

Energy and Climate Change

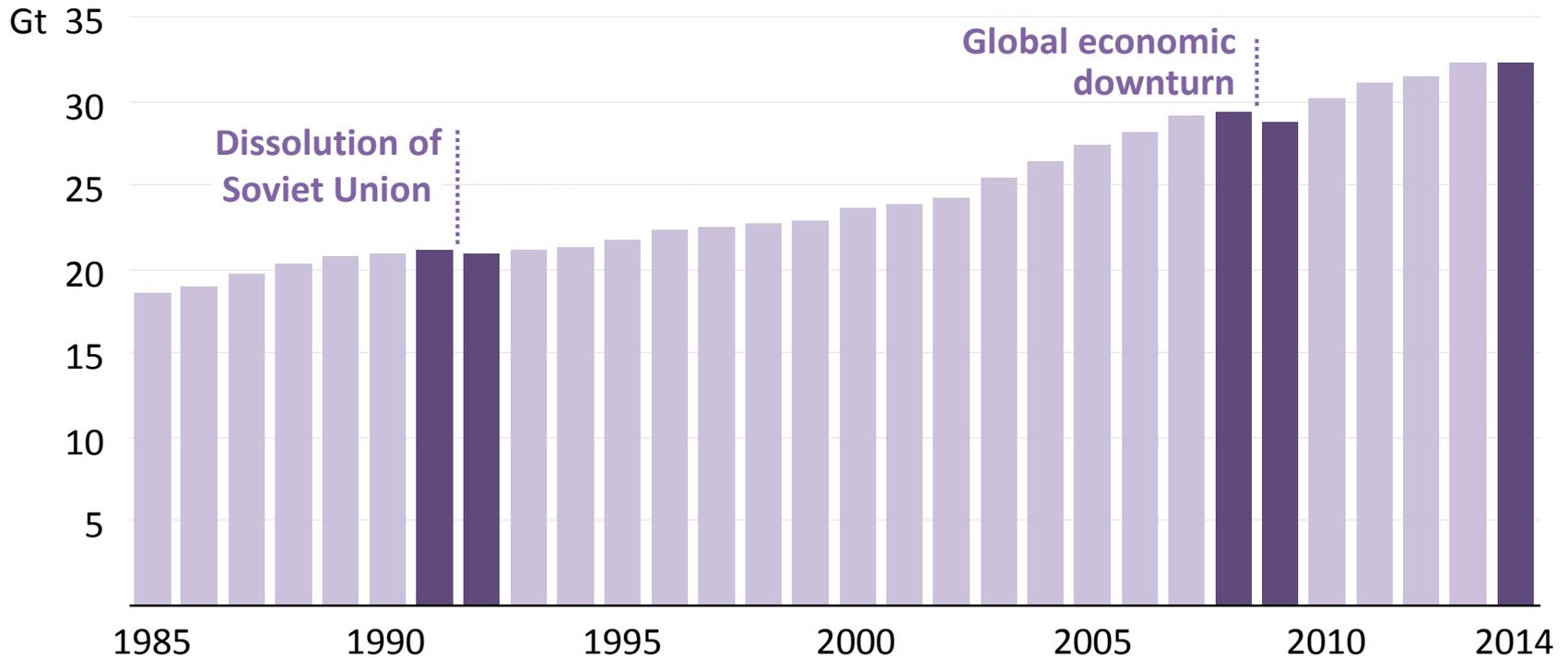
Paris, 15 June 2015

Energy & climate change today

- **A major milestone in efforts to combat climate change is fast approaching – COP21 in Paris in December 2015**
- **Momentum is building:**
 - *Historic US-China joint announcement; EU 2030 targets agreed*
 - *Developed & developing countries are putting forward new pledges to reduce emissions*
 - *Many energy companies & investors are starting to engage*
- **Energy production & use accounts for two-thirds of global greenhouse-gas emissions**
- **Energy sector must cut emissions, while powering economic growth, boosting energy security & increasing energy access**

Energy emissions stall but economic engine keeps running

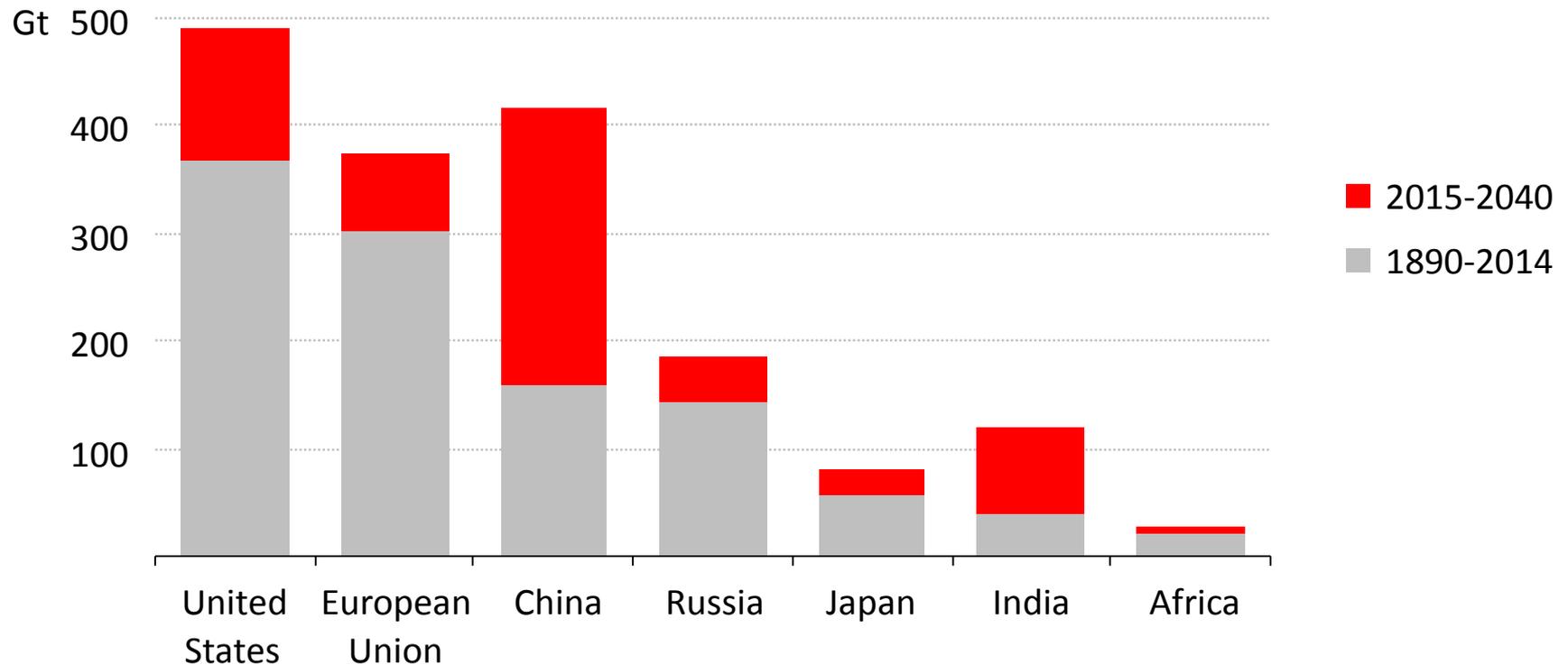
Global energy-related CO₂ emissions



For the first time, energy-related CO₂ emissions stalled despite the global economy expanding by 3%

Emissions burden moves over time

Cumulative energy-related CO₂ emissions by region

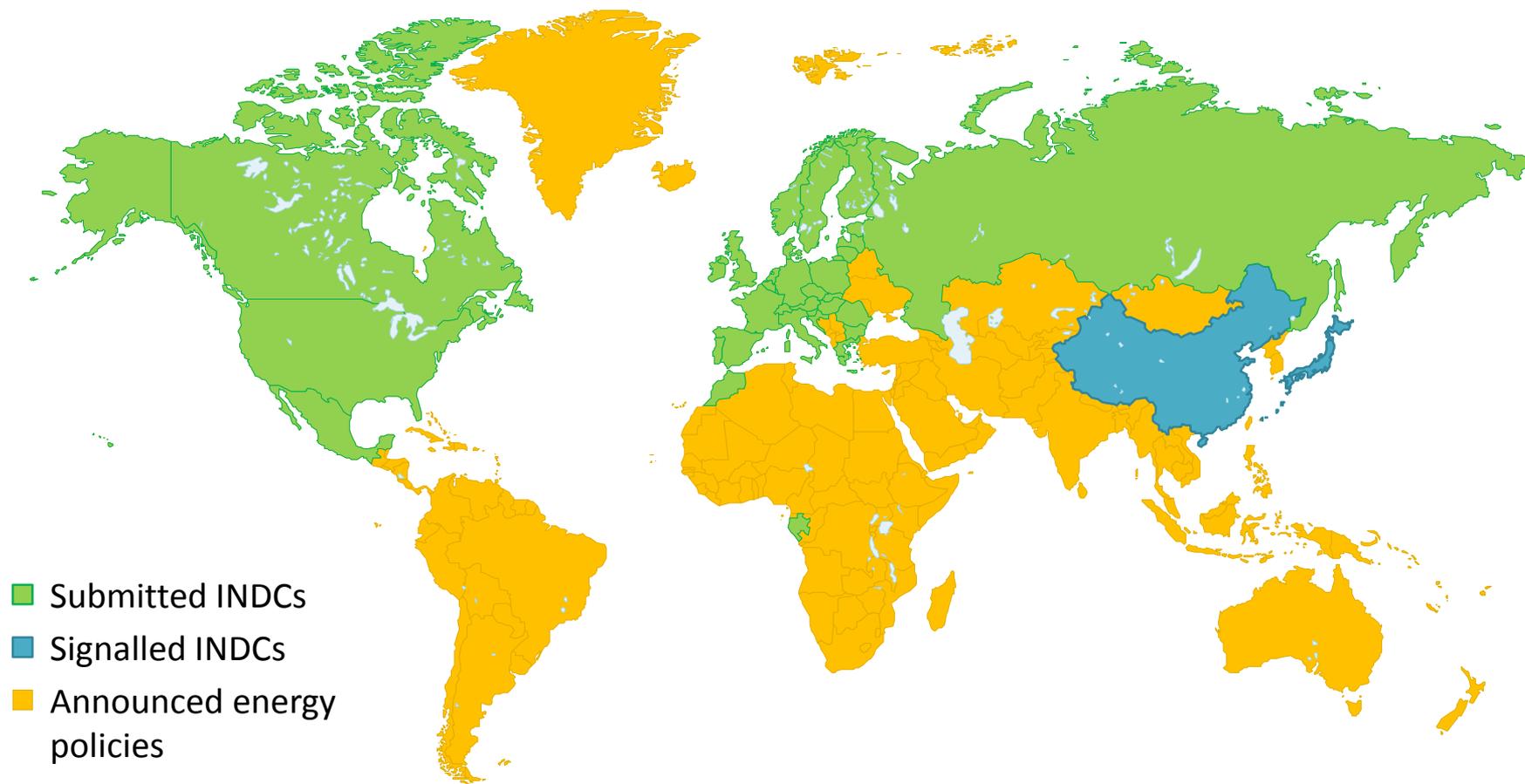


Past emissions are important, although the source of emissions shifts with changes in the global economy

National pledges build towards a global agreement

WEO Special
Report on

Energy &
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Submitted & signalled Intended Nationally Determined Contributions (INDCs) cover two-thirds of energy-related GHG emissions, shaping energy & emissions trends

Climate pledges shift the energy sector

- **One-quarter of the world's energy supply is low carbon in 2030; energy intensity improves three-times faster than the last decade**
- **Renewables reach nearly 60% of new capacity additions in the power sector; two-thirds of additions are in China, EU, US & India**
- **Natural gas is the only fossil-fuel that increases its share of the global energy mix**
- **Total coal demand in the US, Europe & Japan contracts by 45%, while the growth in India's coal use slows by one-quarter**
- **Climate pledges for COP21 are the right first step towards meeting the climate goal**

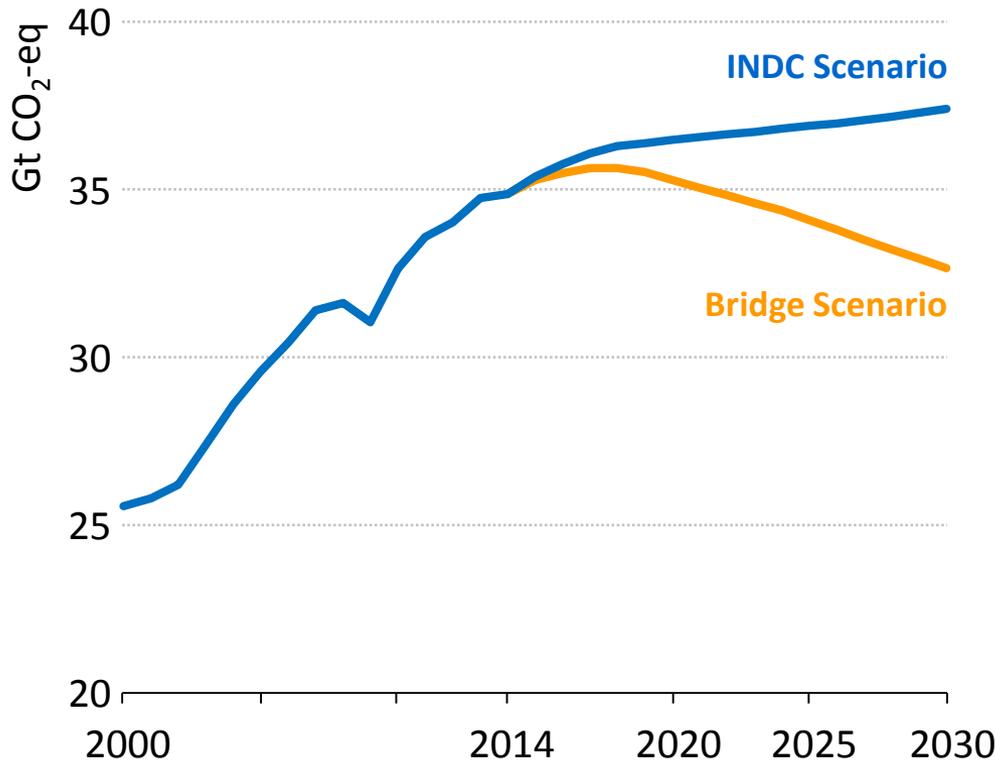
What does the energy sector need from COP21?

■ The IEA proposal for COP21:

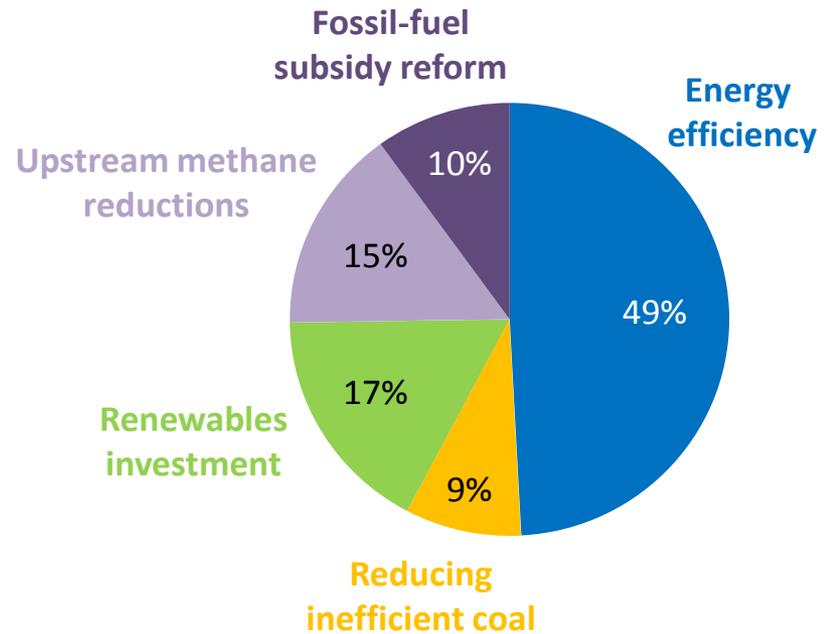
1. *Peak in emissions* – set the conditions which will achieve an early peak in global energy-related emissions
2. *Five-year revision* – review contributions regularly, to test the scope to lift the level of ambition
3. *Lock in the vision* – translate the established climate goal into a collective long-term emissions goal
4. *Track the transition* – establish a process for tracking energy sector achievements

1. Peak in emissions: IEA strategy to raise climate ambition

Global energy-related GHG emissions



Savings by measure, 2030

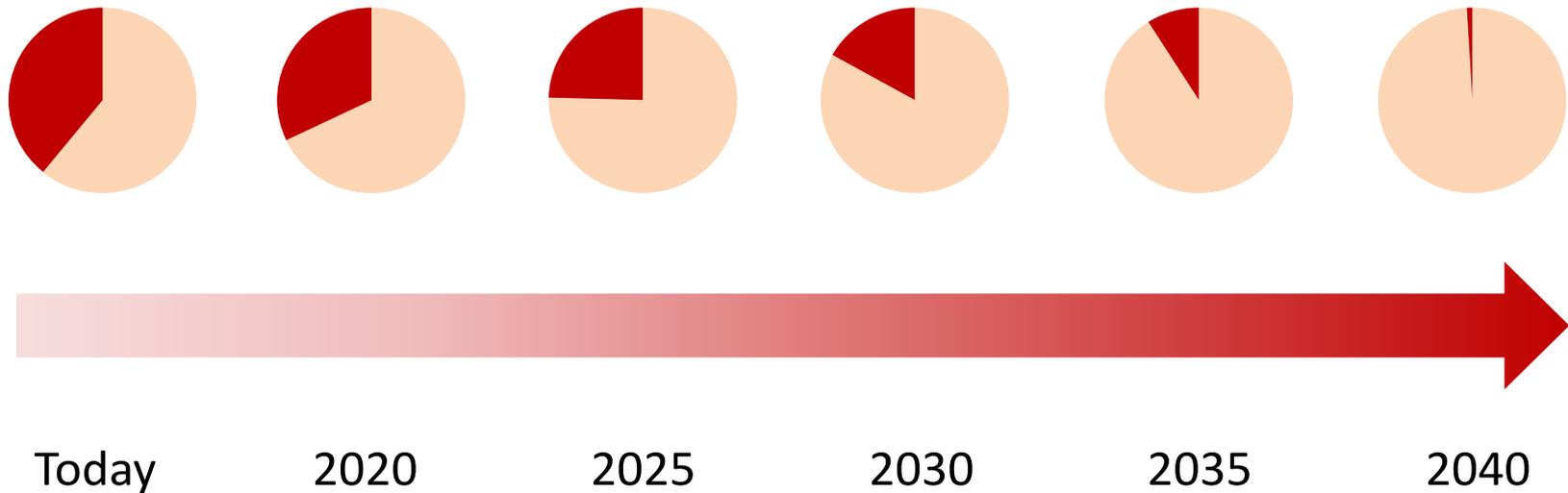


Five measures – shown in a “Bridge Scenario” – achieve a peak in emissions around 2020, using only proven technologies & without harming economic growth

2. Five-year revision:

World's carbon budget is shrinking

World's remaining carbon budget

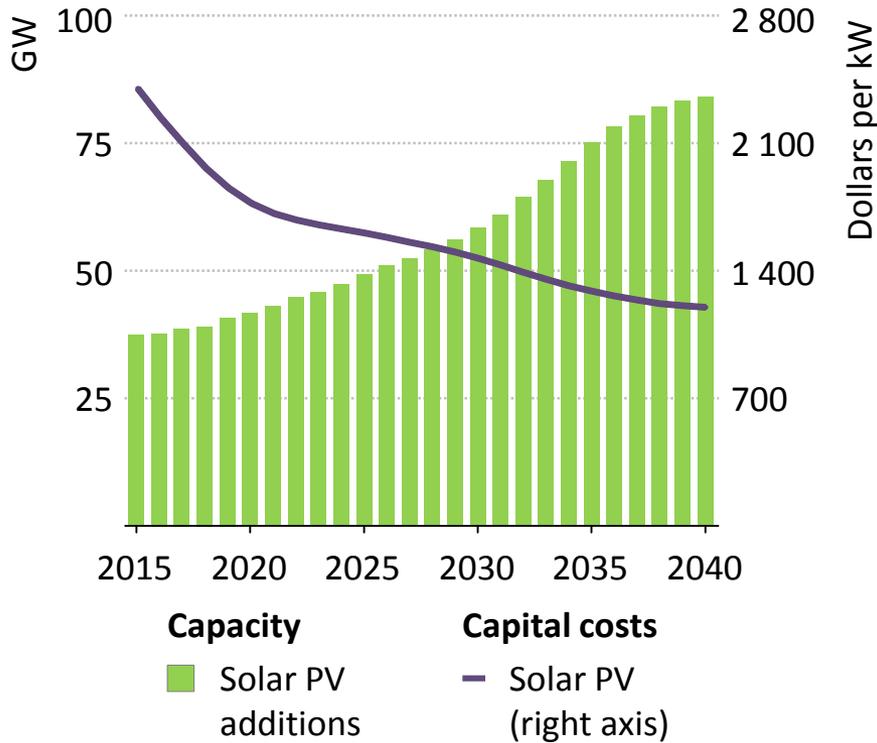


A five-year review cycle would enable pledges to keep pace with energy sector innovation; building ambition before the carbon budget is consumed

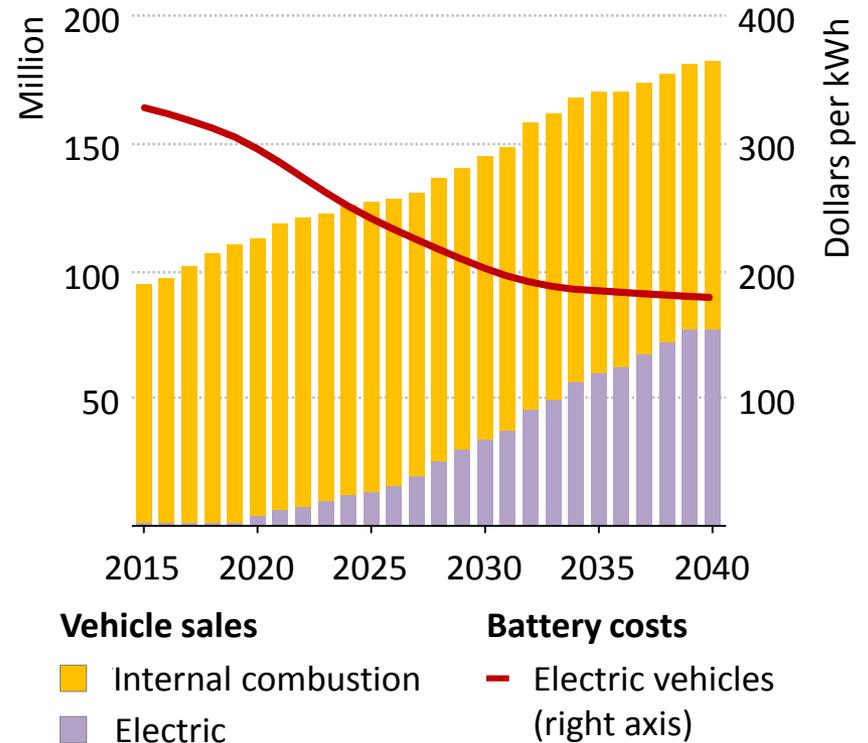
3. Lock in the vision:

What more does it take for 2 °C?

Cost reductions & deployment of all solar PV



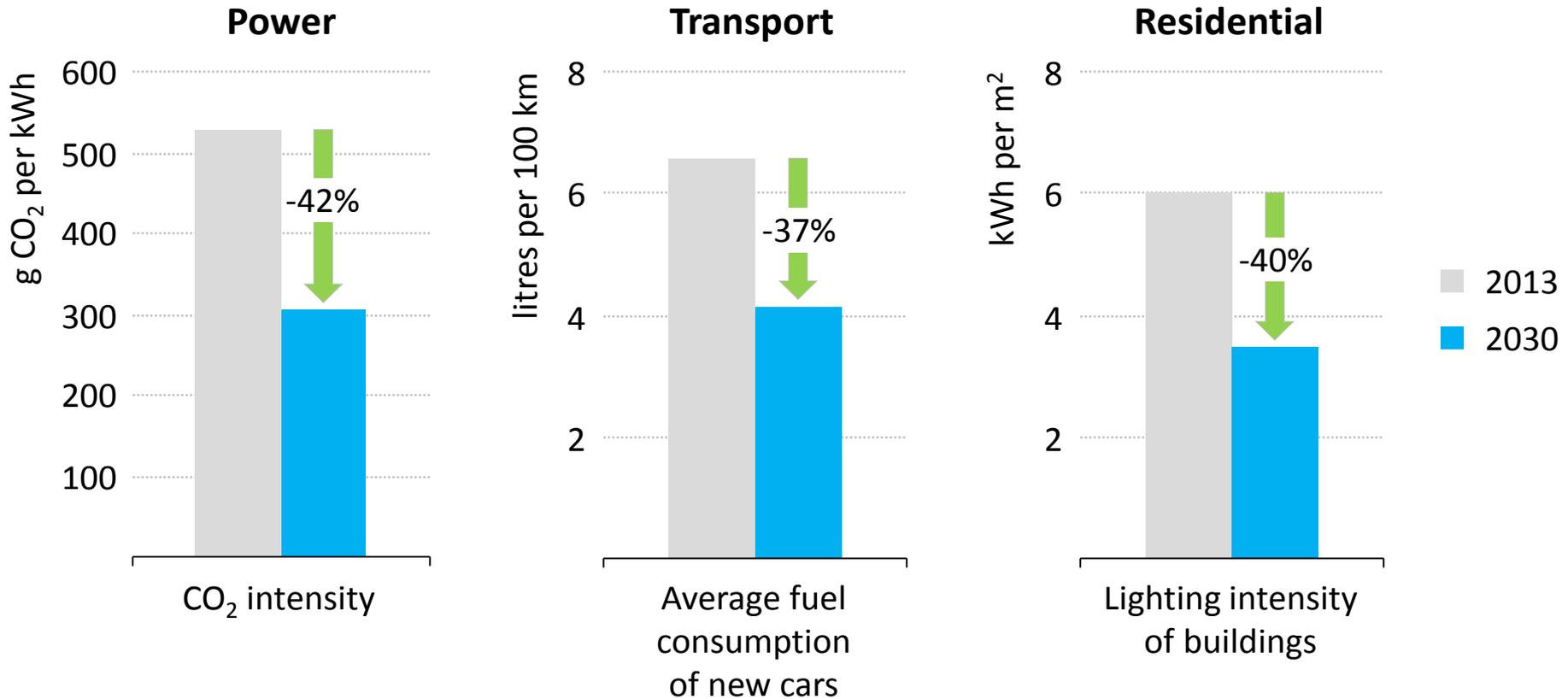
Cost reductions & deployment of electric vehicles



An emissions goal would give greater clarity & certainty to the energy sector, strengthening the case for RD&D investment & technology transfer

4. Track the transition:

Impact of pledges must be monitored



Energy sector indicators are needed to track the low-carbon transition; the IEA identified key metrics to monitor energy sector achievements

Conclusions

- Pledges are not yet enough to achieve our climate goal, but are a basis from which to build ambition
- Companies that do not anticipate stronger energy & climate policies risk being at a competitive disadvantage
- For COP21, the IEA proposes four key energy sector outcomes:
 1. Target a near-term peak in emissions
 2. Five-year revision, to test the scope for raising ambition
 3. Lock in the vision by setting a long-term emissions goal
 4. Track the transition in the energy sector

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www.worldenergyoutlook.org/energyclimate