

## Supporting Large Scale Onshore Wind in New York State

### Carlyle Power Partners II – Valcour Wind Energy

*NY Green Bank (“NYGB”) has committed \$68.75 million to finance the acquisition of 612.0 MW of operating large-scale wind projects in New York State (“NYS” or the “State”) by funds managed by The Carlyle Group. These assets account for approximately 30% of current wind generation in NYS. As a Joint Lead Arranger in this transaction alongside other commercial banks, NYGB’s participation supports the long-term financing of large scale renewable projects in NYS that have merchant exposure.<sup>1</sup> The recapitalization and proposed operational improvements are expected to extend the useful life of the projects, resulting in additional greenhouse gas (“GHG”) reductions in NYS, and the retention of more than 40 clean energy jobs in the North Country and Western New York.*

#### Transaction Description

Carlyle Power Partners II (“CPP”), a dedicated power investment platform of The Carlyle Group, recently acquired a portfolio of six wind projects in NYS, as originally [announced](#) in September 2018. In late February 2019, NYGB committed financing to Valcour Wind Energy alongside three commercial banks to support the acquisition. In late March 2019 NYGB committed an additional financing to Cogentrix Valcour Intermediate Holdings to further support CPP’s acquisition, for a total aggregate commitment of \$68.75 million from NYGB. The wind projects total 612.0 MW and account for approximately 30% of current wind generation in the State. The first project in the portfolio started operating in 2008 and the final project came online in 2009.

The project finance market is becoming more comfortable with merchant exposure for thermal facilities, but the market is less developed for merchant renewable projects. NYGB’s participation signals that long-term financings of NYS wind projects with merchant tails are possible, which in turn is expected to encourage more primary wind development in the State. This transaction supports the secondary market for wind projects in NYS at a time when long-term offtake contracts are increasingly scarce. This is the first large scale renewable project in which NYGB is participating, and further large scale renewable transactions are expected as NYGB continues to support large scale renewables development in NYISO.

The recapitalization and expected operational improvements associated with this acquisition will allow the 612.0 MW of installed generation to remain operational beyond the original 20-year design life. During these additional years, the projects are expected to generate at least 2,913,810 MWh of clean energy and provide at least 1,532,889 metric tons of avoided GHG emissions. In addition to the environmental benefits, this transaction supports economic development in the State: more than 40 clean energy jobs in the North Country and Western NY will be retained through the continued operation of these wind projects, with continued lease payments made to landowners and property taxes contributed to the local communities.

The 612.0 MW Valcour wind portfolio will continue to generate renewable wind energy for the State. NYGB participation in this secondary market transaction is expected to spur further private investment in this type of asset, delivering even more renewable generation options and benefits to ratepayers. The anticipated growth of large scale renewables in the State (including onshore wind) can be expected to be maximized in a market where there is ample capital available for both project developments and the subsequent recapitalization and/or sale of operating assets. Many benefits of Clean Energy Fund initiatives in the State (including NYGB investments consistent with its mission,

<sup>1</sup> Merchant power plants are non-utility owned or independent power generation facilities where energy is sold into competitive wholesale power markets. Merchant plants may contract for the sale of some of their output, but such arrangements tend to be shorter term arrangements, rather than longer term power purchase agreements (“PPAs”).

such as the Valcour transaction) comprise follow-on market activity as part of quantifying overall impact. In this instance, the provision of secondary financing of operating wind assets is expected to provide confidence to developers and future financiers that there is increasing liquidity in merchant renewable project asset classes across project lives, spurring even greater interest and activity. NYGB expects to see material indirect benefits from transactions like this one in the form of more large-scale renewable projects for NYS and specific estimated indirect impact benefits associated with this transaction are set out in the “Metrics & Evaluation Plan” section of this Transaction Profile, below.

This Transaction Profile is provided pursuant to the updated “NY Green Bank – Metrics, Reporting & Evaluation Plan, Version 3.0” (the “**Metrics Plan**”) developed in collaboration with the NYS Department of Public Service and filed with the NYS Public Service Commission (the “**Commission**”) on June 20, 2016.<sup>2</sup> This Transaction Profile contains specific information in connection with both Carlyle/Valcour Wind Energy transactions as required by the Metrics Plan<sup>3</sup>, which transactions were respectively entered into on February 28 and March 29, 2019.

## Form of NYGB Investment

NYGB Product	Product Sub-Type	Committed Capital
Asset Loan & Investment	Term Loan	\$61.25 million
Asset Loan & Investment	Revolving Credit Facility	\$7.5 million

## Location(s) of Underlying Project(s)

Multiple Regions.<sup>4</sup> The wind projects are located in the North Country and Western New York.

## Types of Client & Counterparty Organizations that are Transaction Participants

	Name	Participant Type
<b>Client</b>	Valcour Wind Energy, LLC	Borrower
	Cogentrix Valcour Intermediate Holdings, LLC	Borrower
<b>Counterparties</b>	Carlyle Power Partners II, LP	Sponsor
<b>Partners</b>	Other Lenders	Commercial Banks

<sup>2</sup> Case 13-M-0412.

<sup>3</sup> See Section 4.0, page 8 and Schedule 3.

<sup>4</sup> Defined as projects located in two or three regions of the State.

## Summary of Financing Market Objectives & Barriers Addressed

Beneficiary	Market Barrier	Financing Solution
<b>Wind Project Developers</b>	Wind developers can face difficulties refinancing assets exposed to merchant revenue risk. To date, the majority of wind financings have been supported by long-term PPAs or hedges with creditworthy offtakers and terms of over 10 years alongside fixed price long-term NYSERDA REC contracts with 20-year terms. However, such long-term contracts are becoming increasingly scarce.	NYGB's participation encourages more efficient use of project developer equity. Ideally, there should be a more liquid market for operating projects, where merchant risks are increasingly better understood and managed. NYGB's willingness to support these assets helps to demonstrate to the broader market lender comfort with NYISO merchant exposure.
<b>Capital Market Participants</b>	Many capital market participants are not yet comfortable underwriting merchant revenue from renewable energy assets. The debt financing community has become increasingly familiar with generation assets supported by 5 – 7-year hedges, but principally with thermal generating facilities.	NYGB's participation provides an important market signal that long-term financings of NYS wind projects with merchant tails are possible. Supporting operating assets allows lenders an opportunity to better assess the technology using asset-specific operating data as well as increasing experience of wholesale power markets.
<b>New Yorkers</b>	While renewed interest and activity in wind projects are increasing rapidly in NYS, many are expected to rely on a combination of merchant and REC revenue streams.	By bridging financing gaps in the secondary marketplace, NYGB is encouraging more primary wind development in the State. Ultimately this is expected to provide New Yorkers with greater choices and access to clean energy at a lower cost.

## Technologies Involved

Technology	Measures
Renewable Energy	Onshore wind systems

## Metrics & Evaluation Plan

### Planned Energy & Environmental Metrics

NYGB's minimum investment criteria specifically require that "transactions will have the potential for energy savings and/or clean energy generation that will contribute to greenhouse gas reductions in support of New York's energy policies".<sup>5</sup> In addition, the Metrics Plan requires that the following energy and environmental measures, applicable to this transaction, be reported on:<sup>6</sup>

- Estimated gross lifetime and first-year clean energy generated (MWh);
- Estimated gross clean energy generation installed capacity (MW); and
- Estimated gross lifetime and first-year GHG emission reductions (metric tons).

<sup>5</sup> Case 13-M-0412, "Order Establishing New York Green Bank and Providing Initial Capitalization" issued and effective December 19, 2013 of the Commission, Ordering Clause 6 at pages 24 - 25.

<sup>6</sup> See Metrics Plan, Section 2.0, pages 2 - 6.

The estimated additional gross lifetime and first-year direct energy and environmental impacts of the supported wind systems are as follows:

Energy/Environmental Impact	Lifetime Low Estimate	Lifetime High Estimate	First-Year Low Estimate	First-Year High Estimate
Estimated clean energy generated (MWh) <sup>7</sup>	2,913,810	3,067,169	582,762	611,900
Estimated clean energy generation installed capacity (MW) <sup>8</sup>	Not Applicable			
Estimated GHG emission reductions (metric tons)	1,532,889	1,613,567	306,578	321,907

Since this transaction involves the secondary market financing of existing wind assets, in addition to the estimated direct incremental impact benefits outlined above, material indirect impact benefits are expected to result for the State from NYGB investments of this nature.<sup>9</sup> The estimated additional gross lifetime energy and environmental impacts of the Valcour wind projects are as follows:

Indirect Energy/Environmental Impact	Lifetime Estimate
Estimated clean energy generation installed capacity (MW)	34.6 - 69.13
Estimated clean energy generated (MWh)	2,573,876 - 5,147,752
Estimated GHG emission reductions (metric tons)	1,354,057 - 2,708,114

## Planned Market Characterization Baseline & Market Transformation Potential

The Metrics Plan requires that market evaluation occurs when a critical mass of NYGB financing and investment arrangements are put in place, approximately three to five years following initial NYGB capital deployments. Market evaluation activities commenced in 2018 to collect baseline data on key market indicators for the sectors that have been supported by NYGB since its inception, and the dataset will be updated going forward to include indicators specific to this and other transactions. Baseline data will be used as a comparison point against which to assess market progress in the later studies. Progress indicators are defined below for the short, mid and long-terms.

Output indicators will identify early activity levels and will be regularly tracked at least for the duration of the transaction. These include, but are not limited to:

- Number of new large scale renewable projects in development and completed;
- Average and aggregate dollar value of projects;
- Location of projects;
- Size of projects (i.e., installed capacity in MW);
- Renewable energy generated (in MWh); and
- GHG emission reductions (in metric tons).

Outcome indicators will be expected to show progress through program tracking or market evaluation over time. These include, but are not limited to:

- Favorable financial performance data;
- Favorable technology performance data;

<sup>7</sup> Assuming the installed generation operates for at least 5 years beyond the original 20-year-design life. This does not represent the useful life assumption used for the financial evaluation of the portfolio.

<sup>8</sup> Built clean energy generation capacity at full deployment of funds is the same for first-year and lifetime duration.

<sup>9</sup> Details with respect to the methodologies and key assumptions for the indirect benefits attribution will be included in NYGB's future Quarterly Metrics & Evaluation Report, with the next such report due to be filed on May 15, 2019.

- Increasing market volume of large scale renewable projects (both developments and primary/secondary financings);
- Investment risk/default rates become increasingly attractive to investors, as a result of positive financial performance data;
- Increasingly positive view of banks and institutional investors on investment value of merchant renewables;
- Scale of onshore wind investment increases, due to increased end-use market demand;
- Replication of finance model by other developers;
- Decreased project technology costs/increasing output and efficiency;
- Decreased financing costs;
- Increased number of financial participants providing similar capital structures;
- Increased financial market volume for large scale renewable projects; and
- Reduced time to execute large scale renewable financings.

## **Proposed Method of Outcome/Impact Evaluation (by NYSERDA) & Timeframe**

NYSERDA will evaluate the impact this transaction has had on the clean energy finance markets and the energy/environmental benefits delivered by this transaction.

**Market evaluation** will address the short, mid, and long-term indicators identified above. Methods will include analysis of program data along with interviews and surveys of market participants to track information including but not limited to: project scale information, interest in wind financing, and influence of NYGB's participation on primary and secondary financial markets. As noted, baseline data is being collected on key indicators in the first phase evaluation during 2018 – 19. Later follow-up studies will assess progress against baseline levels for other market segments as those evolve. The specific timing of these efforts may be revised based on experience or other factors as NYGB's investment portfolio further develops and evolves.

**Impact evaluation** will assess the performance of the projects funded to verify that the wind systems are generating clean energy within the estimated range set forth in this Transaction Profile.

As with all NYGB investments, projects that receive an incentive or funding from other entities (e.g., utility, other NYSERDA program) will, in accordance with the Metrics Plan, be tracked in order to minimize any double-counting activity on a consolidated basis. As set out in the Metrics Plan, evaluation sampling approaches will also be used as a mechanism to estimate overlap and minimize double counting. Attempts will be made to coordinate market and impact evaluation activities for these projects that receive support from multiple sources in order to maximize the efficiency of data collection and avoid participant survey fatigue.