



ENGINEERING MORE
SUSTAINABLE PRINT





**“The betterment of our society
is not a job to be left to a few.
It is a responsibility to be
shared by all.”**

Dave Packard

Decades of dedication to sustainability

HP has taken sustainability seriously since its inception in a garage in what is now California’s Silicon Valley.

From the start, HP made strides to reduce the amount of raw materials used, recycle parts of products and components, and produce products that use fewer natural resources. In 1957, HP added ‘environmental stewardship’ to its company objectives, and in 1966 began to recycle computer punch cards. It moved to recycling hardware in 1987 and launched Planet Partners in 1991 which has been responsible for recycling millions of cartridges and billions of plastic bottles.ⁱ

Sustainable advances are not a new part of HP’s approach to technology, but a founding principle, and by 2035, HP expects to operate 100% renewably.ⁱⁱ Architecture, engineering, and construction (AEC) professionals expect products to reflect the work they do. The AEC sector is designing and building the sustainable cities and workplaces of tomorrow, and it needs sustainable tools to get there.

HP timelineⁱⁱⁱ

- 1957 ● Commits to environmental stewardship.
- 1966 ● Recycles computer punch cards.
- 1987 ● Begins hardware recycling program.
- 1991 ● Planet Partners recycles components including ink cartridges.
- 2016 ● HP achieves **100% Zero deforestation.**^{iv}
- 2018 ● **4.7 billion ink cartridges** produced from recycled material.
- 2020 ● **60M^v bottles** saved from waterways and recycled.
- 2020 ● HP launches its **first carbon-neutral large format printer**, the DesignJet Studio and introduces eco-carton ink cartridges to replace plastic-based cartridges.
- 2025 ● **35% potable water reduction** and **60% renewable electricity** across global operations.
- 2035 ● **100% renewable electricity** in global operations.



Towards the circular economy

As every AEC professional knows, producing new products from new materials is a drain on the planet's resources.

HP is actively moving towards circular economy principles, by the reduction or elimination of unnecessary components, increasing the usage of recycled materials, and innovating to use more sustainable resources.

In 1991 HP started the Planet Partners program to recycle components for free rather than have users discard them in landfill. With the help of customers, the program has now recycled more than 875 million HP ink and toner cartridges and is the #1 printer supplies recycling program.^{vi}

In addition, more than 4.7 billion plastic bottles and 114 million plastic hangers have been diverted from landfill and remade into HP cartridges.

Meanwhile, HP's ocean-bound plastic recycling program in Haiti has actively sourced and cleaned nearly 60 million plastic bottles, turning this plastic into new ink and toner cartridges, and also printer and laptop components. This recycling reduces the reliance on raw materials.

4.7bn

bottles recycled^{vii}

875m

cartridges recycled

114m

plastic hangers recycled

60m

ocean-bound plastic bottles processed in HP's Haiti Washing Line facility^{viii}

...And counting



Carbon neutral printing

The DesignJet Studio is the first net carbon neutral HP DesignJet plotter,^{ix} covering lifecycle carbon emissions from material extraction, manufacturing, transportation, usage, and end of service. This means the plotter has no overall impact on the environment over its life cycle, according to the CarbonNeutral Protocol.^x

HP continually reduces the carbon footprint of printing through carbon reduction initiatives such as energy efficiency, reduced packaging, and use of recycled plastics.

The new HP DesignJet T200 and T600 series are designed to reduce the environmental impact, lowering CO₂ emissions by up to 7.3 tons per year per unit sold by using up to 30% recycled plastic.^{xi} HP has become the first printer manufacturer in the European Union (EU) to earn UL's Recycled Content Validation with the DesignJet T200 and T600 plotter series.



Leaps in sustainability

Plastic cartridges for the new PageWide XL have been phased out in favor of a new circular economy approach that drastically reduces the environmental impact.

Eco-Carton Cartridges^{xii} replace the existing plastic cartridges and feature:

80%
reduction in plastic

66%
reduction in CO₂^{xiii}

An overall capacity increase from 775ml to
1 LITRE
which means cartons need to be replaced less frequently

ZERO LANDFILL
—local outer carton recycling, free take-back of inner ink bag via HP Planet Partners^{xiv}



Energy Star^{xv}

Both the HP DesignJet T200 and T600 series of plotters,^{xvi} in addition to PageWide XL^{xvii} models, are Energy Star certified. Products that are Energy Star certified include features that actively reduce the power used while in sleep or standby modes.

EPEAT

EPEAT registered products help meet sustainability goals. EPEAT certification involves a manufacturer having products checked by a third party Conformity Assurance Body (CAB) to verify that their product meets the EPEAT criteria as claimed.^{xviii}

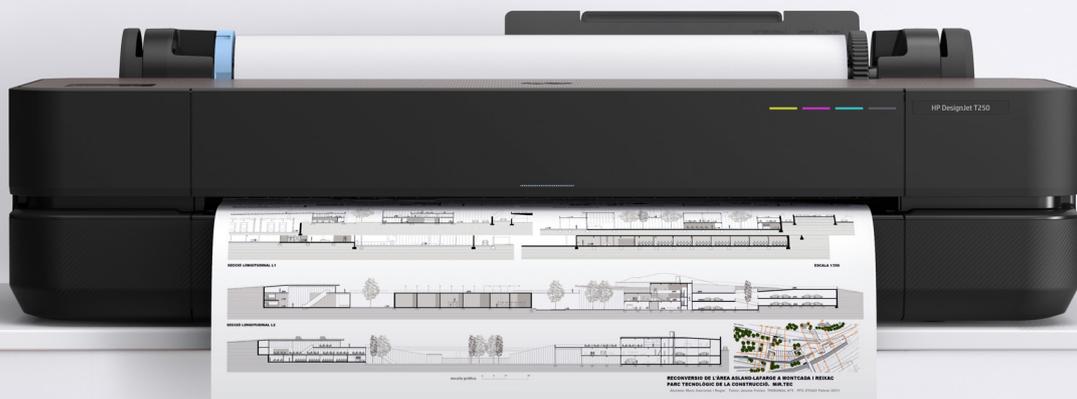
The DesignJet T200^{xix} and T600^{xx} series are certified Gold in the US, while the PageWide XL range is certified Silver and Gold.^{xxi}

UL validated (recycled plastic)

UL validation confirms that components are indeed made of recycled plastic. Both the HP DesignJet T200 and T600 series have earned the UL Recycled Content Validation, the first plotters in Europe to receive this award,^{xxii} with 30% post-consumer recycled content, calculated as a percentage of total plastic weight.

Verified for Nordic Swan Ecolabelled printing companies

PageWide XL inks are verified for Nordic Swan Ecolabelling, which means they meet strict environmental and health requirements for chemicals.^{xxiii}



HP has a long history of embracing sustainability, long before it was a ubiquitous concern

HP has led the way for sustainable innovation since 1957 when its two founders wrote its first corporate statement. Objective five related to citizenship and how to behave responsibly as a company, to meet, “the obligations of good citizenship by making contributions to the community and to the institutions in our society which generate the environment in which we operate.”

This principle has remained a core concern ever since, prompting HP to make choices to focus more on the environment when this was of peripheral or no concern in the wider world.

Consequently, HP Planet Partners is the #1 printer supplies recycling program^{xxiv} in the print industry. It's also one of the reasons why HP has become Newsweek's 'Most Responsible' company for the last two years. HP is recognized as one of the world's most sustainable companies thanks to a concerted effort to move to circular economy principles, transparency, and social and community commitment among other things.

For HP, this is a journey that will continue. New breakthroughs have already allowed the switch to carton-based ink cartridges, and produced large format printers that embrace circular economy principles through recycled and recyclable components.

These innovations are not the end but the beginning of a movement to improve the sustainable credentials of all AEC businesses by making working more sustainable.





- i. See www.hp.com/go/recycle
- ii. See www.hp.com/go/sustainableimpact
- iii. <https://www8.hp.com/h20195/v2/GetPDF.aspx/c05673165.pdf>
- iv. <https://press.hp.com/us/en/press-releases/2019/hp-pledges-to-making-every-page-printed-forest-positive.html>
- v. See <https://www8.hp.com/us/en/hp-information/sustainable-impact/planet.html>
- vi. Majority of OEM ink & laser printer supply recycling programs. Criteria: size, reach, recycled content use, upcycling & eco award/ranking. HP-commissioned Aug 2020 InfoTrends report. Market share: IDC Q2'20 Hardcopy Peripheral Tracker. Program availability varies. See hp.com/go/recycle & keypointintelligence.com/HPPlanetPartners
- vii. hp.com/sustainableimpact
- viii. See <https://www8.hp.com/us/en/hp-information/sustainable-impact/planet.html>
- ix. HP is reducing the carbon footprint of printing through carbon reduction initiatives such as energy efficiency, reduced packaging, and use of recycled plastics. The HP DesignJet Studio Printer is the first HP DesignJet where HP has offset the remaining carbon impact due to raw material extraction and processing, printer manufacturing and transportation, as well as electricity, paper, and cartridge use in accordance with The CarbonNeutral Protocol <https://www.carbonneutral.com/how/carbonneutral-protocol>
- x. <https://www.carbonneutral.com/how/carbonneutral-protocol>
- xi. More sustainable design compared to the previous printer models (HP DesignJet T100 Printer series) replaced with the HP DesignJet T200 Printer series. Based on calculations in accordance with ISO 14040/14044 Life Cycle Assessments using ReCiPe (H) v. 1.1 (2016) on GaBi 8.5 (2018) software and scaled to reflect expected yearly sales.
- xii. <https://hpeccarton.com/>
- xiii. CO2e reduction based on moving from plastic ink cartridge to cardboard HP Eco-Carton ink cartridge, with annual manufacturing savings of 36 tons and transport savings of 1 ton. Equivalent to 147,755 km (91,811 miles) driven by an average passenger vehicle or 4,718,692 smartphones charged.
- xiv. The ink cartridge HP Eco-Carton outer carton is 100% recyclable through local cardboard/paper programs. Inner materials including the ink bag are 55% recyclable and can be returned free of charge to the HP Planet Partners program for reprocessing of plastic parts. Zero landfill. For take-back of ink bag, visit <http://www.hp.com/recycle> to see how to participate.
- xv. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
- xvi. <https://h20195.www2.hp.com/v2/GetPDF.aspx/4AA7-7960ENE.pdf>
- xvii. <https://h20195.www2.hp.com/V2/GetPDF.aspx/c04777928.pdf>
- xviii. <https://www.epeat.net/about-epeat>
- xix. <https://www.epeat.net/product-details/5d5f5e366bd64c4e8283fac88e1beb93>
- xx. <https://www.epeat.net/product-details/d792589b6fa348789498ed1673a2f113>
- xxi. <https://www.epeat.net/imaging-equipment-search-result/page-1/size-25?countryId=112&manufacturerId=345&productName=Pagewide%20XL&productTypeId=185451>
- xxii. <https://www.ul.com/news/ul-2809-recycled-content-validation-earned-hp-designjet-t200t600-printer-series>
- xxiii. These inks meet with the chemical requirements described in Printing Companies, Printed matter, Envelopes and other Converted Paper Products version 5.15.
- xxiv. Majority of OEM ink & laser printer supply recycling programs. Criteria: size, reach, recycled content use, upcycling & eco award/ranking. HP-commissioned Aug 2020 InfoTrends report. Market share: IDC Q2'20 Hardcopy Peripheral Tracker. Program availability varies. See hp.com/go/recycle & keypointintelligence.com/HPPlanetPartners

