

Contents

1. INTRODUCTION1
2. OVERVIEW OF 2014
TRENDS2
3. BNEF 'TAKE' ON KEY
OPEN RFPs5
4. NEXT STEPS6

Trends for North American clean energy RFPs in 2014

In 2014, utilities and other offtakers in North America issued 52 requests for proposals (RFPs) for clean energy. Trends in these RFPs can serve as a leading indicator for the industry. We look at the mix of these RFPs by sector, geography, and company.

- The analysis in this report is based on our North American Clean Energy RFP database (available to clients of Bloomberg New Energy Finance's Insight services).
- There were 52 RFPs for clean energy in North America issued in 2014, totalling 3.3GW (to the extent the RFPs were for capacity or storage, and disclosed the amount being sought).
- *By sector:* Solar RFPs dominated the market, both in capacity (1.8GW) and quantity (27 RFPs). There was also a significant amount of interest (at least 12 RFPs) in energy smart technologies, particularly energy storage. Most storage RFPs are looking for a relatively small amount of capacity, evidence that these may be initial experimental forays into a rapidly changing sector.
- *By geography:* The West was the biggest region for RFPs, with 1.0GW being requested. The Southeast was the second-largest region in terms of capacity requested, almost all of it solar. The absence of RFPs in the PJM region is striking, potentially owing to state mandates for renewable energy already having been largely met.
- *By company:* Alliant made the biggest splash with a single RFP. Collectively, the US Armed Forces issued seven RFPs.
- We also look at three RFPs that are currently 'open' and accepting proposals (renewables in Ontario, storage in California, solar in Texas) and provide a brief analysis on these.

1. INTRODUCTION

The North American Clean Energy RFP database, produced and maintained by Bloomberg New Energy Finance, captures and monitors relevant requests for proposal (RFPs) and requests for information (RFI). The database includes RFPs / RFIs for (i) utility-scale renewable energy projects, (ii) advanced energy storage projects, (iii) digital energy projects, (iv) transactions for renewable energy credits (RECs, SRECs), and (v) RFPs from state-funded 'green banks' to support clean energy investments. Within a set of criteria defined by Bloomberg New Energy Finance, the database aims to be comprehensive – though undoubtedly there are RFPs that are small or are only privately circulated which we fail to capture.

In this brief report, we take stock of the RFPs¹ that came out in 2014. We look at trends in terms of the types of clean energy projects being sought, in terms of the geographies in which they are needed, and in terms of the organisations that are making these requests. The trends in RFP issuance are worth following as they could serve as a leading indicator for the growth of each of the sectors, and for the strategic direction of utilities and other organisations.

In a final section, we also consider three RFPs that are currently 'open' (ie, accepting submissions) and provide our 'first take' on what it might take to succeed in each case.

¹ From here on out, we refer to both RFPs and RFIs as simply 'RFPs.'

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2. OVERVIEW OF 2014 TRENDS

This section analyses the trends of RFPs in 2014. First, a brief explanation of the definitions used in the charts:

Table 1: Definitions of terms used in RFP analyses in this report

	Definition	Examples
EST	RFPs looking for ‘energy smart technologies’, a term used by Bloomberg New Energy Finance to include advanced energy storage, digital energy, energy efficiency, and electrified transport. In the case of the RFP database, this almost always refers to energy storage.	<ul style="list-style-type: none"> • Alberta Innovates – Energy and Environment Solutions (Canada) seeking next-generation renewable energy storage technologies • Connecticut Department of Energy and Environmental Protection seeking microgrid project
Renewables	RFPs looking for renewable electricity (or RECs), including solar, wind, bioenergy, geothermal, hydro. We use this term when the RFP is seeking any or various types of renewable energy, with the exception of RFPs seeking only solar.	<ul style="list-style-type: none"> • Hydro-Quebec seeking 450MW of wind • LIPA (NY) seeking 280MW of renewable energy projects
Solar	RFPs looking for solar power (or SRECs) only.	<ul style="list-style-type: none"> • Windham Solid Waste Management District (VT) seeking 5MW solar project • FirstEnergy seeking 48,500MWh of SRECs
Diverse	RFPs looking for any or various types of clean energy, including EST and/or renewables (the RFPs in this category can also be seeking non-clean energy, such as fossil fuel-fired power, but we only capture RFPs that specifically mention clean energy as at least one of the options).	<ul style="list-style-type: none"> • NY Green Bank seeking renewable energy and energy efficiency investment opportunities • SDG&E seeking 500-800MW of locally-sourced power (including 200MW from “preferred sources” which include energy efficiency, demand response, renewables, etc.

Source: Bloomberg New Energy Finance

Figure 1 shows RFP issuance in 2014, broken down by sector, and measured in terms of capacity and quantity. (We only capture the capacity if the RFP discloses the total amount to be procured.)

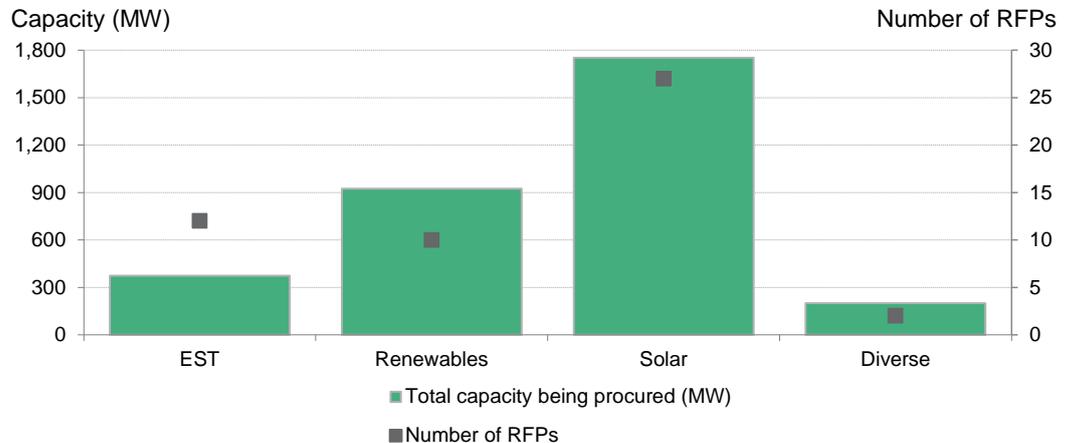
In 2014, a total of 52 clean energy RFPs were issued in North America. To the extent the RFPs were looking for capacity or storage, and the RFPs disclosed the amount to be procured, the total capacity requested in those RFPs was 3.3GW.

Solar was the most sought-after sector in terms of both capacity (1.8GW) and quantity (27 RFPs issued). The total capacity for EST, which corresponds to RFPs seeking energy storage, was lower than for renewables and solar-only. But the quantity of RFPs looking for EST was telling: there were at least 12 RFPs looking strictly for EST (mostly storage), and in addition, both of the RFPs marked as ‘Diverse’ explicitly mentioned interest in energy storage. There is clearly significant interest on the part of utilities in these technologies.

The relationship between the two metrics – capacity and number of projects – points to the amount of capacity requested per RFP (to a limited extent, though, since some RFPs do not disclose total amount to be procured). Generally speaking, the RFPs looking for ‘Renewables’ and ‘Diverse’ tend to have a sizable amount of procurement in sight, whereas most of the EST-related RFPs have a smaller appetite, evidence that these may be initial experimental forays into a rapidly changing sector.

For example, San Diego Gas & Electric issued an RFP seeking 200MW of ‘preferred sources’ (energy efficiency, demand response, renewables, combined heat and power, and distributed generation), of which at least 25MW must be energy storage. (This was part of a larger RFP looking for 800MW, but we only count the 200MW portion in our clean energy tally.)

Figure 1: Total capacity sought and number of RFPs issued by sector in 2014



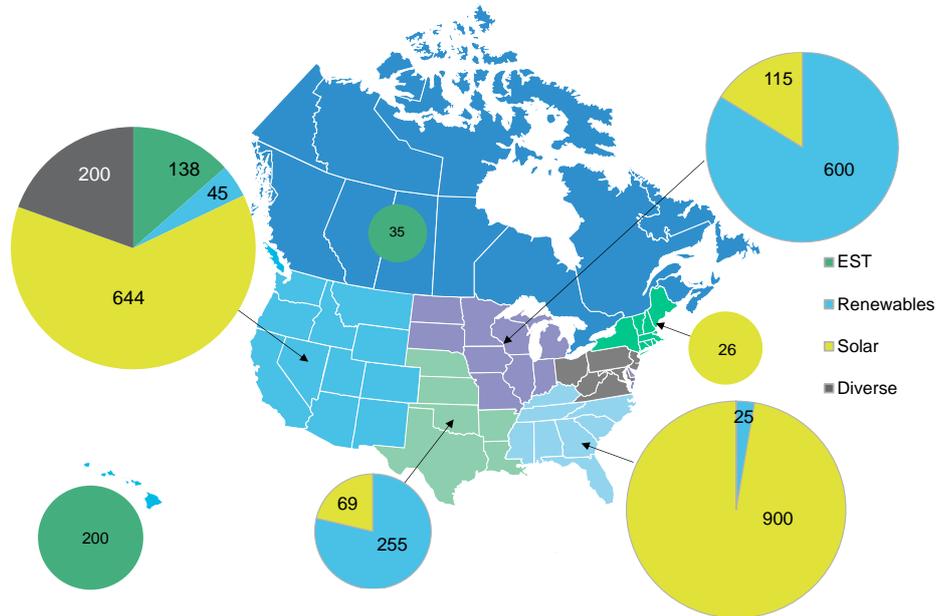
Source: Bloomberg New Energy Finance, companies issuing RFPs. Notes: See above in this report for definitions of the sectors. The capacity is only captured if an RFP discloses the total capacity sought; many RFPs leave this open-ended, meaning that the RFP is captured under 'number of projects' tally, but its capacity is not captured.

In Figure 2, the 2014 RFPs are broken down by region.

- The West had the most capacity sought at 1.0GW. Of the 18 RFPs coming out of this region, seven were issued by the three big investor-owned utilities in California. Utilities in Nevada, New Mexico and Arizona were also hungry, particularly for solar.
- The Southeast was the second-largest region in terms of capacity requested, almost all of it solar. The largest procurement efforts came from the two biggest utilities in the region: Southern Company (via its subsidiary, Georgia Power) and Duke. The US Army and a South Carolina utility also issued requests for solar in the region.
- Hawaii's 200MW RFP for grid-tied energy storage is an indication of the importance of this technology in the state. Hawaii has a smaller electricity grid than other regions; storage facilitates integration of renewable energy resources and helps avert potential grid issues that can occur on islands.
- The absence of RFPs in the PJM region is striking. While the region has been among the leaders in renewable energy build over the last several years, this activity has been driven largely by state mandates, most of which have been met and surpassed. We could see an uptick in RFP activity in this region in the coming years: PJM overall will need significantly more wind to meet a rapidly rising RPS later in the decade, and utilities and regulators in the region will probably want to test energy storage applications.²

² Indeed, they already have. For example, in October 2014, the New Jersey Board of Public Utilities posted an RFP seeking proposals for energy storage systems. This is not captured in Figure 2, as the RFP did not have a specific capacity target.

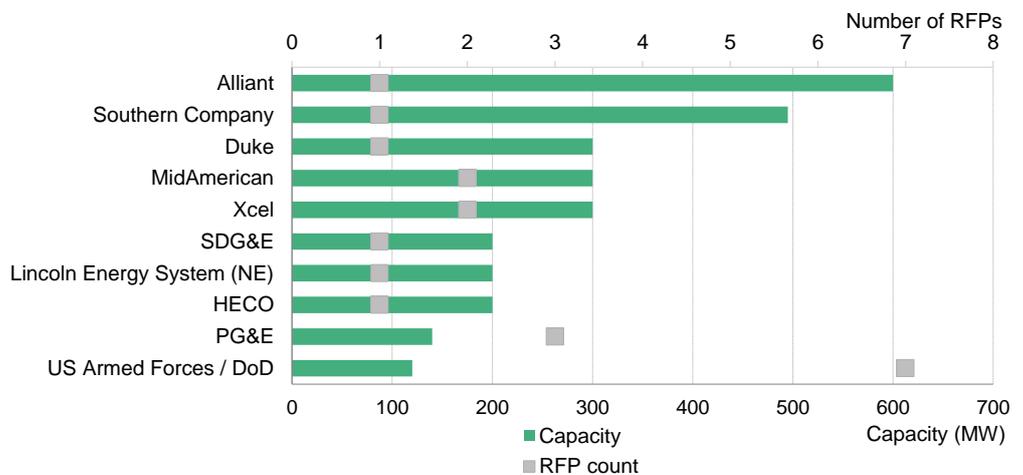
Figure 2: Total capacity sought (MW) by sector and by geography for RFPs issued in 2014



Source: Bloomberg New Energy Finance, companies issuing RFPs. Notes: Numbers show capacity sought by sector. Colouring in the pie charts corresponds to the legend. Colouring in the map has no significance and is only shown to distinguish one region from another. Size of pie charts are not to scale.

Lastly, RFPs issued by 'parent company' is shown in Figure 3. The largest RFP came from the offices of Alliant Energy, which is looking for up to 600MW of wind projects in Wisconsin. The various branches of the military and the Department of Defense are grouped under 'US Armed Forces / DoD'; together, these entities issued seven RFPs in 2014. The US Armed Forces' involvement in RFPs is part of a substantial commitment to purchase 1GW power from renewable energy sources by 2025, so we expect continued activity in the coming years.

Figure 3: Leading issuers (grouped by parent company) of RFPs in 2014, ranked by total capacity sought



Source: Bloomberg New Energy Finance, companies issuing RFPs. Notes: Companies are grouped by their parent company. HECO is Hawaiian Electric; this analysis does not yet account for its acquisition by NextEra. DoD is the Department of Defense.

Note that RFPs seeking larger capacity are more likely to contract multiple parties, so these could result in multiple winning proposals.

3. BNEF 'TAKE' ON KEY OPEN RFPs

In this section of the report, we look at three key RFPs whose status is still open: the RFPs have been issued, and the submission deadlines are upcoming. We briefly explain what the RFP is seeking and then provide our Bloomberg New Energy Finance (BNEF) 'first take' – ie, a compact assessment, provided by one of our expert analysts, speculating what it might take to be a successful project. *These 'first takes' are based purely on our analysis of the market; we have no inside knowledge about what the issuer is specifically seeking.*

Renewables in Ontario

- **Issuer and RFP:** Ontario Power Authority (see link [here](#))
- **Submission deadline:** 1 September 2015 (recently delayed)
- **What is being sought:** 565MW of renewable energy
- **BNEF 'first take':**

Strong competition for the wind sites in this Ontario RFP is likely to push proposed prices well below the CAD 115/MWh maximum. The list of participants qualified to bid is impressive; collectively, the 22 qualified participants have at least 800MW of development capacity, vying for the mere 300MW of wind capacity up for grabs. (The remaining 265MW are for solar, waterpower, and bioenergy.)

The Ontario Power Authority wants serious bids from serious developers: bids for projects above 20MW can only be placed by developers that have previously been involved in the construction of a project costing at least CAD 200m. As it stands, the 22 qualified bidders have an impressive resume, with a combined installed wind capacity of over 3,000MW in the Province alone.

Ontario Power Authority will also be placing emphasis on community engagement, so qualified bidders are likely to very busy working with local municipalities and First Nations to complete Support Resolutions. Under Ontario's FIT programme, qualifying projects faced significant permitting setbacks from municipal by-laws. Some projects may run into the same challenges under the current RFP. However, successful wind projects will be granted a relatively long lead time – four years – to attain commercial operation from the date of signing RFP contracts.

Storage in California

- **Issuer and RFP:** Southern California Edison (SCE) (see link [here](#))
- **Submission deadline:** 1 April 2015 (Notice of Intent due on 2 February 2015)
- **What is being sought:** 16.3MW of energy storage
- **BNEF 'first take':**

This Request for Offers (RFO) is separate from the 261MW of storage capacity already awarded by SCE as part of a larger procurement effort in November 2014. This new RFO, with bids due 1 April 2015, is focused on procuring storage capacity explicitly for the utility's transmission and distribution system under California's energy storage mandate. Specifically, the request is looking for in-front-of-the-meter storage projects of at least 1MW with four hours of capacity. (In contrast, the previous, larger effort aimed to meet local capacity requirements by procuring both generation and demand-side resources totalling over 2.2GW of capacity, primarily in response to the closure of the San Onofre Nuclear Generating Station.)

Under this RFO, SCE is soliciting offers under one of two basic structures. The first allows the storage vendor to provide Resource Adequacy (RA) to SCE while maintaining partial control over the system to benefit from any capacity, ancillary service or other revenue streams ('RA Only Option'). The second structure allows the storage vendor to provide all system benefits and revenues to SCE ('Energy Storage Option'). We expect to see a variety of electrochemical storage vendors target this RFO, including those with lithium ion batteries and molten salt batteries, which tend to have four-plus hours of capacity. Thermal storage, such as that provided by Ice Energy and CALMAC, is generally unable to interconnect in-front-of-the-meter and will therefore be ineligible.

Solar in Texas

- **Issuer and RFP:** US Army Defense Logistics Agency – Energy (see link [here](#))
- **Submission deadline:** 31 March 2015
- **What is being sought:** 40MW of renewable energy generation
- **BNEF 'first take':**

The vast potential for solar projects in Texas has been cited so frequently it's becoming a cliché. Proponents point to the state's high irradiance, low development costs, cheap labour and growing power demand as strong evidence. However, despite these promising attributes, the greater challenge in Texas is that solar must compete against an unusually low cost of electricity. Fort Hood's 40MW RFP envisions a PPA price below grid power, but only the most low-cost developers have a chance at achieving this. Utility-scale solar PPAs in Texas have been signed as low as \$50/MWh, with the help of federal subsidies.

4. NEXT STEPS

The North American Clean Energy RFP database is updated on a monthly basis. 2015 has seen more than 10 new RFPs issued already, encompassing a diverse range of sectors.

How to participate

We welcome additions to this database. Utilities, corporations, and other organisations that are issuing RFPs / RFIs and that wish to have these captured and tracked in the Bloomberg New Energy Finance North America Clean Energy RFP database can do so by contacting us (bnef.rfp@gmail.com).

The database is available to clients of some of Bloomberg New Energy Finance's Insight services.

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