

- Adobe
- AMD
- Apple
- AT&T
- Autodesk
- BD
- Biogen
- Cisco
- EMC
- Equinix
- Facebook
- FedEx
- General Motors
- Goldman Sachs
- Google
- Herman Miller
- HP
- Intel
- Interface
- Johnson & Johnson
- Kohl's
- Microsoft
- Nike
- Procter & Gamble
- Rackspace
- Salesforce
- Staples
- Starbucks
- Steelcase
- Target
- Verizon
- VF Corporation
- Voya Financial
- Walmart
- Wells Fargo
- Whole Foods
- Workday

# Clean Energy Procurement

U.S. Corporate Leaders, Trends, and Resources

## What Is the Corporate Clean Energy Leaders Universe?

The Corporate Clean Energy Leaders (CCEL) Universe was created by Clean Edge in early 2016 to recognize corporations that are leading the way in establishing renewable electricity and low-carbon commitments, deploying renewable energy, and investing in clean-tech deployment. As more companies transition from fossil fuels to clean energy, the Corporate Clean Energy Leaders Universe provides a key barometer of innovation, best practices, and leadership. The inaugural universe, released in January 2016, included 34 companies. This latest edition includes 37 U.S.-listed corporations.

While many organizations apply negative screens to track corporate sustainability, fossil-free, and ESG (environmental, social, and corporate governance) activities, Clean Edge applies a methodology focused on actions and commitments, applying mainly positive screens. Companies must meet at least two of the tracked criteria, and meet minimum score thresholds, to be eligible for inclusion in the rankings.

## SELECT COMPANIES SEEKING 100% RENEWABLE ELECTRICITY

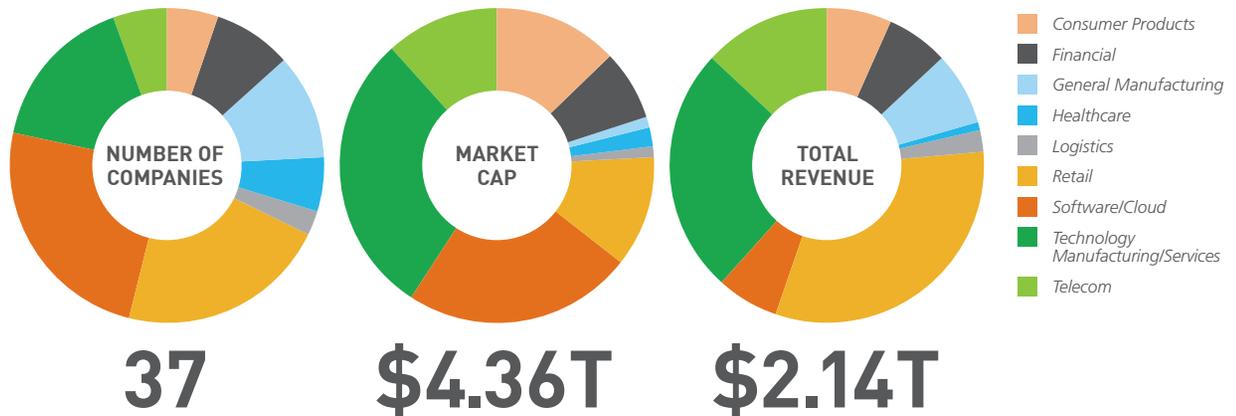
COMPANY	RENEWABLE PERCENTAGE*	RESOURCES USED
	93%	On-site solar & micro-hydro, purchased wind & RECs
<b>facebook.</b>	35%	Wind, hydro, some on-site solar, RECs
	38%	RECs
	35%	16 PPAs: 2 GW, mostly wind
<b>KOHL'S</b>	100%	Rooftop solar, RECs
	100%	Wind PPAs & RECs, has an internal carbon price
	43%	RECs, moving to PPAs
<b>Walmart</b> 	25%	On-site solar, off-site wind

\*Most recently reported  
Source: Clean Edge research. Note: Clean Edge makes no claim to the logos in the above table. All trademarks are the property of the respective companies.

### CCEL HIGHLIGHTS

- 25** Currently get 25% or more of their electricity from renewable sources
- 25** Have a stated goal of getting 100% of their electricity from renewable sources
- 12** Are in the top 25 in solar capacity and/or number of installations
- 2** Have mobilized at least \$25B in clean energy/clean tech deployment
- 25** Participate in one or both of the Business Renewables Center and the Corporate Renewable Energy Buyers' Principles
- 4** Have a Chief Sustainability Officer

### CCEL SECTORS



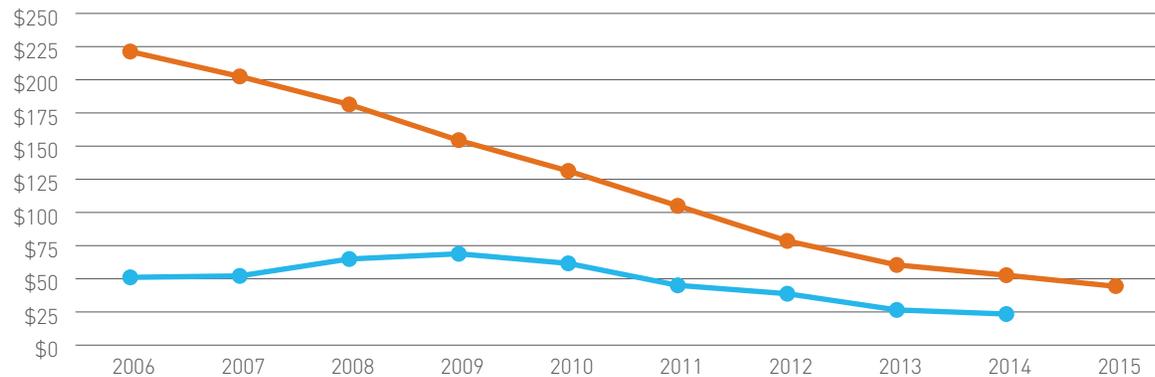
Sources include: EPA Green Power Program, RE100, SEIA "Solar Means Business 2015", RMI, WRI, Weinreb Group "CSO Back Story II", company reporting, and Clean Edge research. NOTE: Data was collected and is accurate as of our July 2016 re-evaluation.

Source: Google Finance and Yahoo Finance. NOTE: Market cap data is updated as of July 1, 2016, while revenue data is current as of the end of the most recently reported fiscal year.

# Costs of Wind and Solar Continue to Decline

Average levelized costs for solar PPAs have gone from 22¢/kWh in 2006 to less than 5¢/kWh in 2015, which has made them significantly more cost competitive with fossil fuels. Wind power, meanwhile, has seen its costs cut in half, from 5¢/kWh in 2006 to 2.3¢/kWh in 2014. And further declines have been reported so far in 2016. This significant reduction in costs has made PPAs, green tariffs, direct ownership, and other procurement methods increasingly popular among corporates looking to meet environmental goals and lock in energy costs. Google, Amazon, Procter & Gamble, Apple, and Equinix are just some of the companies leading the charge.

## WIND & SOLAR LEVELIZED PPA PRICES BY CONTRACT YEAR (2014 \$/MWH)



Source: Lawrence Berkeley National Lab, "Utility Scale Solar 2014" and "2014 Wind Technologies Market Report"

ADDITIONAL RESOURCES FOR COMPANIES INTERESTED IN INCREASING RENEWABLE ENERGY USAGE	
<b>RE100</b>	RE100 is a global initiative of influential businesses committing to 100% renewable electricity.
<b>Renewable Energy Buyers Alliance</b>	REBA works with a range of stakeholders to identify both barriers and solutions to buying renewable energy.
<b>Corporate Renewable Energy Buyers' Principles</b>	A group of large energy buyers, spearheaded by nonprofits WRI and WWF, developed the Buyers' Principles to spur progress on renewable energy.
<b>Business Renewables Center</b>	The Business Renewables Center (BRC), an RMI initiative, works to streamline and accelerate corporate purchasing of off-site, large-scale wind and solar energy.
<b>We Mean Business</b>	A coalition of organizations, formed by Ceres, BSR, CDP, and others, works with thousands of the world's most influential businesses and investors to enable the transition to a low-carbon economy.
<b>Future of Internet Power initiative</b>	The Future of Internet Power initiative, headed by BSR, brings together technology companies to enable data centers to utilize more renewable energy.

## AVENUES TO 100% CORPORATE RENEWABLE ELECTRICITY

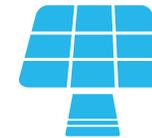
Here are some of the leading ways that companies are moving towards 100% renewables:



**RENEWABLE ENERGY CERTIFICATES (RECs)** have been a popular option for years, due to their low cost and ease to procure. However, they do not necessarily guarantee "additionality," come at an added expense, and have no opportunity for additional savings. Many companies are pursuing other options.



**ONSITE RENEWABLES** (particularly solar) have fallen precipitously in price over the last several years and are becoming a popular option, especially for retailers.



**COMMUNITY SOLAR** — which allows a customer to purchase a portion of the output of an offsite solar facility — has primarily been aimed at residential and small business customers but could be harnessed by large corporate users.



**POWER PURCHASE AGREEMENTS (PPAs)** are long-term agreements for companies to purchase the output of large wind, solar, or other clean energy installations. Virtual PPAs, a common variation of this type of model, have become increasingly popular among corporations in recent years.



**GREEN ENERGY TARIFFS** are special rates offered by a few utilities in regulated markets that allow companies with high demand to directly purchase renewable energy. The number of programs is small but growing.

This briefing is brought to you by Clean Edge in collaboration with SolarCity

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