

# State of Climate Action 2021

Summary of the assessment of climate action in the power sector - This factsheet is an excerpt from State of Climate Action 2021. All references, data sources, authors and methods can be found in the [full report](#).

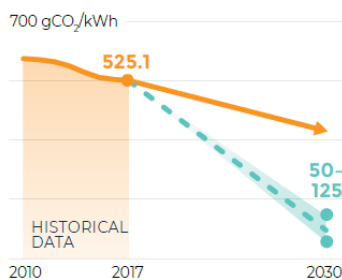
Share of power of global emissions	Energy %	Electricity and heat 31.9%	<p><b>Key features of the power sector in climate change mitigation</b></p> <p>Power generation is not only a <b>major source of emissions</b>, but its decarbonisation is also <b>pivotal for reaching zero-emissions in all other</b> sectors that will heavily rely on electrification for decarbonization</p> <p>Emissions in the power sector are determined by the amount of energy generation, the efficiency of this generation, and the carbon content of the fuel. <b>Mitigating emissions in the power sector will require both supply- and demand-side measures</b> and the successful adaptation of the electric infrastructure to sustain high amount of variable renewable generation. This will require <b>improved distribution grids, management and large-scale storage capacities</b>.</p> <p>Increasing clean energy sources while phasing out coal-based power will <b>reduce local air pollution and improve human health</b>—benefits that typically outweigh the cost of the transition in all regions. Improving energy efficiency is also a “no regrets” option, which often leads to <b>increased employment and economic activity</b>, and is linked with the achievement of many Sustainable Development Goals (SDGs)</p>
	Transportation 16.9%	Manufacturing and construction 12.6%	
	Buildings 5.9%		<p><b>The Paris-compatible benchmarks for the power sector:</b></p> <ol style="list-style-type: none"> <li>1- <b>Reduce global carbon intensity</b> of electricity generation to 50 – 125gCO<sub>2</sub>/kWh by 2030 and to below zero by 2050</li> <li>2- <b>Increase the share of renewables</b> in electricity generation to between 55 and 90% by 2030 and to 98-100% by 2050</li> <li>3- <b>Reduce the share of unabated coal</b> in electricity generation to 0 – 2.5% by 2030 and to 0 by 2050</li> </ol>
	Fugitive emissions 5.9%	Other fuel combustion 3.0%	
	Agriculture 11.9%		<p><b>Enablers of climate action in the power sector:</b></p> <ul style="list-style-type: none"> <li>• Scaling up <b>R&amp;D investments</b> in solar, wind, and a variety of tailored storage technologies</li> <li>• Improving <b>integration of variable renewable energy sources</b> into electricity grids</li> <li>• Short, medium and long-term <b>storage capacities</b> tailored to the individual country generation mix.</li> <li>• <b>Adopting policies</b> to increase renewable electricity generation and improve energy efficiency</li> <li>• Setting <b>ambitious coal phaseout targets</b> and reforming <b>fossil fuel subsidies</b></li> <li>• Creating social and economic protections to sustain <b>just, equitable transitions</b> to a net-zero future</li> </ul>
	Industrial processes 5.9%		
	Waste 3.3%		
	Land-use change and forestry 2.8%		

## The state of climate action in the power sector

Many countries have already made progress in reducing **the carbon intensity of electricity generation**. The global view shows a slower decline, and, although headed in the right direction, this historical rate of decline is far from what is needed to achieve the 2030 target.

POWER 3.2x

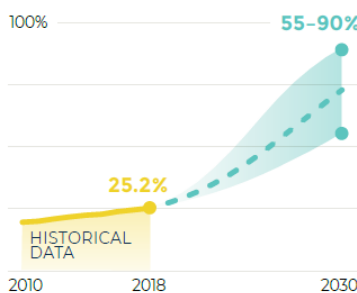
Reduce carbon intensity of electricity generation to 50-125 gCO<sub>2</sub>/kWh



In 2020, **renewables** reached a new all-time record, generating 29 percent of the world’s electricity. Overall, despite the promising signs, it does appear that growth in renewables must accelerate, though much uncertainty remains over how much acceleration is needed.

POWER N/A

Increase the share of renewables in electricity generation to 55-90%



Worldwide coal buildout has not slowed sufficiently in recent years. In 2020, for example, newly installed coal capacity was still higher than retirements and more coal capacity is in the pipeline.

POWER 5.2x

Lower the share of unabated coal in electricity generation to 0-2.5%

