

GREEN BANK NETWORK

GBN Bulletin- June 2019



The first half of 2019 has been off to a strong start for Green Banks, with [new Green Bank transactions](#) around the world, and growing interest in Green Banks as a powerful policy tool to combat climate change.

Green Bank Network (GBN) members have closed new transactions, including a number of innovative clean energy deals in merchant power projects (i.e. without PPAs in place) and new transactions focused on catalyzing private investment. See more in GBN member transactions [below](#).

The [Green Bank Design Summit](#) took place in March 2019 in Paris, France, bringing together 21 emerging markets and developing countries, along with experts and practitioners, for a hands-on workshop on Green Bank design. See testimonials and more information [here](#).



In the United States, interest in Green Banks at the federal level continues to grow. In May 2019 two US presidential candidates – Governor Jay Inslee and Senator Michael Bennet – called for a [Green Bank](#) as part of a solution to fight climate change. And US Senator Chris Murphy (D-CT) and other leading senators introduced the [Green Bank Act of 2019](#). A companion bill was [introduced in the House](#) on June 21, 2019 with 14 co-sponsors.

This federal momentum builds on the success of Green Banks at the US state level. A new paper published in May 2019 by the American Green Bank Consortium reports that [US Green Banks have caused \\$3.67 billion](#) in clean energy investment through the end of 2018, and the ratio of private to public investments generated by the American Green Banks was 3.4 to 1. The Inaugural [U.S. Green Bank Summit](#) is taking place on July 10, 2019 in Washington DC.

In Europe, a number of Green Banks or similar initiatives are being explored or launched, including new transactions at [NYSNO in Norway](#), and France's President Macron [calling for a "Climate Bank"](#) to work in close coordination with existing DFIs and promotional banks.

New white papers were published by the GBN last quarter, including reports on Green Bank tools focused on [Aggregation and Securitization](#) and [Bioenergy and Resource Recovery](#), by the Coalition for Green Capital.

Happy reading,

GBN Team (CGC and NRDC)



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Recent GBN Member Transactions

Clean Energy Finance Corporation

On 11 June, the CEFC announced that it had become a [billion dollar solar investor with its latest equity investment in large-scale renewables](#). The CEFC achieved this milestone with its third equity investment in a large-scale renewable energy development, with a A\$51 million stake in Victoria's 200MW (AC) Kiamal Solar Farm. The investment extends the CEFC's push into equity following earlier investments in Queensland's Ross River Solar Farm and Tasmania's Granville Harbour Wind Farm. The Kiamal Solar Farm, near Ouyen in north-west Victoria, is the first Australian project to be delivered by leading international developer Total Eren, further diversifying the investment profile of Australia's solar sector. In addition to developer Total Eren, financing partners on Kiamal Solar Farm included ANZ, ING and Natixis.



In May, the CEFC [confirmed investment commitments of almost A\\$1 billion in Australia's wind sector, delivering 2GW of wind energy across regional Australia](#). The latest investment was a \$180 million commitment to the Collector Wind Farm in south-eastern NSW, with the CEFC's role as sole debt financier supporting the accelerated delivery of the innovative circa A\$360 million project. CEFC's commitment enabled the project to reach financial close on a fully merchant basis, ahead of securing energy offtake contracts.

Through its "Clean Energy Innovation Fund," CEFC also continues to support innovative clean energy companies, including recent transactions with [Morse Micro](#), [Carbon Revolution](#) and [Omni Tanker](#).

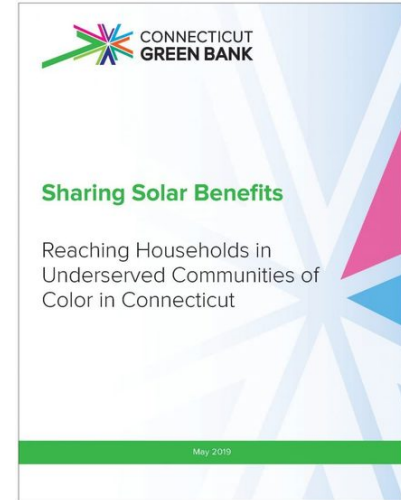
See all latest transactions and media releases on the [CEFC website](#).

Connecticut Green Bank

On 9 April 2019, Connecticut Green Bank [announced the sale of \\$38.6 million investment-grade rated Asset-Backed Securities \(ABS\) notes](#). This innovative first-of-its-kind issuance monetizes the solar home renewable energy credits (SHRECs) generated through the Residential Solar Investment Program (RSIP). The sale was comprised of two tranches of SHRECs produced by more than 105 megawatts of 14,000 residential solar photovoltaic (PV) systems. The SHRECs were aggregated by the Green Bank and sold in annual tranches to Connecticut's two investor-owned utilities, Eversource Energy and United Illuminating Company, at a fixed, predetermined price over 15 years. The funds raised through this

sale will recover the costs of administering and managing the RSIP, including the incentives offered to residential participants in the program.

On 6 June 2019, Connecticut Green Bank [announced that the ABS financing was certified](#) against the [Climate Bonds Standard](#), providing investors with assurance of the deal's green credentials. Verification against the Climate Bonds Standard was done by [Kestrel Verifiers](#), a US-based company. [Climate Action Reserve](#), a non-profit specializing in environmental impact assessment, provided an independent review of the beneficial impacts of the activities and programs financed with the securities. The Green Bank worked with RBC Capital Markets as their underwriter and sole book runner in this green bond transaction.



On 20 May 2019, Connecticut Green Bank [announced the publication of a new report on the acceleration of adoption of solar energy in communities of color](#). Connecticut is bucking a national trend of disparity when it comes to solar adoption among communities of color, according to the report. This increase is due to Connecticut Green Bank's successful efforts to make solar energy more accessible and affordable for homeowners in communities of color and low-to-moderate income (LMI) households by intentionally engaging these traditionally underserved communities through two key programs.

Read more about Connecticut Green Bank's latest transactions and developments [here](#).

NY Green Bank

NY Green Bank continues its commitment to growing clean energy investment, evidenced through the announcement in its latest quarterly report that as of 31 March 2019, NYGB has an Active Pipeline of potential investments proceeding to close of \$702.7 million and total commitments of \$737.6 million. NYGB investments support clean energy projects across New York State with a total project cost of between [\\$1.74 and \\$1.96 billion in aggregate](#).

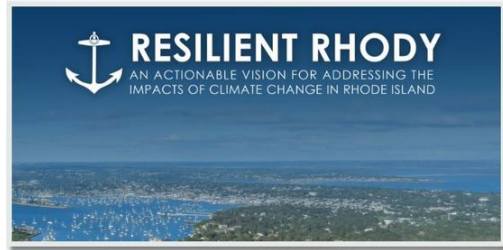
In the quarter ended March 31, 2019, NYGB closed three transactions, respectively sponsored by BlackRock Renewables Assets (one transaction) and Carlyle Power Partners (two transactions). Each transaction, as part of NYGB's portfolio, contributes to the primary Clean Energy Fund (CEF) outcomes of GHG emissions reductions, customer bill savings, energy efficiency, clean energy generation and mobilization of private sector capital. In turn, the CEF objectives support New York State's aggressive clean energy targets, including under New York's Green New Deal which mandates a significant increase in the State's Clean Energy Standard with a goal of 70% energy generation from renewable sources by 2030 and carbon-free electricity by 2040.

One recent NYGB transaction is with Black Rock Renewable Assets, the dedicated renewables investment team of BlackRock Real Assets. NYGB [has committed \\$31.25 million to the recapitalization of a portfolio of wind farms by BlackRock Global Renewable Power Fund II](#), including a 55.35 MW project in New York State. NYGB's participation in this transaction – alongside other commercial banks – supports the long-term financing of a large scale renewable project in New York State that has merchant exposure, as well as the secondary market for assets of this type. The existence of a robust secondary market supports even greater development of large scale renewables through the availability of greater sources of capital interested in investing in this asset class. In addition, NYGB's involvement in this transaction contributes to ratepayers' greater energy choices, and ultimately, lower-cost clean energy opportunities.

Read more about NYGB's latest transactions and developments in its [latest quarterly report](#).

Rhode Island Infrastructure Bank

Rhode Island Infrastructure Bank (Infrastructure Bank), has announced new initiatives and transactions, continuing its leadership in clean water, clean energy, and climate resilient infrastructure investment in the state of Rhode Island. Recent initiatives and transactions include:



On 24 April 2019, the Infrastructure Bank [announced that five communities will participate in the first round of the Municipal Resilience Program \(MRP\)](#): Barrington, Warren, Portsmouth, South Kingstown and Westerly. The Infrastructure Bank is committing \$2 million in grant funding for the Municipal Resilience Program to implement climate resilience projects based on specific needs identified in each community.

The MRP program builds upon the state's Climate Resilience Action Strategy, *Resilient Rhody* and aims to deepen municipalities' understanding of climate risk while assisting them in developing resilient solutions. Municipalities will build on their local hazard mitigation planning to develop initial resilience plans and prioritize projects through Community Resilience Building workshops. The workshops will be developed and delivered in partnership with The Nature Conservancy. After successfully completing the program, municipalities will be eligible to apply for implementation funds.

On 19 April, 2019 the Infrastructure Bank [announced \\$47.3 million in financing to support wastewater, sewer and stormwater projects](#) for the Town of Bristol and the Narragansett Bay Commission (NBC). Financing these projects through the Infrastructure Bank's Clean Water State Revolving Fund will save approximately \$5.2 million in interest expense when compared to directly borrowing in the bond market. Collectively, these projects will support approximately 1,300 jobs. The Town of Bristol received \$2.3 million to complete primary treatment upgrades at the wastewater treatment facility along with various systemwide drainage improvements.

The Narragansett Bay Commission received \$45 million for systemwide sewer improvements, green stormwater infrastructure and engineering and planning activities. The Narragansett Bay Commission will save approximately \$5.0 million by borrowing through the Bank's below-market interest rate lending program for clean water projects.

See all the latest transactions and media releases on the [Rhode Island Infrastructure Bank website](#).

Green Investment Group

The Green Investment Group (GIG), a specialist in green infrastructure investment, project development and portfolio management owned by Macquarie Group Limited (Macquarie), has announced new transactions, continuing its global leadership in green investment and dedication to supporting the growth of the global green economy. Recent GIG transactions include:

On 12 June 2019, GIG [announced the acquisition of the 43 MW Hornamossen onshore wind farm](#) located in Sweden's Jönköping municipality. GIG will acquire 100 per cent of the project from Nordic wind power developer OX2, who have been developing the project since 2006. Consisting of 10 Siemens Gamesa 4.3 MW direct drive turbines, Hornamossen is expected to produce enough renewable electricity to displace an estimated 121 kt CO₂e over its lifetime - the equivalent to removing approximately 1000 cars from the road every year of its operational life. GIG structured and secured a long-term power purchase agreement (PPA) for the project with Swiss energy utility Axpo Nordic, part of the Swiss energy group Axpo. GIG has now sourced and structured PPAs for almost 1 GW of onshore wind capacity in Sweden, equivalent to over 10% of Sweden's total onshore wind installed capacity.

On 26 March 2019, GIG [announced the closing of debt financing on an innovative battery-based energy](#).

[storage project in Southern California](#). It is the project's third debt financing and will fund the completion of its construction. The financing will fund construction of an additional 97 MWh portfolio and, once fully constructed, will complete a 63 MW / 340 MWh project for Southern California Edison (SCE) of behind-the-meter, battery storage systems located in grid-constrained pockets of the West Los Angeles Basin service territory. CIT Group, which led the initial financing through its Power and Energy Finance unit, was also the lead lender in the second financing in December and this financing. CIT Group was joined by Rabobank, Sumitomo Mitsui Banking Corporation and ING.

Read more about GIG's latest transactions and developments on the [GIG website](#).

Green Bank Events

US Green Bank Summit – July 10, 2019

The Inaugural [US Green Bank Summit](#) is the premier gathering for US Green Bank leaders. The Summit will be held Wednesday July 10, 2019 in Washington, DC and is a gathering of Green Banks, project developers, capital providers, philanthropy, policymakers and others eager to expand innovative clean energy investment with and through Green Banks.



Participants will include the heads of US Green Banks, federal policymakers, and Green Bank industry participants. These participants will speak about the expanding Green Bank field and new investment opportunities.

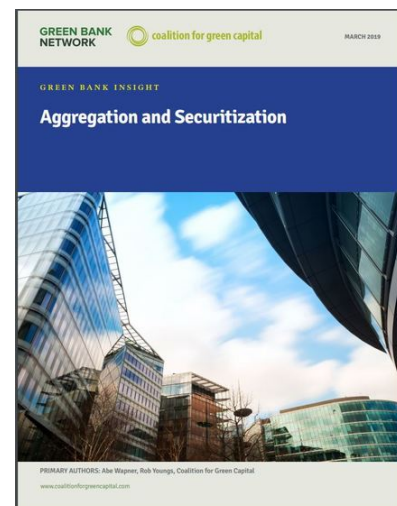
This event is by invitation only. Please contact consortium@coalitionforgreencapital.com with any questions, including location.

Reports and Whitepapers

Green Bank Insight: Aggregation and Securitization

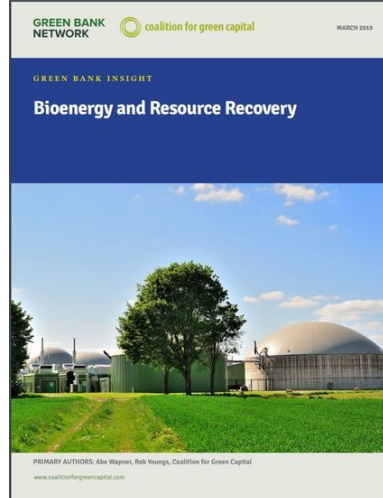
CGC has written a new paper on [Aggregation and Securitization at Green Banks](#). Green Banks employ a variety of strategies to unlock capital and drive investment into clean energy projects. Green Bank investment strategies have included participating in projects at the development phase, or under new regulatory regimes, with an eye towards spurring larger portfolios or securitizing completed projects to improve their marketability to traditional investors. Green Bank investments also include making cornerstone investments in project portfolios or in first-of-a-kind Green Bonds to encourage additional institutional investment in clean energy projects.

This paper discusses several examples of Green Banks working to facilitate private investment in projects through strategies of aggregation and securitization. The goal of this paper is to highlight successful Green Bank aggregation and securitization strategies to present best practices for unlocking new sources of private capital. The paper presents an overview of securitization and aggregation before covering several specific Green Bank transactions.



Green Bank Insight: Bioenergy and Resource Recovery

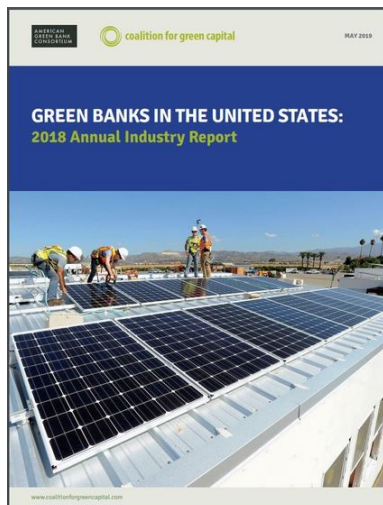
This paper discusses different Green Bank approaches to financing projects in the [bioenergy and resource recovery](#) sectors. The goal of this paper is to provide an overview of the technology and present examples of successful projects to share lessons learned and best practices. Several example projects in the bioenergy sector are first-of-kind or were developed under new regulatory regimes, and benefit from Green Bank “first mover” financing. Innovative financing approaches and methods for addressing both real and perceived risks across a number of markets can be drawn from the examples presented by Green Bank activity in the bioenergy and resource recovery sectors.



Green Banks in the US: 2018 Annual Industry Report

The first [Annual Industry Report](#) of the American Green Bank Consortium covers the period through the year 2018. The Green Bank impacts presented in this report are the result of information gathering performed by CGC. Key metrics were collected from the public reports issued by each Green Bank as well as direct information provided to CGC by various Green Banks upon request.

In total, the report finds that American Green Banks have caused \$3.67 billion in clean energy investment, with \$676 million of this investment taking place in 2018. The Green Bank concept was first proposed in 2009, and there are now 14 Green Banks in the U.S. with more in development.



Green Banks are unique in that they use innovative finance solutions and incentives to facilitate private investment in clean energy projects that would otherwise struggle to find capital. The report finds that the impact of every dollar of direct public Green Bank investment was more than tripled by the private investment it attracted. The ratio of private to public investments generated by the American Green Banks was 3.4 to 1.

See more white papers covering the Green Bank model on the GBN website's [Knowledge Center](#).

GREEN BANK NETWORK

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