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## ***Five key points for COP 20***

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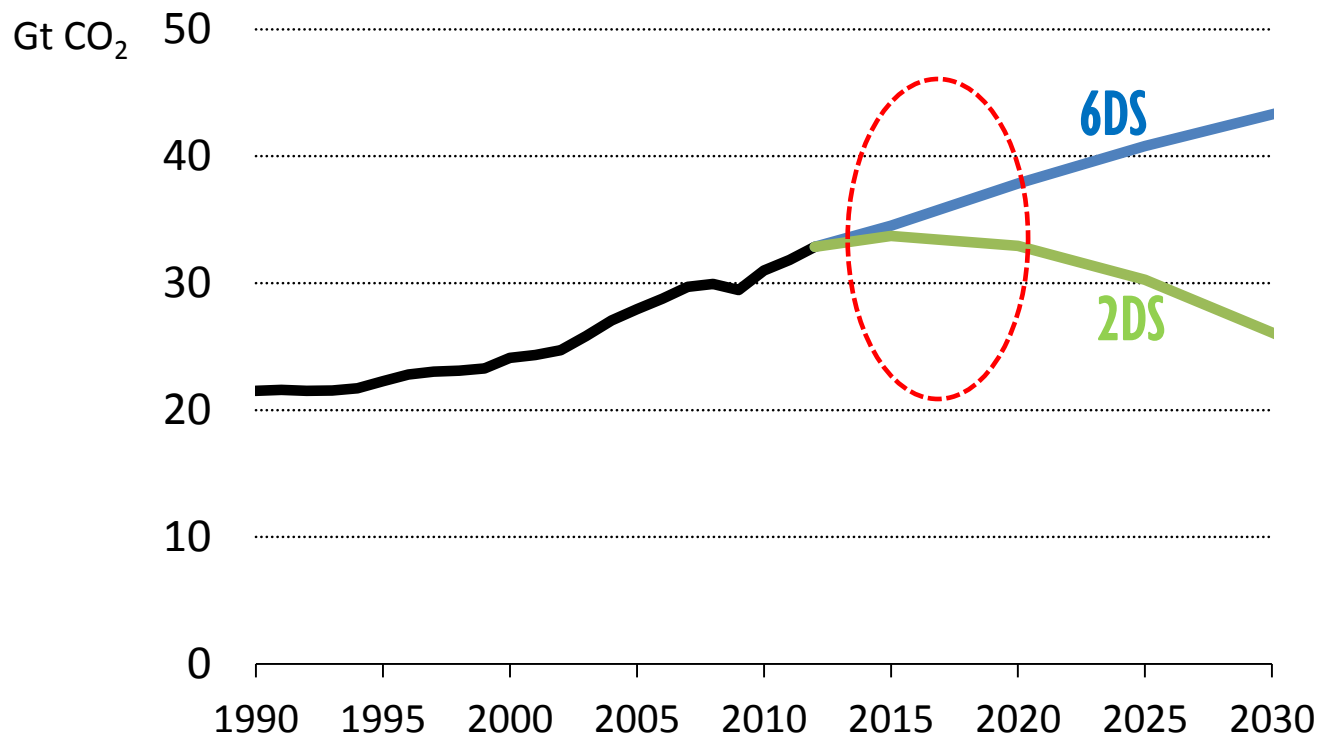
*20 November 2014*

# 5 key actions to achieve a low-carbon energy sector

- 1. Seize the benefits of immediate action to bend the global emissions curve**
- 2. Focus on electricity decarbonisation**
- 3. Reshape investment and accelerate innovation now in low-carbon technologies**
- 4. Mobilise non-climate goals to promote energy sector decarbonisation**
- 5. Strengthen the resilience of the energy sector to climate change**

# 1. Seize the benefits of immediate action to bend the global emissions curve

## *Bending the global emissions curve*

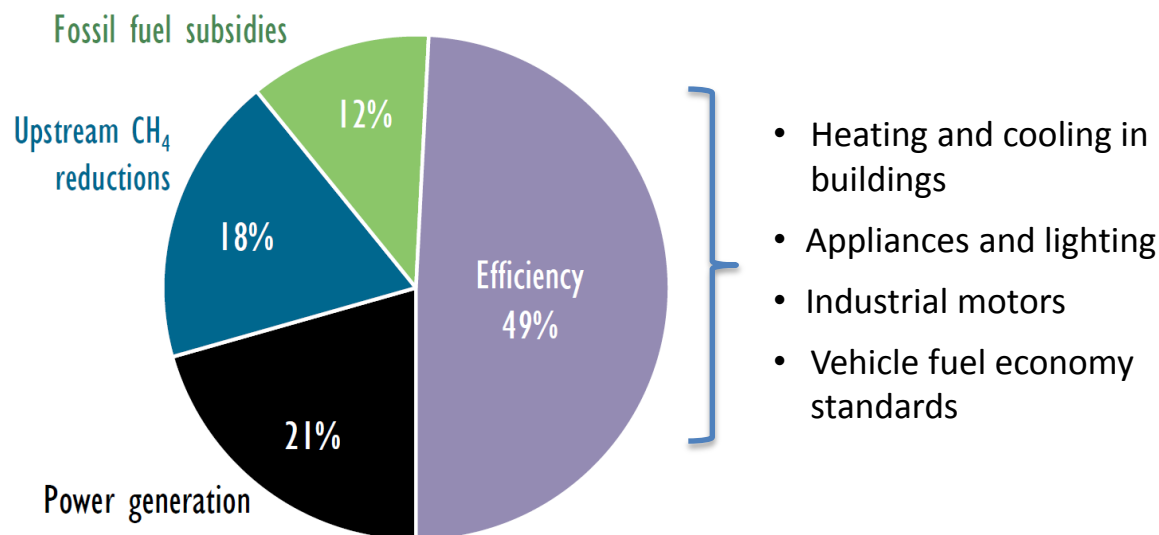


**World energy-related CO<sub>2</sub> emissions by scenario**

Source: *Energy Technology Perspectives, 2014*

# 1. Seize the benefits of immediate action to bend the global emissions curve

*GDP-neutral actions in the period to 2020, led by energy efficiency, can keep the 2°C goal within reach.*



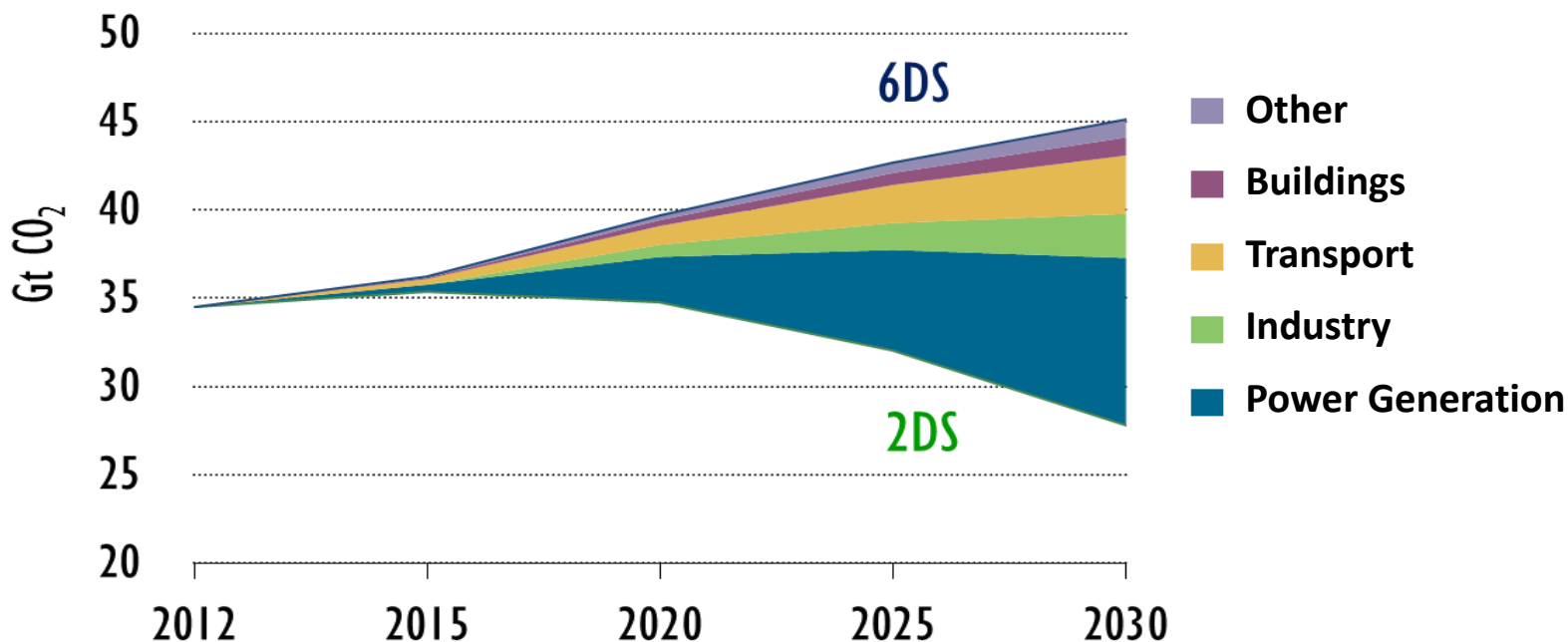
Source: World Energy Outlook Special Report: Redrawing the Energy-Climate Map, 2013

## Possible inputs to the UNFCCC:

In INDCs	In the 2015 Climate Agreement
<ul style="list-style-type: none"> <li>• Ambitious 2020 starting point: countries should undertake cost-effective action pre-2020.</li> </ul>	<ul style="list-style-type: none"> <li>• Ambitious post-2020 mitigation targets will encourage pre-2020 action.</li> <li>• Continue technical expert meetings to share best-practice.</li> </ul>

## 2. Focus on electricity decarbonisation

*To 2030, electricity sector decarbonisation has the largest impact.*



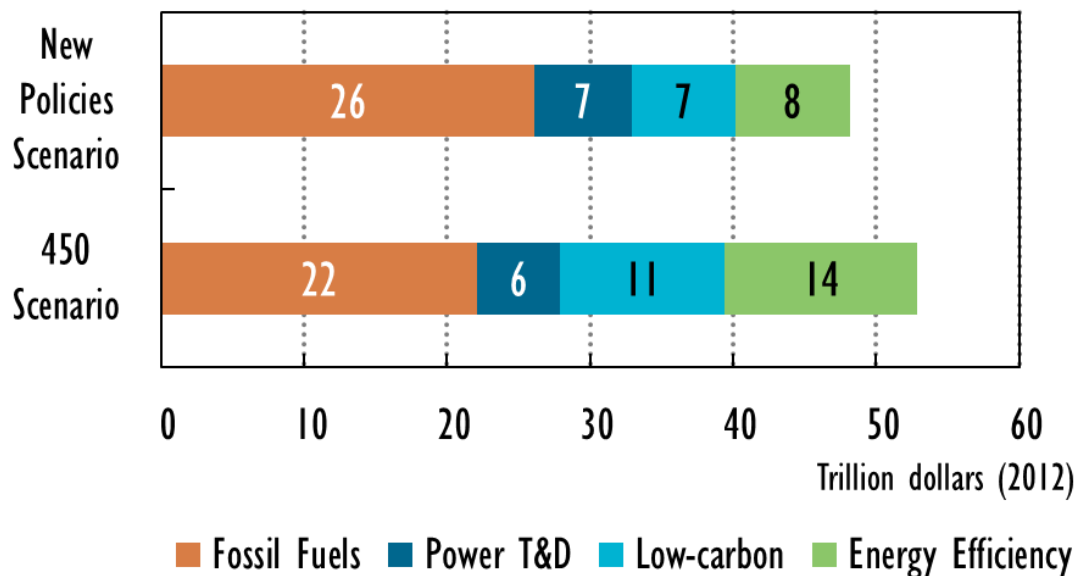
Source: *Energy Technology Perspectives, 2014*

### Possible inputs to the UNFCCC:

In INDCs	In the 2015 Climate Agreement
<ul style="list-style-type: none"> <li>Complementing GHG goals, countries could set INDCs for the power sector such as emissions intensity, energy efficiency or renewables .</li> </ul>	<ul style="list-style-type: none"> <li>Encourage focus on underlying drivers of change in the electricity sector, in addition to overall GHG outcomes</li> <li>Support carbon markets for those countries wishing to use them.</li> </ul>

### 3. Reshape investment and accelerate innovation now in low-carbon technologies

*In the 450 Scenario, investment in energy supply is redirected from fossil fuels to low-carbon, while energy efficiency increases.*



Cumulative investments in the New Policies and 450 Scenarios 2014 to 2035

Source: World Energy Investment Outlook, 2014

#### Possible inputs to the UNFCCC:

##### In INDCs

- Complementing GHG goals, countries could set INDCs for investment patterns

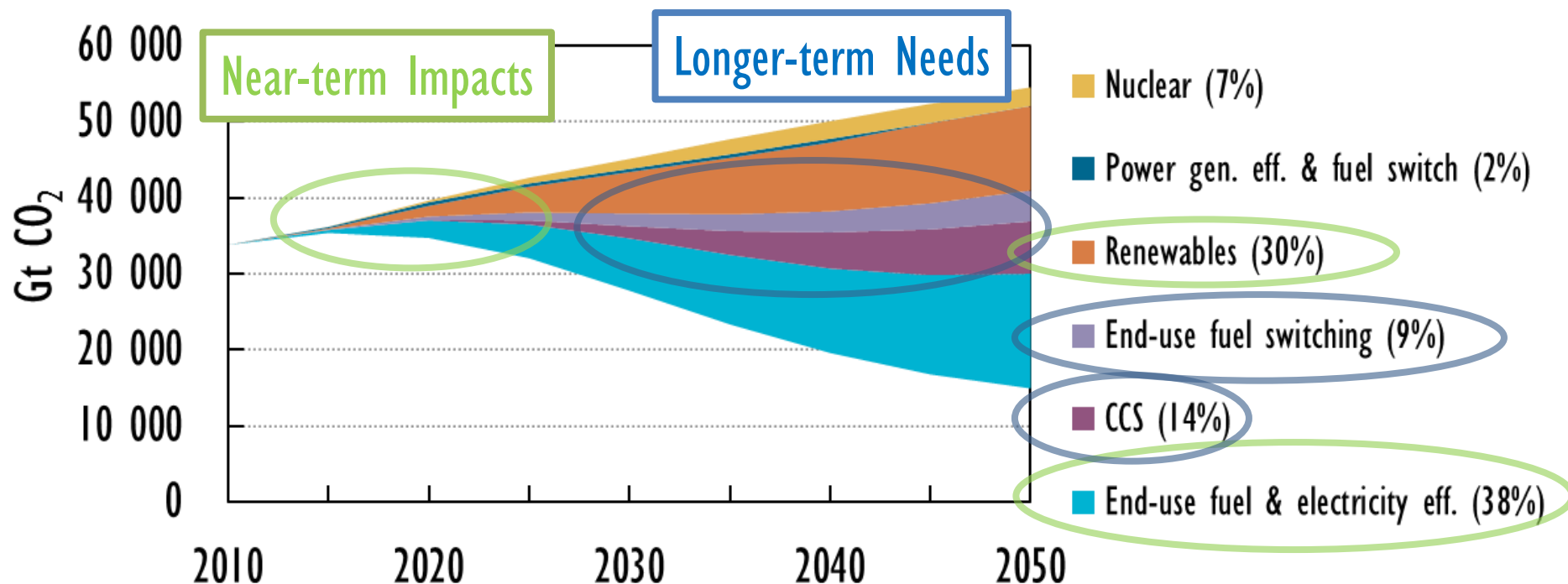
##### In the 2015 Climate Agreement

- Long-term global and/or national emissions goal(s), with tracking based on energy sector decarbonisation metrics as well as GHG levels.



### 3. Reshape investment and accelerate innovation now in low-carbon technologies (cont'd)

#### The innovation challenge



Source: Energy Technology Perspectives, 2014

#### Possible inputs to the UNFCCC:

##### In INDCs

- Mitigation INDCs should take into account the future availability and costs of technologies.

##### In the 2015 Climate Agreement

- Publish a review of technology progress and availability ahead of each round of mitigation target-setting.
- TEC, or an agency like the IEA, to track adequacy of technology RD&D.

# 4. Mobilise non-climate goals to promote energy sector emission reductions

*GHG emission reductions can be co-benefits of other policy objectives.*



## Possible inputs to the UNFCCC:

### In INDCs

- Consider whether non-GHG INDCs could support greater ambition than emissions targets alone.
- Work across government to identify non-climate goals that can reduce emissions, and design win/win policies.

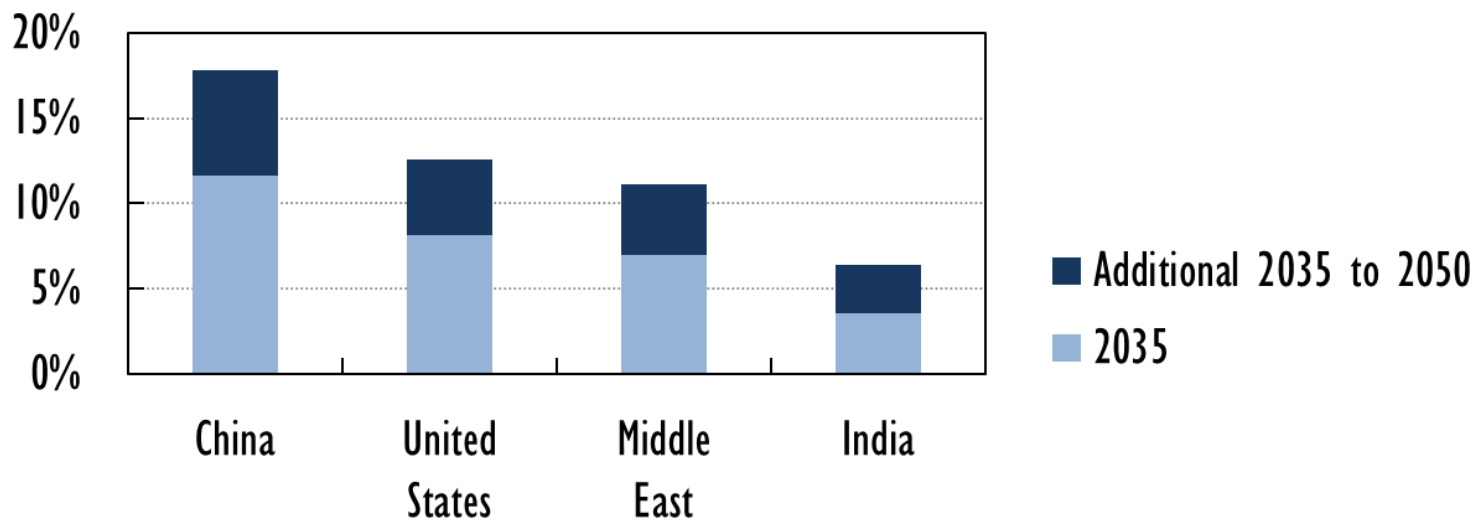
### In the 2015 Climate Agreement

- Support GHG goals by complementary use of non-GHG metrics
- Recognise non-UNFCCC goals and actions.
- UNFCCC, or an agency like the IEA, could track global progress in key drivers such as energy efficiency.



# 5. Strengthen energy sector resilience to climate change

*Past energy demand patterns cannot serve to plan future energy systems.*



Increases in energy demand for space cooling after accounting for climate change

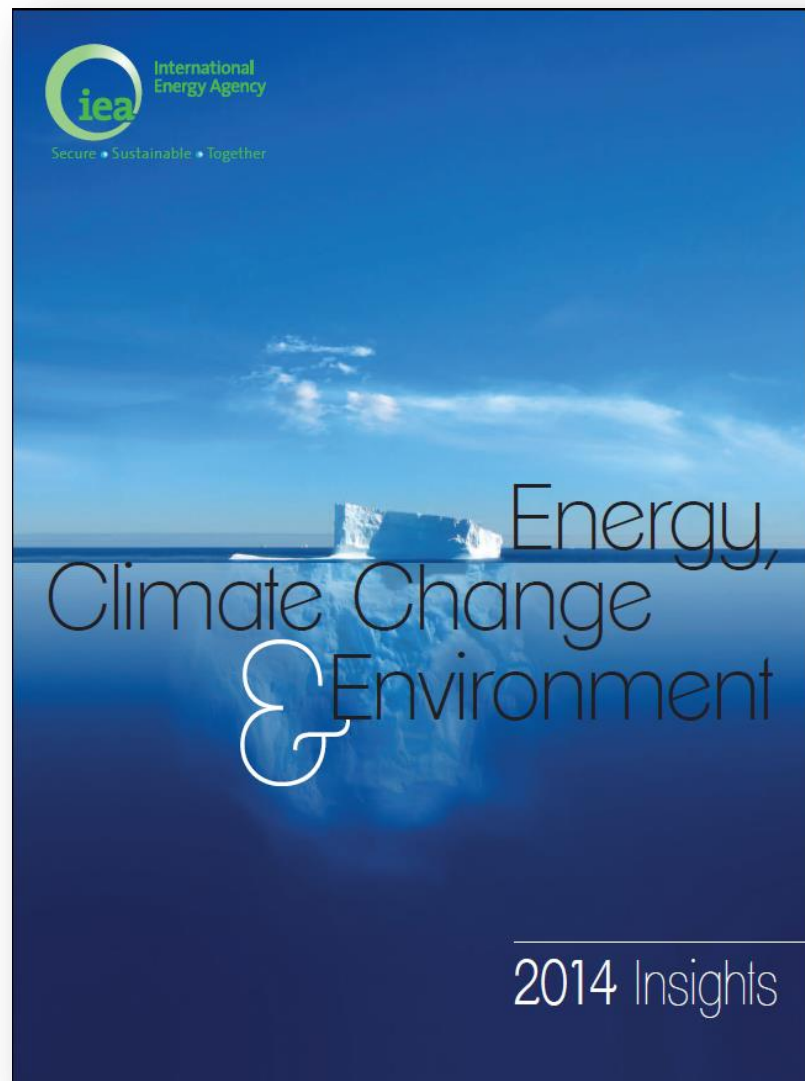
Source: *World Energy Outlook Special Report: Redrawing the Energy-Climate Map, 2013*

## Possible inputs to the UNFCCC:

In INDCs	In the 2015 Climate Agreement
<ul style="list-style-type: none"> <li>Explore mitigation actions that also enhance resilience (e.g., energy efficiency, decentralized renewables generation, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>Encourage resilience measures in the energy sector-by all countries.</li> <li>Provide financial support to developing countries to enhance their energy sector's resilience to climate change impacts.</li> <li>Incorporate climate risks to energy infrastructure, supply and demand in Green Climate Fund investments decisions.</li> </ul>

# New IEA publication

- **Annual publication**
- **Goes deeper into selected technical issues**
- **Each year chooses a special thematic focus**
- **Presents regional energy and emissions data**



# Outline of 2014 edition

- **Policies and actions to “unlock” existing high-emissions assets**
- **The new landscape of emissions trading systems**
- **Energy metrics: A useful tool for tracking decarbonisation progress**
- **The air pollution-GHG emissions nexus: Implications for the energy sector (this year’s special focus)**
- **Trends in energy and emissions data**

## THE WAY FORWARD

FIVE KEY ACTIONS TO ACHIEVE A LOW-CARBON ENERGY SECTOR



**01** Seize the benefits of immediate action to bend the global emissions curve. To 2020, bridging 80% of the gap to an optimal 2°C path comes at no extra GDP cost.



**02** Focus on electricity decarbonisation. Strong policies supporting low-carbon electricity could more than halve electricity emissions in 2030. This would save 9.5 Gt in 2030 - an amount larger than China's total 2012 energy emissions.

**03** Reshape investment and accelerate innovation now in low-carbon technologies. Multilateral collaboration is critical to the development and tailoring of nationally appropriate technology solutions.



CO<sub>2</sub>



**04** Mobilise non-climate goals to promote energy sector decarbonisation. Health, transport, energy security, and other goals can also drive emissions reductions.



**05** Strengthen the resilience of the energy sector to climate change. Even in a 2°C world, climate change poses threats to energy security that need to be addressed through policy and commercial actions.



# Thank you

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