COP28 Action Agenda: Potential Impact to 2030

December 2023
## COP28 Action Agenda

<table>
<thead>
<tr>
<th>Sector</th>
<th>Ambition</th>
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<tbody>
<tr>
<td>Renewables</td>
<td>• Triple total installed renewables capacity from ~3.5 TW to ~11 TW by 2030</td>
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<tr>
<td>Energy Efficiency</td>
<td>• Double annual energy efficiency improvements from ~2% to ~4% by 2030</td>
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<tr>
<td>Oil and Gas</td>
<td>• Net Zero Scope 1&amp;2 emissions by 2050</td>
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<td>• Near-zero methane and zero routine flaring by 2030</td>
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<td>CCS</td>
<td>• Aspirational goal for gigatonne-scale CCUS by 2030</td>
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<tr>
<td>Heavy Emitting Sectors</td>
<td>• Launch of Industrial Transition Accelerator</td>
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<tr>
<td>Deforestation</td>
<td>• Protect, restore and sustainably manage forest basins in key tropical countries</td>
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<tr>
<td>Agriculture and Food</td>
<td>• Accelerate uptake of alternative proteins, fertilizer innovations, dietary shifts, and reductions in methane emissions</td>
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Pursuing the 1.5°C North Star: emissions reductions required by 2030

Global CO₂ emissions

GtCO₂

= 3 GtCO₂e on 100yr basis; = 9 GtCO₂e on 20 year basis

Global CH₄ emissions

MtCH₄

2030 Business as usual

2030 1.5°C pathway

~50%

~35%
Prudent assessment of impact

Global CO₂ emissions

- Baseline 41
- Renewables 3.5
- Electrification and Energy Efficiency 2.5
- O&G Scope 1&2 ~0.1
- CCS ~0.4
- Heavy Emitting Sectors 0.2-0.3
- Food and Land 1
- 2030 - Including Mitigation 33
- Remaining Gap 12
- 2030 - Required for 1.5C 21

Global CH₄ emissions

- Baseline 380
- O&G Scope 1&2 30
- Food and Land 15
- China Pledge 10
- 2030 - Including Mitigation 325
- Remaining Gap 75
- 2030 - Required for 1.5C 250
Tripling renewables: actions required

- **Strategic vision**: setting clear national targets in line with the global tripling commitment

- **Faster permitting** – halving timescales for wind, solar

- **Investing in the grids needed** to connect renewable resources

- Quadrupling of investment in **low- and middle-income countries**, to ~$650 bn p.a. by 2030
Doubling energy efficiency: actions required

- **As much electrification as possible** – replacing internal combustion engines with electric vehicles; gas boilers with electric heat pumps

- **Increasing technical efficiency of key equipment**: heat pumps and air-conditioners

- **Accelerating retrofit** of existing buildings to make more efficient

- **Efficiency improvements in internal combustion engines**

- **Behavioural changes**, e.g. lower driving speeds, lower thermostat settings for heating, higher settings for air conditioning
Oil and Gas: actions required

• Independently verified and accurate measurement

• Strong and tightly enforced regulations

• Economic incentives: e.g., US Inflation Reduction Act’s explicit methane price

• Need to apply measures across all geographies and companies
Carbon Capture: actions required

• **Stronger policies to make CCUS economic**, incl. subsidies, regulatory requirements or carbon prices

• Coordinated action to develop the shared infrastructure of transport and storage

• **High capture rates** and **strong transparency**

• **Annual investment of ~$70 bn p.a. by 2030**, more than 10x current levels
Industry Transition Accelerator: specific actions to drive rapid progress

• Increased and widespread commitments

• Critical mass of early demand for green products

• Targeted public subsidies, financial institution support and value chain coordination to stimulate the initial projects

• Long-term economic incentives: carbon prices or volume mandates
Agriculture, Forestry and Land Use: actions required

- Strong policy and enforcement
- Increase in grant and concessional payments
- Research, development and deployment of alternatives to meat and dairy
- Best practices at specific national/local levels
Maximum potential if all countries committed, and strong policies drive implementation

Global CO₂ emissions

- 2030 - Baseline
- Renewables
- Energy Efficiency
- O&G Scope 1&2
- CCS
- Heavy Emitting Sectors
- Food and Land
- 2030 - Including Mitigation
- Remaining Gap
- 2030 - Required for 1.5C

Global CH₄ emissions

- 2030 - Baseline
- O&G Scope 1&2
- Food and Land
- China Pledge
- 2030 - Including Mitigation
- Gap
- 2030 - Required for 1.5C
Implications of full implementation for fossil fuel demand

**Coal, Mtce**
- 2022 COP28 Proposals: 5,800
- 2023: 1,700
- IEA NZE: 4,100
- ETC ACF/PBS: 3,250

**Gas, bcm**
- 2022 COP28 Proposals: 4,150
- 2023: 700
- IEA NZE: 3,450
- ETC ACF/PBS: ~3,500

**Oil, Mb/d**
- 2022 COP28 Proposals: 97
- 2023: 20
- IEA NZE: 77
- ETC ACF/PBS: 84-93

**Reducation Levels**
- **30% reduction**
  - Coal
  - Natural Gas
- **15% reduction**
  - Coal
  - Natural Gas
- **25% reduction**
  - Oil