Intel Sustainability: Micro-Turbine News Highlights

In May 2015, Intel began piloting one of the world's largest operating rooftop arrays of wind micro-turbines on the roof of its worldwide headquarters in Santa Clara, California – the latest milestone in Intel's longstanding commitment to innovation and environmental sustainability.

Micro-Turbine Pilot

Located on the roof of its worldwide headquarters in Santa Clara, California, Intel's micro-turbines are a proof-of-concept project, in which Intel hopes to collect data that will help the company better understand green power and identify ways to continue evolving its sustainability programs.

- Intel has installed 58 micro-turbines on the roof of its Santa Clara headquarters, each measuring between 6 and 7 feet tall and weighing approximately 30 lbs.
- Due to their small size, the micro-turbines are versatile in their potential uses and applications. They are a viable option not only for Intel, but for homeowners and small businesses.
- Based on the average local wind speed (about 8-9 mph), the micro-turbines should generate power about 65 percent of the time. Each micro-turbine is expected to produce approximately 65 kilowatt-hours (kWh) of electricity per year.
- The micro-turbines are placed on the edge of the roof to best capture the wind and optimize power generation. This placement leaves enough space for solar panels, which are installed on Intel's roof next to the micro-turbines.
- Intel plans to share the data collected from this pilot with local utilities, other companies, the wind power industry, NGOs and other parties with an interest in driving the adoption of various green power technologies.
- In addition to this project, Intel has:
    - Piloted wind micro-turbines and ground-source heat pumps at its site in Guadalajara, Mexico
    - Installed 2 megawatts of fuel cells at its sites in California
    - Supported installation of 21 solar electric facilities across 12 Intel campuses around the world
    - Deployed over 100 electric vehicle charge stations across Intel's U.S. and international sites

Additional Intel Sustainability Initiatives

The micro-turbine pilot is just the latest in Intel's diverse and longstanding environmental sustainability portfolio, which includes notable initiatives in areas such as supply chain responsibility, renewable energy purchasing, green building, energy conservation and product efficiency.

- **Green Power:** In early 2015, Intel was recognized for the seventh consecutive year as the largest voluntary purchaser of green power in the U.S., according to the U.S. Environmental Protection Agency's Green Power Partnership rankings. In 2014, Intel purchased enough renewable energy certificates to meet 100 percent of its U.S. electricity use for the year, amounting to approximately 3.1 billion kWh of green power.
- **Solar and Wind Installations:** As of April 2015, Intel has partnered with third parties to complete 21 solar electric installations on 12 Intel campuses – in Arizona, California, Colorado, New Mexico, Oregon, India, Israel and Vietnam – collectively generating more than 12 million

kWh per year of clean solar energy. Intel has installed solar hot water systems in India, Israel and Costa Rica. The India installation supplies nearly 100 percent of the hot water used at Intel's two largest campuses in that country, saving approximately 70,000 kWh annually. Intel has also piloted wind micro-turbines and ground-source heat pumps at its site in Guadalajara, Mexico.

- **LEED Certifications:** Intel has achieved Leadership in Energy and Environmental Design (LEED) certification for more than 40 new and existing buildings in nine countries, with a combined total of more than 12.5 million square feet of space. Intel's LEED certified buildings also include many of its existing manufacturing buildings, such as its first Platinum certified building, located in Israel. Since 2011, Intel's policy has been to design all new buildings to a minimum LEED Silver certification level, and in 2014, Intel revised its policy to design all new buildings to a minimum LEED Gold certification level.
- **Supply Chain:** In January 2014, Intel announced that it is now manufacturing and shipping the world's first commercially available 'conflict-free' microprocessors, the result of a five-year effort to validate the sources of specific metals (tin, tantalum, tungsten and gold) used in its microprocessor products. In May 2014, Intel submitted one of the only third-party audited conflict minerals filings in accordance with the Dodd-Frank Act, which requires publicly traded companies to report conflict minerals in their supply chain and investigate the source of the minerals. Intel is currently working toward its goal to make all of its products conflict-free by 2016.

To get the latest Intel sustainability news, visit www.intel.com/responsibility. More information on Intel's corporate responsibility programs can be found at the CSR@Intel blog and on Twitter.