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Energy

Does Amazon use renewable energy?

Yes. Amazon was the leading corporate purchaser of renewable energy in the United States in 2016. We have a long-term goal to power our global infrastructure using 100% renewable energy. Our newest, largest wind farm – Amazon Wind Farm Texas – is up and running, adding more than 1,000,000 megawatt hours (MWh) of clean energy to the grid each year. As of May 2019, we've completed 57 wind and solar projects worldwide. Together, these projects will generate enough energy to power over 297,700 homes and will support hundreds of jobs, while providing tens of millions of dollars of investment in local communities.

Amazon has set a goal to host solar energy systems at 50 fulfillment network buildings by 2020. This goal includes a commitment to our associates – we expanded our Career Choice program (where Amazon pre-pays 95% of tuition and fees upfront for Amazon associates to get the skills and training they need for in-demand fields) to include funding for Amazon associates to earn the North American Board of Certified Energy Practitioners certification to become accredited photovoltaic installation professionals. This first deployment of rooftop solar systems is part of a long-term initiative that will start in North America and spread across the globe.

In addition, AWS has a long-term commitment to achieve 100% renewable energy usage for our global infrastructure. For more information, please visit AWS & Sustainability.

What is Amazon doing to reduce its carbon emissions and address the impacts on climate change from its business?

Amazon is committed to minimizing our carbon emissions by optimizing our transportation network, improving product packaging to drive efficiency in the distribution of products, implementing energy efficiency measures in our operations, and using renewable energy to run our business. We have also joined numerous industry partnerships to express support for action on climate change and to accelerate the transition to a low-carbon economy.

In 2019 we announced Shipment Zero, Amazon's vision to make all Amazon shipments net zero carbon, with 50% of all shipments net zero by 2030. To track our progress on this journey and as part of an overall commitment to sharing our sustainability goals, we plan to share Amazon's company-wide carbon footprint, along with related goals and programs, later this year.

As of May 2019, Amazon hosts solar energy systems on 47 fulfillment facility rooftops worldwide, with the capacity to generate over 85 megawatts (MW) of power. Amazon has set a goal to host solar energy systems at 50 fulfillment network buildings by 2020. In September 2016, Amazon announced Amazon Wind Farm Texas, a new 253-megawatt (MW) wind farm in Scurry County, Texas, that will generate 1,000,000 megawatt hours (MWh) of wind energy annually.

AWS focuses on energy efficiency & continuous innovation in our data centers, and we also have a long-term commitment to achieve 100% renewable energy usage for our global infrastructure. For more information, please visit AWS & Sustainability.

How does Amazon improve energy efficiency in its buildings?

Amazon designs and operates buildings that prioritize energy efficiency, low maintenance costs and modular design. Our new offices and fulfillment centers are equipped with energy efficient technologies such as LED lighting, advanced building management systems, motor variable frequency drives, high efficiency heating and cooling systems, and remote energy and power monitoring.

In addition to incorporating energy efficiency into new building design, we are retrofitting our existing buildings. For example, LEDs have helped reduce Amazon's energy consumption by more than 225,000 MWh per year as of June 2019. Our energy efficiency assessments and retro-commissioning studies have uncovered additional low/no-cost and capital energy savings opportunities that are being implemented across our fulfillment center network.

Amazon's newest buildings in the Denny Triangle area of Seattle are heated using an innovative approach to sustainability--recycling energy from a nearby data center. This "district energy" system works by capturing heat generated at a non-Amazon data center in the neighboring Westin Building and recycling that heat through underground water pipes instead of venting it into the atmosphere. This unique approach is nearly four times more efficient than traditional heating methods and will also enable the Westin Building data center to cut back on the energy it uses to cool its building.

The district energy system came about from a collaboration among Amazon, Clise Properties, McKinstry and the City of Seattle. Through it, Amazon is able to heat 3 million square feet of office space. This ability to recycle energy from a neighbor is another big benefit of having an urban campus in the heart of Seattle.

In addition, the green roofs on our Doppler building and adjacent Meeting Center reduce building heating and cooling loads, clean and reduce storm water runoff by at least 70%, moderate the urban heat island effect and improve local air quality.

We focus on sustainable design in our international locations, as well. For example, Amazon.de's corporate offices in Munich, Germany have been Gold-certified for environmental design by the German Sustainable Building Council, based on their energy-efficient interiors and use of sustainable building materials. Amazon's fulfillment center in Beijing, China maximizes the use of natural lighting, saving thousands of kilowatt-hours of power usage each month.

Does Amazon participate in industry collaborations to support the development of renewable energy?

Yes. Many of the cross-cutting sustainability issues that we prioritize at Amazon are enhanced by working with credible, knowledgeable and innovative industry partnerships as well as collaborative initiatives.

Examples of these activities and groups include:

Advanced Energy Buyers Group (AEBG)
In 2017, Amazon became a founding member the Advanced Energy Buyers Group (AEBG). The mission of the business-led AEBG is to engage on policies that make it possible for non-residential energy users to meet their own energy needs with advanced energy through simple, flexible, market-based solutions; and to support policies that facilitate the transition to an electricity system that is secure, clean, resilient, smart, and affordable.

American Council on Renewable Energy (ACORE)

To support our engagement on renewable energy, Amazon joined the American Council on Renewable Energy (ACORE), a nonprofit membership organization dedicated to building a secure and prosperous America with clean, renewable energy. ACORE convenes thought leadership forums and creates energy industry partnerships to communicate the economic, security and environmental benefits of renewable energy.

Center for Climate and Energy Solutions
Amazon joined the Business Environmental Leadership Council at the Center for Climate and Energy Solutions (C2ES) to work toward practical solutions to the world's climate and energy challenges. C2ES is an independent, nonpartisan, nonprofit organization working to forge practical solutions to climate change. Through strong policy and action to reduce greenhouse gas emissions, promote clean energy, and strengthen resilience to climate impacts, C2ES works with Fortune 500 companies to coordinate business action and business support for effective climate policy.

Corporate Renewable Energy Buyers' Principles
Amazon signed the Corporate Renewable Energy Buyers' Principles, which were developed by over fifty corporate signatories with the support of nonprofit partners World Wildlife Fund (WWF) and the World Resources Institute (WRI). The Buyers' Principles outline the key criteria that would significantly help companies meet their renewable energy purchasing goals. They were designed to frame the challenges and needs faced by large renewable energy buyers in order to spur progress on renewable energy.

U.S. Partnership for Renewable Energy Finance (PREF)
Amazon joined the U.S. Partnership for Renewable Energy Finance (US PREF), a program of ACORE, to support our work with state and federal policymakers and other stakeholders to enable more renewable energy opportunities for cloud providers. US PREF is an educational program that provides expert input on how the renewable energy finance market works.

For more information, please visit our External Engagement page.

What are some examples of AWS's sustainability initiatives?

AWS focuses on energy efficiency and continuous innovation in our data centers, and our scale allows us to achieve higher resource utilization and energy efficiency than the typical on-premises data center. In addition to the environmental benefits inherently associated with running applications in the cloud, AWS has a long-term commitment to achieve 100% renewable energy usage for our global infrastructure. AWS also focuses on reducing water usage in our data centers, and we evaluate climate patterns for each AWS Region to select the most energy and water efficient cooling method. We are also implementing on-site water treatment technologies that allow us to further reduce water consumption. To help conserve drinking water supplies, AWS utilizes non-potable, recycled water for cooling when possible.

For more information, please visit AWS & Sustainability.

What is AWS's policy on renewable energy?

AWS has a long-term commitment to achieve 100% renewable energy usage for our global infrastructure. We are active in the public policy space to promote laws and regulations that increase the availability of and access to renewables, particularly to provide certainty to businesses working in the renewable energy sector and to level the playing field with other sources of energy. We believe by putting in place thoughtful policy, businesses can accelerate and expand investments in new renewable projects, which will diversify the US electrical energy generation mix where they operate.

For more information, please visit AWS & Sustainability.
