



# OUR TECHNOLOGY

**ESG REPORT**

**2023**

# Contents

Pure Storage is committed to advancing its environmental, social, and governance (ESG) practices and impact across three key pillars: Our Technology, Our Operations, and Our People. Discover how Pure Storage can help you achieve your own commitment to sustainable business goals.

**This segment focuses specifically on Our Technology.**

[Download the Full ESG Report 2023](#)

<b>Introduction</b>	<b>3</b>
Use of Forward-looking Statements	4
A Letter From Our Chairman and CEO	5
About Pure Storage	6
Pure Storage at a Glance	7
<b>Our Technology</b>	<b>8</b>
Sustainable Products and Services	9
How Pure Storage Delivers Energy and Emissions Savings	13
Pure Storage Evergreen® Architecture and Subscriptions	14
How Pure Storage Delivers e-Waste Savings and Product Circularity	15
Extending Sustainability with the Evergreen//One as-a-Service Subscription	16
Product Life Cycle Analysis	17
Customer Outcomes	18
Future Forward: Our Technology	19



# INTRODUCTION



# Use of Forward-looking Statements

This report contains “forward-looking statements” that are based on our management’s beliefs and assumptions and on information currently available to management. Such forward-looking statements include information concerning our possible or anticipated ESG strategy relating to future operations, potential growth opportunities, and plans and objectives of management. Forward-looking statements include all statements that are not historical facts and can be identified by terms such as “anticipates,” “believes,” “could,” “seeks,” “estimates,” “targets,” “expects,” “intends,” “may,” “plans,” “potential,” “predicts,” “prospects,” “projects,” “should,” “will,” “would,” or similar expressions, as well as the negatives of those terms, although not all forward-looking statements contain these identifying words.

Forward-looking statements involve known and unknown risks, uncertainties, assumptions, and other factors that may cause our actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. Factors that may cause actual results to differ materially from those in any forward-looking

statements include, without limitation, changes in global economic conditions; unexpected delays, difficulties, and expenses in executing against our ESG goals as set forth in this report; and changes in the environmental or other regulatory landscape. Further information on factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section titled “Risk Factors” in our most recent Annual Report on Form 10-K and our most recent Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) and in our other SEC filings. We cannot guarantee that we’ll achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements.

Forward-looking statements represent our management’s beliefs and assumptions only as of the date of this report. We undertake no obligation and do not intend to update the forward-looking statements.

# A Letter From Our Chairman and CEO

**I am pleased to publish our 2023 ESG report.** This report is meant to bring visibility to our initiatives and results, as well as our commitment to year-over-year progress on the environmental, social, and governance issues of greatest impact to our business and stakeholders.

**Pure Storage's largest contribution and impact in the world of ESG is helping our customers achieve their environmental sustainability goals. We are also continuing to make advancements across our technology portfolio, operations and people.**

In 2022, the World Economic Forum produced a [study](#) stating that digital electronics of all types contribute 4% to 5% of all carbon emissions. Other studies identify that data centers use between 1% and 2%<sup>1</sup> of all electrical power generated in the world. It is further estimated that data storage represents 20% to 25% of data center power usage, and this is only expected to increase in the future.<sup>2</sup> The vast majority of data in data centers—over 80%—remain trapped on magnetic hard disks. Pure Storage's flash-optimized systems generally use between 2x and 5x less power than competitive SSD-based systems and between 5x and 10x less power than the hard disk systems we replace.

Simple math then shows that replacing that 80% of hard disk storage in data centers with Pure Storage flash-based systems can reduce total data center power utilization by approximately 20%. That same math shows that both data center space and e-waste would also be reduced by similar amounts with reduced labor costs and increased reliability as additional benefits. Reducing the world's data center power, space, and e-waste by 20% significantly contributes to accelerating our customers' achievement of their sustainability goals.

At Pure, we think about data storage differently from other vendors in the industry. We view data storage and management as high technology while others treat it as a commodity. And today, we are now the only company that can provide a single consolidated, consistent, and highly orchestrated data storage and management platform that can satisfy all customers' needs—with a portfolio that spans from highly performant to high-capacity, cost-effective products.

While our product and technology leadership, along with our world class customer service, remain the primary reasons why customers select Pure Storage, the sustainability of our products continues to escalate in importance. Our customers are increasingly drawn to the fact that our products and solutions use much less power and space, significantly reduce e-waste, and deliver superior reliability for more sustainable operations.

Our ability to fuel innovation and execution at scale is made possible by our more than 5,000 global employees. In FY23, we grew our global and diverse talent footprint by 22%. One of the foundational tenets of our people strategy is helping our diverse and talented employees deliver strong business results while also fostering a culture that enables each employee to enhance their skills, accelerate their development, and serve their communities.



To meet the needs of our customers and achieve our ESG goals and objectives, we continue to enhance the sustainability of our own operations and that of our global supply chain through climate resiliency initiatives, engaging our strategic suppliers to support their sustainability journeys, and maturing our governance of ESG across the business.

**I am proud of our leadership in the area of sustainability and our focus and commitment to making steady progress across each of our ESG initiatives.**

**I look forward to continuing to advance our shared goals in partnership with our employees, customers, partners, and other stakeholders to improve in all that we do.**

Thank you,

**Charles Giancarlo**, Chairman & CEO

<sup>1</sup> | Source: <https://www.iea.org/energy-system/buildings/data-centres-and-data-transmission-networks> <sup>2</sup> | Block & Files "Could NAND capacity replace H 6 DDs by 2029?" July 13, 2023 [https://www.google.com/url?q=https://blocksandfiles.com/2023/07/13/nand-manufacturing-hdds-2029/&sa=D&source=docs&ust=1690813703797075&usq=AOvVaw3Q8XL7DZqTo8IC-v\\_JMngu](https://www.google.com/url?q=https://blocksandfiles.com/2023/07/13/nand-manufacturing-hdds-2029/&sa=D&source=docs&ust=1690813703797075&usq=AOvVaw3Q8XL7DZqTo8IC-v_JMngu)

# About Pure Storage

**Pure Storage is a global leader in data storage and management with a mission to redefine the storage experience by simplifying how people consume and interact with data, all while focusing on doing the right things to positively impact customers, partners, employees, communities, and the environment.**

Pure Storage offers a single, consolidated, consistent, and highly orchestrated platform that delivers more than 10x the reliability at less than one half the power, space, cooling and labor of competitive solutions.

Pure Storage and its workforce of 5,000+ employees across 30+ countries strive every day to embody the company's five core values: **Customer First, Persistence, Creativity, Teamwork, and Ownership.**

**To learn more about Pure Storage's operations and business structure, please see our FY23 [Annual Report](#).**

## Our Technology

The Pure Storage portfolio of products can conservatively decrease global data center energy consumption by 90 TWh per year, simply by replacing less efficient, less reliable hard disk drives (HDDs) and solid state drives (SSDs) solutions. To put that in perspective, 90 TWh can power about five million US households for a year.<sup>1</sup>

## Our Operations

We continue to advance the resiliency and sustainability of our global supply chain with activities, including but not limited to supply chain due diligence, Responsible Business Alliance (RBA) collaboration and tools, and manufacturing optimization with environmental benefits.

## Our People

# 92%

of surveyed rate Pure Storage as a great place to work

# 85%

employee engagement (industry average: 76%)<sup>2</sup>

# 31.5%

Women directors<sup>3</sup> (more than a 2% point increase YoY)

## Recognitions and Awards

- **Business Intelligence Group:** 2022 Sustainability Award
- **Fortune:** Best Workplaces in Technology 2022
- **Great Places to Work:** Best Workplaces for Parents 2022
- **Human Rights Campaign** Corporate Equality Index 2022
- **Newsweek:** Most Loved Workplaces 2022
- **San Francisco Business Times:** Top 100 Bay Area Corporate Philanthropists of 2022
- **Silicon Valley Business Journal:** Best Places to Work in the Bay Area 2023: Largest Companies

[For a full list, see our Awards webpage](#)

<sup>1</sup> | Energy savings equivalent based on calculations from <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>. <sup>2</sup> | Employee engagement is the extent that employees are motivated to contribute to organizational success and willing to apply discretionary effort. <sup>3</sup> | Women Directors includes Directors and Senior Directors.

# Pure Storage at a Glance



FY23 ANNUAL REVENUE

**\$2.75B**

26% YoY Growth



OUR PEOPLE

**5,000+**

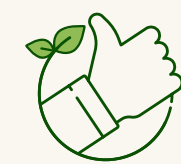
Employees



CUSTOMERS

**11,000+**

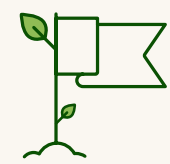
Global Customers



SATISFACTION

**81.4**

NPS is Highest in the Industry



LEADERSHIP

**9** Year Leader

Gartner® Magic Quadrant™ Primary Storage<sup>1</sup>



OUR OPERATIONS

**30+**

Countries



FORTUNE 500 CUSTOMERS

**~58%**

Of Fortune 500 Companies



Q4 FY23 SUBSCRIPTION ARR<sup>2</sup>

**\$1.10B**

30% YoY Growth

<sup>1</sup> | Source: <https://www.purestorage.com/resources/gartner-magic-quadrant.html>. <sup>2</sup> | Subscription ARR is a key business metric that refers to total annualized contract value of all active subscription agreements, including Evergreen, on the last day of the quarter, plus on-demand revenue for the quarter multiplied by four.



# OUR TECHNOLOGY







# Sustainable Products and Services

**At Pure Storage, we offer a unified platform that is far more sustainable than any other available enterprise data storage technology, including other all-flash storage. Our products use much less power and space, significantly reduce e-waste, and deliver superior reliability for more sustainable operations.** Our storage arrays fit more data in less space than traditional storage products. This means our storage uses much less energy and reduces power generation-related emissions for our customers by up to 85%. This dramatic 5x reduction means less energy, water, and natural resources consumed to meet the world's growing demand for data.

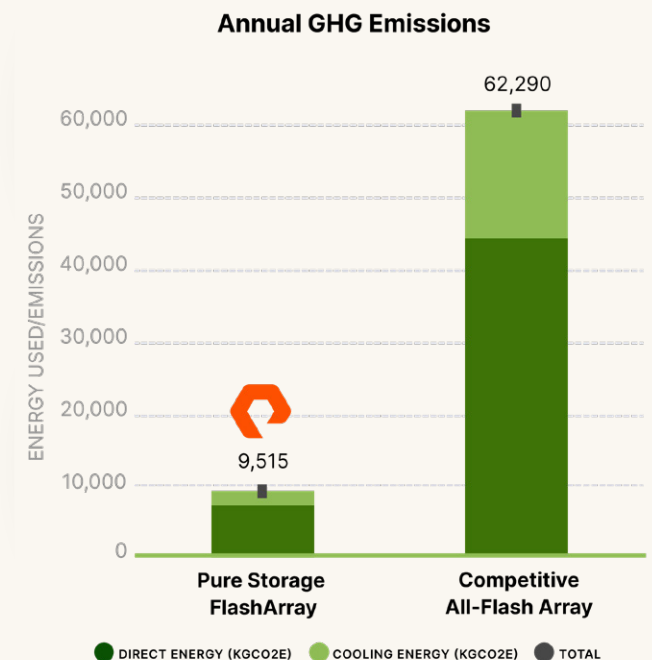
**The foundation for the outcomes we are able to drive is rooted in our platform innovation that is able to satisfy all of our customers' data storage needs.**

Our multi-protocol storage spans the entire range of price and performance and operates with a single operating environment, a single management platform, common storage components, and with a cloud operating model that gives customers the best of both worlds without

tradeoffs. And all of this is available in a cloud consumption model through Evergreen//One.

As companies and governments work toward a net-zero carbon economy, our offerings can help this transition while providing industry-leading performance.

## Pure Storage Product Energy & Emissions Savings<sup>1</sup>



Pure Storage conducted a life cycle analysis on its FlashArray//X™ product and applied the same use phase modeling to our entire product line. **Below are the energy and emissions savings that our products deliver, compared to competitive flash-based products:**<sup>1</sup>

### Product Energy and Emissions Savings

FlashArray  **UP TO 85% SAVINGS**

FlashArray  **UP TO 80% SAVINGS**

FlashArray  **UP TO 75% SAVINGS**

FlashBlade  **UP TO 65% SAVINGS**

The environmental benefits of our products cover the whole product life cycle. In addition to slashing energy use and space requirements, we reduce e-waste for our customers. We do this by providing storage that requires far less equipment to store the same amount of data, reduces over-buying of equipment, and requires far fewer replacement parts because of higher reliability. Most importantly, Pure Storage products are designed to avoid becoming obsolete and can be upgraded modularly and non-disruptively for 10 or more years, without the wholesale system replacement common with other storage technologies.

Five years ago, we pioneered an on-premises storage as-a-service model that accelerates and extends these benefits, delivering a space- and energy-optimized storage footprint, capacity when needed, and energy-efficiency assurances.

## Pure Storage Product Sustainability Differentiation<sup>2</sup>

### Technology Advantage

#### Pure Storage Architecture

DFM | Purity | Pure1 | Scalable

#### Evergreen® Life Cycle

Never Obsolete

#### Cloud Operating Model

Never Over Provision

### Sustainable Outcomes

#### Less Energy

Lower CO2e Emissions

#### Less Real Estate

Lower Biodiversity & H2O Impact

#### Less E-waste

Lower Environmental Load

### Business Value

#### Up to 85% Energy Savings

#### 75%+ Data Center Footprint Savings

#### 50%+ More Efficient Materials Use

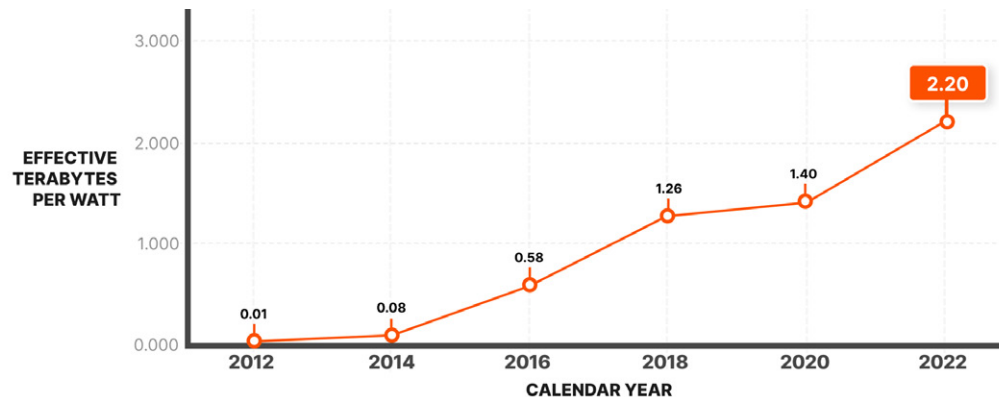
<sup>1</sup> | Listed Pure Storage products were compared to similarly configured and performing competitive products. FlashArray//X, FlashArray//XL and FlashBlade//S were compared to competitive all-flash, FlashArray//C compared to hybrid flash. FlashArray//E and FlashBlade//E energy use will be detailed in FY24 ESG report. Refer to the Future Forward: Our Technology section for more on these new products. <sup>2</sup> | Real estate savings and materials use savings based on customer use cases, see Customer Outcomes section below for examples.

## Sustained Improvements and the Opportunity Ahead

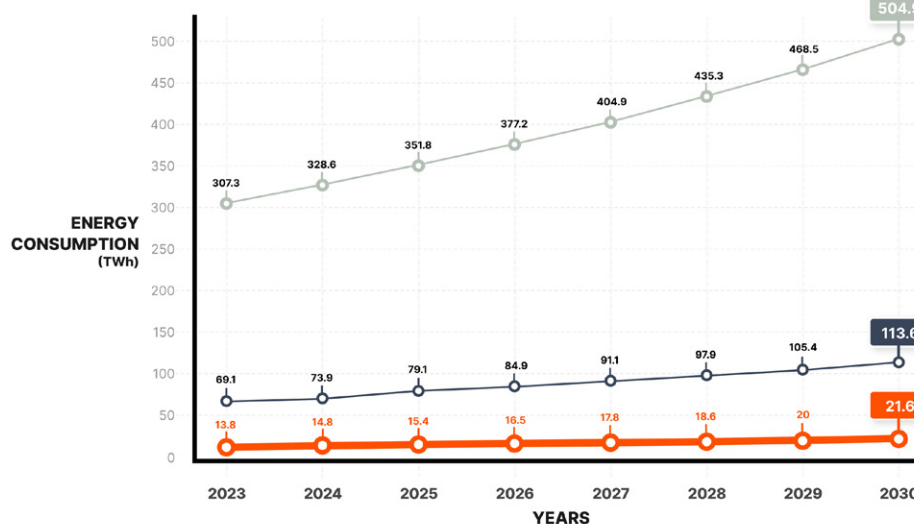
Pure Storage has been committed to building efficiencies in all areas of our products and unique business models since our founding. The charts on this page shows our evolution to achieve an over 200x reduction in energy consumed per effective terabyte (TB) compared to our earliest product models. And we are not stopping there. We intend to further improve the efficiency of our products through additional research, development, and investment in order to advance sustainability for our company and our customers.

The potential global energy savings opportunity that Pure Storage is pursuing could be as much as 370.5 TWh by 2030—enough energy to power 31 million homes in the US for an entire year!<sup>1</sup>

### FlashArray™ Capacity Efficiency Trend



### Data Center Energy Consumption Per Year<sup>2</sup>



**Potential Cumulative Energy Savings**

**370.5 TWh**

**31 million US homes energy for 1 year**

**2023-2030**

Energy savings opportunity based on industry leading and current average energy efficiency levels.

<sup>1</sup> | Energy Savings Equivalent Based on <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator> data. <sup>2</sup> | Cumulative energy savings opportunity is based on the current growth rate of data center energy consumption and assumes storage will remain a constant 22.5% of total data center energy through 2030. It assumes industry-leading all flash storage replaces legacy storage at a rate of 12.5% per year with an average of 80% less power. For further details see: <https://www.purestorage.com/docs.html?item=/type/pdf/subtype/doc/path/content/dam/pdf/en/white-papers/wp-efficient-it-infrastructure-saves-more-than-just-energy-costs.pdf>.

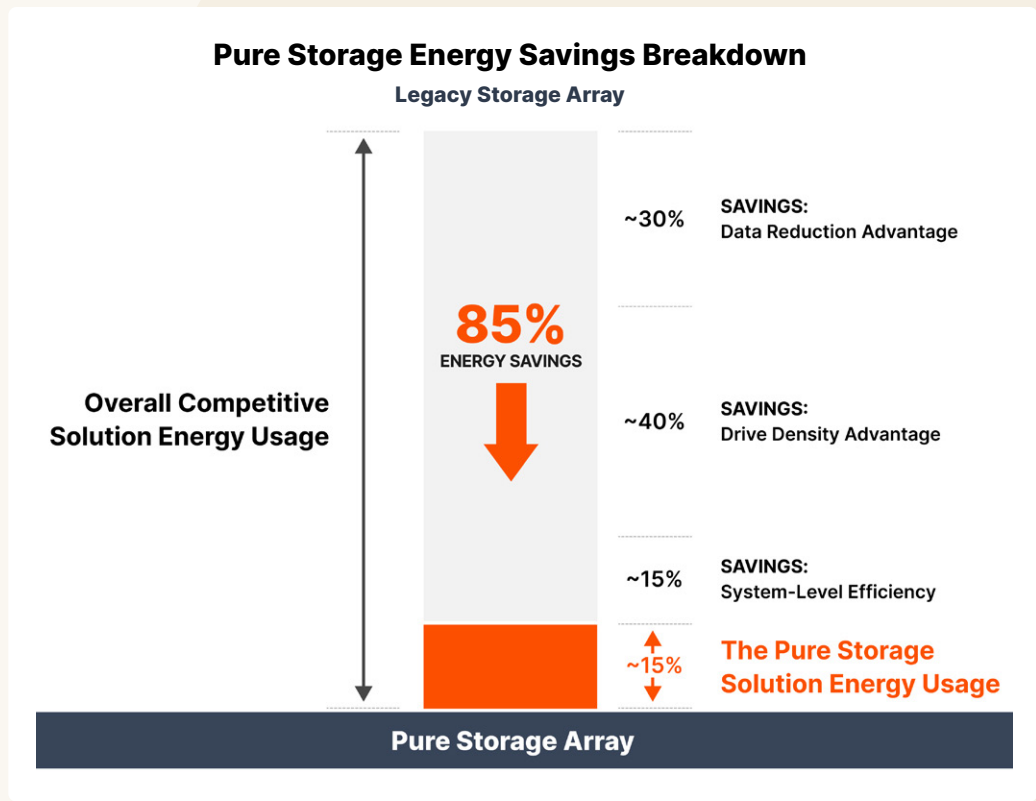
**There are several key technologies and services that help make Pure Storage more sustainable than legacy enterprise storage options, including other all-flash designs.**

The Pure Storage platform uses the built-for-flash software, the Purity operating environment, combined with our unique DirectFlash® technology. This combination allows our products to bypass the limitations associated with commodity SSDs and “talk” directly to the flash storage, increasing storage density and performance significantly. For example, SSDs use DRAM (Direct Random-Access Memory) heavily, for buffering writes and caching data location. DirectFlash technology, since it talks directly to flash, requires far less DRAM—about 1000x less than the typical SSD requirement. By using less DRAM, DirectFlash technology consumes less power. These are the primary reasons why Pure Storage products reduce energy use and carbon emissions by up to 85% compared to competitors’ all-flash systems (and even more compared to HDDs), and also use up to 95% less rack space. These technologies also deliver more reliable products and longer service lifetimes, with 3x the industry average SSD reliability and 6x the reliability of HDDs.

Our unique Evergreen architecture means that our products do not become obsolete. Instead, products are constantly upgrading and improving both software and hardware without disruption. This allows our customers to continuously benefit from the latest hardware and software technology, eliminating unnecessary product replacements and associated e-waste.

In addition to traditional purchases with an ongoing subscription for modernization, Pure Storage also delivers its solutions in a cloud consumption model via our Evergreen//One™ subscription. This allows customers to use only the storage they need, reducing over-provisioning and energy waste. And Pure Storage is the only vendor offering an energy-efficiency service-level agreement (SLA), ensuring customers will realize the energy and emissions savings they seek.

**Pure Storage Evergreen architecture** extends equipment life up to 10 years or more.



# How Pure Storage Delivers Energy and Emissions Savings

One of the main reasons that our products are so energy efficient is Pure Storage DirectFlash technology.

Years ago, our designers realized that SSDs designed for a wide range of applications are not optimal for enterprise storage. They saw the potential to remove many of the bottlenecks and other limitations found in standard solid-state flash drives (SSDs) by taking a “clean sheet” approach. Our built-for-flash Purity software was further extended to control flash directly, and we designed our own flash modules built with NAND chips. This integration of Purity software and DirectFlash eliminates the redundancy in SSD-based systems caused by SSDs’ emulation of HDDs and makes possible much higher storage densities, higher performance, and much more robust and reliable drives.

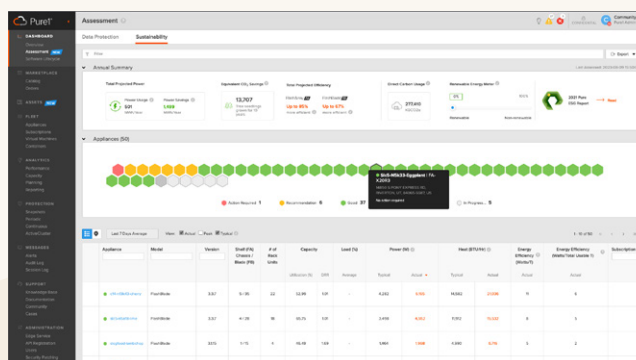
All of our systems now utilize these Pure Storage-designed DirectFlash modules in place of the commodity SSDs used by nearly all competitive systems.

Our unique integrated hardware and software DirectFlash technology enables Pure Storage to ship very high density drives (18.3TB TLC drives, and 48TB QLC drives currently)<sup>1</sup> while still providing the very high levels of performance that our customers demand. In contrast, the performance of typical competitive SSDs

suffers dramatically as the size of individual drives increases. As a result, larger-capacity SSDs are not typically configured in competitive systems for the workloads that our customers run. This requires users of competitive systems to use more (i.e., smaller and less-dense) drives, more hardware, and thereby consume more power to meet the same performance needs. With fewer drives (and associated hardware), Pure Storage products are up to 5x more energy-efficient than competing all-flash products, and take up to 5x less space than other storage systems.

Our Purity operating environment delivers energy efficiency in other ways as well. Pure Storage products have always-on data reduction, which further reduces the amount of storage needed, delivering 2x to 3x better data reduction than other all-flash systems with no performance compromises. In fact, Pure Storage has over 100 patents granted and pending for data reduction technologies. The tight integration of our Purity operating environment and our DirectFlash hardware also reduces energy consumption. This integration simplifies and optimizes storage operations, especially when compared to SSD-based systems. Our combination of hardware and software increases both drive reliability and performance, and greatly extends service lifetimes.

Our Pure1 AI-powered storage management environment has also been optimized to help customers monitor and maximize their energy efficiency. In FY23, we introduced a new Sustainability Assessment feature, which provides real-time analysis of energy use for a customer’s entire storage fleet. Pure1 enables customers to quickly and easily make sustainability decisions based on near real-time telemetry data and to monitor their overall progress toward sustainability goals. With a single click, Pure Storage customers and partners are able to view their entire storage estate and gain insight into several key sustainability metrics for each array they own or manage.



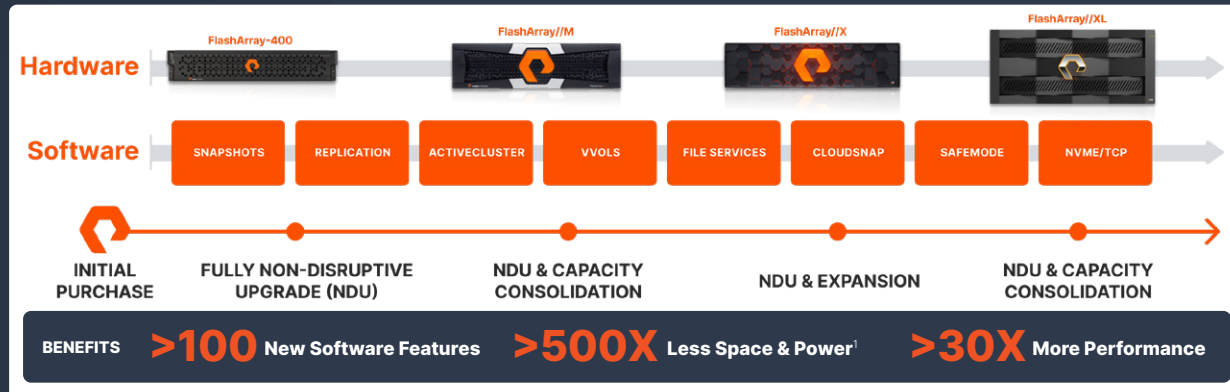
Pure1® Sustainability Assessment Dashboard

# Pure Storage Evergreen® Architecture and Subscriptions



**Pure Storage Evergreen//Forever™** combines our Evergreen architecture with an ongoing subscription to provide traditional-purchase customers a simple, economical, and sustainable way to keep their storage modern without repurchase or end-of-life worries.

## Pure Storage: Longer Life, Modernization and Innovation

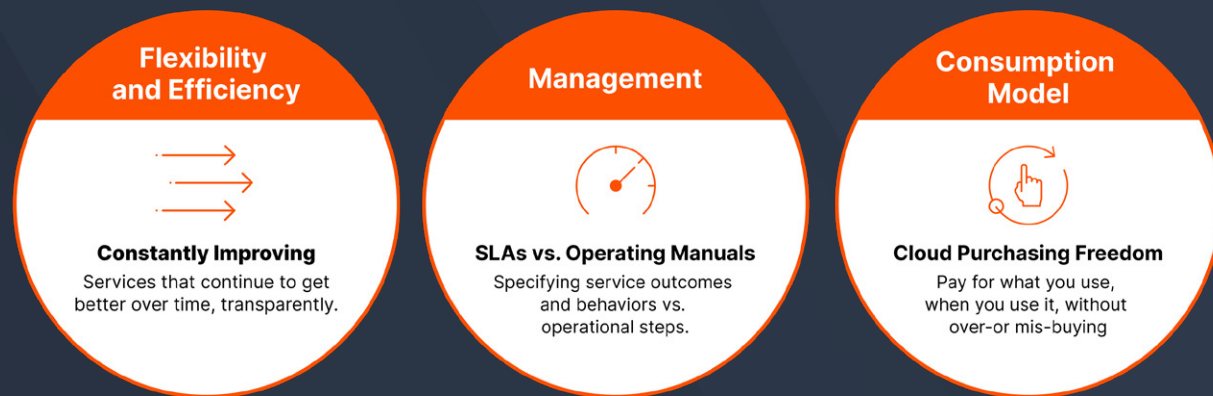


## Competitors: Forklift Upgrades, Rebuys and Migrations



**Pure Storage Evergreen//One™** brings the same Evergreen architecture benefits to customers who want to consume their storage fully as-a-service in their data center or in the cloud. It also has additional sustainability advantages.

## A Cloud Operating Model That Maximizes Sustainability



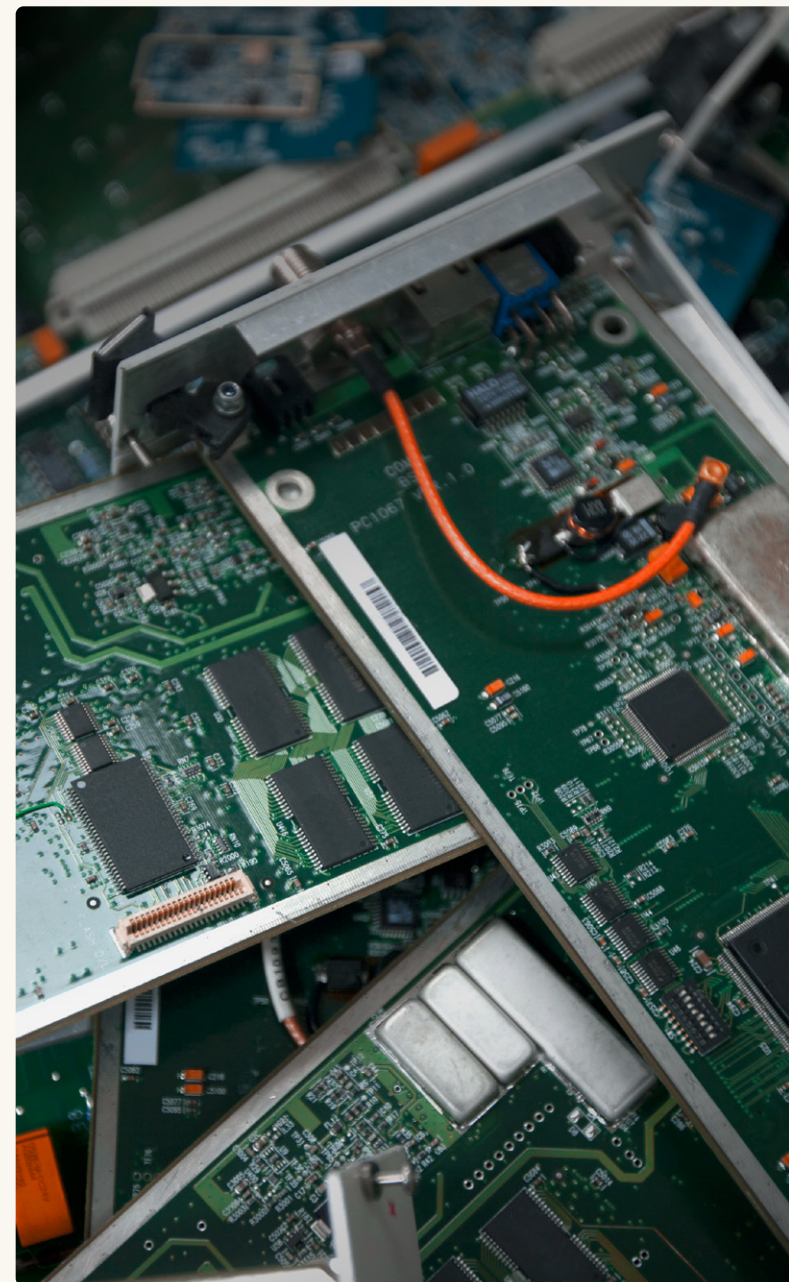
# How Pure Storage Delivers e-Waste Savings and Product Circularity

**Compared to competitor offerings, our storage architecture requires far less physical space and is more reliable, significantly reducing the amount of e-waste.** This is both compelling for our customers and delivers positive outcomes for the environment. Our storage products can be upgraded modularly and non-disruptively to meet changing customer requirements and—compared to legacy storage systems—avoid the need for a full product replacement every few years, further reducing the amount of e-waste generated. We call this our Evergreen Architecture. For example, by upgrading array controllers, a customer can get more processing capability, gain access to new features, and increase storage capacity while extending the useful life of their system—by up to 10 years or more.

Customers on an Evergreen subscription (such as Evergreen//Forever™) can modularly upgrade and expand their storage as needed, without taking systems offline or replacing the entire system every few years. Our Evergreen architecture extends to our Evergreen//One storage as-a-service subscription. This consumption model allows customers to optimize their utilization of our storage products and eliminate overprovisioning.

As part of the Evergreen subscription, components that have been upgraded, and still have a useful life, are refurbished by Pure Storage and repurposed in places like our internal technical labs, enabling product circularity. In FY23, Pure Storage reused over one third of the controllers that were upgraded. For returned components that cannot be repurposed, Pure Storage works with recycling partners who can certify zero-waste-stream operations.

We have designed our systems with individual components that are more reliable than the commodity components used in competing products. For example, our DirectFlash storage modules are 3x as reliable as the industry average in terms of reliability compared to typical solid state disks and 6x as reliable as mechanical disks. This reliability advantage results in fewer failed parts and extended product service lifetimes, which reduces e-waste even further.



# Extending Sustainability with the Evergreen//One as-a-Service Subscription

**Building on our significant product sustainability advantage, Pure Storage**

**Evergreen//One subscription extends sustainability even further.** Since our customer does not purchase equipment but instead subscribes to a storage service, we can provide them just the right level of capacity and performance to meet their needs. This

eliminates any over-provisioning of storage, which avoids running more hardware than is required over long periods of time, which in turn leads to less energy use and emissions. Evergreen//One allows Pure Storage to offer our customers the cloud operating model everywhere in their data estate, both in their own data centers and in the public cloud.



## Sustainability Advantages of Evergreen//One

Evergreen//One is a complete and environmentally sustainable approach to as-a-service models, providing the following benefits:

- **Eliminate Wasteful Over-provisioning:** The right amount of storage at the right time
- **SLA-based Terms:** Including the industry's first Energy Efficiency SLA, to add predictability to energy consumption and to aid in the pursuit of emissions goals
- **Business Optimization:** Eliminates CAPEX, simplifies budgeting, and removes obstacles to growth
- **Continuous Innovation:** Non-disruptive upgrades allow customers to take advantage of the latest capabilities, without planned downtime
- **Array and Workload Optimization:** Aligning performance, capacity, and Watt per TB to customer goals



# Product Life Cycle Analysis

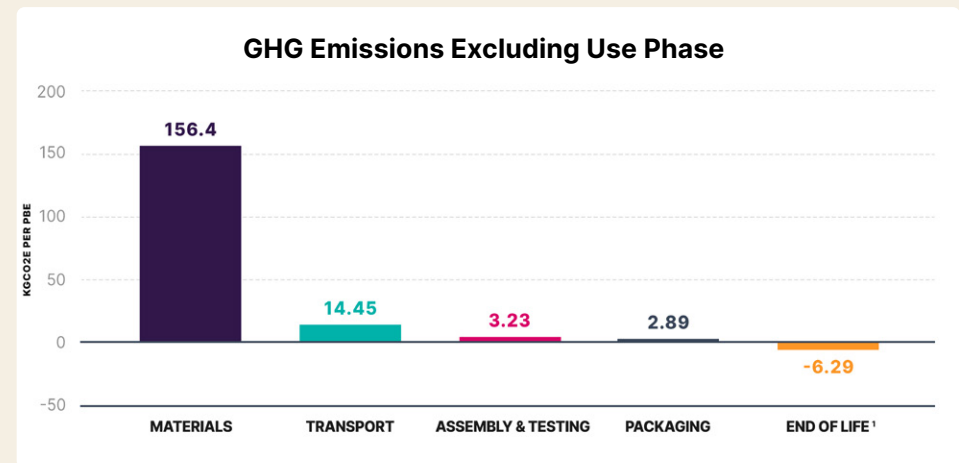
We strongly believe a standards-based life cycle analysis (LCA) approach, with its cradle-to-grave analysis and requisite third-party critical review, provides the most useful, reliable, and actionable information for our customers. In FY21, we partnered with a third-party environmental analysis firm to conduct our first LCA. The product chosen for the analysis was our most widely purchased array model, the **FlashArray//X70**, and a comparative assessment was conducted against other storage devices.

In particular, the LCA results provide valuable insight into the environmental impacts of our storage products, including manufacturing, transportation, assembly and testing, packaging, product use, and eventual disposal. The analysis shows that the total annual GHG emissions per array are 9.9 MT CO<sub>2</sub>e, and 0.39 MT CO<sub>2</sub>e when product use phase was excluded. These findings make clear that the largest near-term opportunity for Pure Storage to reduce GHG emissions is by reducing the energy consumption associated with product use. The LCA results underscore that our focus on continued innovation in leading-edge storage densities, and in designing more efficient hardware and software, will provide the best sustainability outcome both for our customers and for Pure Storage.

[See Our Full LCA Report](#)

## Key findings of the LCA Include

Excluding use phase, the total GHG emissions work out to 390 kg CO<sub>2</sub>e per array and 170 kg CO<sub>2</sub>e per PBe.



According to the [epa.gov GHG equivalencies calculator](https://www.epa.gov/ghg-equivalencies-calculator) this is equivalent to CO<sub>2</sub> emissions from of any of the following:



ENERGY

1

BARREL OF OIL



LITERS

167

LITERS (44 GALLONS)



PROPANE TANKS

16

USED FOR HOME BARBEQUE GRILLS

# Customer Outcomes

The proven benefits of our technology are far-reaching. We're proud to support our customers on their sustainability journeys, reducing their environmental footprint while helping them advance their business.



## Virgin Media O2

For Virgin Media O2, the United Kingdom-based telecommunications provider, a move to Pure Storage saved money while building a scalable platform for growth.

The company immediately began to see benefits from a sustainability perspective, with a **90% data center floor space reduction**. That adds up to an incredible **96% reduction in power consumption**, as well.

**“Without the move to Pure Storage FlashArray, we would have needed to build an additional data center.”**

**AJIT SHARMA**

Business Optimization Manager, Virgin Media O2

[See Our Full Case Study on Virgin Media O2](#)



## County of San Luis Obispo, CA

San Luis Obispo County (SLO) provides more than 700 municipal services and administers state and federal programs for nearly 300,000 citizens. The County chose Pure Storage to support all public-facing applications, as well as internal systems.

Today, the county delivers uninterrupted services to citizens and supports a secure, hybrid workforce of 2,800 employees. **With a near 3:1 compression rate**, SLO County can run a lean, cost-effective data center and advance its sustainability goals.

**“We’ve reduced our footprint by 75% and [total] power consumption by 59%. Pure has played a big role in helping us achieve these results.”**

**GARY HICKLIN**

IT Supervisor, San Luis Obispo County

[See Our Full Case Study on SLO County](#)



Ministry of Economic Affairs, R.O.C.

## Ministry of Economic Affairs, Republic of Taiwan

The Ministry of Economic Affairs (Taiwan) works to promote economic development and international trade. As the Ministry's Information Management Center (IMC) worked to digitize to serve its constituents better, power use and data center space were becoming significant issues.

By moving to Pure Storage, the IMC saw a reduction of **more than 98% in storage rack space and 84% in power requirements**.

**“Pure Storage provides us with the foundation we need to move towards smart technology and environmental sustainability.”**

**LIN, TSUNG-REN**

Director of the Information Management Center

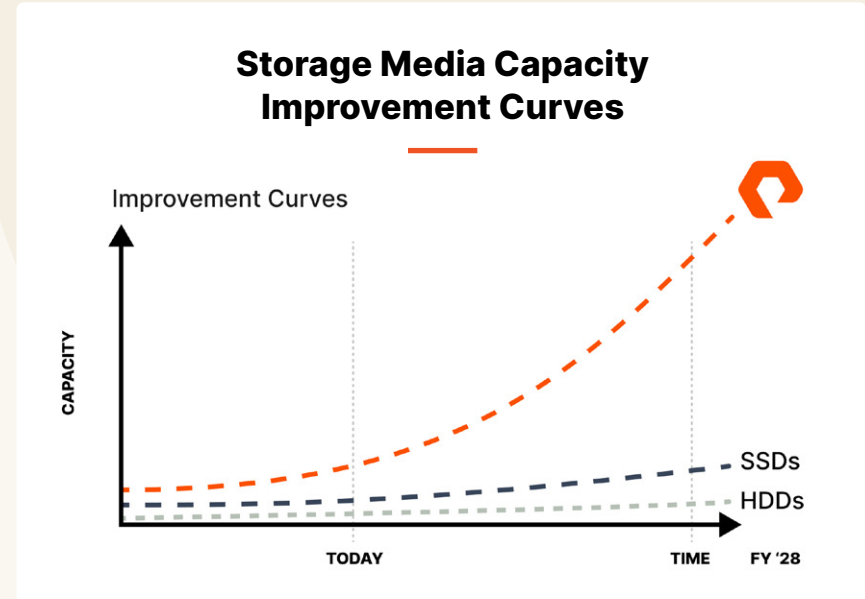
[See Our Full Case Study on Ministry/IMC](#)

# Future Forward: Our Technology

In next year's ESG Report, we look forward to sharing more on several initiatives highlighted below that took place in early FY24 or are planned through fiscal year end.

**In order to continue delivering differentiated product sustainability and features, Pure Storage introduced several new products in FY24, as of the publication date of this report:**

- **The Pure//E™ family (FlashBlade//E™ and FlashArray//E™):** The Pure//E family offers customers even more choice for an all-flash alternative to power-hungry hard disk storage array offerings. With one-fifth the space and power requirements, 85% less e-waste, and at least 40% lower TCO over six years, but at the same acquisition cost as all-disk storage, the Pure//E family now eliminates the need for any hard disk drives in data centers.
- **The latest generation of our FlashArray//X™ and FlashArray//C™ products(XCR4):** Our latest products increase performance while continuing to deliver highly differentiated energy efficiency relative to competing all-flash solutions.

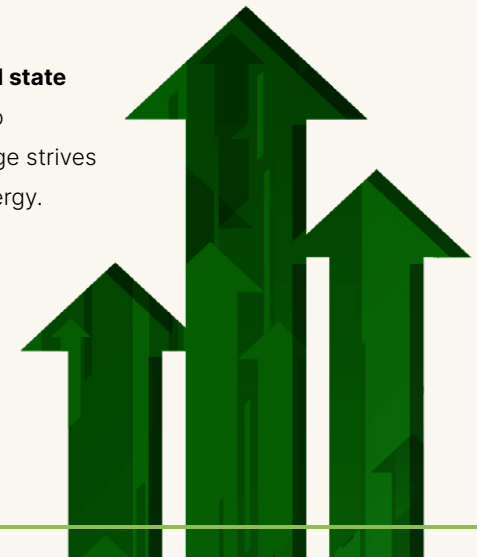


## Our Trajectory

**As illustrated above, the capacity in our products has improved steadily over time and has outpaced the rate of commodity solid state disk and hard disk capacity improvements.** As we move into the future, however, we expect the rate of our capacity improvement to dramatically exceed the rate of solid state disk and hard disk capacity improvement. Through innovations in our products, Pure Storage strives to further reduce the energy and water used to operate our products. We continue to invest in designing our products to use less energy.

These energy savings will be multiplied as our products continue to evolve, and we anticipate significant further reductions in total cost of ownership over the next four years.

With these advancements, we are more convinced than ever that HDDs will become obsolete for data center use in the near term. We are confident that our sustainable and economical all-flash products will help make that a reality and continue to help our customers attain their data and sustainability goals.





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