Updates
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The Biden Administration’s Plan for a Zero-Carbon Federal Government by 2050

President Biden signed an executive order (Order) on December 8, 2021, directing the federal government to use its scale and procurement power to slash its carbon emissions by 65% by 2030 and achieve net-zero emissions by 2050. Under this ambitious plan, federal operations would run on 100% carbon-free electricity by 2030. The plan is expected to add at least 10 gigawatts of locally supplied clean electricity to the grid by 2030. The White House Council on Environmental Quality (CEQ) also released the Federal Sustainability Plan that outlines actions for implementing the Order.

The Biden administration's plan includes four primary targets to reduce emissions across federal operations. This update provides a high-level overview of the Order. A more detailed analysis of the opportunities and challenges arising from the Order can be found here.

Four Primary Goals of the Executive Order

1. 100% Carbon Pollution-Free Electricity (CFE) by 2030, at Least Half of Which Will Be Locally Supplied Clean Energy to Meet 24/7 Demand

The Order defines 24/7 CFE as "carbon pollution-free electricity procured to match actual electricity consumption to an hourly basis and produced within the same regional grid where the energy is consumed." It focuses on "locally sourced" CFE resources, which suggests development of CFE resources in each regional market in which federal energy procurement occurs. CFE resources in the Order include marine energy, solar, wind, hydrokinetic, geothermal, hydroelectric, nuclear, renewably sourced hydrogen, and electrical energy generation from fossil resources to the extent there is active carbon capture and storage. The Order anticipates that meeting this target will spur the development of more than 10 gigawatts of new clean electricity production by 2030.

Projects already under development will contribute to this production goal. For example, the U.S. Department of Defense's Pacific Missile Range Facility in Hawaii will complete construction of the nation's largest 100% clean energy microgrid in 2022, consisting of a 14 MW solar facility paired with a 70 MWh battery energy storage system.

2. 100% Zero-Emission Vehicle (ZEV) Acquisitions by 2035, Including 100% Zero-Emission Light-Duty Vehicle Acquisitions by 2027

The Order calls on the federal government to acquire an all-electric light-duty vehicle fleet by 2027 and an all-electric fleet—including all medium- and heavy-duty vehicles—by 2035. In addition to replacing its fleet of 600,000 cars and trucks with electric vehicles (EVs), the federal government will need to rapidly scale its charging infrastructure, including electric vehicle supply equipment and hydrogen stations, and establish a secure EV battery supply chain.

Some existing efforts by agencies in this area include the U.S. Department of Homeland Security's field testing of the Ford Mustang Mach-E ZEV for use in its law enforcement fleet in 2022, which consists of over 30,000

vehicles. In addition, the Biden administration had previously pushed to electrify the U.S. Postal Service's 231,000 vehicles, which make up the largest component of the federal fleet.

3. Net-Zero Emissions From Federal Procurement No Later Than 2050, Including a "Buy Clean" Policy to Promote Use of Construction Materials With Lower Embodied Emissions

The Order calls on the federal government to leverage its annual purchasing power of $650 billion in goods and services to increase the sustainability of federal supply chains. The plan also requires major federal suppliers to publicly disclose greenhouse gas emissions and climate risks and set science-based targets to reduce emissions. The Order's "Buy Clean" initiative incorporates life-cycle emission considerations in building projects, aiming to reduce emissions from construction materials like concrete and steel. Further, in 2022, the U.S. General Services Administration (GSA) will require contractors to disclose the embodied carbon of building materials for new building and major modernization contracts.

In addition to the "Buy Clean" initiative, the Biden administration's existing "Buy American" policies point to significant growth opportunities in the manufacturing and mining industries that support production of goods and materials necessary to meet the "Buy Clean" goals domestically, including EVs, battery storage, solar panels, and similar items.

4. A Net-Zero Emissions Buildings Portfolio by 2045, Including a 50% Emissions Reduction by 2032

The Order sets a target for net-zero emissions buildings by 2045, including a 50% reduction in building emissions by 2032, requiring the federal government to transform its portfolio of 300,000 buildings by increasing energy and water efficiency, reducing waste and pollution, and removing carbon emissions through means such as natural carbon sinks, carbon capture and storage, and direct air capture. The Order further directs agencies to implement the CEQ's Guiding Principles for Sustainable Federal Buildings and issue building performance standards within six months from the publication of the Order.

Additional Goals and Targets in the Order

In addition to these four primary pillars, the Order states a target to achieve net-zero emissions operations in the federal government by 2050, including a 65% reduction by 2030. The Order and the Federal Sustainability Plan also outline efforts to improve climate resilience in federal infrastructure and operations, develop a climate-focused workforce, and incorporate environmental justice and equity into agency sustainability plans.

While the Order offers a strategic vision for federal agencies to implement ambitious zero-carbon targets and presents opportunities for industries touching the energy sector, meeting these targets will also present significant challenges. A more detailed analysis of these opportunities and challenges can be found here.

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