

Michigan State University entered into a 25-year Power Purchase Agreement (PPA) to buy 15,000 megawatt-hours of electricity produced each year by the largest solar carport in the country, located on its East Lansing campus.

Renewable Energy Purchasing

Moving Toward 100% Clean, Renewable Energy on Campus

America's colleges and universities can purchase renewable power to transition to a future of 100 percent clean, renewable energy, as well as save money and hedge against volatile fossil fuel costs. Power purchase agreements (PPAs) and renewable energy credits (RECs) enable colleges to purchase clean energy and drive the deployment of new renewable energy installations without upfront costs.

Renewable Energy Purchases Accelerate the Transition to Clean Energy

While some campuses have ample opportunities to install solar and wind power on site, colleges with limited space or cash reserves can purchase renewable energy generated off-campus or help finance its production. Financing options like power purchase agreements (PPAs) avoid upfront costs, and provide incentives for developers to build additional renewable energy capacity. Renewable energy purchasing ensures that all schools can achieve ambitious clean energy goals.

Campuses Benefit from Renewable Energy Purchases

Colleges can purchase renewable electricity in different ways:

- **Power Purchase Agreements (PPAs):** Colleges can buy clean electricity directly from an electricity provider. These purchases can generate long-term cost savings, require no upfront capital or maintenance costs, and provide a fixed price over a long contract term (typically 20 years), offering protection from volatile energy prices.
- **Net Metering Credit Purchase Agreements (NMAs):** Some states allow NMAs, which allow a university to purchase net metering credits from a renewable energy producer. This helps offset some of the university's carbon emissions and helps finance renewable energy projects.

- **Renewable Energy Credits (RECs):** Colleges can purchase RECs to pay renewable electricity providers for the right to claim credit for renewable electricity generation towards their own clean energy goals. One REC represents one megawatt-hour of clean electricity. REC sales help developers to finance renewable energy projects.

As of January 2016, 61 universities had financed over 100 megawatts of solar energy capacity through PPAs. As of April 2016, 81 universities had contracts to purchase RECs.

Overcoming Challenges Associated with Renewable Energy Purchases

PPAs and NMAs are not available in all states. While REC purchases can be an effective way to spur clean energy development, their effectiveness depends on the strength of state renewable energy programs. Weak standards for RECs can result in a number of problems:

- **Double counting:** Improperly tracked RECs may be counted twice – once as a green energy purchase, and once by a utility to comply with a state's renewable energy standard.
- **Aging facilities:** Some RECs may be generated from pre-existing facilities, rather than being used to install new clean energy capacity.
- **Favorable economics:** RECs purchased from states where renewable energy development is driven primarily by favorable economics may not effectively encourage new development.

Higher education institutions can use careful screening or purchase high-quality RECs that have been vetted by trusted certification systems, such as Green-e, which verifies and certifies that RECs are not double counted and come from projects built within the last 15 years, among other criteria.

Georgetown purchases renewable energy certificates that exceed its electricity use to support clean electricity generation both on and off campus.

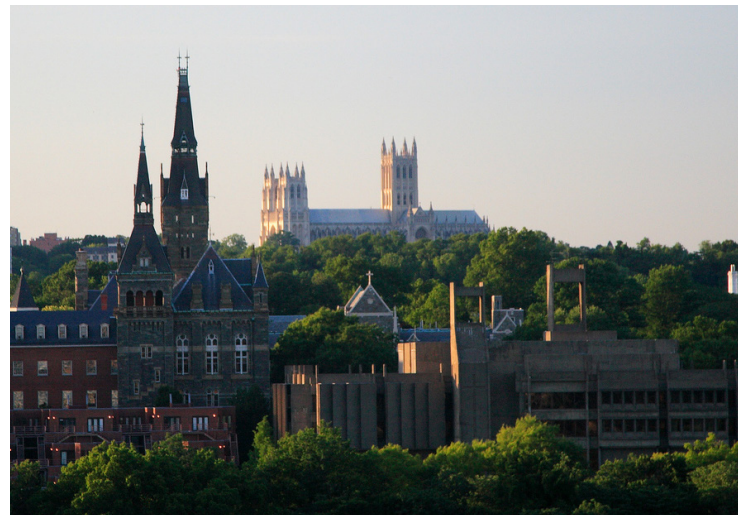
Georgetown Uses RECs and Efficiency to Exceed 100% Renewable Electricity

Georgetown University's historic campus in Washington, D.C., does not have the physical space or flexibility to deploy large-scale clean energy installations on site. Yet, by procuring off-campus renewable energy, installing renewable energy on rooftops, and working to aggressively reduce energy use on campus, Georgetown University has become one of the nation's top clean energy schools.

Georgetown bought RECs equivalent to 129 percent of its electricity use in the year ending in July 2016. By exceeding 100 percent renewable power, Georgetown supports clean electricity both on and off campus. To maximize the effectiveness of these RECs in driving renewable energy adoption, Georgetown purchases RECs that have been certified by Green-e.

Clean energy adoption at Georgetown goes beyond REC purchases, and includes improving building energy efficiency, engaging people to conserve energy, and even installing solar panels on the roof of six historic townhouses. In fiscal year 2014, Georgetown saved 500,000 kWh of energy, cutting carbon emissions by 3,400 metric tons of CO₂ – equivalent to taking more than 700 cars off the road.

Because of its clean energy efforts, the EPA recognized Georgetown as a Green Power Partner of the Year in 2013.



Boston University Commits to 100% Renewable Electricity through a PPA

At the end of 2017, Boston University (BU) adopted the BU Bold Climate Action Plan, which commits the university to purchase 100 percent of its electricity from renewable energy sources starting in 2020 and to be carbon neutral by 2040.

To achieve 100 percent renewable electricity, BU signed a PPA in 2018 to purchase wind power equivalent to its electricity usage for 15 years, starting in 2020. The university's Climate Action Plan set several criteria to maximize this PPA's impact. First, BU selected a project with the greatest emissions reductions – a wind farm in South Dakota, which will offset the use of dirty energy sources like coal-fired power plants. The university will also purchase RECs certified by Green-e, an independent verification and certification program, to ensure that the renewable energy it purchases is not being double-counted by other entities. Lastly, BU purchased energy from a project that would not have been built without the university's commitment – a concept called “additionality.”

*This factsheet is one of an 11-piece series.
For citations, and to read the other factsheets,
please visit
EnvironmentAmericaCenter.org/Campus101*



List of Resources

To get the most out of renewable energy purchasing:

- Consult the National Renewable Energy Laboratory's fact sheet for solar PPAs:
www.nrel.gov/docs/gen/fy16/65567.pdf
- Learn more about PPAs and NMAs for institutions:
www.mass.gov/eea/docs/eea/lbe/ppa-and-nma-guidance.pdf
- Signatories to the Carbon, Climate and Resilience Commitment have access to the primers, guides and market intelligence of the Rocky Mountain Institute's Business Renewable Center:
www.businessrenewables.org