

Policy Enabling Environment for Corporate Renewable Energy Sourcing

Interest in renewable energy (RE) procurement in new markets is on the rise. Corporations are increasing their commitments to procuring RE, motivated by an interest in using clean energy sources and reducing their energy expenses. Many large companies have facilities and supply chains in multiple countries, and are interested in procuring renewable energy in the grids where they use energy. The policy environment around the world plays a key role in shaping where and how corporations will invest in renewables.*

Many countries have the opportunity to develop robust markets for corporate renewable energy sourcing (Figure 1 shows off-site RE procurement), particularly in jurisdictions undergoing power sector regulatory reform. Purchasing renewable energy means differentiating electricity based on the attributes of the generation and allocating the renewable attributes to specific customers, which is done through contracts. The contractual mechanisms for procuring renewable energy can be complex, particularly for purchases from off-site renewable projects. Despite these challenges, a variety of procurement mechanisms exist (Table 1 and Figure 2 show common procurement methods and Figure 3 shows use of power purchase agreements [PPAs]). Corporate sourcing of renewables can be an effective mechanism for realizing government objectives:

- In jurisdictions that have established renewable energy goals, corporate renewables procurement can leverage private sector capital to develop RE markets.
- Sourcing from renewables can help address rapid electricity demand growth because renewables can often be

Table 1. Summary of Corporate Renewable Energy Procurement Mechanisms

	Capital and Operating Expenditures	Project Size	Contract Length	Level of Risk for Corporation
Corporate Ownership	Yes	Scalable; site limits on-site size	No contract	Production risk
PPAs	No, but significant financial commitment	Scalable; site limits on-site size	Long-term contract	Basis risk if the project is located in a different region
Utility Green Tariff	No	Typically large	Long-term contract	Low to medium risk, little control
Direct Access	No	Scalable, often larger deals	Contract duration varies	Low to medium risk
Community Renewables	Up-front capital required under some programs	Small to medium	Contract duration varies	Low to medium risk
Unbundled Certificates	No	Scalable	Typically 1-3 year terms or longer	No project level risk, but contract duration risk



Figure 1. Location of off-site RE projects purchased by companies reporting to the Carbon Disclosure Project (CDP). Green >50, yellow = 20-50, orange = 5-20, red = 1-5 projects. Data source: CDP; Map source: Espatial

- developed more quickly than conventional generation sources, and have economic development benefits.
- Allowing corporations to purchase renewables directly can help establish renewable energy markets, lower procurement costs, and drive wide-scale adoption.

* For further information on corporate sourcing of renewable energy, see Bird, L., et al. 2017. *Policies to Enable Corporate Renewable Energy Sourcing Internationally*. TP-6A50-68149. Golden, CO: 21st Century Power Partnership. <http://www.nrel.gov/docs/fy17osti/68149.pdf>.

The policy enabling environment for corporate procurement will factor into how and where corporations procure renewables. Policymakers can facilitate corporate renewables sourcing, whether in traditionally regulated energy markets, liberalized markets, or in areas where the power sector is undergoing transformation. The following policies and market characteristics can facilitate corporate renewable energy procurement.

- Adequate verification and tracking systems for RE purchases can help corporations be more confident in their procurement and can enter into strong contractual arrangements.
- Clear and stable compensation mechanisms for generation from on-site renewable energy systems exported to the grid that enable off-takers to accurately evaluate project economics over the project lifetime.
- Interconnection procedures that are transparent, expedient, and equitable to the utility and project owner.
- Streamlined and coordinated permitting processes that simplify the process for end-users, reduce unnecessary delays, and increase the viability of on-site projects.
- Clarity regarding ownership of RE attributes associated with renewable generation under incentive policy programs (e.g., feed-in tariffs) to enable corporations to make clear claims about their use of renewable energy.

Mechanisms Used to Procure Renewable Energy
 (% of Total MWh Reported)

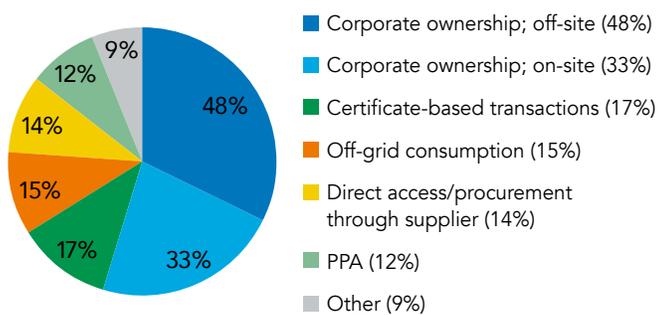


Figure 2. Corporate approaches to renewable energy procurement in 2016. Data source: CDP 2017

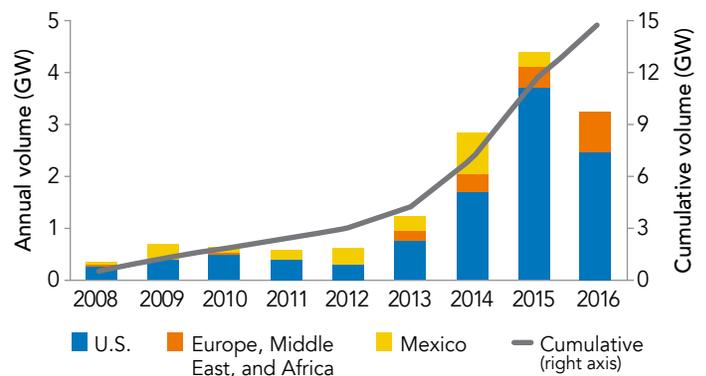


Figure 3. Global Corporate PPAs by region and year, 2008–2016 (GW). Data source: Bloomberg New Energy Finance. Note: No data available for Asia or for Mexico in 2016.

- Tariffs for large electricity users that price electricity on wholesale market rates and reflect actual costs of production.
- Liquid wholesale markets that have price transparency can enable corporations to evaluate the economics of PPA and other wholesale transactions.
- Larger, more integrated grids (within or across countries), which can increase supply of RE that corporations could source from, enable more procurement options, potentially lower the cost RE procurement, and enable sourcing of RE locally.
- Open access transmission policies and ability to “wheel” power by paying a fee. Opening access to transmission lines to all generators (renewable and not) can allow RE deployment in areas with higher quality renewable resources.

Policy certainty is essential to creating vibrant markets that allow governments to benefit from corporate sourcing of renewables. While policymakers may need to adjust policy mechanisms over time as markets go through different stages of maturity, they can also consider the economic decisions that end-users make in evaluating projects and the implications of policy shifts on market uptake. Policymakers can use these tools to enable corporate renewables sourcing to benefit their jurisdiction, its citizens, and its economy.