POWER INVESTED.

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Commercial Leasing for Wind Power
Development on the Outer Continental Shelf (OCS) Offshore California

Call for Information and Nominations (Call)

Docket No. BOEM–2018–0045

NOMINATION FORM

Submitted To:

BOEM, Office of Strategic Resources
760 Paseo Camarillo (Suite 102)
Camarillo, California 93010

Submitted By:

Algonquin Power Co., dba Liberty Power
354 Davis Road, Suite 100
Oakville, Ontario L6J 2X1

January 28, 2019

0. Introduction

This nomination form submission ("Submission") is submitted by Algonquin Power Co., dba Liberty Power, ("APCo", or "Algonquin Power"). Algonquin Power hereby expresses its interest in participating in competitive lease processes for offshore leases for the purposes of building offshore wind energy projects ("Projects") within the Humboldt and Diablo Canyon call areas.

APCo will be supported in this endeavor by its parent company, of which it is a wholly-owned subsidiary, Algonquin Power & Utilities ("APUC"), as well as by its affiliate, Algonquin Power Fund (America) Inc. ("APFA").

1. Call Areas Interested in Leasing

APCo is interested in leasing areas within each of the Humboldt Call Area and Diablo Canyon Call Area. For a list of specific blocks, please see the table below. For the ArcGIS file, please see Appendix 1 included as part of this Submission.

Protraction Name	Protraction No.	Block No.	Sub-block
Diablo Canyon	NI09-03	6965I	I
Diablo Canyon	NI09-03	6965J	J
Diablo Canyon	NI09-03	6965K	K
Diablo Canyon	NI09-03	6965M	M
Diablo Canyon	NI09-03	6965N	N
Diablo Canyon	NI09-03	6965O	O
Diablo Canyon	NI09-03	7016I	I
Diablo Canyon	NI09-03	7016M	M
Diablo Canyon	NI09-03	7066A	A
Diablo Canyon	NI09-03	7066E	E
Diablo Canyon	NI09-03	7066I	I
Diablo Canyon	NI09-03	7066M	M
Diablo Canyon	NI09-03	7116A	A
Diablo Canyon	NI09-03	7116E	E
Diablo Canyon	NI09-03	7116I	I
Diablo Canyon	NI09-03	7116M	M
Diablo Canyon	NI10-06	6010A	A
Diablo Canyon	NI10-06	6010B	B
Diablo Canyon	NI10-06	6010C	C
Diablo Canyon	NI10-06	6010D	D
Diablo Canyon	NI10-06	6011A	A
Diablo Canyon	NI10-06	6011B	B
Diablo Canyon	NI10-06	6011C	C
Diablo Canyon	NI10-06	6011D	D
Diablo Canyon	NI10-06	6012A	A
Diablo Canyon	NI10-06	6012B	B
Diablo Canyon	NI10-06	6012C	C
Diablo Canyon	NI10-06	6012D	D
Diablo Canyon	NI10-06	6013A	A
Diablo Canyon	NI10-06	6013B	B
Diablo Canyon	NI10-06	6013C	C
Diablo Canyon	NI10-06	6013D	D
Diablo Canyon	NI10-06	6014A	A
Diablo Canyon	NI10-06	6014B	B
Diablo Canyon	NI10-06	6014C	C
Diablo Canyon	NI10-06	6014D	D
Diablo Canyon	NI10-06	6015A	A
Diablo Canyon	NI10-06	6015B	B
Diablo Canyon	NI10-06	6015C	C
Diablo Canyon	NI10-06	6015D	D
Diablo Canyon	NI10-06	6016A	A

Protraction Name	Protraction No.	Block No.	Sub-block
Humboldt	NK10-07	7126A	A
Humboldt	NK10-07	7126B	B
Humboldt	NK10-07	7126C	C
Humboldt	NK10-07	7126E	E
Humboldt	NK10-07	7126F	F
Humboldt	NK10-07	7126G	G
Humboldt	NK10-07	7126H	H
Humboldt	NK10-07	7126I	I
Humboldt	NK10-07	7126J	J
Humboldt	NK10-07	7126K	K
Humboldt	NK10-07	7126L	L
Humboldt	NK10-07	7126M	M
Humboldt	NK10-07	7126N	N
Humboldt	NK10-07	7126O	O
Humboldt	NK10-07	7126P	P
Humboldt	NK10-10	6027A	A
Humboldt	NK10-10	6027B	B
Humboldt	NK10-10	6027C	C
Humboldt	NK10-10	6027D	D
Humboldt	NK10-10	6027E	E
Humboldt	NK10-10	6027F	F
Humboldt	NK10-10	6027G	G
Humboldt	NK10-10	6027H	H
Humboldt	NK10-10	6027I	I
Humboldt	NK10-10	6027J	J
Humboldt	NK10-10	6027K	K
Humboldt	NK10-10	6027M	M
Humboldt	NK10-10	6027N	N
Humboldt	NK10-10	6077A	A
Humboldt	NK10-10	6077B	B
Humboldt	NK10-10	6077E	E
Humboldt	NK10-07	7124	
Humboldt	NK10-07	7125	
Humboldt	NK10-10	6025	
Humboldt	NK10-10	6026	
Humboldt	NK10-10	6076	

Diablo Canyon	NI10-06	6010E	E
Diablo Canyon	NI10-06	6010F	F
Diablo Canyon	NI10-06	6010G	G
Diablo Canyon	NI10-06	6010H	H
Diablo Canyon	NI10-06	6011E	E
Diablo Canyon	NI10-06	6011F	F
Diablo Canyon	NI10-06	6011G	G
Diablo Canyon	NI10-06	6011H	H
Diablo Canyon	NI10-06	6012E	E
Diablo Canyon	NI10-06	6012F	F
Diablo Canyon	NI10-06	6012G	G
Diablo Canyon	NI10-06	6012H	H
Diablo Canyon	NI10-06	6013E	E
Diablo Canyon	NI10-06	6013F	F
Diablo Canyon	NI10-06	6013G	G
Diablo Canyon	NI10-06	6013H	H
Diablo Canyon	NI10-06	6014E	E
Diablo Canyon	NI10-06	6014F	F
Diablo Canyon	NI10-06	6014G	G
Diablo Canyon	NI10-06	6014H	H
Diablo Canyon	NI10-06	6015E	E
Diablo Canyon	NI10-06	6015F	F
Diablo Canyon	NI10-06	6015G	G
Diablo Canyon	NI10-06	6015H	H
Diablo Canyon	NI10-06	6016E	E
Diablo Canyon	NI10-03	7010	
Diablo Canyon	NI10-03	7011	
Diablo Canyon	NI10-03	7012	
Diablo Canyon	NI10-03	7013	
Diablo Canyon	NI10-03	7014	
Diablo Canyon	NI10-03	7015	
Diablo Canyon	NI10-03	7060	
Diablo Canyon	NI10-03	7061	
Diablo Canyon	NI10-03	7062	
Diablo Canyon	NI10-03	7063	
Diablo Canyon	NI10-03	7064	
Diablo Canyon	NI10-03	7065	
Diablo Canyon	NI10-03	7110	
Diablo Canyon	NI10-03	7111	
Diablo Canyon	NI10-03	7112	
Diablo Canyon	NI10-03	7113	
Diablo Canyon	NI10-03	7114	
Diablo Canyon	NI10-03	7115	

2. Description of Objectives and Facilities

The objective of these Projects is to install and operate offshore floating wind energy generation projects, to a total maximum capacity of 1,600 MW. This comprises 600 MW within the Humboldt Call Area, and two 500 MW phases within the Diablo Canyon Call Area. The Projects would develop California as a leader in the North American offshore wind industry, and provide reliable, competitively priced renewable power to California residents.

Turbine technology will be studied and determined once development of the Projects commences, but will use tier-one technology. Multiple offshore wind turbines are currently in development, and floating support structures exist, and each option will be evaluated before a final decision is made.

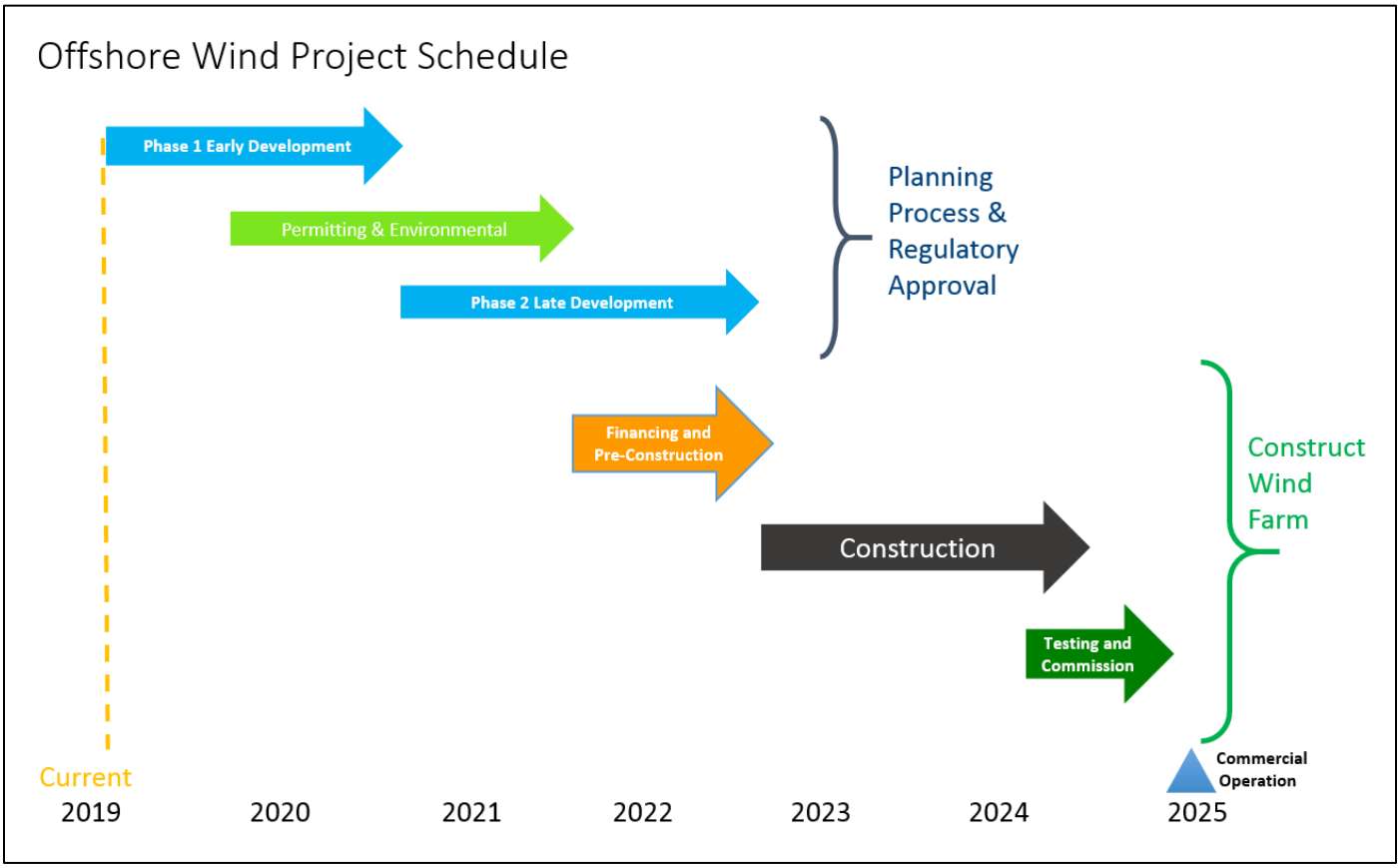
Algonquin will source an undersea cable to connect the Projects to the California coast. Algonquin's experience with its Amherst Island Wind Project will inform this process, as that facility uses an undersea cable to connect the facilities located on the island to the mainland.

Substation design will be determined once development of the Projects commences, and will follow Algonquin's previous experience with substation design and construction.

Further project design would be studied and detailed once development of the Projects commences.

3. Preliminary Schedule of Activities to COD

The preliminary schedule for development and construction of the Projects is as follows. This schedule will be refined and expanded once detailed development of the Projects commences.



4. Resource Data for the Area

Algonquin has assessed reanalysis products from the following sources:

- ERA-5: ERA5 is a climate reanalysis dataset developed through the Copernicus Climate Change Service (C3S) and processed/delivered by ECMWF. The dataset is intended to replace the ERA-Interim dataset from ECMWF shortly after the ERA5 dataset is complete. The ERA5 dataset has several improvements compared to ERA-Interim: Newer modelling system, more observations, higher spatial resolution (31 km).

- MERRA-2: MERRA-2: These data originates from the Global Modeling and Assimilation Office of NASA / Goddard Space Flight Center. The MERRA-2 analysis are being conducted with the GEOS-5 Atmospheric Data Assimilation System (ADAS). The model grid is 0.5 degree latitude and 0.625 degree longitude.

- BLENDED COASTAL WINDS. These data is a coastal region subset of the Blended Sea Winds dataset. The Blended Sea Winds dataset originates from the NOAA / NESDIS / National Climatic Data Center, USA. This dataset contains globally gridded high resolution ocean surface winds and wind stresses on a global 0.25 degree grid. The dataset has up to four daily records, where the winds have been blended from multiple records from up to six satellites equipped with scatterometers. The winds are 10 minute averages in 10 meter height. The wind direction is from the NCEP reanalysis 2 (NRA-2).

Long-term wind speeds at 100 meters are expected to be in the 7.5 m/s – 8.5 m/s range with healthy A and K parameters. Hence, Algonquin is expecting an energized wind environment that would yield above average net capacity factors.

Wind Resource Exclusion Criteria	
Environmental Criteria	**Data Sources**
100% exclusion of lands managed by U.S. National Park Service and U.S. Fish and Wildlife Service	U.S. Geological Survey federal lands "shapefile" (December 2005)
100% exclusion of federal lands designated as park, wilderness, wilderness study area, national monument, national battlefield, recreation area, national conservation area, wildlife refuge, wildlife area, wild and scenic river, or inventoried "roadless" area	U.S. Geological Survey federal lands shapefile (December 2005); Inventoried Roadless Areas (2004); U.S. *Bureau of Land Management* Areas of Critical Environmental Concern (2008)
100% exclusion of state and private lands equivalent to the first two criteria , where geographic system data were available	State/GAPb Land Stewardship Data Management Status 1, from Conservation Biology Institute Protected Areas Database (2004)
50% exclusion of remaining U.S. Forest Service lands (including national grasslands) except ridge crests	U.S. Geological Survey federal lands shapefile, (December 2005)
50% exclusion of remaining U.S. Department of Defense lands except ridge crests	Military lands boundary files, Homeland Security Infrastructure Program (HSIP) (2007)
50% exclusion of state forest land, where GIS data were available	State/GAP land stewardship data management status 2, from Conservation Biology Institute Protected Areas Database (2004)
Land Use Criteria	**Data Sources**
100% exclusion of airfields, urban, wetland, and water areas	U.S. Geological Survey North America Land Use Land Cover (LULC), version 2.0 (1993); Esri airports and airfields (2006); U.S. Census Urbanized Areas (2000; 2003)
+650 meter sea depth	Data LDEO-Columbia, NSF, NOAA

5. Documentation Confirming Legal Ability to Hold the Lease

Algonquin Power has multiple affiliate entities that are legally qualified to hold a lease in accordance with the requirements set forth in 30 CFR 585.112. The specific entity to be the leaseholder will be determined based on the lease under discussion, and the process requirements as it develops.

For the purposes of this submission, Algonquin submits for consideration that Algonquin Power Fund (America) Inc. is an affiliate of Algonquin Power Co., a corporation organized under the laws of Delaware, and is legally authorized under its Articles to conduct business in the United States. Its status as such implicitly includes the ability to hold and operate leases, easements, and other land control agreements to develop and operate wind energy projects. Algonquin may seek to change this entity if it proceeds with this process, if it is deemed necessary to do so.

The Confidential Appendix 2 includes the documentation to meet the MMS qualification requirements.

6. Financial & Technical Abilities

6.1. Technical Capability

6.1.1. General Corporate Experience

Algonquin Power has a long history of developing and executing projects throughout Canada and the United States. Since its inception in 1988, APCo has grown and diversified to own and operate 1.5 GW of generation assets, comprising 39 projects, the majority of which are under long-term power purchase agreements.

With the growing team of subject matter experts and experienced individuals, APCo is able to execute all facets of a project to achieve commercial operation in a timely fashion. This includes project development and planning, finance, construction, as well as long-term operation and maintenance of facilities.

6.1.2. Key Personnel

Name	Title	Relevant Experience
Jeff Norman	Chief Development Officer	Mr. Norman has overseen the development of the portfolio of wind generation projects of Algonquin Power. This role has included responsibility for the following areas of each project: - Energy resource assessments - Offtake contract negotiations - Securing land control - Relationship management with local, state/provincial/ and federal government entities - Compliance with utility and independent system operator requirements for project interconnection - Development timeline scheduling - Project risk registers - Third-party engineering, financial, and legal consultants - Key project contracts, including turbine supply, balance of plant, interconnection, - Key stakeholder management
Homer Lensink	VP, Development	Mr. Lensink has overseen the construction of the portfolio of wind generation projects of Algonquin Power. This role has included responsibility for the following areas of each project: - Procurement of key project components including turbine supply - Construction progress and schedule (actual vs. planned) - Inter-relation of construction progress and stakeholder interests - Public and worker safety including ambient hazards, training, and compliance - Reporting including government agency interface

		- Environmental protection requirements, including mitigation monitoring, habitat protection, waste management, site clearing and protection work, seasonal and daily timing restrictions - Site access and transportation access, working with local transportation authorities - Management of local stakeholder relations, including participating and non-participating landowners, government agencies and community members - Oversight of project construction quality, including civil, geotechnical, structural and electrical elements - Site restoration and clean-up in compliance with all regulations at local, state and federal level
Sean Fairfield	Sr. Director, Energy Projects	Mr. Fairfield has overseen the permitting and environmental compliance of the portfolio of wind generation projects of Algonquin Power. This role has included responsibility for the following areas of each project: - Evaluating requirements for submission, and subsequently managed compliance with all local, state, and federal permit requirements - Evaluating requirements for submission, and subsequently managed compliance with all local, state, and federal environmental regulations - Due diligence and acquisition of land rights for project siting, including land for substations and collector lines - Management of all lease and easement obligations with landowners (i.e. crop loss payments, estoppels, notification requirements); - Management of engineering to ensure all Issued For Construction design drawings met permitting obligations - Interaction with local utility company to ensure milestones under interconnection agreements were met, and design requirements were complied with
Rob Innes	Director, Project Financing	Mr. Innes has overseen the financing of the Amherst Island wind project. This role has included responsibility for the following areas of each project: - Obtaining debt financing, reviewing and negotiating terms of the financings - Conducting due diligence on lenders - Running a process to select the most competitive lender - Coordinating due diligence conducted by the lenders - Ensuring financings fit within the acceptable parameters of Algonquin's investment guidelines and project development criteria - Coordinating with team members, and securing internal approvals for the financings and their key terms - Ensuring financial close for the project was obtained in a timely manner, in order to support the construction/operating activities of the project in compliance with all relevant project contracts and timelines.

		Prior to Mr. Innes, Mr. Norman held these responsibilities, which included, in addition to the above responsibilities, the following: - Obtaining tax equity financing, including reviewing and negotiating terms of the financings
Joanne Atalay	Sr. Director, Asset management	Ms. Atalay has overseen the operations of the portfolio of wind generation projects of Algonquin Power. This role has included responsibility for the following areas of each project: - All aspects of operation on a daily basis, including oversight of all third party operation and maintenance contractors - Planning and execution of maintenance programs - NERC compliance, emergency response planning, outage planning and outage management - Overall monitoring of generator efficiency, performance, availability, SCADA (turbine alarms and data, BOP monitoring), OEM turbine maintenance contractor - Substation maintenance program, including preventative maintenance activities such as protection relay testing, breaker testing, lightning arrestor testing, CCVT and VT testing, and CAP bank testing - Communications and contract compliance with landowners, utilities, NERC/MRO, municipalities, government agencies etc. - Compliance with county, state, and federal laws and regulations - Repair and replacement of key project components including unit transformers, lightning arrestors, electrical wiring and collector systems, underground splicing, pad-mount junction box and junction points. - Documenting weekly and monthly substation, turbines, BOP, and civil inspections - Management and development of various health, safety, & environmental programs

As the Respondent and lead for this opportunity, APCo will hold the lead responsibility for executing all of the previously mentioned aspects of the project.

6.1.3. Prior or Current Projects

Project	Type	Location	Size (MW)	Years in Operation	Operating Status
Blue Hill	Wind	Saskatchewan	177 MW	-	Development
Val Eo	Wind	Quebec	24 MW	-	Development
Walker Ridge	Wind	California	144 MW	-	Development
Broad Mountain	Wind	Pennsylvania	200 MW	-	Development
Shady Oaks II	Wind	Illinois	120 MW	-	Development
Sandy Ridge II	Wind	Pennsylvania	100 MW	-	Development
Amherst Island	Wind	Ontario	75 MW	0.5	Operating
Deerfield	Wind	Michigan	149 MW	2.0	Operating
Odell	Wind	Minnesota	200 MW	2.5	Operating

Morse	Wind	Saskatchewan	25 MW	3.5	Operating
St. Damase	Wind	Quebec	24 MW	4.0	Operating
Minonk	Wind	Illinois	200 MW	6.0	Operating
Senate	Wind	Texas	150 MW	6.0	Operating
Sandy Ridge	Wind	Pennsylvania	50 MW	6.5	Operating
Shady Oaks	Wind	Illinois	110 MW	6.5	Operating
St. Leon II	Wind	Manitoba	17 MW	7.0	Operating
Red Lily	Wind	Saskatchewan	26 MW	8.0	Operating
St. Leon	Wind	Manitoba	104 MW	13.0	Operating

	Key Personnel Involvement				
Project	**Jeff Norman**	**Homer Lensink**	**Sean Fairfield**	**Rob Innes**	**Joanne Atalay**
Amherst Island	D	C	P	F	O
Deerfield	D	C	P		O
Odell	D	C	P		O
Morse	D, F	C	P		O
St. Damase	D, F	C	P		O
Minonk	D, F	C	P		O
Senate	D, F	C	P		O
Sandy Ridge	D, F	C	P		O
Shady Oaks	D, F	C	P		O
St. Leon II	D, F	C	P		O
Red Lily	D, F	C	P		O
St. Leon	D, F	C	P		O
D: Project Development F: Financing		C: Construction Management O: Operations		P: Permitting & Environmental	

6.1.4. Adverse Legal Proceedings

There have been no significant, relevant or adverse legal or regulatory actions taken against APUC, APCo, or APFA in the last five years that would materially impact the ability of APUC, APCo, or APFA to acquire the leases or develop the associated Projects therewith.

6.2. Financial Capability

6.2.1. Financing Plan

APCo anticipates that the acquisition of leases, initial lease development activities, as well as all future development, construction and operation of the Projects will be financed using cash on hand, and a mix of equity and debt via its parent company, APUC. It is expected that APCo will obtain equity and debt financing for the Projects through existing credit facilities and existing bond platform discussed below. Future phases of project development will be financed in the same way.

APCo's estimate of costs to obtain the Federal and state authorizations required to be obtained in association with the leases is currently $2 million.

APCo is a wholly owned subsidiary of Algonquin Power & Utilities, common shares of which are publicly traded on the Toronto Stock Exchange and the New York Stock Exchange under the trading symbol "AQN" and "AQN.TO". APUC has a long-term consolidated corporate credit rating of BBB (flat) from Standard & Poor's ("S&P") and a BBB (low) rating from DBRS Limited ("DBRS"). APCo has a BBB (flat) issuer rating from S&P and BBB (low) issuer rating from DBRS. Both APUC and APCo have investment-grade credit ratings. Further information regarding APUC and its subsidiaries is available on its website at www.algonquinpower.com.

APUC has access to a USD $500 million syndicated revolving credit facility with a group of six major North American financial institutions. Additionally, APUC also has access to a successful bond platform which provides for the issuance of senior unsecured debentures, through which four offerings of CAD $135 million, CAD $150 million, CAD $200 million, and CAD $300 million, respectively, have been issued, the later representing the most recent issuance dated January 17, 2017. APUC also has access to a USD $200 million letter of credit facility available in order to secure letters of credit as may be required in connection with the development, construction and operation of projects within APCo's portfolio.

6.2.2. Financial Experience

APUC has relationships with prominent Canadian and American banks, and is able to secure surety bonds as may be required in connection with the development, construction, and operation of the Projects.

APUC has experience raising construction financing from top-tier banks, including construction loans for the Odell Wind Project located in Minnesota, and the Deerfield Wind Project located in Michigan. Its portfolio of projects for which it has recently obtained financing are below:

Project	Year	Size (MW)
Amherst Island Wind	2018	75 MW
Deerfield Wind	2017	149 MW
Odell Wind	2016	200 MW

For its existing projects, APCo has been able to leverage its current bank credit and bond platform, secure debt and construction financing, and access the equity capital markets through its parent APUC, which demonstrates APCo's ability to develop, construct, and operate the Projects for the duration of their operating lives.

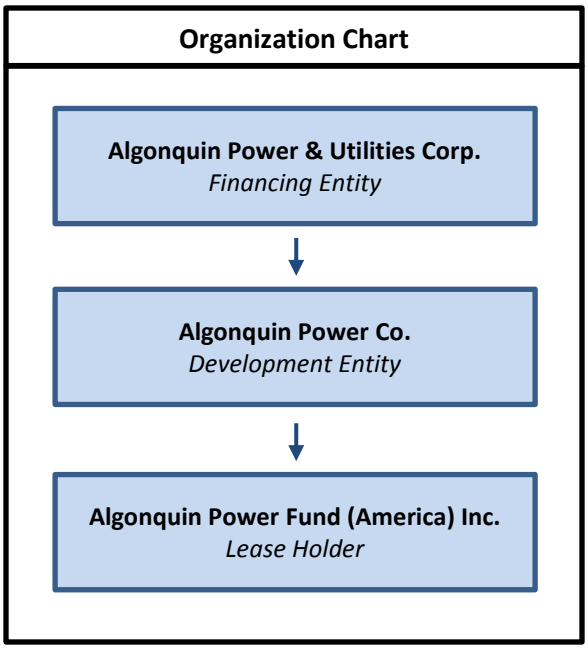
6.2.3. Business Entity

Algonquin Power is an Ontario trust, and has a long history of developing and executing projects throughout Canada and the United States. Since its inception in 1988, APCo has grown and diversified to own and operate 1.5 GW of generation assets, comprising 39 projects, the majority of which are under long-term power purchase agreements.

With the growing team of subject matter experts and experienced individuals, APCo is able to execute all facets of a project to achieve commercial operation in a timely fashion. This includes project development and planning, finance, construction, as well as long-term operation and maintenance of facilities.

6.2.4. Corporate Structure

A description of the corporate structure of the relevant parties involved in this submission is as follows:



6.2.5. Years in Operation

Algonquin Power & Utilities Corp. was formed in 1988, and has operated its portfolio of utility assets and generation facilities within North America for the intervening 30 years.

6.2.6. Audited Financial Statements

Attached as Appendix 3 are the most recent audited financial statements for Algonquin Power & Utilities Corp.

6.2.7. Adverse Financial Proceedings

There have been no bankruptcy or adverse financial proceedings by APUC, APCo, or APFA in the last five years.