Energy is an enabler of economic growth, development and progress. Affordable, reliable and accessible electricity is the foundation of prosperity in the modern world. Coal helps provide this – and is needed to help bring electricity to everyone. Low emission coal technologies reduce emissions to help meet climate objectives.

**Global electricity mix**

<table>
<thead>
<tr>
<th>Technology</th>
<th>2014 TWh</th>
<th>2040 TWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>23,318</td>
<td>39,444</td>
</tr>
<tr>
<td>Gas</td>
<td>16%</td>
<td>41%</td>
</tr>
<tr>
<td>Nuclear</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>Hydro</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Bioenergy</td>
<td>22%</td>
<td>15%</td>
</tr>
<tr>
<td>'New' renewables</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: IEA WEO 2015 New Policies Scenario and 2016 Key Electricity Trends

**CO₂ reduction of potential coal-fired power plants by increased efficiency**

- Subcritical: 30% CO₂ reduction
- Supercritical: 38% CO₂ reduction
- Ultra-supercritical: 45% CO₂ reduction
- Advanced ultra-supercritical: 50% CO₂ reduction
- CCUS: 90% CO₂ reduction

**What is the future of coal?**

The growth of global electricity from coal is expected by 2040, based on the International Energy Agency.

“I want India and China to know how to use clean coal because they are going to be building coal plants anyway. And if we’ve got the technology that can help make sure that they are not emitting huge amount of carbon all the better”

Barack Obama, President of the United States

**What are cleaner coal technologies?**

High efficiency low emission (HELE) technologies are a group of technologies developed to increase the amount of energy that can be generated from a coal plant while decreasing emissions.

On a global scale, HELE coal technology has the potential to make a huge impact to reducing emissions.

Raising the average global efficiency of coal plants from 33 per cent to 40 per cent would save two gigatonnes of CO₂ emissions. These two gigatonnes would be far more effective than many of the climate actions we’ve already taken.
WHY IS CCUS SO IMPORTANT?

HELE technologies are important because they are also a vital first step towards carbon capture use and storage (CCUS), which stores CO₂ underground.

To continue working under the assumption that fossil fuels can be substituted in the next three decades is likely to lead to less efficient technology being deployed threatening the ability to deliver global climate objectives.

We need all energy sources to meet global energy needs and we need all low emission technologies to reduce emissions and meet climate objectives.

Support for CCUS so far has been disappointing. To make CCUS a reality, it needs the same types of support as renewables get.

WHAT ARE THE PARIS AGREEMENT NATIONAL COMMITMENTS?

The foundation of the COP21 Paris Agreement is the commitments countries made in the lead-up to the summit. Nations choose the energy mix that fits them – for many, that includes coal, particularly developing economies.

19 countries, representing 44% of the world’s emissions, committed to reducing emissions from coal-based energy generation and agreed that they will deploy HELE coal technologies to support their emission reductions. That means, by 2040, coal will still be a big part of the world’s electricity mix.

And for the Paris Agreement to be successful, we must support low emission coal. The WCA calls for an international mechanism to provide the financial and other support necessary to drive HELE and CCUS deployment forward.