



# CLEAN REVENUE: MEASURING PROGRESS TOWARD LOW-CARBON GROWTH

## CONTENTS

Introduction.....	2
Current definitions and parameters.....	2
Defining low-carbon technology for the IT industry.....	3
Efficient IT.....	3
Encompassing IT efficiency in clean revenue parameters.....	4
Enabling technologies.....	4
Closing and actions.....	5



## INTRODUCTION

Businesses are evolving their strategies to lead the transition to a low-carbon economy and capitalize on low-carbon opportunities. Yet clearly defined indicators to measure progress toward this transformation remain underdeveloped. In efforts to remedy this problem, clean, or low-carbon, revenue has emerged as a metric for disclosing a company’s revenue from goods and services that have a clear environmental benefit.<sup>1</sup> Although parameters have been adapted to specific sectors, more clarity is required to accurately map procurement decisions to corporate sustainability goals and initiatives within technical industries.

Disclosing clean revenue not only better enables a company to mitigate their own risks, but also builds stronger relationships with key stakeholders by helping customers meet their own sustainability-related goals, fostering innovation, and empowering suppliers to move the industry forward. These positive relationships create a ripple effect, enabling a cleaner economy overall.

However, the fluidity to clean revenue’s taxonomy leaves room for inconsistent parameters, particularly within complex or service-based business models. At HPE, our methodology for calculating clean revenue is informed by industry standards and based upon our approach to efficient IT, which primarily considers the energy, equipment, software, and resource efficiency of IT solutions.

Companies leading the transition to a low-carbon economy must not only innovate products and solutions that minimize environmental impacts, but must also ensure that a significant portion of their revenue is comprised of these solutions. This is not just environmentally beneficial; it also enables these companies to overcome obstacles and capture the business opportunities of this transition.

## CURRENT DEFINITIONS AND PARAMETERS

Despite increasing expectations for companies to measure and report on clean revenue through third-party rankings and self-reporting, stakeholders disagree on what defines clean revenue. In their annual Climate Change questionnaire, CDP requests that companies describe the classification of, and set a percentage for, low carbon products and revenue in a given reporting year. This offers companies the flexibility to define low-carbon revenue relative to their business and provides CDP with insights on how companies define this term.

Comparing the clean revenue self-reported by technology companies to CDP to the clean revenue calculated by Corporate Knights, a financial information company developing a global clean revenue taxonomy standard, reveals the inconsistency in clean revenue reporting. For technology hardware companies, Corporate Knights calculates clean revenue from environmentally certified products, EPEAT commercial products, hardware with environmental benefits, clean investment income, product leasing and repairing, energy efficient processes, and renewable energy parts. The self-reported parameters listed in the table show that companies report on their clean revenue using much looser requirements.

**TABLE 1.** Comparison of clean revenue self-reported to CDP versus Corporate Knights calculated clean revenue for technology hardware companies

Company	Self-reported to CDP clean revenue (%) FY2020	Corporate Knights clean revenue (%) FY2020	Self-reported parameters <sup>2</sup>
Apple Inc.	100%	69.13%	Emission reductions targets across all product lines; devices powered through data centers which run on 100% renewable energy
HP Inc.	87%	49.16%	Printing from closed-loop recycled plastic in print cartridges; eco-label certified hardware
Konica Minolta	93%	78.3%	Products employing recycled materials, carbon emission offset services, energy-saving edge computing without the need for large servers, energy saving products
Lenovo	87%	15.27%	Products that helped avoid emissions, products with ENERGY STAR® certification (notebooks, desktops, workstations, monitors, and servers)
Cisco	58%	60.44%	Uses the Corporate Knights methodology, “Clean revenue measures a company’s revenue from all goods and services which have clear environmental and, in a limited number of well-defined cases, social benefits. This includes revenue from clean transition, low-carbon economy and circular economy revenue segments.”
HPE	47%	42.25%	Equipment that best exemplifies low-carbon, energy efficiency, and resource optimization

<sup>1</sup> [corporateknights.com/wp-content/uploads/2020/11/Corporate-Knights-Clean-Taxonomy-definitions-version-3.0-2020-11-06.xlsx](https://corporateknights.com/wp-content/uploads/2020/11/Corporate-Knights-Clean-Taxonomy-definitions-version-3.0-2020-11-06.xlsx)

<sup>2</sup> Self-reported parameters are paraphrased from responses to the 2021 CDP Climate Change questionnaire



While it's understandable that different types of products and services will merit different indicators, the variance of percentages and definitions between reporting bodies emphasizes the need for more prescriptive boundaries and cohesive comparisons to inform procurement, strategy, and progress. The self-reported parameters also demonstrate the varying environmental responsibility taken on by companies, with some companies focusing on reducing their own impact via energy efficiency and others relying heavily on renewable energy compensation.

Furthermore, this comparison across technology companies shows there is still room to provide more nuanced indicators for specialized sectors given the rapid evolution of business models. For example, Corporate Knights lists eco-label certified hardware as a primary indicator for the enterprise technology sector. Although this certification enables effective sustainable procurement for most electronics on the market, it does not account for the complexity of workloads within enterprise IT infrastructure. Additionally, the transition to service-based models across industries presents new low-carbon opportunities; however, these energy efficiencies are evident in the entire IT solution, rather than the individual hardware parts.

A company's commitment to the low-carbon economy must not only be evident in their R&D, but also in the company's commitment to shift their product portfolio toward low-carbon or clean revenue products and engage with customers to help them use products efficiently. Although clean revenue metrics clearly signal the value that can be generated by low-carbon solutions, few companies have set intentional targets to grow these offerings. Further, those who have exemplify varying degrees of clarity and rigor in defining their methodologies. Further developing clean revenue reporting standards could encourage greater adoption of the metric across the technology industry.

## DEFINING LOW-CARBON TECHNOLOGY FOR THE IT INDUSTRY

When defining clean revenue, the IT industry is unique in that we must consider both the environmental impacts of the products we bring to market, as well as how these products can be applied to decarbonize the industries in which our customers operate.

### Efficient IT

As an innovation-driven company which invests over a billion dollars in R&D annually, HPE has a long history of innovation in low-carbon technologies. In fact, approximately 21% of our inventions over the last twenty years offer low-carbon benefits.<sup>3</sup> Although the applications and carbon impact of these inventions vary, several HPE patents can be linked to transformative IT innovations that have the potential to significantly reduce the energy impacts of IT in the long-term. These include patents related to non-volatile memory (NVM), which retains information even when power is removed, and photonics, a technology using light rather than electronics to transport data, thereby eliminating the resistance inherent in copper circuits, thus saving significant amounts of energy and reducing heat generation. To encourage the innovation and adoption of low-carbon technologies, HPE collaborated with Facebook and Microsoft to make key patented technologies that have application in low-carbon innovations freely available through the [Low-Carbon Patent Pledge](#).

HPE classifies our solutions as clean revenue based on a concept we refer to as **efficient IT**. We define efficient IT as goods and services that enable our customers to reduce the impact of their IT infrastructure across its entire lifecycle, enabling our customers to compute at the highest levels while consuming the least amount of resources possible. These attributes are based upon principles of equipment efficiency, energy efficiency, resource efficiency, and software efficiency. At HPE, because customers' use of our products comprises two-third of our carbon footprint, designing and innovating the most energy-efficient technologies is critical to our ability to lead the transition to a low-carbon economy and achieve net-zero emissions by 2040.

While the majority of HPE solutions are arguably **low-carbon**, we exercise responsibility in defining which aspects of our portfolio offer clear, deliberate, and maximized low-carbon benefits. For our 2021 reporting cycle, we chose the IT equipment and services that best exemplified the aforementioned traits, which accounted for roughly 47% of our fiscal 2021 net revenue. We partner with our customers to design and operate more efficient IT infrastructure solutions in their operations. As a result, we believe that our impact extends far beyond the 47% estimated.<sup>4</sup> More information on HPE's methodology for defining clean revenue products can be found [here](#).

Looking ahead, we are shifting our design and sales enablement processes from product family divisions to solutions-centric, making it easier for our company and our customers to make more sustainable procurement choices in building their IT solutions.

HPE's as-a-service business strategy further accelerates the efficiency of our customers' IT estates. This transition has provided HPE customers the benefits of access to best-in-class technology and delivery of outcomes without the need for costly overprovisioning inherent in most customer-owned IT infrastructures. Rightsizing the IT estate decreases the material consumption of hardware, as well as the associated required resources like energy, water, and fuel for backup systems. Additionally, the shift to ITaaS ensures a more controlled chain of custody that enables hardware takeback and the extension of hardware life through the circular economy.

<sup>3</sup> HPE internal data

<sup>4</sup> It should be noted that internal visibility to revenue across business units can limit our percentages, and we're taking a purposefully conservative approach to maintain the necessity to continually improve our transition to the low-carbon economy.



Efficient IT is most effective when it’s leveraged to build effective relationships with customers, ensuring needs of the business are met and anticipated at the lowest carbon cost. Increasingly, our sustainability capabilities are a strategic differentiator in customer relationships, helping us to drive new business and maintain strong relationships. Our sustainability expertise as a commercial partner, as well as the sustainability performance of our products, operations, and supply chain, give us a competitive advantage across sectors and enable us to play an important role in accelerating the low-carbon, circular economy.

**Encompassing IT efficiency in clean revenue parameters**

Given the complexities of efficient IT and the evident inconsistent reporting, there is an industry need to advance the parameters of clean revenue to encompass IT efficiency. Defining the offerings best classified as low-carbon is particularly challenging in the rapidly evolving technology industry. Currently recognized parameters for defining clean revenue within IT, such as eco-labels, recycled material content, and defined resource savings only provide guidance at the individual piece of equipment level and typically only define off-the-shelf elements. For instance, eco-labels define benchmarks that measure a server’s ability to manage operating and idle energy in the factory configuration, but this configuration is often changed by customers. This can offer customers access to off-the-shelf products with clearly defined environmental benefits, but the customization, energy effectiveness, and resiliency of more complex solutions with multiple hardware elements may diminish or eliminate these benefits. Additionally, because enterprise hardware is designed to operate continuously and run at higher capacity and temperature than consumer products, extensive piloting is essential to ensure recycled content materials are safe and reliable. Lastly, environmental specifications for IT workloads are contingent on evolving workloads, customized settings, and the load balancing of the entire IT ecosystem, making it difficult to define specifications for each piece of hardware. Rather, low-carbon IT infrastructure should be defined as efficient solutions, not its individual parts. These solutions can consist of hardware, software, professional services from both the primary vendor and third parties.

In order to consider the sustainability of an entire IT solution, HPE recommends incorporating IT ecosystem optimization, flexible workloads, edge computing and decentralized networks, and consolidation strategies as clean revenue parameters (Table 2). Further details for each parameter can be found in our white paper on [efficient IT](#).

**TABLE 2.** Recommendations for clean revenue parameters to encompass IT efficiency

Clean revenue parameter	Description
IT ecosystem optimization	Revenue from solutions which decrease the quantity of hardware required, as well as the associated resources that power hardware like energy, water, and cooling
Flexible workload	Revenue from solutions offering customizable consumption models, enabling rapid adjustment to fluxes in workload, such as compute and software-as-a-service offerings
Edge computing and decentralized networks	Revenue from solutions enabling edge computing and decentralized architectures, reducing the need for on-site infrastructure
Consolidation strategies	Revenue from data centers employing consolidation strategies through centralization, physical consolidation, storage consolidation, data integration, and/or application of systems

While companies have direct control over the efficiency and sustainability of the products and services they offer, there is less control over how customers utilize these. With this in mind, companies should complement product R&D with customer engagement and education on best utilization practices. Actively engaging with customers can ensure efficient use of systems, allowing suppliers and customers to reach sustainability goals such as reaching higher utilization rates or installing renewable data center cooling. In 2021, HPE’s [sustainability engagements](#) reached customers representing \$3.4 billion in revenue. We estimate that these engagements helped drive approximately \$891 million in net revenue, an increase of 185% over three years.

**Enabling technologies**

To address the urgency of climate change, it is not enough to focus on the carbon impacts of our own sector; we must also consider how to implement edge-to-cloud technologies to enable our customers to minimize the carbon intensity of both their operations and entire sectors.

Accelerating the transition to low-carbon industries is not just an environmental imperative, but also a business opportunity. Companies that are able to capitalize on the market opportunities of a low-carbon economy will have a foot forward in any market, avoiding the risks of potential increased operational and capital costs due to potential carbon taxes and investment in carbon-emissions mitigation measures which may lead to lower profitability. According to [HPE’s climate modeling](#), which aligns to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), developing technology solutions to facilitate a low-carbon transition will create numerous business opportunities valued at upwards of \$12 billion for HPE and our customers in the next 5–15 years.



In addition, according to a 2019 report, Exponential Roadmap, the digital sector will have exponential influence on reducing emissions by 2030 due to digitization in every sector despite accounting for only 1.4% of global emissions.<sup>5</sup> ICT could enable a 20% reduction in global emissions by 2030—primarily by enabling efficiencies in other industries such as buildings, agriculture, transport, and manufacturing. Recognizing the opportunity to curb the emissions of resource-intensive sectors, while capturing new market opportunities, HPE has committed to investing billions of dollars in edge technologies and is partnering with our industrial customers to tap into data produced at different stages within manufacturing processes to increase operational efficiencies and enable continuous product improvements that will contribute to a low-carbon economy.

## CLOSING AND ACTIONS

HPE's sustainable innovation and partnerships across our value chain create a business advantage that drives revenue and investor confidence. At HPE, our holistic approach to sustainable IT offers industry-leading technology solutions with less environmental impact, enabling the advancement of a low-carbon economy. We recommend the central term of clean revenue be inclusive of environmental benefits, while allowing sectors to provide specific parameters as to what defines this type of revenue for their business. Organizations focused on leading the low-carbon transition should publish their methodologies toward defining clean revenue and provide constructive industry recommendations, enabling better comparison, collaboration, and sharing of best practices. Through this transparency, we can drive more robust accountability and influence investment decisions, making it easier to evolve low-carbon solutions.

## LEARN MORE AT

[hpe.com/us/en/living-progress.html](https://hpe.com/us/en/living-progress.html)

<sup>5</sup> [exponentialroadmap.org/wp-content/uploads/2019/09/ExponentialRoadmap\\_1.5\\_20190919\\_Single-Pages.pdf](https://exponentialroadmap.org/wp-content/uploads/2019/09/ExponentialRoadmap_1.5_20190919_Single-Pages.pdf)

Make the right purchase decision.  
Contact our presales specialists.



Chat now (sales)



Call now



Get updates