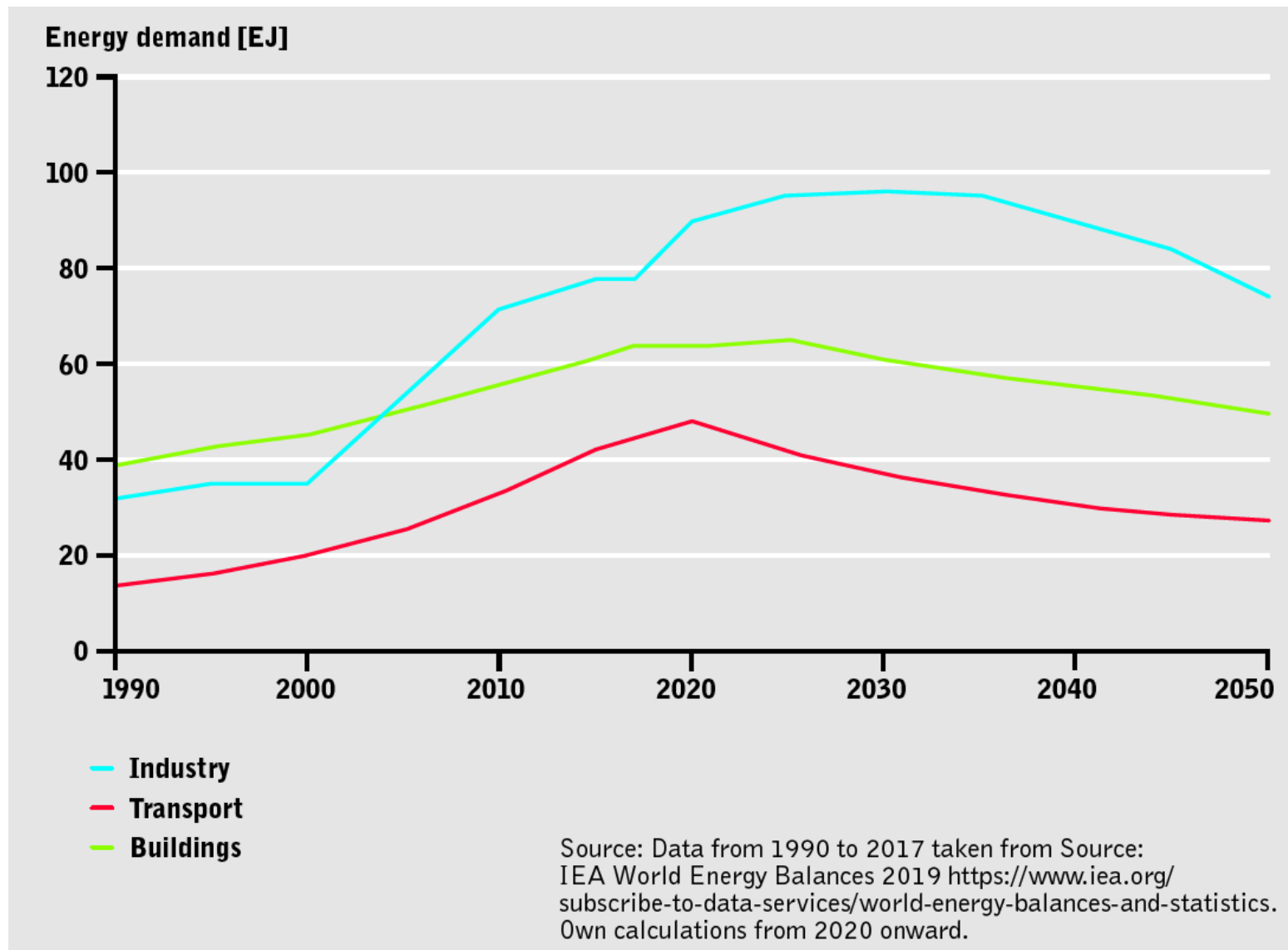


Results

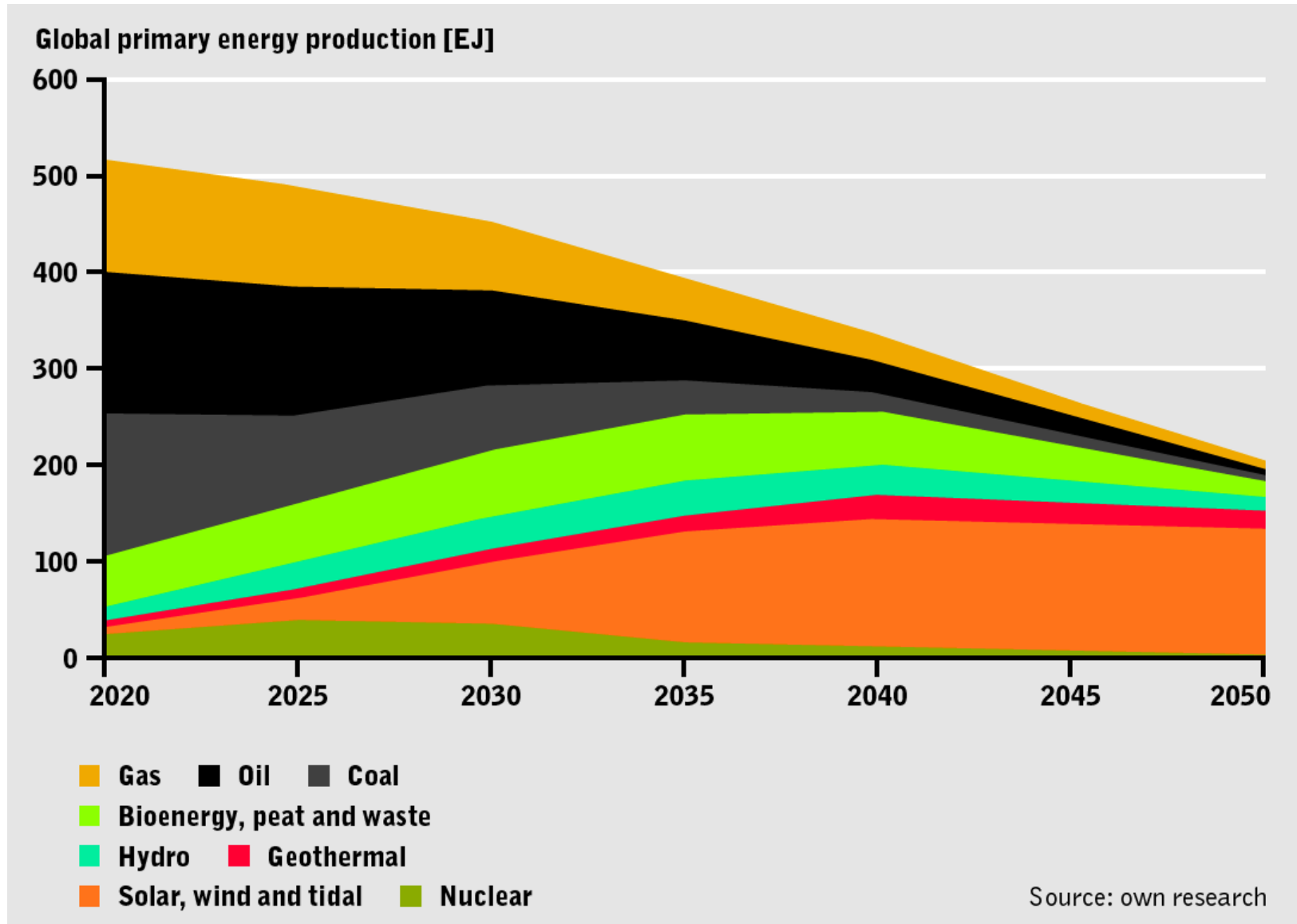
Energy demand Annex I



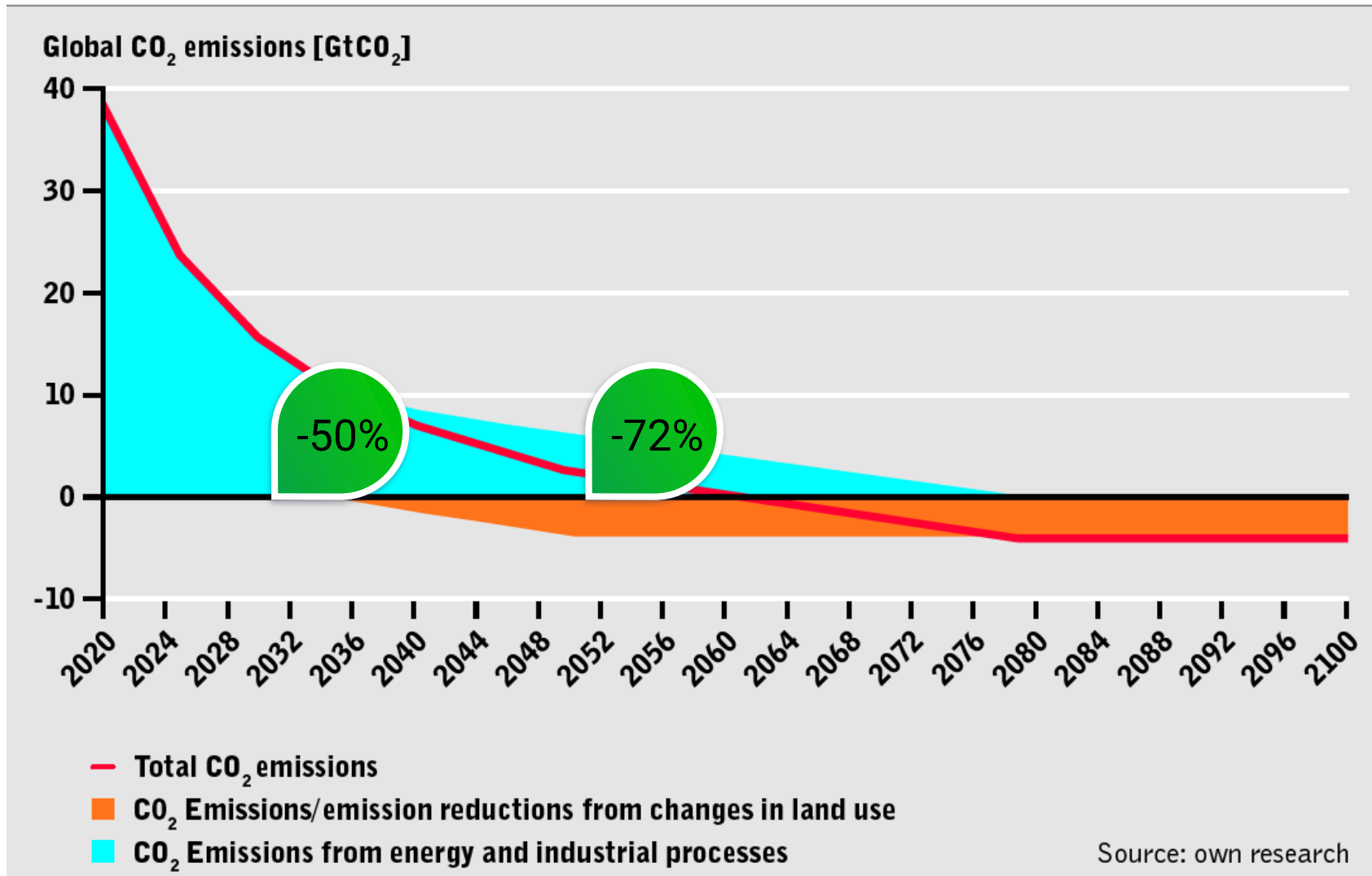
Energy demand Non-Annex I



Primary energy production



Global emissions

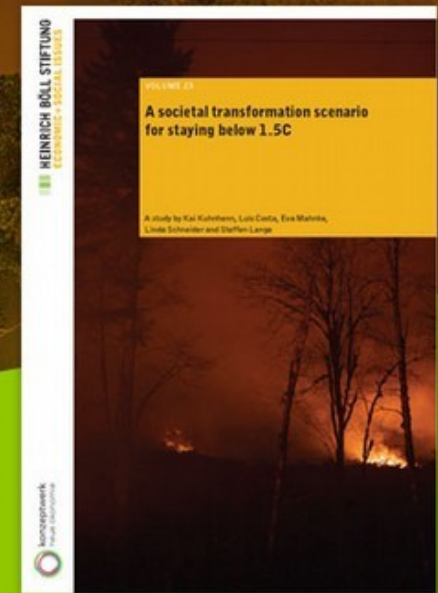


Thank you for your attention!

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<https://www.boell.de/en/2020/12/09/societal-transformation-scenario-staying-below-15degc>