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May 30, 2012

Gil C. Quiniones
Co-Chair, Energy Highway Task Force
President and Chief Executive Officer
New York Power Authority
123 Main Street, 16th Floor
White Plains, NY 10601-3170

RE: NRG Energy's Dunkirk Combined Cycle and Huntley Gas Co-Firing Proposal

Dear Mr. Quiniones and Energy Highway Task Force members:

On behalf of NRG Energy, Inc. ("NRG"), I am pleased to provide the Dunkirk Combined Cycle Repowering and Huntley Gas Co-Firing Conversion informational proposals for your consideration in the New York Energy Highway Request for Information ("RFI").

In the two attached documents, NRG proposes to convert its two coal-fired facilities in Western New York to be dual-fuel capable by introducing natural gas at the existing sites. As an additional step, NRG proposes to completely repower its Dunkirk Station to a high-efficiency combined cycle unit. The Dunkirk and Huntley projects provide a number of benefits called for in the RFI, including:

- *"Assures that long-term reliability of the electric system is maintained"* (RFI, pg 11)
—Retaining generation at the existing Dunkirk & Huntley sites maintains system reliability in Western New York.
- *"Contributes to an environmentally sustainable future for New York"* (RFI, pg. 13);
—Replacing Dunkirk's coal-fired units with a high-efficiency combined cycle unit can improve air emissions.
- *"Encourages the development of utility scale renewable generation"* (RFI, pg 11);
—Providing combined cycle technology in Western New York capable of wind-firming.
- *"Creating jobs for New Yorkers"* (RFI, pg. 13): —Creating up to **500 construction jobs** and more than **24 permanent jobs** during the operations phase; and
- Providing projects that seamlessly integrate with other New York centric transmission projects that connect Western New York to downstate.

We are pleased to submit solutions that will enhance grid reliability while providing opportunities for large-scale renewable growth and providing jobs to New Yorkers. We are available to answer any questions on our proposal and provide additional information that may be helpful. Please contact Jon Baylor, our project lead, directly at 609.524.4958 or by email at jonathan.baylor@nrgenergy.com.

Respectfully yours,

A handwritten signature in blue ink that reads "Lee Davis".

Lee Davis
Senior Vice President and President, Northeast Region
NRG Energy, Inc.

**NRG Dunkirk
Gas Co-Firing Conversion / CCGT Repowering**

**NRG Huntley
Gas Co-Firing Conversion**

**Response to Request for Information
The New York Energy Highway**

May 30, 2012



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- B. Addendum to Western Division Area Review – Review of Potential EPA Impacts
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- E. Letter of Support: International Brotherhood of Electrical Workers, Local Union 97

1. NRG Overview

NRG Energy, Inc. (“NRG”) is a Fortune 300 energy supply company headquartered in Princeton, New Jersey. NRG owns and operates one of the industry's most diverse wholesale generation portfolios (including nuclear, wind and solar power) that provides nearly 26,000 megawatts (“MW”) of electric generating capacity, enough to support nearly 21 million homes. NRG’s retail businesses, Reliant Energy, Green Mountain Energy Company and Energy Plus, serve more than 1.8 million residential, business, commercial and industrial customers.

In addition to being the power sector’s leader on environmental efforts, NRG actively contributes to the local communities where its employees live and work. Since 2004, NRG’s Global Giving program has provided more than \$15 million to organizations and charities that have a direct impact on the lives of the people in our communities, including food banks and other organizations that foster self-sufficiency, improve housing and provide supplemental education to people in need.

NRG has a market capitalization of \$3.6 billion with approximately \$2.37 billion of available liquidity. Over the past five years, NRG has successfully developed more than 1,600 MW of new power projects and coordinated project financing of \$4.9 billion. NRG has the knowledge and experience to effectively develop and finance the Astoria redevelopment project.

NRG in New York

NRG began its commitment to New York in 1999 by investing approximately \$945 million in five fossil-fueled power generating facilities as part of the newly-created deregulated electric generation market, making NRG one of the top investors within the State. Examples of NRG’s continuing commitment to the State include:

- 4,000 MW of net generating capacity;
- More than 500 employees dedicated to generating power safely and economically;
- Converting its Western New York coal-fired units in 2005 to Powder River Basin (“PRB”) low-sulfur coal which dramatically improves environmental performance;
- Investing \$300 million to retrofit Western New York coal units with emissions controls systems that reduces nitrous oxides (“NOx”), sulfur dioxide (“SO2”), and particulate matter (“PM”) emissions; and
- Continued commitment to redeveloping existing New York sites to improve emissions and generating efficiency within the state.

In addition to managing its current assets, NRG is developing opportunities to aid New York State in its goals of improving the environment, growing jobs and creating a long-term sustainable future. NRG has a team of experienced professionals focused on building a portfolio of projects across the Northeast that demonstrates our commitment to partnering with our customers achieve their energy goals.

Contact Information

For additional information related to this RFI submission, please contact:

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SECTION I

NRG Dunkirk

Gas Co-Firing Conversion / CCGT Repowering

2. Dunkirk Project Overview

NRG plans to build, own, and operate the Dunkirk Gas Turbines (the "Project"), a new, natural gas combined cycle gas turbine ("CCGT") power plant located in NYISO Zone A. The Project will be located at NRG's existing facility in Dunkirk, New York.

NRG proposes to convert its Dunkirk coal facility to a combined cycle unit with generating capacity between 450 and 600 MW. The site can accommodate either a one-on-one or a two-on-one CCGT unit, with final design dictated by customer needs. NRG will build gas infrastructure to its existing Dunkirk coal units to enable them to co-fire with both coal and natural gas. Concurrently with this build-out, NRG will construct the combined cycle facility, which will ultimately use the pre-built gas infrastructure and take the place of the existing coal units once it is commissioned for commercial operations.

The Project can optimize repowering characteristics to fit the needs of the local transmission grid. Repowering Dunkirk with gas co-firing in the near term, and subsequent combined cycle technology provides the region with a number of key benefits:

- Maximum generating efficiency – Best-in-class turbine technology is capable of providing heat rates below 7000 btu/kWh
- Fast Start Technology – New CCGT designs can incorporate fast-start elements to their base design, giving CCGT units response times of traditional peaking units.
- Wind Firming Resource – The intermittent nature of wind resources can be a challenge for western New York ("WNY") grid operators. A CCGT unit near the wind generators that is capable of load following will stabilize the grid when wind resources are unpredictable.
- Improved Emissions Profile – Repowering the Dunkirk coal station with a natural gas CCGT will create significant reductions of all major emissions.
- Improved WNY Reliability – Recent studies indicate that there would be system reliability needs in WNY if NRG's existing Dunkirk coal units were retired. Repowering existing units with a higher-efficiency CCGT and gas co-firing would mitigate costly transmission upgrades and create a best-in-class generation resource for WNY.
- Adds Jobs to WNY – The proposed build-out of dual fuel capability and CCGT would help preserve local jobs at the site in the near term, provide up to 500 jobs during the 36-month construction cycle, and retain more than 24 jobs after the CCGT is commissioned.

The Project will utilize NRG's existing on-site 115 kV and 230 kV interconnections. Multiple natural gas pipelines are located within a six mile radius of the Dunkirk site and are capable of providing sufficient year-round gas supply.

NRG can achieve dual fuel capability by summer 2013, and NRG expects to achieve full CCGT operations in time for summer 2017 season. Air permitting under the new Article X process is expected to take up to 18 months. After the full air permit is awarded, the construction phase of the Project will be approximately 36 months. Total capital costs for the CCGT repowering are estimated at levels over \$700 million or \$1,200 per installed kilowatt ("kW") for a two-on-one CCGT.

2.1. Site Description

The Dunkirk Station is situated on an 84 acre site in Dunkirk, New York on a peninsula in the city harbour, on Lake Erie. The City of Dunkirk is approximately 55 miles southwest of Buffalo, NY. NRG's Dunkirk site is accessible by CSX rail service, and has onsite dock access with barge unloading capabilities.

Figure 1 - Existing Dunkirk Station



The Dunkirk Station consists of four active generating units with a total nameplate rating of 635 MW net. Units 1 and 2 are identical 100 MW units that began commercial operation in 1950. Units 3 and 4 are identical 218 MW units that went into commercial operation in 1959 and 1960, respectively (Table 1). All Dunkirk units use low-sulfur Powder River Basin coal as their fuel source.

Table 1 - Existing Dunkirk Generation

Technology	COD Year	Total Capacity	Fuel
Unit 1 – CE Boiler/GE Turbine	1950	100 MW	Coal (PRB)
Unit 2 – CE Boiler/GE Turbine	1950	100 MW	Coal (PRB)
Unit 3 – CE Boiler/GE Turbine	1959	218 MW	Coal (PRB)
Unit 4 – CE Boiler/GE Turbine	1960	218 MW	Coal (PRB)

Units 1 and 2 connect to the 115 kV network and Units 3 and 4 are interconnected to the 230 kV system. All units are interconnected through a National Grid switchyard located on-site adjacent to NRG's boiler house.

2.2. Construction Plan

NRG has significant expertise in the structuring, negotiation, execution and management of engineering, procurement, and construction (“EPC”) agreements and will use this expertise to reduce construction-phase risk and price. NRG's procurement and construction personnel are skilled at optimizing contracts with vendors and suppliers locally, nationally and globally to maximize quality, limit cost and control schedule.

NRG has recently completed back-end environmental controls projects at the Huntley and Dunkirk stations, in excess of \$300 million. Throughout the construction process, NRG had a positive working relationship with the local unions that provided the labor and the EPC firms that managed the project. NRG anticipates that the Dunkirk project will use standard construction and technology guarantees for construction on both phases of the Project.

2.3. Construction Schedule

Construction of gas infrastructure to the existing Dunkirk units could be completed by summer 2013. NRG has held discussions with the operators of several interstate gas pipelines near the Dunkirk plant. Construction of the pipeline spur would be conducted concurrently with proposed boiler modifications that would accommodate dual fuel operations.

Construction of the CCGT will take 30 to 36 months. If awarded a contract by the end of this year, NRG believes the Project could receive full notice to proceed in early 2014. Steam turbine and transformers typically require significant lead time and often dictate ultimate construction schedule. NRG will use existing relationships with local labor to ensure that the Project is designed and built to industry standards, and is capable of achieving a June 2017 commercial operations date.

2.4. Technical Summary

Advances in CCGT technology enable generation owners to optimize plant characteristics around the needs of the local transmission grid. The optimization choices include maximizing efficiency, fast-start capability, total plant capacity, integrated “peaking” capability through the use of duct burners, and ancillary services including automatic generation control and fast ramp rate.

The Dunkirk combustion turbines (“CT”) will be state-of-the-art natural gas-fired units designed for maximum efficiency in full load operations, capable of operating between 50 to 100% of total combustion turbine capacity. Heat recovery steam generators (“HRSG”) create steam from exhaust heat generated from the CT, which is then sent to a steam turbine. Capturing energy from exhaust heat enables the CCGT unit to achieve maximum efficiency. The HRSG design will also incorporate duct-firing capability, in which additional peaking MWs can be generated when the system needs them without significant additional investment.

The Project can also be designed to accommodate the various needs of New York’s transmission system including the use of fast-start capabilities for wind firming operations, or maximizing total on-site capacity. Whatever the customer’s final requirements, NRG will work with multiple technology providers to design the units to deliver the required performance characteristics for the best overall value.

The expected lifespan of a CCGT is generally considered to be 30 years. NRG will operate the Project to maximize its lifespan through industry best practices and best-in-class preventative maintenance.

2.5. Plant Operations Plan

NRG has a proven, exceptional track record in power plant operations by focusing on three key priorities:

- Safety;
- Minimal forced outages; and
- Maintenance optimization.

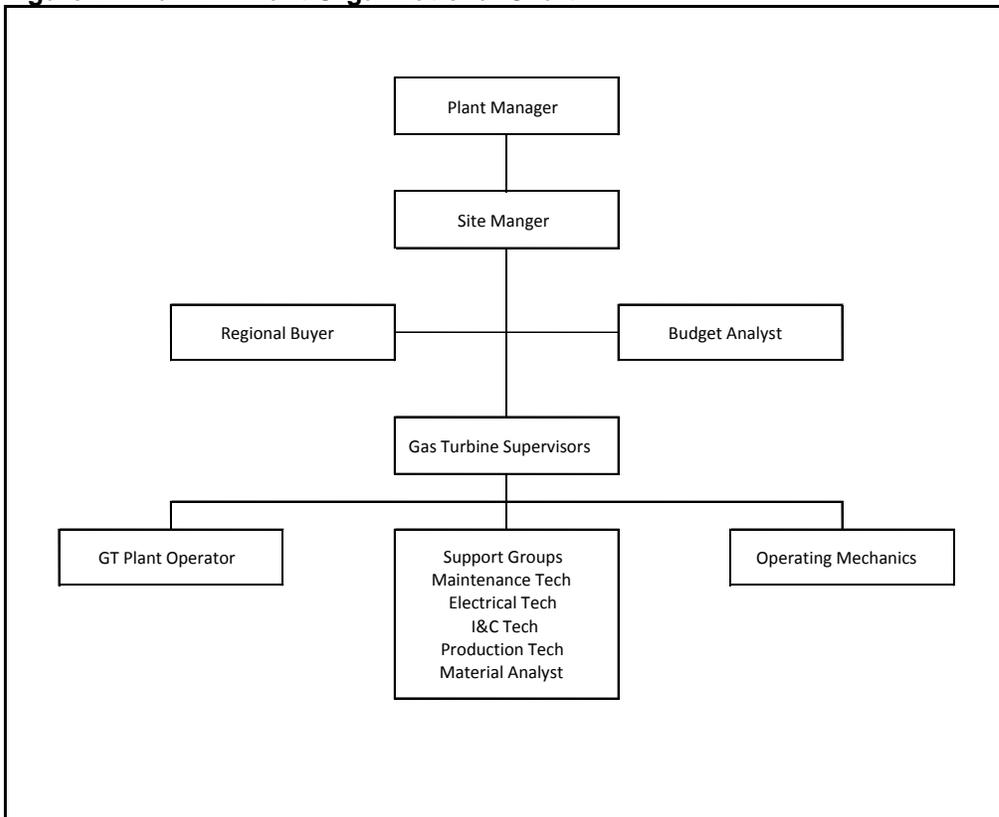
NRG has an unrelenting focus on safety across the company which is reflected in its performance, in which the company takes pride. During 2011, NRG's OSHA Total Recordable Injury Rate was 0.77, which puts NRG in the top decile for the Electrical Generation Industry. NRG has achieved this high level of operational performance through its intensive focus on operations and maintenance fundamentals led by regionally-coordinated operations teams that

NRG has the right experience to operate all sizes of power production facilities. NRG emphasizes proper plant operations and maintenance ("O&M"), including the O&M as it pertains to gas turbines

2.5.1. Staffing

Facility staffing is expected to be in excess of 24 full-time positions including plant supervision, mechanical, electrical, instrumentation, operating technicians and support staff. Figure 2 is a representative organizational chart of the proposed plant staffing.

Figure 2 – Dunkirk Plant Organizational Chart



NRG is committed to achieving world-class excellence for its generating fleet and a key step in realizing this goal is partnering with technology providers in an extensive training program for all levels of operations personnel. Our training program will include classroom training, computerized simulator training and physical plant training.

2.5.2. Maintenance

Gas turbine maintenance intervals are based on a combination of factors that include fuel type, operating hours, number of starts, and type of starts. These factors are used to calculate equivalent hours that determine the type and interval of the level of inspection. Maintenance

intervals vary among gas turbine suppliers. NRG works closely with equipment manufacturers and industry experts when completing inspections, outages and equipment upgrades.

The Project will either self perform its long-term maintenance or seek separate Long-Term Service Agreements (“LTSA”). The term of these LTSAs will typically cover the period of startup through the first planned major maintenance period (i.e., the initial 5-6 years of plant operations). A detailed maintenance plan will be developed and implemented in line with standard industry practices.

2.5.3. Safety

NRG’s paramount goal is for its employees to go home injury free every night. As a result, safety training and awareness are NRG’s top priority. Operational procedures will ensure the safe startup, commissioning and operation of the Astoria facility. The operations staff will be involved in the safety review during the design phase of the plant, before any construction begins, and in the design of safety systems for new plant operations.

3. Project Justification

The Dunkirk repowering proposal provides many benefits to local residents, New York ratepayers, the environment, and grid operators. Adding dual-fuel to existing units and using state of the art technology for this repowering allows this Project to accomplish several objectives of the Energy Highway Initiative, including:

- Retaining generation at the existing Dunkirk & Huntley sites “*assures that long-term reliability of the electric system is maintained*” (RFI, pg 11);
- Replacing Dunkirk’s coal-fired units with a high-efficiency combined cycle unit provides an un-matched upstate project that “*contributes to an environmentally sustainable future for New York*” (RFI, pg. 13);
- Providing combined cycle technology in Western New York capable of wind-firming that “*encourages the development of utility scale renewable generation*” (RFI, pg 11);
- “*Creating jobs for New Yorkers*” (RFI, pg. 13): up to **500 construction jobs** and more than **24 permanent jobs** during the operations phase; and
- Providing projects that seamlessly integrate with other New York centric transmission projects that connect Western New York to downstate.

3.1. Upstate Reliability

A recent study by National Grid evaluated system reliability of its entire 115 kV system in WNY, and identified the potential reliability risks of removing specific generation. The study identified NRG’s existing Dunkirk Station as necessary for voltage support in the Southwest New York area¹. Without voltage support from Dunkirk, the transmission system has trouble supporting transfer of power from Niagara down to Dunkirk and into Pennsylvania.

An addendum to the National Grid study also evaluated the impact of WNY coal unit retirements on the existing transmission system. The study further confirmed that generation at Dunkirk is needed to maintain voltage and reliability in the Southwest NY region:

“The following analysis shows that loss of the output of any set of machines would result in increased flows on the 230 kV and 115 kV circuits heading south, especially on the lines near Niagara. It was also found that the loss of the real and reactive output of these machines would result in the 230 kV voltages declining. It is believed that system reinforcements would be necessary to restore the voltages to an acceptable value.²”

The heart of the issue is that the Dunkirk Station is the only truly large scale generation in the area that can provide significant support at both the 230 kV and 115 kV levels for load and ancillary system needs on the transmission loop around the Southwest tier of New York (Figure 3). National Grid’s recent letter to the Department of Public Service confirms the critical role that Dunkirk serves stating that

“the proposed mothballing of Dunkirk units 1-4 will result in significant detrimental impacts to transmission reliability in western NY.³”

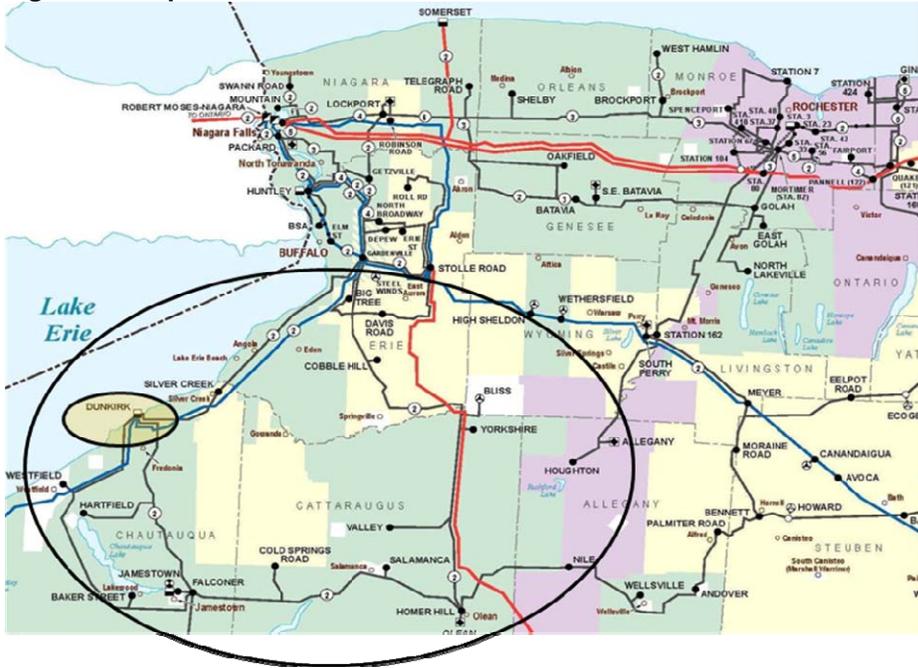
¹ Western Division Area Review: Part 1 – Needs Assessment; National Grid, Aug. 24, 2011 (See Appendix A)

² Addendum to Western Div. Area Review – Review of Potential EPA Impacts; National Grid, Oct. 31, 2011; pg 1 (See Appendix B)

³ National Grid letter to New York Dept of Public Service; Response to March 21, 2012 letter regarding mothballing of NRG Energy’s Dunkirk generation; March 30, 2012 (See Appendix C)

While there are other smaller generators at Jamestown and Olean, these are smaller, older coal units that may be at risk of retirement and the largest is a 90 MW combined cycle that is already approximately 20 years old. The largest new generation additions in the area are from intermittent wind resources with 135 MW coming online in recent years and another 472 MW proposed in the NYISO interconnection queue.

Figure 3 - Map of New York's Southwest Tier



Adding gas co-firing as a bridge to a full CCGT repowering at Dunkirk would mitigate system reliability concerns and eliminate the potential of costly transmission upgrades. Ultimately the construction of a large-scale combined cycle would provide reliable generation support to the region for the long-term and be a highly efficient and economic source of supply that could access potential upgrades on the “Energy Highway.”

3.2. Wind Firming Capabilities

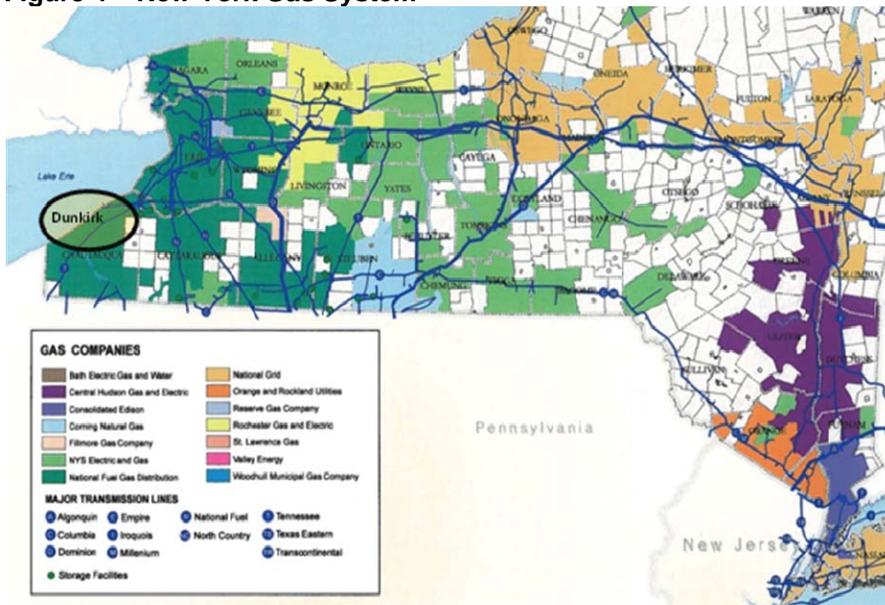
The recent New York State Transmission Assessment and Reliability Study (“STARS”) modeled wind generation in New York, showing it growing from 1300 MW today to 6000 MW, much of which is targeted for WNY. The intermittent nature of wind generation creates unpredictable generating patterns that create problems for grid operators. The proposed Project location in Zone A will provide wind-firming capabilities to help NYISO operators stabilize grid supply. New CCGT technology is capable of 10 minute response and flexible load following capabilities to respond to changing grid conditions.

3.3. Gas System Diversity

While a conversion to gas and ultimately a repowering of Dunkirk to a CCGT would tend to increase the state’s overall reliance on gas, it is important to consider that its location and ability to access interstate gas pipelines provides a level of diversity from a gas system constraint point of view. Most of the new gas fired resources or conversions of existing units have been concentrated in eastern and southeastern New York. This has increased the demand on the system in that region and tends to make interruptions in gas supply into the constrained region a bigger concern for the electric generation sector. By promoting a gas conversion of generation in western New York, the take-off point from the gas system is diversified while continuing to

maximize the use of electric system infrastructure that is already in place to serve the existing generation resource.

Figure 4 – New York Gas System



As Figure 4 demonstrates, there is in fact a significant amount of gas system infrastructure in WNY, including built-in redundancy with ties among different operator's systems. The Project is within approximately 6 miles of two pipeline systems, Tennessee and National Fuel that could potentially supply the converted and repowered units.

3.4. Environmental Benefits

The co-firing portion of the Project modifies the Dunkirk Station's existing coal boilers, enabling them to use either natural gas or coal as a primary fuel source. Although the existing coal units have state-of-the-art emissions controls, natural gas firing would provide significant emissions reductions, most notably in particulate matter, mercury, sulfur dioxide and nitrogen oxides.

The CCGT portion of the Project would replace the existing coal units with a new, fully-controlled combined cycle facility with the lowest achievable emission rates for this technology and would eliminate the need to landfill coal combustion wastes. The repowered Dunkirk units will significantly reduce annual emissions levels of all major emissions.

3.5. Community Benefits

The community will benefit from job growth and long-term capital investment in the Project. Construction of the CCGT units will take approximately three years and will provide about 500 construction jobs on-site. The operations phase of the CCGT units will require over 24 full-time staff.

Investment in a CCGT will also provide significant tax benefits to the City of Dunkirk and Chautauqua County. NRG is the largest single tax payer in Chautauqua County today. Additional investment in the community would ensure long-term operations at the Dunkirk site and more security for the town in future tax revenue streams.

4. Financial

4.1. Proposed Contract Summary

Contract	Tolling Agreement
Counterparty	As determined by State process
Products Sold	All rights to capacity, energy, and ancillary services produced at the facility
Delivery Point Power	National Grid 115kV (Dunkirk substation) National Grid 230 kV (Dunkirk substation)
Delivery of Natural Gas	Buyer is responsible for all the delivery of natural gas to operate the facility
COD	June 2017
Project Term	20 Years
Capacity (MW)	450 MW to 600 MW (dependent on CCGT configuration)
Full Load Heat Rate (Btu/kWh)	~7,000 btu/kwh

4.2. Private Public Partnership

NRG proposes several flexible ownership options. As a sub-option to the tolling proposal, NRG is willing to consider a Build-Own-Transfer (“BOT”) mechanism for the Project. Under this proposal, NRG will build the CCGT unit and transfer all or a portion of the unit to the counterparty at the commencement of commercial operations for a lump-sum, fixed price. NRG will supply operating and maintenance services through an operating agreement, and supply the land through a long-term lease. Using a state agency as the counterparty would allow the Project to take advantage of New York’s tax-exempt status and low cost of capital to help reduce costs to customers.

4.3. Incentives and Options to Reduce Pricing and Price Uncertainty

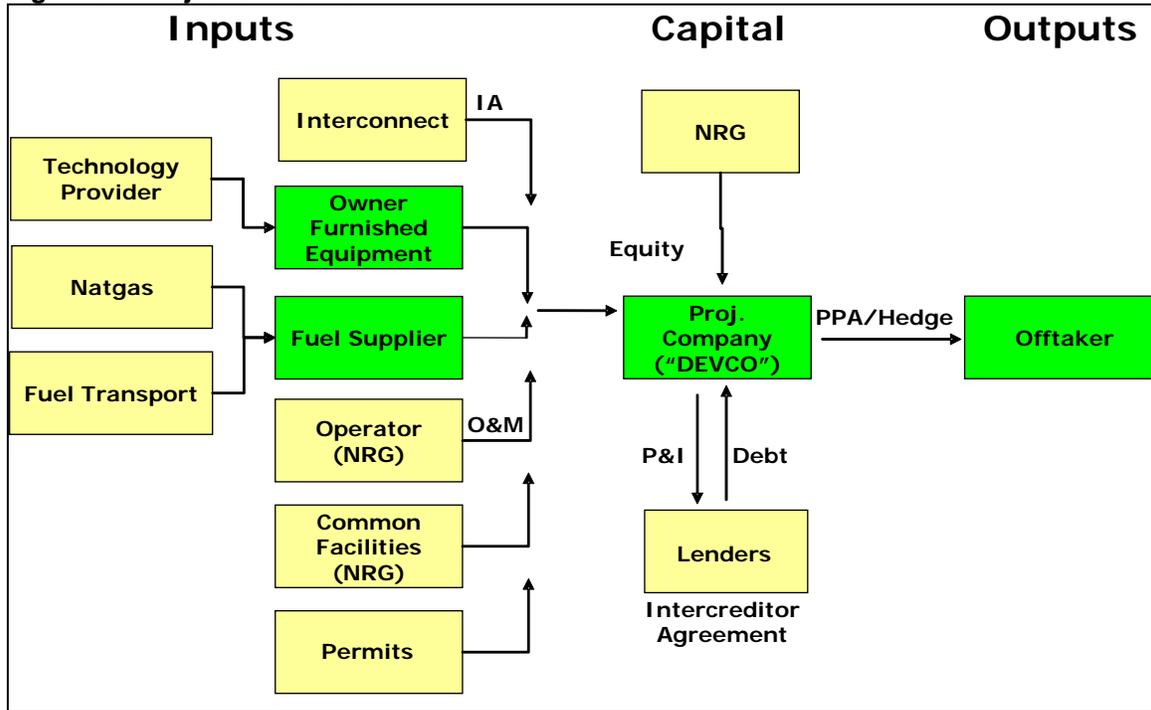
The Project will seek available incentives as a way to help reduce the overall costs of the project to customers. NRG has a long-standing relationship with local officials and has successfully worked to secure a long-term Payment in Lieu of Taxes agreement with Chautauqua County for the existing units. NRG will work with local officials to identify similar opportunities to provide stable, certain tax payments to all parties.

The project would also seek out any available tax incentives with the state of New York to reduce the capital and ongoing costs of running the facility. Access to State bonding capability would provide advantageous interest rates during the construction and operations phase of the project, which would provide ratepayers significant cost benefits.

4.4. Project Financing Plan

A traditional project financing structure will be used to finance the Project (Figure 5). This structure will incent potential financing sources, as well as other project participants (such as EPC contractors), by providing flexibility and a structure that mitigates commercial risks by allocating them to the parties best able to manage them.

Figure 5 – Project Structure



4.4.1. Project Funding

Based on discussions with various commercial and investment banks, NRG anticipates the Project will be funded with a combination of debt and equity throughout its life. Although NRG can supply 100% of the required equity, NRG may include additional equity partners, particularly in situations when such potential partners, by virtue of their core businesses and expertise, are in a position to contribute additional value to the Project. If third parties subscribe for equity in the Project, NRG would continue to retain a substantial ownership interest, reflecting its strong commitment to the Project. Sources of NRG equity will include its current cash balances as well as future cash flows generated by its existing operations. As mentioned above, NRG currently has available liquidity of approximately \$2.3 billion, including more than \$1.2 billion in cash and \$1.1 billion in letter of credit capacity.

Figure 5 indicates the project components that must be executed or be in an advanced stage prior to successfully raising third-party financing. These components include an executed power purchase agreement or hedge with a creditworthy off-taker, as well as interconnection arrangements. To date, initial development and engineering activities for the Project have been funded by NRG corporate funds and no project debt has been used or assumed.

NRG understands the magnitude of financing required for this undertaking and has the financial resources available to implement the Project on budget and on schedule. Since January 1, 2011, NRG has successfully financed 1,600 MW of development projects on a non-recourse basis, resulting in \$4.9 billion of project debt financing, including letter of credit facilities, with competitive terms.

Debt financing may include several tranches of debt with various terms and maturities syndicated among a broad range of domestic and international banks and financial institutions. NRG routinely canvasses the lending markets to determine which institutions would be receptive to participating in such a loan facility. Several have demonstrated their capability and willingness to serve in a lead role in a project finance syndication. Once the Project development has advanced, NRG will discuss with potential lenders the financial model for the Project and the key assumptions and conditions under which the planned Project financing could take place. In parallel with negotiation of a financeable off-take contract, NRG will seek formal proposals from the lending community for a project finance package.

4.4.2. Proposed Project Loan Terms

The following table summarizes the key financing terms which NRG believes, based on its recent experience successfully obtaining project financing and its ongoing consultations with leading financial institutions, could be available to the project, assuming commencement of financing negotiations in 2012 following execution of a long-term, financeable contract and other material project contracts. These terms are generally consistent with those offered for any non-recourse energy financing in the United States.

Table 2 – Financing Structure

	<i>Construction and Letter of Credit; First Lien</i>	<i>Take-Out Financing</i>
Lenders	Commercial banks and financial institutions	Commercial banks, Institutional investors and/or bond market
Prevailing Interest Rate	LIBOR + 225 – 275, with step-ups	LIBOR + 225 – 275, with step-ups; T + 350 – 400
Ratings (Moody's/S&P)	Ba2/BB	Ba2/BB
Loan Term	Dependent on PPA term	Dependent on PPA term

4.5. Evidence of Sponsor Creditworthiness

As of year-end 2011, NRG owns nearly 26,000 MW of net generation assets worldwide, representing a diversified mix of fuel source (including 545 MW of renewable sources), generation technology, output configuration, and geographical location. The company has an additional 1,410 MW under construction. In addition to its wholesale generation business, NRG is a participant in the retail business in Texas and the Northeast, with over 57 TWh sold in 2011. This portfolio of assets and businesses generates significant cash flow, as indicated in NRG's financial statements and guidance.

NRG is a financially sound company with more than \$26.7 billion in assets and unaudited liquidity in excess of \$2.3 billion, including \$1.2 billion in cash.

Given NRG's corporate strength and strategic interest in the success of the proposed projects, as well as its proven ability to raise meaningful amounts of capital in the equity and debt markets, NRG has the capacity to ensure the successful financing of the preferred project throughout the development, construction and operating life of the Project.

5. Permitting and Approval Process

5.1. Environmental Permits

The co-firing portion of the Project will incorporate natural gas firing capabilities into the existing coal boilers. The Title V air permit will need to be amended with the New York State Department of Environmental Conservation (“DEC”) to include natural gas firing as an eligible fuel source to the Dunkirk units. NRG expects that the addition of natural gas will significantly reduce the emissions of PM, SO₂, NO_x, carbon dioxide (“CO₂”) and mercury that are emitted from coal operations today. As a result, no significant hurdles to the permit modification are expected and the amended permit can be completed within six to 12 months.

The CCGT portion of the Project will be subject to the requirements of the new Article 10 law, which was designed to establish procedures and timelines to obtain all required permits for new electric generating units. Article 10 establishes the New York State Board on Electric Generation Siting and the Environment (the “Siting Board”) as the committee responsible for review and approval of all permitting applications.

The expected permitting timeline proposed by the Siting Board takes approximately 18 months from the initial scoping meeting to the full permit award. Given the significant emissions reductions from repowering, the Project may qualify for a fast track option, which could reduce the total time required to 12 months. Environmental factors will be considered in the project design and the NRG team will incorporate several controls and practices that will mitigate impacts from construction and operation.

5.2 Electrical Interconnections

NRG has an existing interconnection agreement with the local transmission owner, National Grid, for the current Dunkirk 1, 2, 3, and 4 generators. All of the units are interconnected to the directly adjacent National Grid 115/230 kV substation, with two smaller units on the 115 kV voltage level and the two larger units at the 230 kV (Figure 6).

The conversion to natural gas co-firing of the existing units will not require a new interconnection study because the conversion will not alter the electrical characteristics of the units. The repowered facility, however, would be subject to the NYISO interconnection study process and would require one or possibly two queue positions depending on whether the new unit would connect at a single voltage level or both levels. NRG believes that the study process could be expedited because the Project would replace NRG’s existing units at the site and the point-of-interconnection already exists. Accordingly, the interconnection process is not expected to be a limiting factor and NRG would file an interconnection request with the NYISO sufficiently in advance to meet the proposed 2017 commercial operation date.

Because the Project would use the existing Dunkirk interconnections, the Project will also use the existing electric system infrastructure thereby minimizing costs and the construction time required to achieve commercial operation. Additionally, NRG holds a total of 593.9 MW of grandfathered

Figure 6 - On Site Interconnections



capacity deliverability rights at this location which would be transferred to the repowered unit. This transfer will ensure that it will be fully eligible to participate in the NYISO capacity market and will not be subject to costly deliverability upgrades, which further help to reduce the projects costs and benefits to consumers.

5.3 Public Outreach and Approval

Consistent with NRG corporate principles and the requirements of the Article 10 process, NRG's plan for involving the Dunkirk expansion respects the history and diversity of each community.

NRG is aware of the impacts the proposed project will have within the greater community and recognizes how critical community awareness, involvement and support are in both the development and continued operation of its facilities. NRG is committed to working with its surrounding communities to raise awareness and address issues of concern.

NRG has met and conferred with representatives from a cross-section of stakeholders including local, county, State elected officials, town and county planning groups, and business organizations. The groups below have all been briefed on the Project. Appendices D & E (attached) are letters of support for the Dunkirk Project. To date, NRG has received favorable feedback from groups that it has interacted with, including, but not limited to:

Dunkirk:

- State Senator Cathy Young
- State Assemblyman Andrew Goodell
- Chautauqua County Executive Gregory Edwards
- Dunkirk Mayor Anthony Dolce
- IBEW Local 97

NRG strives to work with local businesses, agencies and organizations working to form alliances and partnerships. These partnerships will allow the project to fully realize local economic opportunities and increase the magnitude of funds which will remain in the community. NRG will continue to solicit input from key stakeholders at the state and local level for each of the proposed projects.

SECTION II

NRG Huntley

Gas Co-Firing Conversion

1. Huntley Project Overview

NRG is offering to build natural gas infrastructure to its existing Huntley Station in Tonawanda, New York to provide it with dual fuel and co-firing capabilities (the "Huntley Project"). Multiple interstate gas pipelines cross within two miles of the Huntley Station. Modifying Huntley as a dual fuel unit would be a cost-effective way to diversify the Western New York generating portfolio and support the reliability of the regional electrical system.

The Huntley Station is located three miles north of Buffalo on a 120-acre site on the east shore of the Niagara River. Although some of the buildings date to 1916 when the "River Station" began commercial service, the plant has been continually modernized and is comprises two units with a total nominal rating of 380 MW net.

Providing dual fuel capabilities at Huntley accomplish a number of the stated objectives of the New York Energy Highway Request for Information:

- Assure System Reliability – Recent studies determined that reliability needs exist in western New York ("WNY") if any of the existing coal units were to retire. Enabling gas firing allows coal units to optimize dispatch using the lowest cost fuel, helping system-critical units support the transmission system
- Improved Emissions Profile – Natural gas firing at Huntley will displace a portion of coal-fired generation hours, reducing total emissions for the region.
- Protects Jobs for New Yorkers – Dual fuel capability improves dispatch optimization and reduces coal units' reliance on capacity markets in low gas environments. Natural gas-firing capability hedges existing generators in a low gas environment and helps to preserve economic viability of the plants, helping preserve energy sector jobs in the long run.

NRG can achieve the Huntley Project by summer 2013. Modifications to the Title V air permit are required in order to include natural gas as an accepted fuel source and would take four to six months to complete. Construction of gas laterals from nearby interstate gas lines would take approximately six months. The addition of gas nozzles to existing boilers could be completed as a normal scheduled maintenance. Total capital costs for adding dual fuel firing capability to Huntley would cost approximately \$10-\$15 million, or \$25-\$40/kW.

2. Project Justification

The Huntley Project provides many benefits to local residents, New York ratepayers, the environment, and grid operators. Adding dual-fuel capability to existing units enhances the reliability of the grid in WNY, provides emissions benefits to local residents, and retains jobs in WNY.

Today's low-price gas environment has eroded both the dispatch factors and the gross margins of coal plants to untenable levels, leaving these units to rely largely on capacity payments to cover fixed costs. Coal plants are labor intensive facilities, often employing three to five times more employees than a comparably-sized gas facility. New York's rest of state capacity prices are not enough to sustain the high fixed costs of coal facilities. This economic reality has led to a number of other western New York coal plants to file for mothball status, including NRG's Dunkirk Station.

Adding the ability to fire on natural gas at Huntley and Dunkirk allows those units to optimize their economic competitiveness in the market by allowing them to bid the lower cost fuel – whether it is coal or natural gas. Dual fuel capability also provides additional protection by hedging coal units against any further drops in gas prices. Further decreases in gas prices would continue to erode the already diminished operating hours of coal units. By adding gas firing capability, the units can provide the lowest cost power to ratepayers, maximize their dispatch, help cover fixed costs through market mechanisms, and improve the long term viability of these system critical units.

2.1. Assures Western New York System Reliability

A recent study by National Grid evaluated the reliability of its entire 115 kV system, and identified potential reliability risks associated with unit retirements. As discussed in Part I on this proposal, the study identified both the Dunkirk and Huntley Stations as necessary for voltage support in the Southwest New York area. Without voltage support from these units, the system has difficulty supporting transfer of power to and from Niagara down to Dunkirk and Pennsylvania.

“The following analysis shows that loss of the output of any set of machines would result in increased flows on the 230 kV and 115 kV circuits heading south, especially on the lines near Niagara. It was also found that the loss of the real and reactive output of these machines would result in the 230 kV voltages declining. It is believed that system reinforcements would be necessary to restore the voltages to an acceptable value.⁴”

If the western New York coal units were to retire, the only other alternative to address system reliability would be costly transmission upgrades to the 115 kV and 230 kV systems. Transmission solutions could take as long as five years to permit and build, and based on experience, completion of major new transmission lines could take longer than that.

Building dual-fuel contingency into the existing asset base is a less expensive option and can be placed in service by Summer 2013. Maintaining the dual-fuel capability with coal firing has the added benefit of enhancing overall system reliability and helping to insulate New York ratepayers from the potential for interruptions in fuel supply or future price spikes.

2.2. Gas System Diversity

While a conversion to gas co-firing at Huntley would tend to increase the state’s overall reliance on natural gas, it is important to consider that its location and access to interstate gas pipelines provides a level of diversity from a gas system constraint point of view. Most of the new gas-fired resources or conversions of existing units have been concentrated in eastern and southeastern New York. This has increased the demand on the system in that region and tends to make interruptions in gas supply into the constrained region a more important concern for the electric generation sector.

A significant amount of gas system infrastructure in western New York has built-in redundancy with ties among different operator’s systems. The Huntley Project is within 2 miles of several pipeline systems that could potentially supply the converted units. The addition of gas firing to the Huntley units will not create any natural gas supply constraints for the region.

2.3. Environmental Benefits

Although the Huntley Station’s existing coal units have state-of-the-art emissions controls, natural gas is an inherently cleaner burning fuel. Any displacement of coal-generated megawatt hours

⁴ Addendum to Western Div. Area Review – Review of Potential EPA Impacts; National Grid; Oct. 31, 2011; pg 1 (See Appendix B)

with natural gas would provide significant emissions reductions, most notably in particulate matter, mercury, sulfur dioxide, nitrogen oxides and greenhouse gas emissions.

2.4. Jobs and Community Benefits

Improving the economic viability of the Huntley station will retain the jobs of the existing 49 full time employees at the Huntley site. Construction of the pipeline and boiler modifications would also provide additional construction jobs on a short term basis (less than three months).

Improving the viability of existing generation can assist in sustaining the property tax base of the host community. Huntley is among the largest tax payers in Tonawanda, and Erie County. Improving the profitability of the plant directly affects Tonawanda's ability to provide critical services to local residents.

3. Financial

The Huntley Project would be priced and structured on an open book format with respect to cost and schedule. Based on recent estimates, the total project would cost between \$10 and \$15 million to complete. NRG will provide full EPC management for the project and will work with the state to develop a mutually agreed-upon project budget for the gas lateral and boiler modifications. NRG will manage construction of the project on an open-book basis, and is willing to accept schedule and budget risk. NRG will also be responsible for the ongoing maintenance of the dual fuel capability and will guarantee its availability following construction

4. Permitting and Approval Process

Incorporating natural gas co-firing capabilities into the existing coal boilers will require an amendment to the Title V air permit by the DEC. The Title V amendment will seek to include natural gas as an eligible fuel source to the Huntley units. NRG expects the addition of natural gas will significantly reduce the emissions of PM, SO₂, NO_x, CO₂ and mercury that are emitted from coal operations today. As a result, no significant hurdles to the permit modification are expected and should be completed within four to six months.