



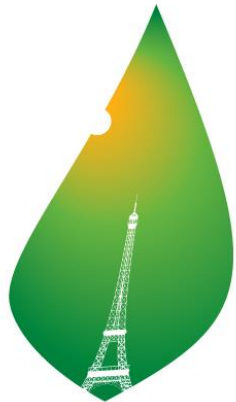
The impact of COP21 on the construction sector

BIBM Congress 2017

17-19 May, Madrid

Oliver Rapf, BPIE

What was agreed at COP21?

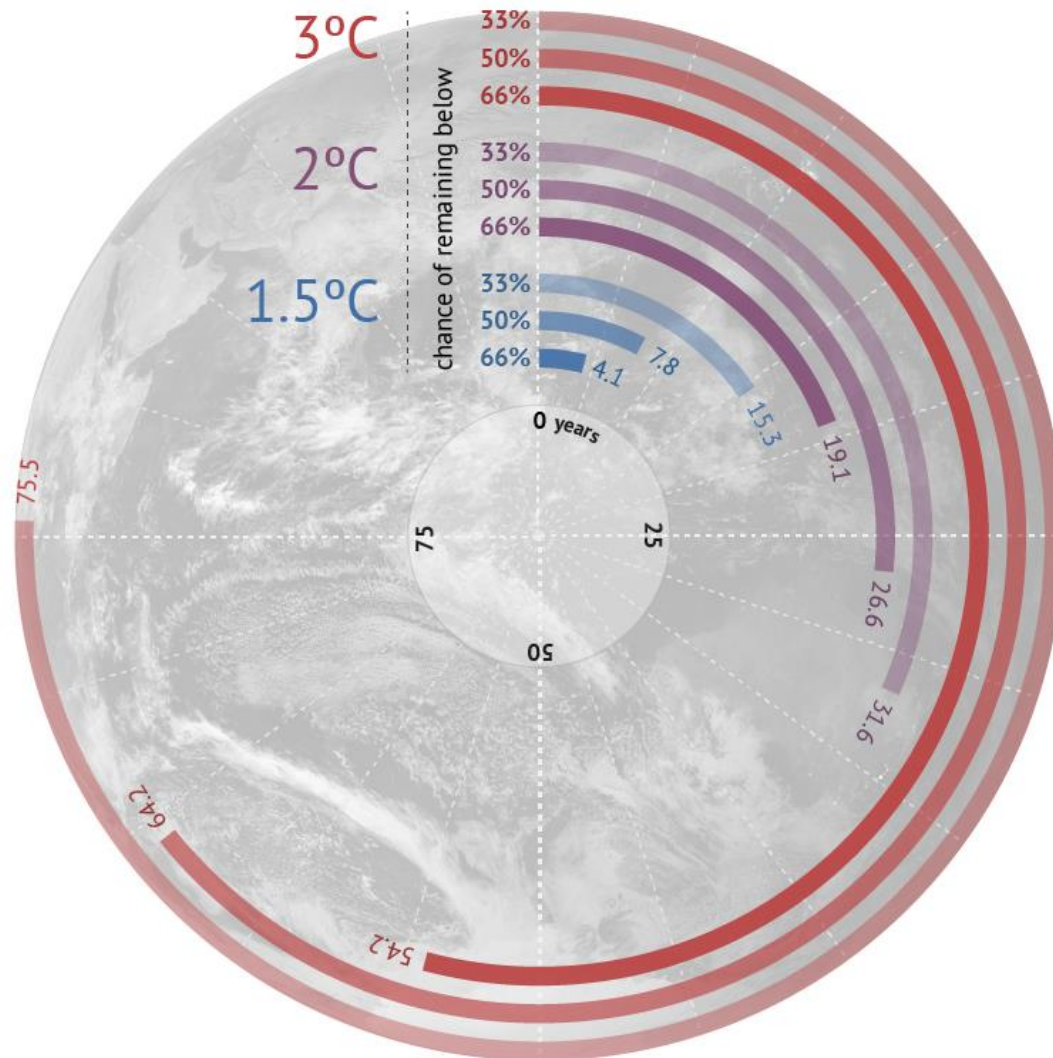


PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21•CMP11

“This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

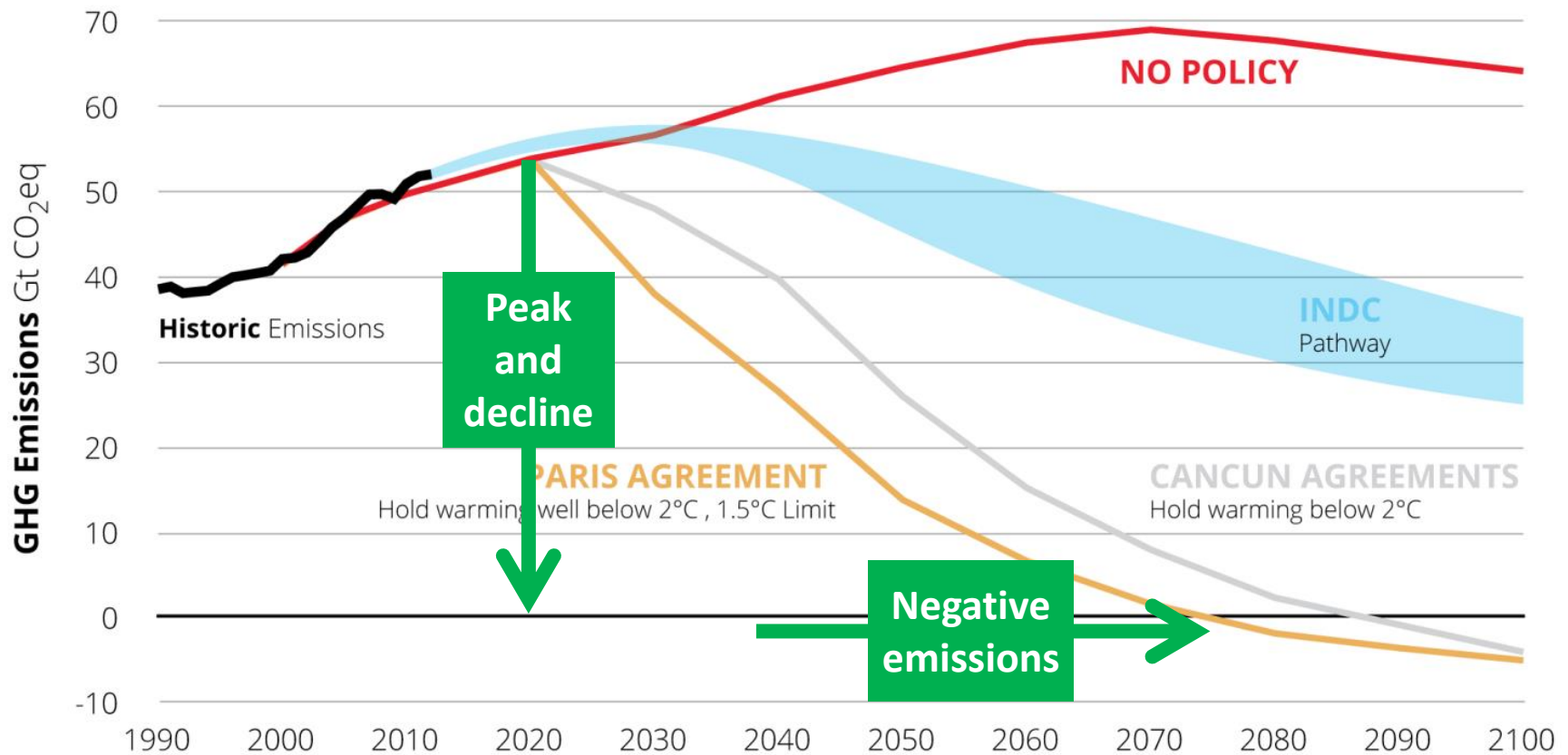
- a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;*
- b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and*
- c) Making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development.”*

The Carbon Countdown and the Paris commitment to a 1.5 degrees warming threshold

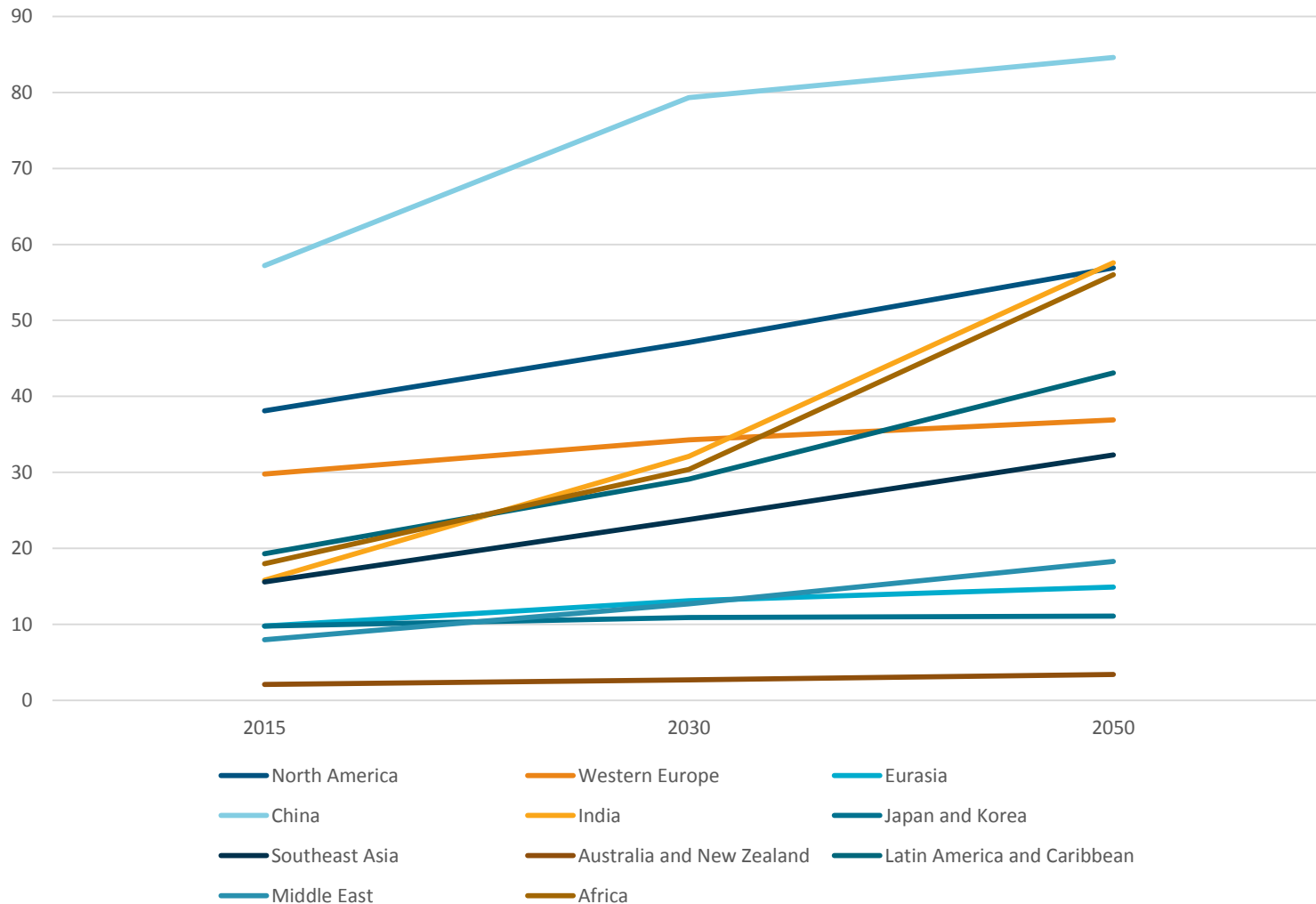


Global emission pathways to meet policy commitments

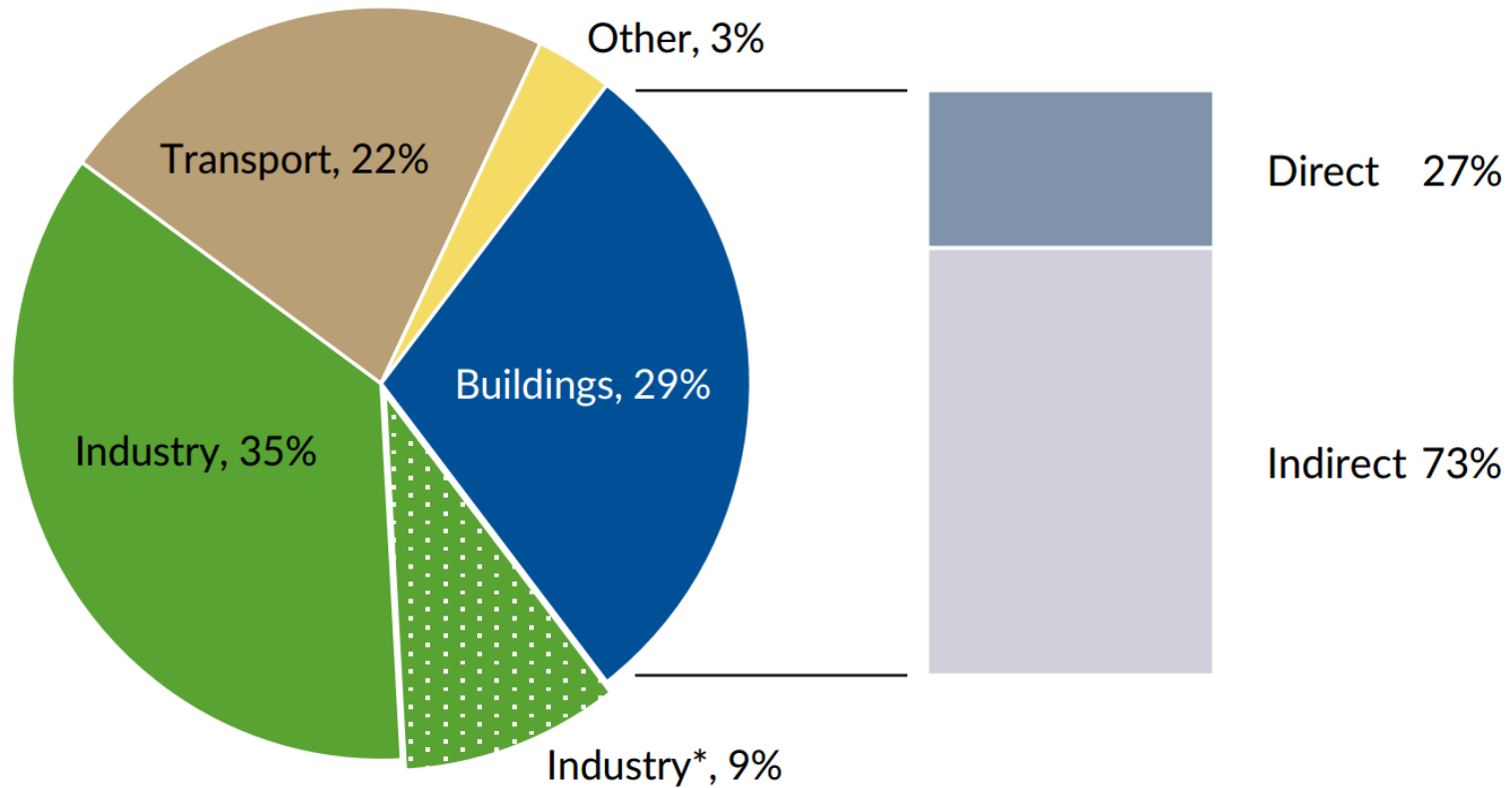
WORLD Emissions Scenarios



Building floor area growth to 2050 by region (Billion m²)



Buildings' emission share



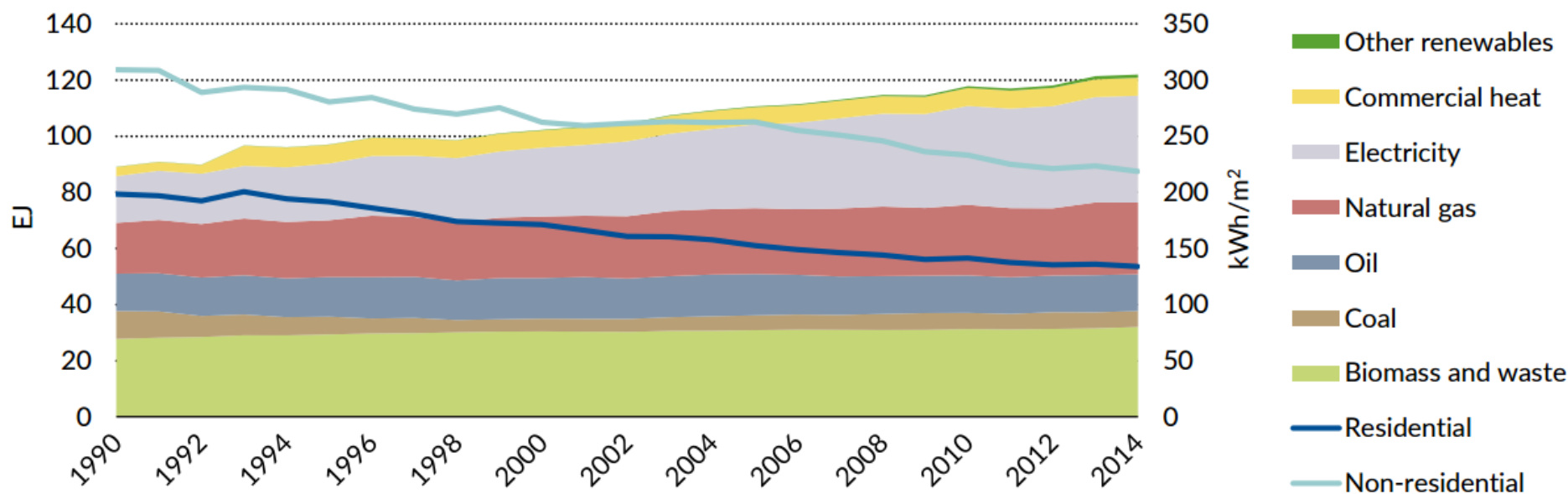
Note: Shares represent energy-related CO₂ emissions, which account for roughly two-thirds of global GHG emissions; indirect emissions include upstream CO₂ emissions from power generation for building consumption of electricity and commercial heat. Industry* represents CO₂ emissions related to energy consumption for iron, steel and cement manufacturing.

Source: IEA, calculations derived from IEA World Energy Statistics and Balances 2016, www.iea.org/statistics

Is a deep reduction scenario achievable?

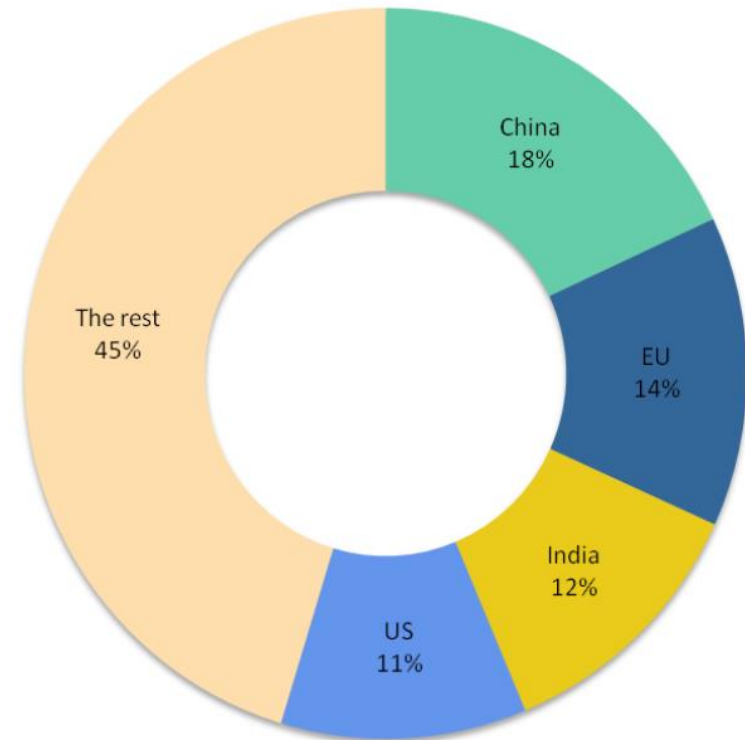
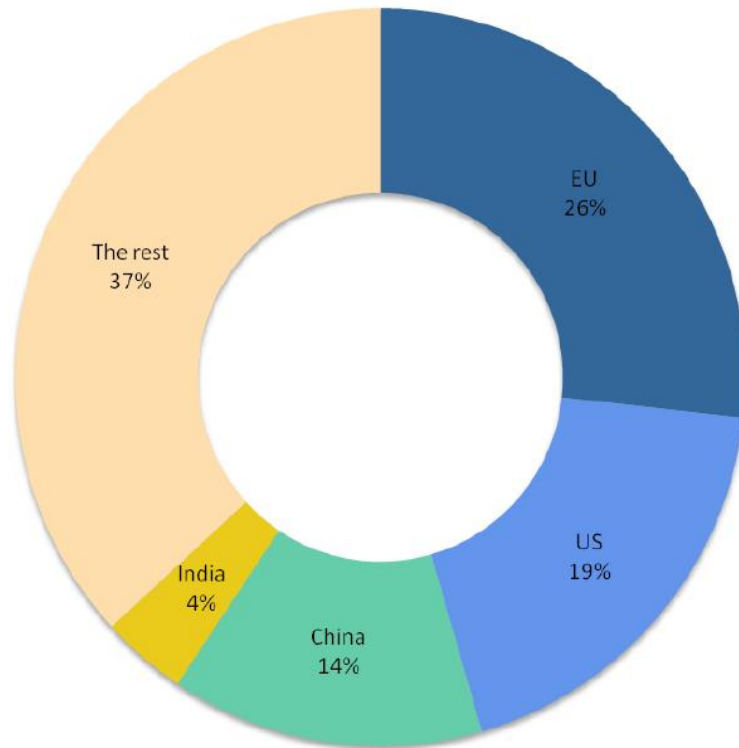
Historical evolution of energy in buildings

Global building sector energy consumption and intensity by sub-sector, 1990-2014

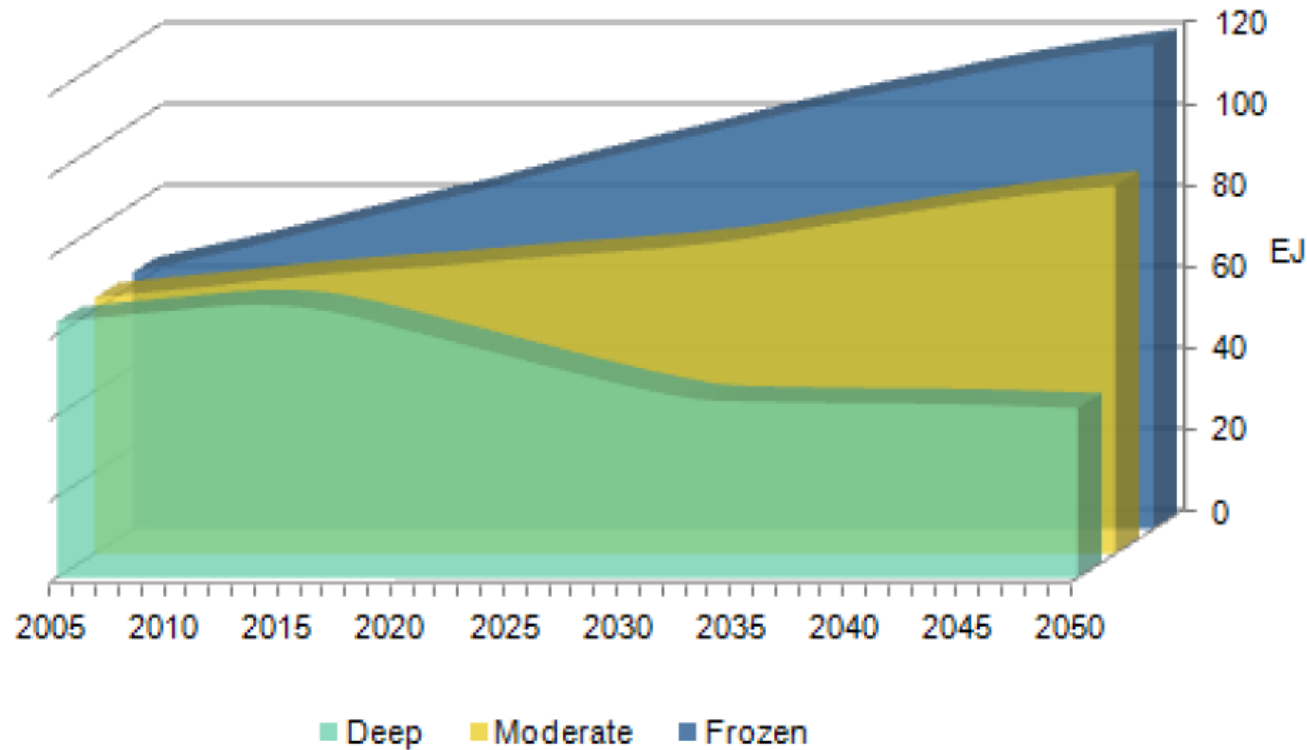


Note: Building sector energy consumption and intensities represent final energy consumption; EJ = exajoules; kWh/m² = kilowatt-hour per square metre.
Source: International Energy Agency (IEA), calculations derived from IEA World Energy Statistics and Balances 2016, www.iea.org/statistics.

Contribution of 4 key regions in global total final thermal energy use in 2005 and in 2050 for Deep Efficiency Scenario



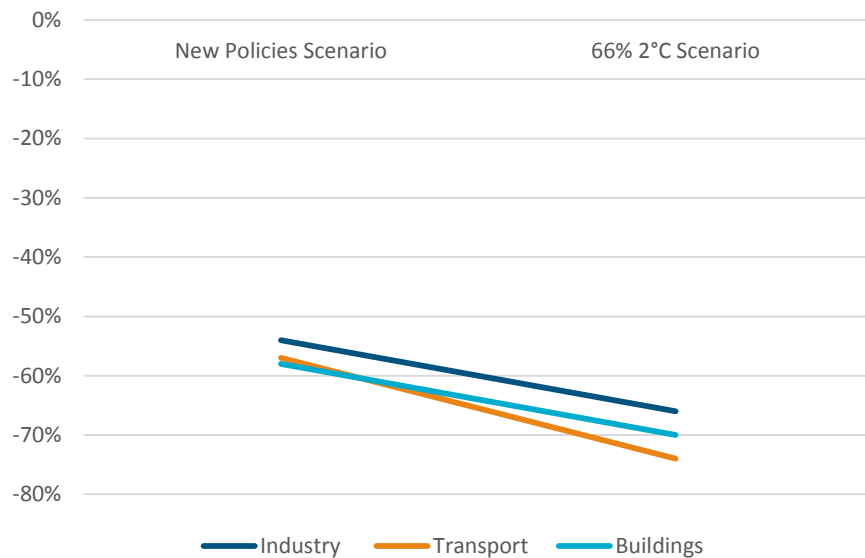
WORLD total final thermal energy for three scenarios



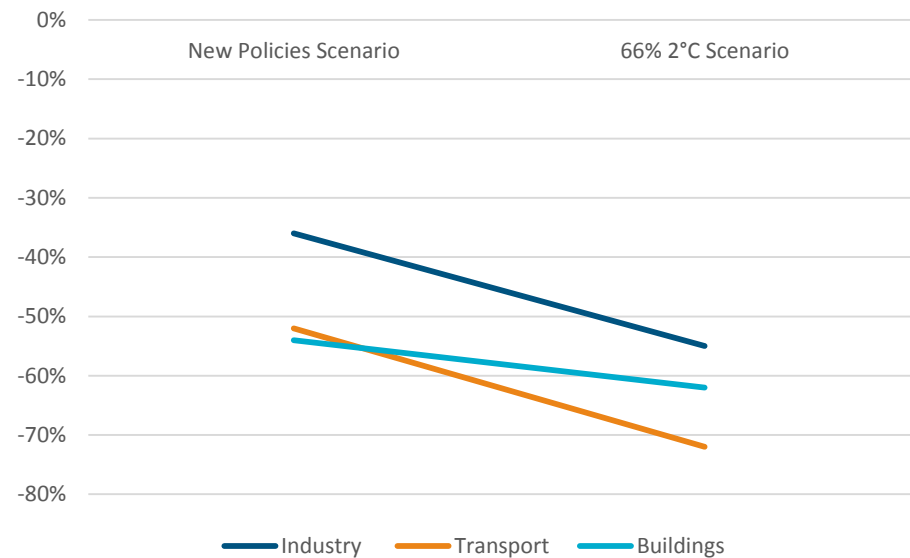
Energy intensity improvement by sector and region in the New Policies and 66% 2°C Scenarios



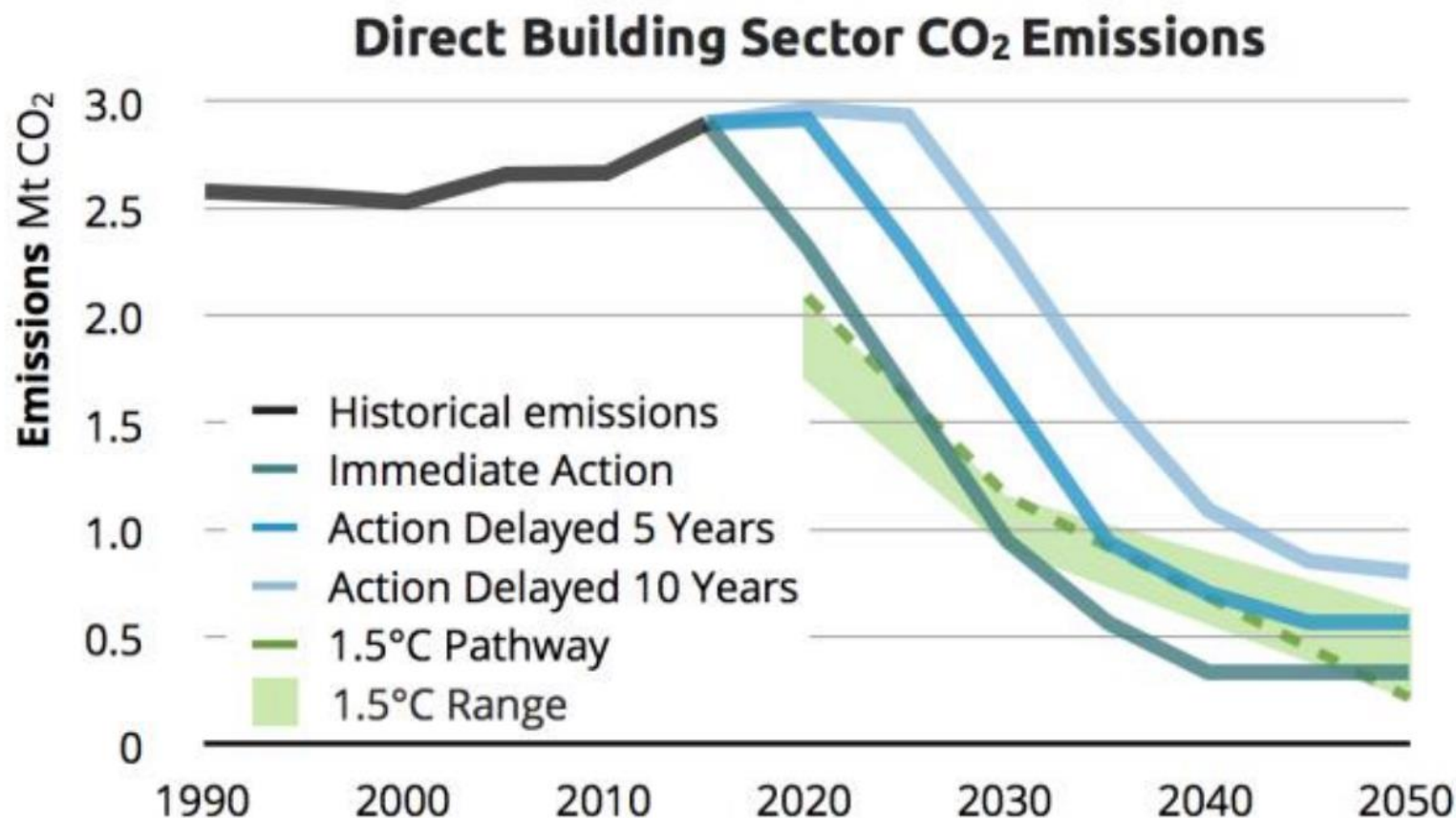
G20



Rest of World



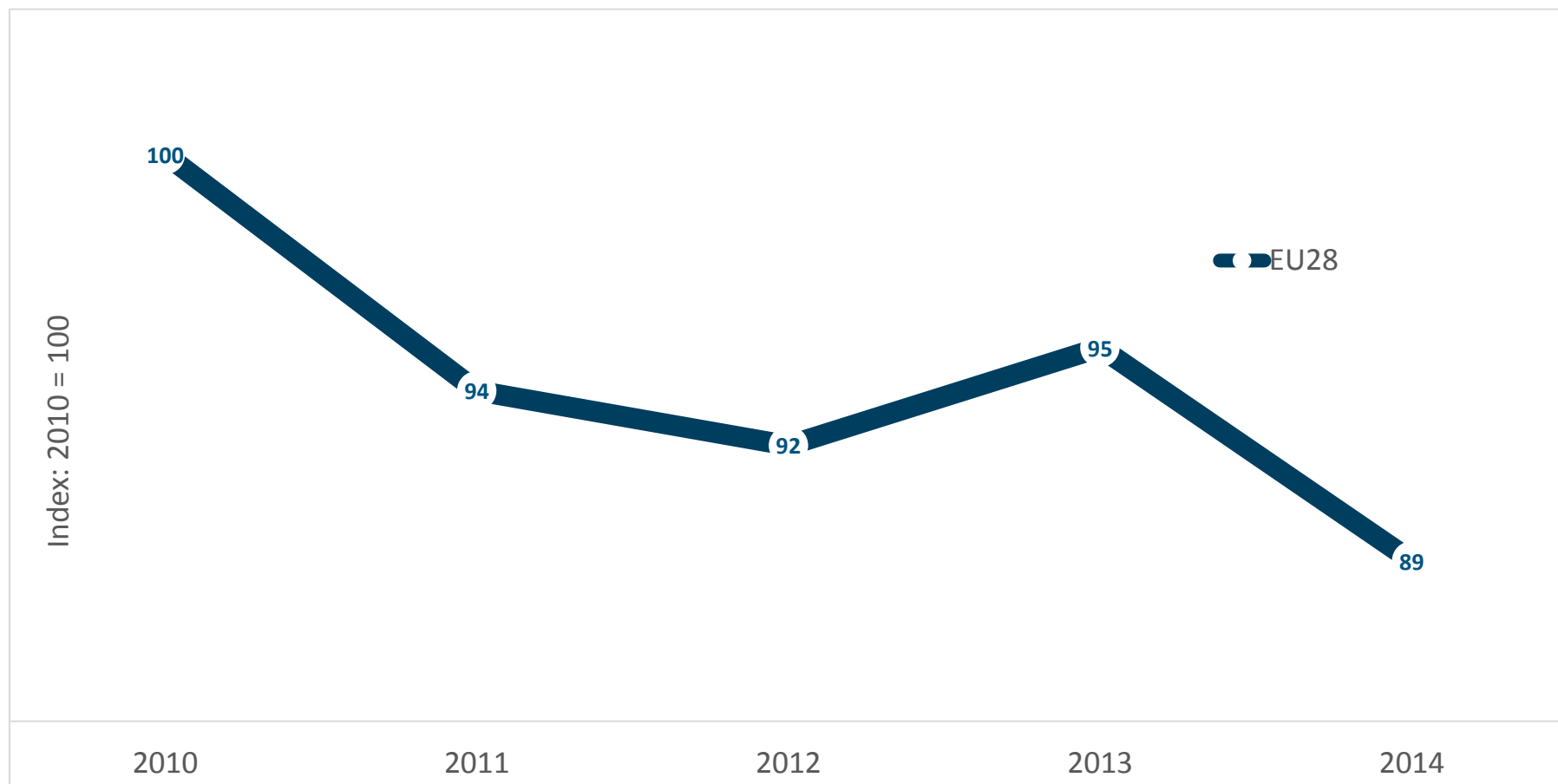
1990–2050 direct building sector emissions in three scenarios compared to 1.5°C



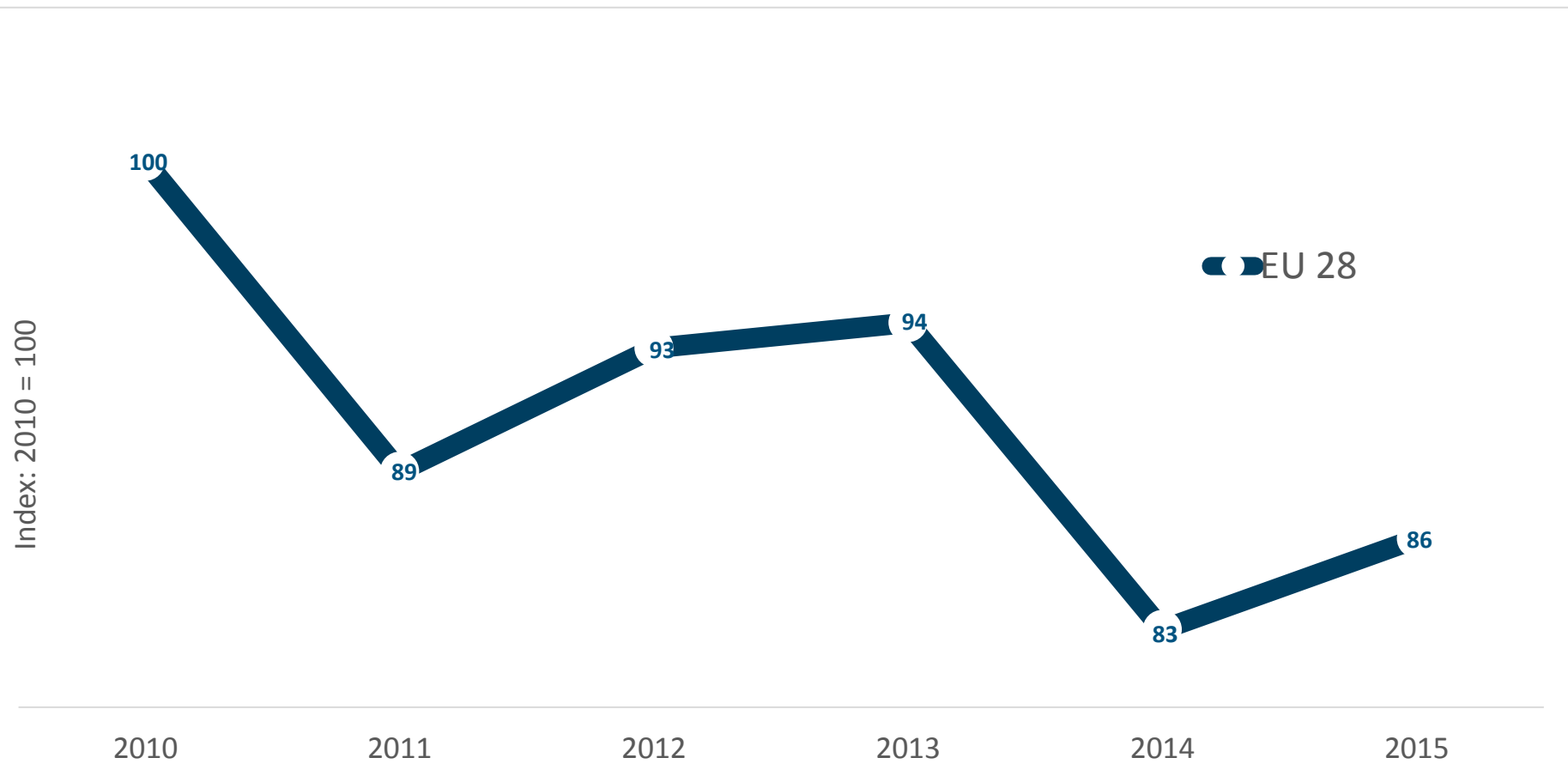
Is the EU moving in the right direction?

Evolution of final energy consumption in residential buildings per m² since 2010 (EU28)

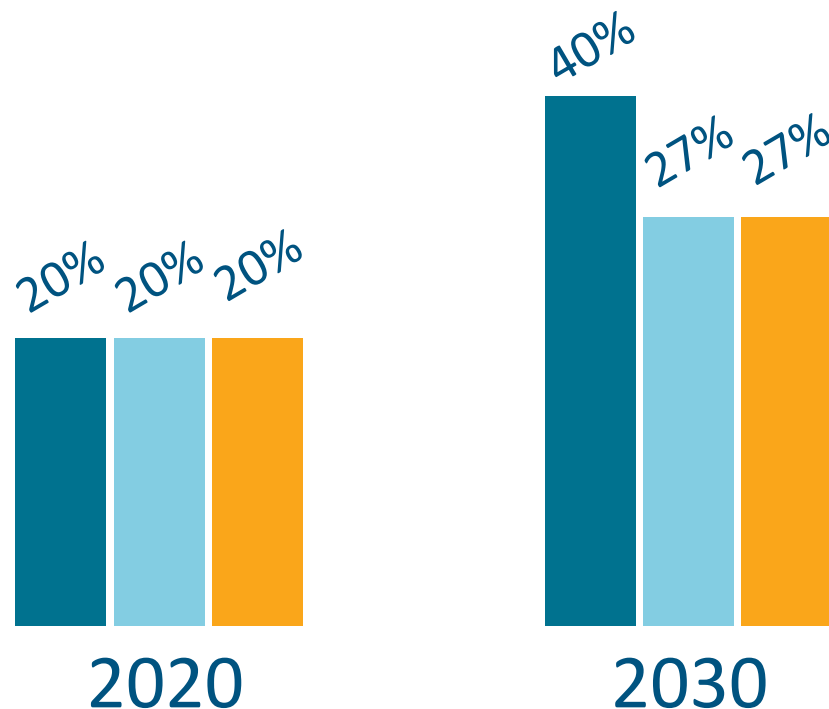
Adjusted to normal climate



Evolution of total final energy consumption in residential buildings since 2010



EU policy framework – 2020, 2030, 2050 targets



All buildings
carbon-neutral

2050

- Greenhouse gas emissions reduction
- Share of renewables increase
- Energy consumption reduction

Clean Energy for all Europeans Package

Energy Efficiency Directive

Energy Performance of Buildings Directive

A communication on accelerating clean energy in buildings

Ecodesign working plan 2018-2019

Renewable Energy Directive

Electricity market and consumers: Electricity Directive, Electricity Regulation and ACER Regulation, and a new Risk Preparedness Regulation

Governance of the Energy Union Regulation

BUILDINGS

A complex EU policy framework for energy efficiency

Energy Efficiency Directive

Binding 30% energy efficiency target for 2030

Access for consumers to consumption information

Extension of annual energy savings obligations for Member States beyond 2020

Eco-design Directive

Energy-related products

Product regulations

Reviews of existing measures and studies for new measures for other products

Governance Regulation

Requirements for Member States' Integrated National Energy and Climate plans for 2021 to 2030

Market Design

Provision to reward flexibility for generation, demand-response and storage

Provisions for the protection of vulnerable customers

Energy Performance of Buildings Directive

Smartness indicator

Electro-mobility infrastructure

Member States - Long-term national renovation strategies

Renewable Energy Directive

Obligations for renewable energy use in heating and cooling

Renewable energy target for 2030

New

- Smartness indicator
- Provisions to protect vulnerable consumers
- Measures to leverage financing

But the proposal fails to trigger more and deeper renovation activities

Missing

- 2030/2050 EU vision for the buildings
- Requirements for better energy performance of public and commercial buildings
- Any changes to EPC towards personalised renovation advice

Expected impact of revised EPBD

Table 8: Comparison of policy options

	Reference: No-change option	Option I: Enhanced implementation and further guidance	Option II: Enhanced implementation, including targeted amendments for strengthening of current provisions	Option III: Enhanced implementation towards further harmonization and higher ambition
Additional final energy savings in 2030	-	2 Mtoe	28 Mtoe	72 Mtoe
Additional associated construction activity in 2030	-	€2.15bn	€47.6bn (€1 – €4 bn mandated by the Option)	€101bn (€52 – €59 bn mandated by the Option)
Economic growth, incl. SMEs in 2030	-	€2.4bn - €10.1bn	€103.8bn - €143.8bn	€197bn - €280bn
Jobs retained/ created	-	9k	220k	500k
Energy poverty alleviation	-	20k – 120k households	515k - 3.2M households	1.5M to 8.3M households

The path not chosen

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Conclusions

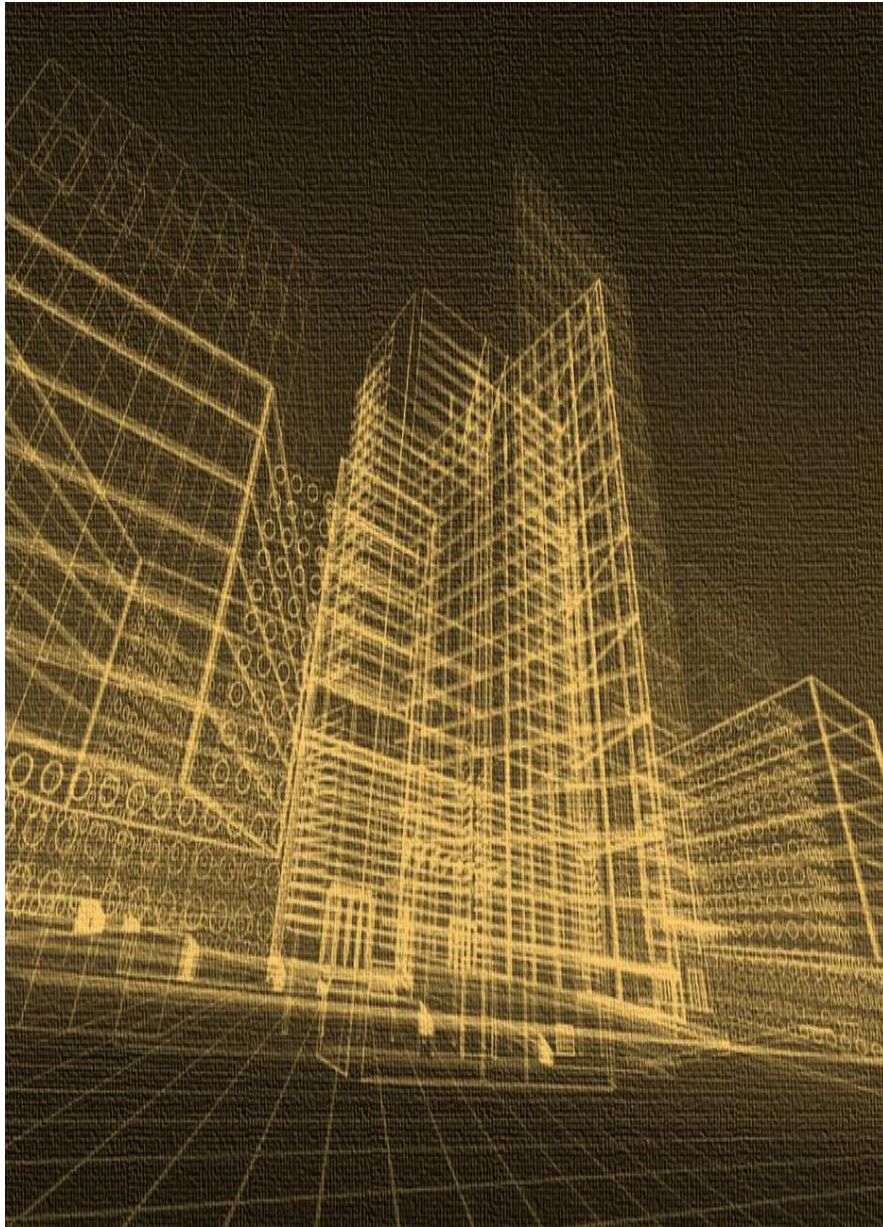
Two pillars to address



Circularity Challenge

Avoid lock-in effects

Develop new financing models and business offers



BPIE

Oliver Rapf

Executive Director

oliver.rapf@bpie.eu

www.bpie.eu