

ISSUE BRIEF

THE ROAD FROM PARIS: THE EUROPEAN UNION'S PROGRESS TOWARD ITS CLIMATE PLEDGE

The European Union (EU) has pledged to reduce its greenhouse gas (GHG) emissions by at least 40 percent below 1990 levels by 2030. This will include reductions through the EU's Emissions Trading System (ETS), which covers more than 11,000 power stations, industrial plants, and other sources. Emissions will also be reduced as EU nations increase their shares of renewable energy and strengthen their energy efficiency measures.

OVERVIEW OF NATIONAL CIRCUMSTANCES

The 28 members of the European Union together represent a population of about 500 million. Combined, the nations of the EU account for nearly nine percent of global GHG emissions, with 40 percent of emissions coming from the power sector, 29 percent from the transport sector, 19 percent from buildings, and 13 percent from industry.^{1,2}

Historically, the European Union is the world's second largest historical emitter of carbon dioxide, accounting for 25 percent of cumulative emissions from 1850 to 2011. In 2014, the European Union emitted approximately 6.4 tons of carbon dioxide per capita, compared with 16.4 tons in the United States, 9.5 tons in Japan, and 7.5 tons in China.³

NATIONALLY DETERMINED CONTRIBUTION

On November 4, 2016, the Paris Agreement entered into force. The EU's nationally determined contribution (NDC), which will be updated regularly as part of the agreement, includes an economy-wide GHG emissions reduction target of at least 40 percent below 1990 levels by 2030.⁴ According to analysts at Climate Action Tracker, while the EU's proposed targets do not represent a "fair and equitable" reduction, it is among the more ambitious plans for developed countries.⁵ The methods for counting land use, land use change, and forestry (LULUCF) need to be clarified in order to determine how much of the NDC will be fulfilled by industrial GHG reductions. And it remains unclear how the United Kingdom's impending exit from the European Union will influence EU climate policy.



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THE PARIS AGREEMENT

In late 2015, the 21st session of the Conference of the Parties (COP21) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) was held in Paris. The 196 nations that are part of the UNFCCC approved the Paris Agreement, which aims to limit global temperature rise to 2 degrees Celsius, and to make best efforts to keep it to 1.5 degrees. To that end, countries submitted intended nationally determined contributions (INDCs) detailing the level to which they planned to cut emissions and their plans to reach that goal. The Paris Agreement entered into force on November 4, 2016—and the INDCs are now formally enshrined as part of the Agreement—and hereafter referred to as nationally determined contributions (NDCs).

CLIMATE MITIGATION POLICIES

Since 1990, the European Union has demonstrated that it is possible to decouple emissions growth from gross domestic product (GDP) growth. From 1990 to 2014, the EU's GDP grew by more than 44 percent, while GHG emissions fell by 21 percent. At the same time, the EU's emissions intensity—the ratio of GHG emissions for each unit of GDP—also fell, by 44 percent.⁶ The EU's emissions decline has been a success due to various policies, many of which were laid out in 2014 in the EU's 2030 Framework for Climate and Energy.⁷

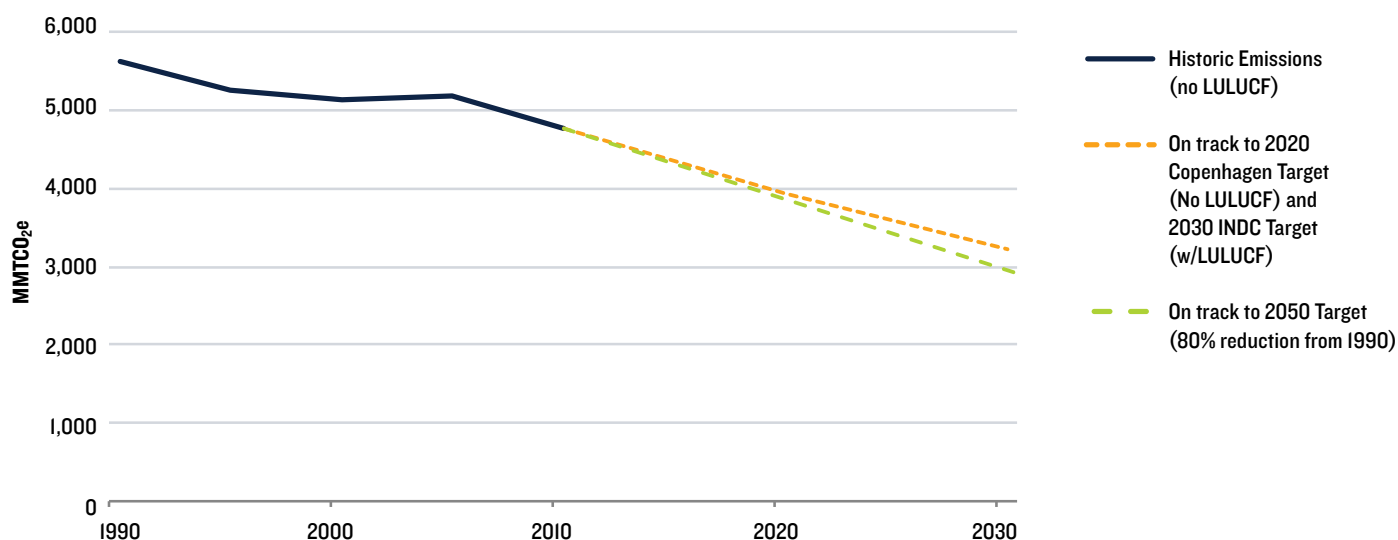
In the summer of 2016, the European Union proposed carbon targets for 2030 for each member state. This draft law of the Effort Sharing Regulation aims to reduce emissions for sectors outside the ETS and will include regulations in the transport, agriculture, and building industries. The law supports the EU's NDC by calling for concrete actions and encouraging stronger investments in buildings, transportation, and waste management. All EU nations and the European Parliament must approve the draft law for it to enter into force, which could take up to two years.⁸

Emissions Trading System

Launched in 2005, the EU ETS covers 45 percent of the European Union's GHG emissions and has been a major driver of emissions reductions. The ETS is the world's first and largest carbon market. It operates on a "cap and trade" system, setting a limit on the total GHGs that can be emitted and allowing companies to trade allowances to cut emissions in the most cost-effective manner possible. The ETS covers emissions from more than 11,000 power stations and industrial plants, as well as aviation in the EU, Iceland, Norway, and Liechtenstein. Additionally, all EU countries are expected to join the global-market based measure developed under the International Civil Aviation Organization (ICAO) upon its commencement in 2021.⁹ The ETS is expected to reduce emissions from the sectors it covers by 21 percent from 2005 levels by 2020, and to reduce emissions by another 22 percent relative to 2005 levels from 2020 to 2030.¹⁰ This adds up to a 43 percent cumulative reduction from 2005-level emissions by 2030.

Other policies are expected to reduce emissions by 30 percent in the non-ETS sectors—putting the European Union on track to realize its NDC goals. For example, the

THE EUROPEAN UNION'S GHG EMISSIONS



Source: Natural Resources Defense Council, based on emissions data from Eurostat, policy projections from Bloomberg New Energy Finance, and the EU's INDC submission to the UNFCCC.

EU's Effort Sharing Decision establishes 2020 emissions targets for sectors not covered by the ETS, such as transport (except aviation and international maritime shipping), buildings, agriculture, and waste.¹¹ The national emissions targets in the Effort Sharing Decision are set based on the relative wealth of each member state. The European Union may also move to limit international maritime emissions in the future.

Renewable Energy

The EU's Renewable Energy Directive sets a binding target that 20 percent of the final energy mix must be sourced from renewable resources by 2020. EU members have different targets for renewable energy resources, ranging from 10 percent in Malta to 49 percent in Sweden that take in to account each country's starting point and potential for renewable energy. To meet their targets, all EU members have developed their own unique renewable energy action plans, including sectoral targets for electricity, heating and cooling, and transport.¹² By 2015, the EU's renewable energy share was already at 13 percent.¹³ The European Union has committed to a renewable energy target of at least 27 percent of the final energy mix by 2030, and the Renewable Energy Directive should be revised by the end of 2018 to reflect this new EU-binding target.

Energy Efficiency

The EU's 2030 climate and energy framework includes a target for 27 percent energy savings compared with the business-as-usual scenario.¹⁴ EU lawmakers are expected to consider increasing this target to a 30 percent reduction by 2030, with the European Parliament environment committee proposing a more ambitious 40 percent reduction.¹⁵ Important policies have already been introduced for sectors such as manufacturing and passenger vehicles, but more action is needed for other sectors like housing

and other transport modes. Electrical equipment efficiency is improving, spurred by the EU's Ecodesign Directive to improve the environmental performance of products and the Ecolabel voluntary environmental performance certificates, but there is still room for greater action. Large investments in long-term energy efficiency improvements in the building sector are anticipated. While national policies will vary by country, ambitious EU-wide energy efficiency standards are needed for appliances, equipment, buildings, and vehicles.¹⁶ There are also considerable opportunities for enhanced industrial efficiency, but free ETS allowances have served to reduce the incentives to pursue greater efficiency.

THE ROAD AHEAD

The European Union is making progress towards its NDC through its 2030 climate and energy framework, which includes reforms to the ETS. Private and public investments are flowing into renewable energy, transport, and carbon capture and storage.¹⁷ However, significant measures for energy efficiency are still needed.¹⁸ The EU's targets are relatively ambitious, but the path to implementation needs clarification—especially emissions reduction plans for specific industries. Member states' carbon targets for 2030 are a step in the right direction, but more action is needed to ensure the EU's NDC is realized and even overachieved.

A gap remains between the EU's NDC and the Paris Agreement's goal to global temperature rise to 2 degrees Celsius, with best efforts to achieve 1.5 degrees Celsius. This will require further ambition in the next submission cycle of NDCs under the Paris Agreement leading up to 2020. Notably, several individual member states such as France, Finland, and Sweden are already securing more ambitious plans beyond EU levels. Global emissions need to be reduced further, and a more ambitious EU climate and energy policy can help close this gap and inspire other countries to greater ambition.

ABOUT E3G

E3G is an independent climate change think tank operating to accelerate the global transition to a low carbon economy. E3G are the independent experts on climate diplomacy and energy policy. Our senior leadership has a combined 75 years experience advising Government, business and NGOs and a wealth of insight into what climate change means for societies.

ABOUT NRDC

The Natural Resources Defense Council is an international nonprofit environmental organization with more than 23 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Montana, and Beijing. Visit us at nrdc.org.

ENDNOTES

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