

Sustainable Operations in the Workplace

Sustainable aerospace starts inside our four walls. We are focused on continuous improvements in pursuit of the sustainable product life cycle across key elements including greenhouse gas (GHG) emissions (Scope 1 and 2), energy usage, water and waste management. We take action to decrease our impact through renewable energy procurement, targeted infrastructure and equipment investments, efficiency standards and conservation initiatives that include deployment of best practices and employee engagement strategies.

ENVIRONMENTAL FOCUS AREAS

Increasing Renewable Energy

Boeing continues to take strides toward its goal of being powered by 100% renewable electricity by 2030, and achieved 35% renewable electricity in 2022 by increasing its use and purchasing renewable energy credits.

For the third year in a row, Boeing has achieved net-zero GHG emissions at manufacturing and work sites through conservation—including efforts emphasizing employee engagement—and increasing renewable electricity use while securing third-party-verified offsets for the remaining GHG emissions.

Conserving Resources

Boeing provides internal sustainability training that inspires and highlights conservation actions employees can take within their respective work roles.

Boeing engages employees through enterprise-wide conservation competitions and environmental action campaigns throughout the year, such as Battle of the Buildings, Earth Day, the Environmental Sustainability Leadership Awards and Energy Awareness Month.

Boeing has Conservation Teams implementing best practices and providing the tools employees need to conserve resources.

THIRD-PARTY-VERIFIED OFFSETS

Boeing purchases offsets that meet requirements set by Verified Carbon Standard, American Carbon Registry or Gold Standard.

We use a diverse portfolio of certified projects that benefit from the power of both nature and technology. To see our 2022 offset project portfolio, please refer to our [Carbon Disclosure Project \(CDP\) Climate Response](#). Further, our strategy now includes our partnership with Equatic, a technology company that permanently removes carbon dioxide from the ocean.

HIGHLIGHTS



In 2022, we achieved a **31% reduction in GHG emissions** compared to 2017.



Achieved **35% renewable electricity** in 2022 by purchasing renewable electricity and renewable energy credits.



Boeing had an **11% reduction** in energy compared to 2017. **Energy consumption** was **6% lower** than anticipated for the year due to the impact of conservation initiatives, infrastructure investments, remote working conditions and reduced production activity.



In 2023, the EPA ranked Boeing **#21** on its **Green Power Partnership Fortune 500 Partners List**.

* Greenhouse gas (GHG) emissions from our operations are calculated using the electricity and natural gas consumption at Boeing's Core Metric Sites. Core Metric Sites represent the majority (>70%) of Boeing's operations. This is an absolute reduction in GHG emissions; no normalization has been applied.

Operational Targets Progress: 2030 Goals

Boeing invests in sustainable operations to drive industrial performance at our manufacturing sites. As we demonstrate progress on our goals for 2030, our previously set 2025 targets will act as milestones to guide our actions. All of our 2025 targets are absolute targets and are not indexed to production levels or growth. Our progress on these 2025 targets is shown in the table.

Performance Area ¹	2025 Targets vs 2017 ²	2022 Progress Toward 2025 Targets	2030 Targets ³
<p>Greenhouse Gas Emissions</p>	Reduce emissions by 25% ¹	<p>31% reduction</p> <p>Procurement of renewable energy and credits, low commercial production activity and infrastructure investments</p>	<p>Net-zero emissions⁴</p> <p>55% GHG reduction from 2017</p> <p>100% renewable electricity</p>
<p>Energy⁵</p>	Reduce energy ⁵ consumption by 10%	<p>11% reduction</p> <p>Conservation initiatives, infrastructure investments, remote working conditions and reduced production activity</p>	<p>10% energy reduction from 2025</p>
<p>Water⁶</p>	Reduce water withdrawal by 20%	<p>19% reduction</p> <p>Increased water intake efficiencies and low production activity</p>	<p>5% reduction from 2025</p>
<p>Solid Waste⁷</p>	Reduce solid waste to landfill by 20%	<p>40% reduction</p> <p>Conservation initiatives, vendor management and remote working conditions</p>	<p>30% reduction in waste produced from 2025</p> <p>Over 90% diversion from landfill or incineration</p> <p>Zero solid waste certification where applicable at major sites</p>
<p>Hazardous Waste⁸</p>	Reduce hazardous waste by 5%	<p>9% reduction</p> <p>Projects to reduce unused and expired materials, and partnerships to reduce waste generation</p>	<p>5% hazardous waste reduction from 2025</p>

- 1 Operational goals shown are absolute targets and not indexed to production levels or growth. 2022 performance was affected by changes associated with occupancy and operations during the COVID-19 pandemic, as well as conservation and changes in how Boeing purchases energy. The targets were established against a 2017 baseline. The 2025 goals will act as a milestone to guide actions and progress to the 2030 goals.
- 2 All 2025 reduction goals are set with an operational boundary of the Core Metric Sites, which represent the majority (>70%) of Boeing's operations, and includes emissions from electricity use and natural gas.
- 3 The 2030 GHG reduction goals are set with an operational boundary of The Boeing Company and includes all Scope 1 and Scope 2 emissions.
- 4 The net-zero achievement covers Scope 1 and Scope 2 emissions for all manufacturing and work sites within the company's operational control as well as Scope 3, business travel. This is achieved by expanding conservation and renewable energy use while securing third-party-verified offsets for the remaining greenhouse gas emissions.
- 5 Energy includes natural gas, other fuels and electricity.
- 6 Water data represents approximately 84% of operations square footage.
- 7 Solid waste numbers represent values determined from scale-weighted containers as well as calculated weights. Nonhazardous solid waste is sent to a landfill for disposal. This measure applies to all waste streams where Boeing is responsible for waste disposal service as a normal part of daily operations (excludes remediation and construction-related waste).
- 8 Hazardous waste is determined from U.S. EPA hazardous waste manifests or equivalent government shipping documents. All types of hazardous wastes that are generated at a facility and are discarded from the site for disposal, and would be considered part of the environmental footprint of the site. Actual tons of all Production or routine wastes shipped as hazardous waste (excludes remediation and construction-related waste).