

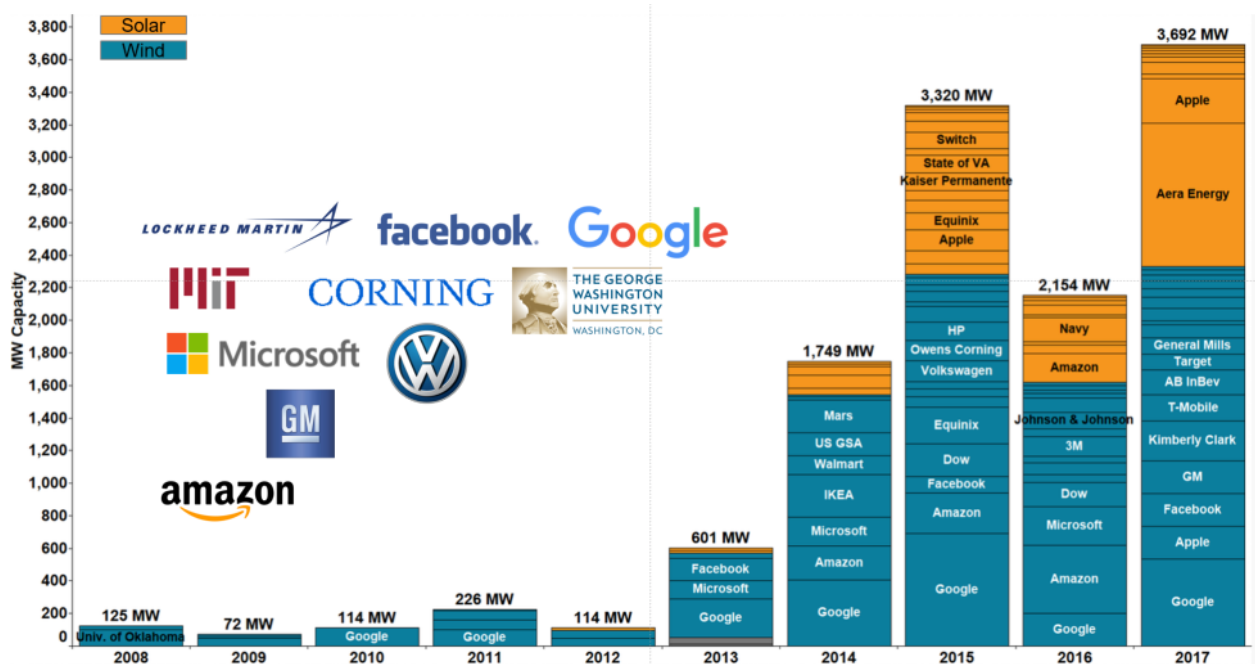
## Regional Uptake of Large-Scale Renewable Energy: Renewable Energy for the Power of 32

Renewable Energy for the Power of 32 (RE4P32) is a new initiative presented by [Sustainable Pittsburgh](#), [CEOs for Sustainability](#), and the [Power of 32](#) in collaboration with the City of Pittsburgh and Sierra Club Pennsylvania Chapter. RE4P32’s mission is to promote a more balanced, resilient, and clean energy system in the Greater Pittsburgh region through the deployment of high-impact large-scale renewable energy (LSRE), blending individual procurements and aggregation of commitment among multiple leading businesses and institutions. Sustainable Pittsburgh selected CustomerFirst Renewables, a leading independent renewable energy advisory firm, to partner with in this initiative.

### RE4P32’s goals include:

- Catalyze the development of new, cost-competitive, low-carbon LSRE resources including wind, solar, low-impact hydroelectricity, bio-mass, and bio-fuels
- Leverage local resources, manufacturers, and suppliers to create jobs and innovation opportunities in the region
- Optimize economic, environmental, and social benefits, and build on the region’s strong sense of community and historic leadership in energy innovation
- Provide local businesses a singular opportunity to lead in the region’s energy future, while enjoying the benefits of low-cost renewable energy procurement

LSRE Project Installations Brought About by End-Users



The end-user procured LSRE market has grown 64% per year since 2008, from 125 MW total to almost 4,000 MW contracted in 2017 alone. In fact, the development of renewable energy generation capacity has outpaced construction of conventional (fossil fuel) generation assets over the past few years, with end-user procured LSRE outpacing utility purchases of the same in this timeframe.

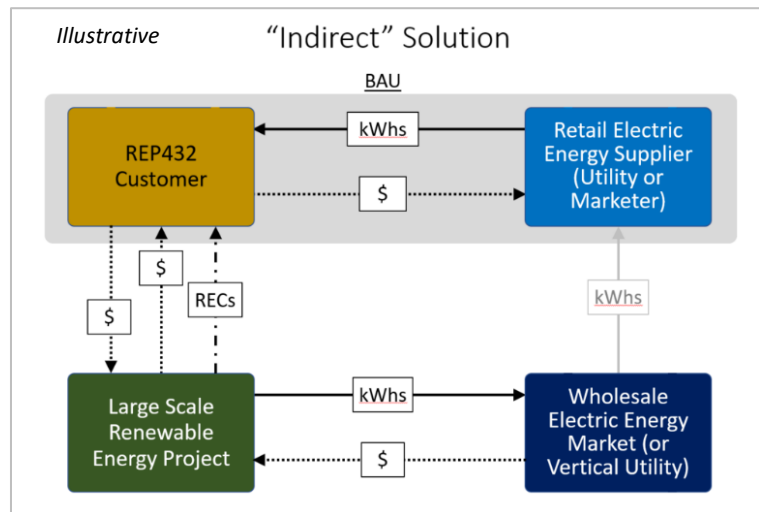
In addition to rapid technology cost declines, organizational commitments to initiatives such as the RE100 (100% renewable goal; Wells Fargo, Google, Nike), powerful movements such as ‘We Are Still In’ (2,500 institutions and 130 million Americans) and the Global Covenant of Mayors for Climate & Energy have been key catalysts in driving this market growth. The following list is a small sampling of notable LSRE procurements, including two Pennsylvania-based initiatives. Such leaders are reaching for new renewables (going beyond Renewable Energy Certificates, or “RECs”) for the benefits of cost savings, cost-effective GHG and risk reduction, and greater social leadership tied to sustainability/CSR reporting.

Company	Project Size (cumulative MWs)	Location	Technology
Google	1,860 MW	Multiple locations globally	Solar & Wind
Amazon	1,220 MW	Multiple locations globally	Solar & Wind
Partner’s Healthcare	28.8 MW	New Hampshire	Wind
MIT/BMC/POSG	60 MW	North Carolina	Solar
Goldman Sachs	68 MW	Pennsylvania	Wind
Iron Mountain	>30 MW	Pennsylvania	Wind

**Inspiration from Boston’s A Better City:** In September 2016, the Massachusetts Institute of Technology (MIT), the Boston Medical Center (BMC), and the Post Office Square Redevelopment Corporation (POSG) completed the largest joint procurement of LSRE to date in America. Convened by Boston-based nonprofit A Better City, the 60 MW procurement resulted in development of the largest operational solar array on the East Coast, while setting a strong precedent for the aggregation model to yield impactful results. Inspired by the initiative and A Better City’s role, Sustainable Pittsburgh seeks to promote a similar effort to benefit the greater Power of 32 region around Pittsburgh.

**The Power Purchase Agreement:** The most common contracting mechanism for organizations purchasing LSRE is called a power purchase agreement (PPA). There are many nuanced variations to the PPA structure, but the most common structure is referred to as an ‘Indirect’ solution. This means the PPA has no direct impact on the customer’s current electricity procurement process; they continue purchasing electricity the same way regardless of the PPA (although perhaps with less need to purchase commodity price hedges). A description of the structure is summarized below:

- 1) Customer pays developer **fixed price** for title to RE power and RECs over **10- to 25-year term**,
- 2) Power is delivered to the grid at the project location,
- 3) Power is sold into the wholesale market at the local wholesale price; customer receives revenue from the sale of this power,
- 4) Revenue is then used to reduce the annual expense of the customer's existing energy acquisition.



This structure represents a meaningful way to capture the value of LSRE for organizations, with ‘value’ typically defined in four parts:

- 1) **Cost savings:** Contract for renewable energy at levels below today’s market price for new and additive ‘green energy’ (i.e., power from the grid plus separate REC purchases),
- 2) **Risk reduction:** Lock in a long-term hedge against market price increases,
- 3) **GHG reduction:** Address largest contributor of Scope 2 GHG emissions and reduce carbon price risk by retaining RECs over life of project,
- 4) **Social leadership benefits:** Improved environmental, social and governance performance, positive PR, community leadership, and job creation, among others.

**Path Forward:** Participation in RE4P32 involves six primary components: Building Interest; Strategy Development; Procurement Plan (including the development of competitive RFP process) Contracting; Pre-COD; and Ongoing Operations.

Each client can opt-in or opt-out of the ongoing operations component, and the process can be modified if an aggregation initiative (i.e., multiple customers leveraging their combined purchasing power) is identified as the optimal path forward.

Whether individual or aggregated procurement, the solicitation is highly tailored to meet the objectives of the customer(s) while allowing for flexibility in contracting. This process acknowledges that in an inefficient and opaque LSRE market, a one-size-fits-all approach is insufficient.

**To learn more,** contact Bob Mango, CustomerFirst Renewables: [bmango@customerfirstrenewables.com](mailto:bmango@customerfirstrenewables.com), 704.650.7178.

***Sustainable Pittsburgh**, a 501(c)(3) corporation, affects decision-making in the Pittsburgh region to integrate economic prosperity, social equity, and environmental quality as the enduring accountability, bringing sustainable solutions for communities and businesses. More information at [sustainablepittsburgh.org](http://sustainablepittsburgh.org)*

***CEOs for Sustainability** is an executive council that is part of Sustainable Pittsburgh's Champions for Sustainability business network.*

***The Power of 32** is a regional collaborative encompassing at least 32 counties across four states surrounding Pittsburgh.*

***CustomerFirst Renewables (CFR)** is a Washington, DC based, independent advisory firm helping businesses and institutions plan and execute strategy to source large scale renewable energy.*

