

An aerial photograph of a large-scale open-pit mine. The mine's structure is characterized by numerous horizontal terraced levels, creating a stepped appearance across the landscape. A prominent, winding road or conveyor system cuts through the lower levels of the mine. In the background, rugged mountains with patches of snow are visible under a clear sky. The overall scene conveys a sense of massive industrial scale and engineering.

Framework for Industry



Welcome

This is a reference for the book, *Creating a Better Climate Future*, by Philip Kent-Hughes. This guide has been developed to help you take action on reducing emissions. This and other guides can be downloaded at: climate-action.org.



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Framework for Industry

A great deal of information is required for a national or state industry emissions reduction plan. The following outlines elements that could be considered and adapted to local and regional circumstances.

Objectives, plan, and communication

The national or state governments should

- Conduct community and industry engagement to find the best solutions for policy, regulation, and support. This could be in-person, through town hall meetings, or via online submission.
- Decide on an emissions reduction objective of 45% by 2030 and additional objectives for 2040 and 2050. Then create an action plan and promote it widely.
- Provide policy stability so that business can plan its investments.

Replacing old with new

For several production processes, technology exists that can replace burning coal or gas, as you can see from the table below.²⁹⁴ Government should help industry to install low-emissions equipment and improve efficiency with financial incentives such as tax credits or deductions. Many of the zero-emissions technology also reduces production time and losses, requires lower maintenance, and has better safety.²⁹⁵

A Selection of Existing Zero-Emissions Solutions

| HEATING TYPE | MATERIAL OR PRODUCT | EXISTING LOW-EMISSIONS SOLUTIONS |
|--|---|---|
| Drying | Electronics, textiles, paper, food, packaging, and automotive | Electric infrared |
| Cooking, sterilizing, and pasteurizing | Food and beverages | Heat pumps and electric infrared |
| Melting | Cement, glass, ceramics, and aluminum | Electric resistance furnace Electrical induction |

Source: Beyond Zero Emissions

Support emerging solutions

Government and industry should invest in the development and widescale deployment of new solutions. Renewable hydrogen is an example of a new technology that is being developed to heat furnaces for making zero emissions steel. The first commercial steel production test projects started in 2020.²⁹⁶ Fast-tracking this technology is important because world iron and steel production is responsible for 7% of total global emissions.²⁹⁷

Purchasing

Governments at all levels should purchase many types of low- and zero-emissions products to support the transition to a low-emissions economy.

Research and development

A collaboration should form between government, universities, and industry for research and commercial development of renewable industrial and manufacturing processes. The aim should be to take new technology to widescale implementation as quickly as possible. This should be shared across the world through licensing to developed or high-income countries and at no cost to developing countries.

Information sharing hub

Set up an information hub to make it easy for industry and manufacturing companies to find the best renewable solutions for their situations.

Regulatory framework

If industries or corporations are unwilling to change, then governments should gradually phase in a carbon tax for materials such as iron, steel, concrete, glass, and aluminum. This could start at a low level in 2025 and then gradually increase.

*You can download this information in several formats from
www.climate-action.org.*