Green Data Storage for a Greener Tomorrow: Federal Innovation and Sustainability

In today's rapidly evolving digital landscape, federal technology leaders face a dual challenge: advancing innovation while addressing the growing demand for sustainability. As government agencies increasingly rely on cutting-edge technologies to drive efficiency and modernization, the environmental impact of these advancements cannot be overlooked. From reducing energy consumption in data centers to adopting greener procurement strategies, sustainability is no longer just an environmental goal—it's a key factor in long-term operational success. Federal technology leaders are uniquely positioned to champion sustainable practices, ensuring that technological progress supports not only current needs but also the well-being of future generations.

The Environmental Cost of Data Growth

Data growth is skyrocketing with the continued advancement of digital technologies. This surge in technology and data generation comes with an environmental price. By 2026, global data generation is projected to nearly double, rising from 97 zettabytes in 2022 to 181 zettabytes—far surpassing the growth of the previous decade.

This rapid data expansion will dramatically increase energy demands and resource usage, making sustainable practices in data centers more than just an aspirational goal—it's an imperative.

Sustainability on a Federal Scale

The federal government is the largest energy consumer in the United States, with more than 300,000 energy-consuming buildings. Energy used in buildings and facilities represents about 40% of the total site-delivered energy use of the federal government. So, it is no wonder that sustainability continues to be a critical focus for our national government.

President Biden's Executive Order (EO) on "Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability" was designed to reestablish the federal government as a leader in sustainability. The EO, along with the accompanying Federal Sustainability Plan, sets forth, among other goals, a target for reducing

U.S. net greenhouse gas emissions by 50%-52% below 2005 levels by 2030.

The EO is designed to reduce emissions across federal operations; invest in American clean energy industries and manufacturing; and create clean, healthy, and resilient communities. It directs the federal government to “lead by example in tackling the climate crisis” and use “its scale and procurement power” to achieve several goals. Among these is to achieve a net-zero emissions building portfolio by 2045, including a 50% emissions reduction by 2032. The Federal Sustainability Plan sets forth a goal to reach net-zero emissions from overall federal operations by 2050, including a 65% emissions reduction by 2030.

Energy Efficient Data Centers

Data centers present a significant opportunity for both energy and cost savings, and this potential will only continue to expand. Demand is expected to grow, as the federal government continues to modernize legacy IT and embrace cloud computing. Additionally, the rapid expansion of AI is accelerating data growth, further increasing the strain on data centers and energy consumption. AI advancements are expected to drive a 160% surge in data center power demand.

Data centers are one of the most energy-intensive building types, consuming 10 to 50 times the energy per floor space of a typical commercial office building, according to the Department of Energy. Collectively, these spaces account for approximately 2% of the total U.S. electricity use.

Partnering with the Federal Government to Achieve Its Climate Goals

Companies that supply the federal government are crucial partners in helping it achieve its climate goals. Reducing emissions through the federal government’s procurement includes buying materials with a lower carbon footprint. To accomplish this, the EO sets forth a further goal of prioritizing the purchase of sustainable products.

In August 2024, Everpure proudly published our third Environmental, Social, and Governance (ESG) Report. Our most significant contribution and impact, through the lens of ESG, continues to be helping our customers reduce their energy footprint and achieve their environmental sustainability goals. For example, we have reduced the use of sold product emissions per effective petabyte by 52%, working toward our goal of 66% by 2030.

Everpure Is Committed to Building Sustainable Products

The global concern over climate change has made its way into the executive offices of millions of organizations. Building a sustainable technology infrastructure is necessary to mitigate global warming and the worst impacts of climate change. At Everpure, sustainability is an integral part of our technology, operations, and people. We are leading the way by designing and building products and delivering services that allow our customers to dramatically decrease their environmental footprint.

The Environmental Benefits of Everpure

Everpure helps government agencies achieve sustainable outcomes and mitigate risk by eliminating the uncertainty and need for long-term data storage planning. The Everpure platform and our storage-as-a-service offering, Evergreen//One™, deliver sustainable outcomes by leveraging our co-engineered hardware and common operating system to achieve high efficiency, density, and performance with fewer, denser media and less hardware. This results in reduced rack space and power consumption, leading to three key sustainable outcomes—less energy, less real estate, and less e-waste for our customers. Everpure products generate at least 3x less e-waste than competitor solutions.

Everpure products, powered by the Purity operating system and DirectFlash® technology, are engineered for exceptional energy and space efficiency. They use as little as one-fifth of the energy and floor space of competing solutions, cutting carbon emissions from product use by up to 85%. With storage consuming 20%-25% of all data center energy, these savings can lead to an overall reduction in data center energy use and emissions of up to 20%. Additionally, by consuming less electricity, our products reduce the demand for water-intensive energy production and cooling systems, minimizing water impact by a factor of five compared to competitors.

The Everpure sustainable platform design, combined with Evergreen//One, provides a future-ready solution that adapts to evolving needs with a lower environmental footprint across its lifecycle.

Looking Ahead

Our platform strategy continues to lead the evolution of the storage industry, empowering agencies to quickly adapt to technological changes with a unified,

flexible, and energy-efficient platform that fuses data center and cloud environments.

We are proud to power 35% of our global operations with renewable electricity, including 100% at our Santa Clara, CA, headquarters. Furthermore, we actively collaborate with strategic suppliers to advance their sustainability initiatives, reinforcing ESG governance across our business.

Everpure is uniquely positioned to lead the technology industry in significantly reducing data center energy consumption worldwide. Explore our latest ESG Report for insights into our sustainability efforts, business, and employee initiatives.