

# Resources, Energy Efficiency and Circularity Position Statement



<p><b>Background</b></p>	<p>Most current manufacturing processes are linear – materials are extracted from the Earth, converted to products, and eventually some are discarded as waste. Improving resource and energy efficiency can reduce resource extraction and waste generation to varying extents; shifting to a circular economy approach eliminates even more waste and pollution, enables materials to be used as long as possible, and supports the regeneration of nature. The circular economy is also underpinned by a transition to renewable energy and materials.<sup>1</sup></p>
<p><b>Approach</b></p>	<p><b>Resource consumption and energy efficiency</b></p> <ul style="list-style-type: none"> <li>• The principal raw materials for making atmospheric gases and hydrogen are air, energy in the form of electricity or steam, and natural gas. Air, which is generally considered to be a renewable resource, typically represents more than 95 percent of the gaseous raw materials Air Products uses on a weight basis. Industrial gas manufacturing is energy intensive due to the amount of energy required.</li> <li>• Increasing energy efficiency reduces energy consumption and lowers greenhouse gas emissions that contribute to climate change. Because Air Products’ water consumption is tied closely to energy use, improvements in energy efficiency also reduce water usage.</li> <li>• Air Products carefully tracks and manages energy use. Our conservation programs are focused on continually improving energy efficiency across our plants, particularly larger facilities. Efficiency improvements are realized through higher plant utilization, increased production at new, larger and more efficient facilities, and through facility improvement projects.</li> <li>• Our product and service offerings enable our customers to improve productivity and increase energy efficiency, thereby reducing emissions and waste.</li> </ul> <p><b>Circularity</b></p> <ul style="list-style-type: none"> <li>• While industrial gases are typically consumed in our customers’ processes, they also contribute to the circular economy. Industrial gases enable our customers to use or recycle resources, such as hydrogen for oil recycling and liquid nitrogen for efficient recycling of materials through cryogenic grinding.</li> <li>• Several of our gas products, such as hydrogen, carbon dioxide, and helium, are produced by purification of industrial by-products, which reduces emissions and waste.</li> <li>• We supply our products via reusable transportable pressure vessels including tankers and tube trailers, via pipelines, and, for small-scale supply in certain regions of the world, in cylinders with typical life spans of 10 to 25 years that are typically recycled after years of use.</li> <li>• Examples of our technologies and equipment that contribute to the circular economy include our Cryo-Condap® process that collects volatile organic chemicals from emission streams so the substances can be reused, and our biogas membrane separators that are used to produce methane from farm waste, manure or municipal waste for use in other applications.</li> </ul>

<p><b>Commitments</b></p>	<p>We contribute to UN Sustainable Development Goal (SDG) 7 "Affordable and clean energy", SDG 12 "Responsible consumption and production", and SDG 13 "Climate action" through our energy efficiency programs and products that improve customers' productivity, energy efficiency, and support the circular economy.</p> <p><b>Resource consumption and energy efficiency</b></p> <ul style="list-style-type: none"> <li>• We strive to continually improve our Environmental, Health, and Safety (EHS) performance and reduce the impacts of our activities as outlined in our <a href="#">EHS policy</a> and codified in our EHS Management System standards.</li> <li>• As an energy-intensive company, Air Products is committed to continuously improving the energy efficiency of our operations. We aim to increase energy efficiency, defined as energy consumption per unit of gas production, on an annual basis. This approach builds on two sets of prior energy intensity goals that were met for our atmospheric gas production units, including cumulative energy efficiency improvements of 8% for 2007-2015 and 2.6% for 2015-2020.</li> <li>• Air Products aims to increase its use of renewable electricity and is evaluating other renewable energy sources.</li> <li>• Through our \$15 billion commitment to energy transition projects, Air Products will significantly increase the share of active renewable electricity production through the development of multiple world-scale green hydrogen production facilities.</li> </ul> <p><b>Circularity</b></p> <ul style="list-style-type: none"> <li>• In support of the circular economy, Air Products will continue to: <ul style="list-style-type: none"> <li>○ Collaborate with our customers to improve productivity and energy efficiency and support their circularity efforts by leveraging our products and technologies, including hydrogen.</li> <li>○ Seek alternative raw material sources for our businesses, such as bio-feedstocks and biogas, and to increase use of renewables.</li> <li>○ <a href="#">Publicly report</a> on our energy and resource efficiency programs and performance as we have since 2009.</li> </ul> </li> </ul>
<p><b>Administration</b></p>	<ul style="list-style-type: none"> <li>• Air Products' management routinely evaluates our sustainability commitments and progress. The Corporate Governance and Nominating Committee of Air Products' Board of Directors has oversight responsibility over public policy issues, including sustainability, and the full Board has oversight responsibility for our environmental, health and safety performance.<sup>2</sup></li> <li>• Air Products' Sustainability Leadership Council routinely reviews our sustainability programs, position statements, performance, and reporting.</li> <li>• We report on our sustainability commitments and progress in our annual <a href="#">Sustainability Report</a> as well as through other external communications channels, including our website and social media.</li> <li>• This position statement and related statements and policies are maintained on Air Products' <a href="#">public website</a>.</li> </ul>

<sup>1</sup>Ellen MacArthur Foundation, <https://www.ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>

<sup>2</sup>See our most recent [Proxy statement](#) for responsibilities of the Board of Directors.