



September 20, 2018

VIA HAND DELIVERY

The Honorable Derek S. Green
Chairman, Philadelphia Gas Commission
One Parkway Building
1515 Arch Street
9th Floor
Philadelphia, PA 19102

Re: **Approval of PGW P3 LNG Project**

Dear Chairman Green:

The Philadelphia Gas Works and Philadelphia Facilities Management Corporation hereby submit for consideration and approval by the Philadelphia Gas Commission the attached

Petition to the Philadelphia Gas Commission for Approval and Recommendation for Approval of Certain Transactions and Contracts for the Purchase, Storage, Distribution and/or Transmission of Natural and Other Gas, and Also Certain Transactions and Contracts Respecting Real Property Owned by the City of Philadelphia and Operated by the Philadelphia Gas Works

(the "Petition").

The following documents are attached as exhibits to the Petition in support of the current request:

- Summary of Key Terms (Petition, Exhibit "A"), including an Economic Opportunity Plan approved by the Office of Economic Opportunity (Exhibit B of the Summary of Key Terms);
- Proposed City Council Ordinance (Petition, Exhibit "B"); and
- Resolution of the Board of Directors of the Philadelphia Facilities Management Corporation (Petition, Exhibit "C").

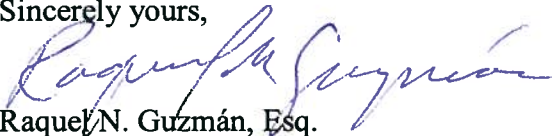
PGW respectfully requests the Commission's prompt consideration and approval of the foregoing Petition and its favorable recommendation to City Council. PGW is available to

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present direct witness testimony in support of this request before the Gas Commission.

Thank you for your consideration.

Sincerely yours,



Raquel N. Guzmán, Esq.
S.V.P. Legal & General Counsel
Philadelphia Gas Works

Attachments

cc: All Commissioners
Gemela N. McClendon, Esq., Executive Director – Philadelphia Gas Commission
Robert Ballenger, Esq., Public Advocate
Marcel S. Pratt, Esq., City Solicitor
Daniel Cantu-Hertzler, Esq., Senior Attorney
Linda Medley, Esq., Counsel to the Philadelphia Gas Commission
Craig E. White, CEO - PGW
Douglas A. Moser, COO - PGW
Joseph F. Golden, Jr., CFO - PGW
Raymond M. Snyder, S.V.P. - PGW

Respectfully submitted,



Raquel N. Guzman, Esq.
Philadelphia Gas Works

Dated: September 20, 2018

cc: All Commissioners
Gemela N. McClendon, Esq., Executive Director – Philadelphia Gas Commission
Robert Ballenger, Esq., Public Advocate
Marcel S. Pratt, Esq., City Solicitor
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Craig E. White, CEO - PGW
Douglas A. Moser, COO - PGW
Joseph F. Golden, Jr., CFO - PGW
Raymond M. Snyder, S.V.P. - PGW

Exhibit "A"
Summary of Key Terms

**SUMMARY OF KEY TERMS OF
PROPOSED AGREEMENTS AMONG
THE CITY OF PHILADELPHIA, THE PHILADELPHIA GAS WORKS BY
PHILADELPHIA FACILITIES MANAGEMENT CORPORATION,
THE PHILADELPHIA MUNICIPAL AUTHORITY, AND
PASSYUNK ENERGY CENTER LLC (AND OTHER RELATED PARTIES)
FOR THE DEVELOPMENT, CONSTRUCTION AND FINANCING OF CERTAIN FACILITIES
AT PGW'S PASSYUNK PLANT AND
THE PURCHASE AND SALE OF CERTAIN NATURAL GAS PRODUCTS AND SERVICES**

<p><i>Parties / Participants:</i></p>	<ul style="list-style-type: none"> • The City of Philadelphia (the “City”) • The Philadelphia Gas Works by Philadelphia Facilities Management Corporation (“PGW”) (all references herein to “PGW” or “Philadelphia Gas Works” shall mean “Philadelphia Gas Works by Philadelphia Facilities Management Corporation”) • Philadelphia Municipal Authority (“PMA”) • Liberty Energy Trust GP, LLC (“Proposer”) • Passyunk Energy Center LLC, a special purpose entity (“SPE”) formed by Proposer (“Developer” or “PEC”) • Northstar Industries LLC, or other qualified Engineering, Procurement and Construction (“EPC”) contractor selected by the Developer, subject to PMA’s approval (“Contractor”) • An investment bank to be determined by the Developer depending on market conditions and offered terms (“Lender”)
<p><i>Background:</i></p>	<p>PGW operates a natural gas receipt, storage, and distribution facility owned by the City located at 3100 Passyunk Avenue in Philadelphia, Pennsylvania known as the Passyunk Plant (“Passyunk Plant”).</p> <p>In April, 2016, PGW issued “Request for Proposals No. 30552” (the “RFP”) seeking, among other things, a “public-private partnership” type arrangement with an entity to further liquefied natural gas (“LNG”) asset optimization goals at the Passyunk and Richmond Plants and to provide Asset Management Services to PGW.</p> <p>Proposer submitted a proposal to PGW in response to the RFP, setting forth potential liquefaction development and utilization plans for the Passyunk and Richmond Plant LNG facilities, and suggesting possible commercial opportunities for PGW and Proposer with respect to the development, sale and purchase of LNG liquefaction and related services, Asset Management and other gas services and products.</p> <p>The Parties now desire to enter into various agreements in order to achieve and memorialize the following aims, upon certain terms and conditions:</p>
	<ul style="list-style-type: none"> • The Developer’s financing, design, and construction, of a new natural gas pretreatment facility and LNG liquefier as well as new unloading facilities and other ancillary facilities, all to become integrated into the

	<p>Passyunk Plant to be operated and maintained by PGW.</p> <ul style="list-style-type: none"> • PEC’s purchase of intra-city on-system (PGW) transportation, liquefaction, storage, loading/unloading and vaporization services from PGW. • PMA/PGW/PEC’s option to call on, via purchase or exchange of like volumes of natural gas, certain quantities of LNG from the other party. • PEC’s election to deliver like volumes of gas into PGW’s system for PGW through vaporization and exchange services. <p>This Term Sheet sets forth the principal terms and conditions to be reflected in the definitive agreements (the “Agreements”), which will set forth the commitments, conditions and obligations of the City, PGW, PMA, Developer/PEC or its affiliates, and other parties relating to the project broadly described above (the “Project”).</p>																				
<p>Agreements:</p>	<p>It is expected that the following Agreements will be executed by the City, PGW, PMA, Developer, Contractor, PEC and Lender(s) as set forth below.</p> <table border="1" data-bbox="456 810 1427 1381"> <thead> <tr> <th data-bbox="456 810 1000 856">Project Agreement</th> <th data-bbox="1000 810 1427 856">Parties</th> </tr> </thead> <tbody> <tr> <td data-bbox="456 856 1000 909">1. License Agreement</td> <td data-bbox="1000 856 1427 909">The City/PGW and PMA</td> </tr> <tr> <td data-bbox="456 909 1000 995">2. Turnkey Development and Lease Agreement</td> <td data-bbox="1000 909 1427 995">PMA and Developer</td> </tr> <tr> <td data-bbox="456 995 1000 1047">3. Loan Documentation</td> <td data-bbox="1000 995 1427 1047">Developer and Lender(s)</td> </tr> <tr> <td data-bbox="456 1047 1000 1134">4. Facility Sublease and Maintenance Agreement</td> <td data-bbox="1000 1047 1427 1134">PMA and The City/PGW</td> </tr> <tr> <td data-bbox="456 1134 1000 1186">5. Construction Agreement</td> <td data-bbox="1000 1134 1427 1186">Developer and Contractor</td> </tr> <tr> <td data-bbox="456 1186 1000 1239">6. LNG Services Agreement</td> <td data-bbox="1000 1186 1427 1239">PGW and PEC</td> </tr> <tr> <td data-bbox="456 1239 1000 1291">7. LNG Call Option</td> <td data-bbox="1000 1239 1427 1291">PMA and PEC</td> </tr> <tr> <td data-bbox="456 1291 1000 1344">8. LNG Call Sub-Option</td> <td data-bbox="1000 1291 1427 1344">PMA and PGW</td> </tr> <tr> <td data-bbox="456 1344 1000 1381">9. Intergovernmental Agreement</td> <td data-bbox="1000 1344 1427 1381">PGW, PMA, and the City</td> </tr> </tbody> </table> <p>The Project documents are expected to be executed at closing, which is expected to occur not later than the sixth month anniversary of the effective date of the Ordinance approving the transactions.</p> <p>Other customary collateral documentation for a municipal project of this type (e.g., collateral assignment agreements, security agreements, inter-creditor agreements) is also expected to be executed upon closing.</p>	Project Agreement	Parties	1. License Agreement	The City/PGW and PMA	2. Turnkey Development and Lease Agreement	PMA and Developer	3. Loan Documentation	Developer and Lender(s)	4. Facility Sublease and Maintenance Agreement	PMA and The City/PGW	5. Construction Agreement	Developer and Contractor	6. LNG Services Agreement	PGW and PEC	7. LNG Call Option	PMA and PEC	8. LNG Call Sub-Option	PMA and PGW	9. Intergovernmental Agreement	PGW, PMA, and the City
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<p>Agreement – License Agreement</p>	<p>Parties: The City (for PGW) and PMA</p> <p>Term: Same as Turnkey Lease</p> <p>Key Terms:</p> <ul style="list-style-type: none"> • The City/PGW will grant PMA a site license (the “License Agreement”) for the purpose of PMA causing and allowing the construction and 																				

	<p>development of the New Facilities (as defined below).</p> <ul style="list-style-type: none"> • And further, the License Agreement will grant PMA a license (for itself and its contractors) for ingress, egress and occupancy of certain areas at the Passyunk Plant during the Term so that PMA shall cause the New Facilities to be designed and built, and to provide construction staging.
<p><i>Agreement – Turnkey Development and Lease Agreement (“Turnkey Lease”)</i></p>	<p>Parties: PMA and Developer</p> <p>Term: Construction and Performance Testing Period (currently targeted for November 2019 but not to exceed 27 months from execution of the Turnkey Lease) plus an Operating Period of 25 years commencing upon acceptance of the New Facilities by PMA (the construction, testing and operating periods, collectively, the “Term”). Expected to commence no later than six months after the effective date of the Ordinance approving the transactions.</p> <p>Project Description:</p> <ul style="list-style-type: none"> • Developer will design-build-finance at its sole cost the following new facilities at the Passyunk Plant (the “New Facilities”): <ul style="list-style-type: none"> • a new liquefaction facility capable of producing not less than 120,000 gallons of LNG per day as further defined in the performance test procedures, and operating continuously under all historic and anticipated weather conditions, using feed gas of historic and anticipated composition, and with normal utility (including nitrogen) consumption, all as more fully defined in the performance test procedures to be approved by the parties; • a new natural gas pretreatment facility; • a truck loading/unloading area and weighing station; and • an LNG Truck Loading Pump to be installed in the existing tank dike area, <p>all as set forth in greater detail on Exhibit C.</p> <p>The New Facilities must meet the daily production requirement at least 347 days per year, including during historical and expected summer and winter operating conditions, during the Term (the “Acceptance Standard”).</p> <p>Further, as part of the New Facilities, Developer will design-build-finance at its sole cost interconnection facilities (identified on Exhibit C in the section marked the “Interconnection Facilities”) in order to connect the New Facilities to the existing Passyunk Plant facilities.</p> <ul style="list-style-type: none"> • All construction shall be in accordance with a preliminary engineering and design study prepared by Developer and the Contractor, and approved by PMA (acting through PGW) (the “Project Design Study”) pursuant to an Engineering, Procurement and Construction Agreement (the “Construction Agreement”) between Developer and Contractor with terms and conditions customary in the industry with respect to the construction of similar projects. All final design and construction is subject to the approval of PMA (acting through PGW).

Developer Responsibilities:

- Developer, at its sole cost, shall provide all financing, engineering, procurement, construction permitting, fabrication, transportation, construction, installation, commissioning, start-up, testing and related services required to complete the New Facilities in a manner consistent with the Project Design Study and the Construction Agreement, including any additional modifications or requirements necessary to achieve the Acceptance Standard.
- Developer will provide PMA with a plant warranty, including for installation, parts and labor, applicable to the New Facilities constructed by Developer valid for three years from PMA's acceptance of the New Facilities.
- After successful performance testing and acceptance of the New Facilities by PMA, the Developer will cause the new liquefier to be fully charged with all consumables (e.g., nitrogen, lube-oil, glycol) at the beginning of the Operations Period at no additional cost to PMA.
- Developer will be responsible for obtaining all relevant construction permits and approvals.
- Developer, at its sole cost, will provide and pay for capital spare parts during the Term which shall be stored on site (e.g., companders) or available on a "just-in-time" basis, and replaced immediately upon use. A list of potential spare parts is set forth on Exhibit D.
- Developer, at its sole cost, and subject to specifications provided by PMA, will perform or cause to be performed any necessary capital replacements (greater than \$5,000) requested by PMA during the Term. For purposes of this requirement, a capital replacement shall be considered "necessary" if, in line with prudent utility practice, it is needed in the ensuing two years of the Term for safety, regulatory compliance or continued reliable operation of the New Facilities. Developer and PMA will consult with one another to develop work schedules and ordering times so that capital replacements are undertaken timely but in no event will the Developer be obligated to purchase capital replacements more than one year in advance, unless required for long-lead ordered items. If Developer does not believe a capital replacement as requested by PMA is "necessary", then PMA may elevate such decision to a steering committee composed of executives from both Developer and PMA (or its designee) to determine the necessity for the requested capital replacement. If found to be necessary by the steering committee, then the capital replacement shall be deemed approved and shall be performed by Developer. If not, then PMA may elevate such decision to a neutral body selected jointly by the parties to determine the necessity for the requested capital replacement. If found to be necessary by the neutral body, then the capital replacement shall be deemed approved and shall be performed by Developer. The parties shall endeavor to meet monthly to plan in advance for any necessary capital replacements; provided, that in the event that necessary capital replacements are immediately needed, Developer's obligation to

perform and pay for same shall not be abated due to a failure of advance notice.

- Developer and PMA may elect to undertake capital additions (greater than \$5,000) upon mutual agreement. The parties will endeavor to meet monthly to discuss and plan for any desired capital additions that are mutually agreed.
- During the Term, Developer shall continue to provide engineering support to PMA related to the New Facilities at no cost, if requested by PMA or its designee.
- Developer shall construct the New Facilities in compliance with all applicable laws, including the requirements of the Pennsylvania Steel Products Procurement Act.

PMA Responsibilities:

- PMA (acting through PGW) will perform all tie-in work at Developer's sole cost. Developer will reimburse PMA on a net-30 day basis when invoiced by PMA (acting through PGW).
- PMA shall cause PGW to cooperate with Developer during performance testing to provide access to PGW's existing facilities at the Passyunk Plant (subject to PGW standard operating requirements).
- PMA (acting through PGW) will be responsible for obtaining permits and approvals that can be obtained only by the operator of the Passyunk Plant and owner of the underlying parcel.
- PMA (acting through PGW) will be responsible for performing all maintenance and repair of the New Facilities during the Term (subject to payment for same by PEC as "Incremental Costs" under the LNG Services Agreement fee schedule).

Milestones:

- Construction Period: construction of the New Facilities will be completed by Developer within 24 months of the effective date of the Turnkey Lease, with the following additional milestones:
 - Ordering long lead equipment: not to exceed 6 months after effective date of the Turnkey Lease;
 - Process and Instrumentation Diagrams and Material Balance Sheet Completion: not to exceed 3 months after the effective date of the Turnkey Lease;
 - Design Documents/Specification Completion: not to exceed 3 months after the effective date of the Turnkey Lease.; and
 - Beginning of on-site construction: not to exceed 6 months after the effective date of the Turnkey Lease.
- Performance Testing Period: After the Construction Period ends, the Developer may take up to 3 months to test the New Facilities. Performance Testing shall be in accordance with the parameters and

procedures agreed to by PMA (by PGW), the Developer, and Contractor.

Costs:

- All costs to design, construct, commission, and test the New Facilities will be borne by Developer, including certain reimbursement costs associated with PMA's tie-ins (by PGW) of the New Facilities to the existing facilities and the provision of spare parts as set forth above and on Exhibit D.
- In constructing the New Facilities, Developer may not borrow more than \$30MM. Developer must reduce principal indebtedness during the Term to \$0 in accordance with a level debt service (decreasing principal) schedule. Developer may refinance its indebtedness over the Term, provided debt service (P&I) and principal declines as required and does not increase at any time.
- Rent payable to Developer after acceptance of the New Facilities under the Turnkey Lease will be a nominal amount (\$10 per annum). There shall be no other payments made to Developer for its development of or PMA or PGW's use of the New Facilities.
- For all volumes transported, liquefied, stored, trucked and/or vaporized during performance testing, Developer shall pay to PMA fees equivalent to those payable to PGW set forth on Exhibit A-2 of the LNG Services Agreement.
- At PMA's election, at the end of the Term, Developer will (a) grant and PMA will take ownership of the New Facilities for \$1, or (b) remove the New Facilities from the Passyunk Plant at Developer's sole cost, and restore the premises to the condition existing prior to the construction of the New Facilities.

Site Conditions/Environmental:

- Developer, in consultation with PMA, will manage and pay for disposal of any hazardous substances that are related to the Project that must be removed during construction. PMA, through PGW, will manage and pay for existing ongoing environmental administrative activities, including Act 2 closure at or near the construction site(s).
- Developer will be responsible for all costs associated with any negligent or willful acts that aggravate existing conditions. PMA will cause PGW to retain underlying environmental responsibility for preexisting conditions but not for the negligent or intentional aggravation thereof.

Contingencies:

- Construction permits.
- Operating permits.
- Necessary regulatory approvals (e.g., local Fire Department).
- Existing Passyunk Plant equipment required for the operation of the New Facilities (e.g. LNG tank) will be operational and available by the time construction of the New Facilities is completed.

- Satisfaction of all conditions precedent in the LNG Services Agreement.

Miscellaneous:

- Developer will implement an Economic Opportunity Plan (“EOP”) which will provide significant opportunities for women, minority and disabled person owned businesses. The Developer is committed to creating opportunities for local hiring, including women and minorities, during the Term. The EOP is attached as Exhibit B.
- Developer shall at all times comply with applicable prevailing wage requirements, and shall also utilize a labor force that will not lead to any stoppages, picketing or other labor disturbances by PGW labor. Developer’s indemnification shall include any claims or losses arising from any labor disturbance, including losses to PGW, if a labor disturbance by Developer’s contractors or subcontractors causes a work stoppage by PGW’s unionized forces. During the Term, Developer shall maintain types and quantities of insurance as required by PMA, which shall include: Workers’ Compensation/Employers Liability, General Liability, Commercial Auto Liability, Excess Liability, Contractors Pollution Liability, Builder’s All Risk (unless purchased by PEC), Professional Liability, Property Insurance w/ Business Interruption and Contingent Business Interruption, Directors and Officers, Builder’s All Risk.
- In the event of Developer’s default, PMA or its designee shall be afforded and may exercise step-in rights with respect to the Loan Documentation and any outstanding debt on the New Facilities.
- The parties do not intend the Turnkey Lease to be an interest in real estate.
- Developer shall not suffer any mechanics or materialmen’s lien to be placed upon the New Facilities or the Passyunk Plant.

Performance Security:

- During the Construction and Performance Testing Period, Developer will provide performance security (i.e., via approved surety bonds, letter(s) of credit and/or affiliate or parent guarantee) covering all of the Developer’s performance and payment obligations, as principal, under the Turnkey Lease. If Developer elects to provide payment and performance bonds provided by Contractor, naming the Lender(s), PMA, PGW and the City as third-party beneficiaries of such bonds, then, in addition, the Developer will provide a guarantee to PMA from a parent or affiliate with adequate financial capacity to secure any of Developer’s obligations under the Turnkey Lease that are not covered under the payment and performance bonds.
- PMA (or its designee) shall have a recordable (e.g., UCC-1) second position security interest on the New Facilities (after the Lender). Except for the initial loan (and any permissible refinancing), and PMA’s security interest, the New Facilities may not be pledged as collateral by Developer for any indebtedness. Collateral value shall decrease as P&I

is repaid by PEC.

- PEC gas stored in the Passyunk tank may be seized by PMA in the event of a PEC default. Gas so seized shall be valued per Dth as (a) the lower of PEC's Passyunk Plant WACOG, or (b) Texas Eastern Market Zone M3 Inside FERC Gas Market Report First of Month Index Price.

Force Majeure:

- The occurrence of an event, act, omission, condition, or circumstance beyond either parties' reasonable control and due to no fault of either party, or those for whom either party is responsible, that materially prevents or delays the parties from performing any of their obligations pursuant to the Agreement. An event is not a Force Majeure Event if such event is otherwise specifically dealt with in the Agreement or arises by reason of:
 - the negligence or misconduct of the non-performing party;
 - any act or omission by the non-performing party in breach of the provisions of the Agreement;
 - lack or insufficiency of funds or failure to make payment of monies or provide required security; or
 - market conditions and economic conditions affecting the availability, supply, or cost of labor, equipment and materials, construction equipment and supplies, or commodities.
- Either party may terminate the Turnkey Lease if a Force Majeure event preventing material performance has continued unabated for 2 years.
- A labor stoppage by PGW employees shall be deemed a Force Majeure event.

Events of Default: Events of Default under the Turnkey Lease may include the following (subject to appropriate cure periods):

- Developer's abandonment/failure to complete the New Facilities;
- A material representation or warranty that is false or misleading;
- Failure to comply with a material obligation, covenant, agreement, term or condition;
- Failure to meet milestones as agreed;
- Failure to make any payments when due; and
- Failure to maintain required insurance coverages or performance security.
- An uncured breach of the LNG Services Agreement or any other Agreement that contains a cross-default with the Turnkey Lease.

Remedies:

- Upon Developer's default, PMA may pursue all normal and customary remedies (terminate the Turnkey Lease, seek actual damages, cure and chargeback, etc.) and, subject to Lender's rights to cure such defaults,

	<p>require Developer to remove some or all of the New Facilities from Passyunk Plant at Developer’s sole cost. PMA (or its assignee) may also exercise any step-in rights with respect to the Loan Documents.</p>
<p><i>Agreement - Facility Sublease and Maintenance Agreement (“Facility Sublease”)</i></p>	<p>Parties: The City (PGW) and PMA</p> <p>Term: Same as the Operating Period under the Turnkey Lease</p> <p>Key Terms:</p> <ul style="list-style-type: none"> • Upon completion of performance testing of the New Facilities, PMA will sublease the New Facilities to the City (PGW). The Facility Sublease will consist of equipment and other facilities and not real estate. • All costs and performance obligations undertaken by PMA under the Turnkey Lease will be borne by PGW. • Rent under the Facility Sublease will be a nominal amount (\$10 per year). • At the end of the Term, the City (PGW) will elect to take ownership of the New Facilities for \$1 or cause PMA to elect to have the Developer remove the New Facilities and restore the premises.
<p><i>Agreement – “LNG Services Agreement”</i></p>	<p>Parties: PGW and PEC</p> <p>Term: Same as the Operations Period Under Turnkey Lease (25 years)</p> <p>Key Terms:</p> <ul style="list-style-type: none"> • PGW shall provide intra-city on-system (PGW) transportation, liquefaction, storage, loading, unloading and vaporization services as requested by PEC in accordance herewith. Services shall be provided by PGW on a firm basis, except for intra-city on-system (PGW) transportation which shall be interruptible. • PEC shall have first priority to have PGW process, store and cycle up to 2.7 Bcf of LNG per annum through the Passyunk Plant during the Term, subject to Force Majeure, storage tank capacity and evacuation by PEC (approximately 250,000 Mcf per tank turn), operating conditions and Maintenance Impacts (defined below). • Subject to Force Majeure, operating conditions (including PEC’s obligation to provide capital replacements under the Turnkey Lease), and Maintenance Impacts, and if requested by PEC, PGW shall endeavor, using best efforts as a prudent utility operator, to provide services to PEC on 95% of the days that the Passyunk Plant is operational annually (the “Availability Standard”) throughout the Term. Notwithstanding, PGW’s failure to meet the Availability Standard shall not be considered a default under the agreement. • PEC shall deliver natural gas commodity to PGW at its own cost and expense. All natural gas delivered by PEC to the Gas

Delivery Point shall be owned free and clear by PEC. The gas delivery point ("Gas Delivery Point") shall be Gate Station 73060. PEC will be responsible for making arrangements and paying all costs associated with its fuel supply and transportation to the Gas Delivery Point. All delivered volumes shall also include additional quantities needed for fuel.

- PEC shall request that PGW liquefy and store for PEC adequate quantities of gas so that PEC can meet its obligations to fulfill PMA/PGW's call rights under the Call Option agreements.
- PEC shall at all times condition its delivery requests such that not less than the "heel" and amounts available for the PMA Call Option volume remain in storage at the Passyunk Plant during the Term (i.e., PEC shall ensure that not less than 100,000 Dth plus the heel be in the storage tank on the first of each month, December through March, inclusive). The calculation of the "heel" is currently 15,000 Dth, but shall be subject to final modifications to the LNG tank liquid withdrawal line.
- PEC may request that PGW vaporize up to 45,000 Dth/day of PEC's LNG stored at the Passyunk Plant from November 1 through April 14 into PGW's distribution system and PGW will exchange an equal volume of PGW flowing natural gas to an alternate receipt point indicated by PEC within the contract paths on PGW's existing interstate pipeline capacity, subject to equipment availability and PGW's existing and available interstate pipeline capacity/access ("Exchange Service"). PEC can request up to an additional 45,000 Dth/day of vaporization from the Passyunk Plant, subject to PGW's equipment and system availability. Vaporization/Exchange Services will only be available to PEC on days when the PGW distribution system has the send-out to accommodate the designated volumes, and when PEC's LNG is available in storage at Passyunk Plant to meet PGW's call.
- All stored PEC volumes at the Passyunk Plant, less the heel and Call Option volume, must be evacuated by PEC (i.e., trucked out or vaporized) no less frequently than annually. All stored PEC volumes at the Richmond Plant must be evacuated by PEC (i.e., trucked out or vaporized) no less frequently than every two years. All stored volumes that remain contrary to these requirements will incur an additional annual charge to PEC of \$0.20 per Dth for each year, or part thereof, they remain in storage. Payments shall be made at the end of each Year.
- If permitted by PGW, and subject to PGW's other contractual and customer demands, PEC may transport and store LNG produced at the Passyunk Plant at the Richmond Plant storage tanks. Volumes injected will be aggregated into monthly totals. Storage capacity allowed for use by PEC at the Richmond Plant will be at PGW's discretion based on availability and not to be unreasonably denied. Such stored volumes may be vaporized by

PGW (up to 200,000 Dth per day, subject to PGW's other contractual and customer demands, and limited further by operational constraints, including sendout limitations) into PGW's distribution system at the request of PEC, and exchanged pursuant to the Exchange Service. Notwithstanding the foregoing, in no event shall PEC's request for vaporization on any day, when aggregated with vaporization volumes requested by PEC under the LNG Call Option Agreement, result in a total aggregate vaporization volume at Richmond of more than 200,000 Dth per day. Fees charged for services provided at the Richmond Plant shall be the same as those charged for services at Passyunk Plant. Variable costs for loading LNG trailers at the Passyunk Plant and for unloading LNG trailers at the Richmond Plant as detailed in Exhibit A-1 shall apply. Vaporization variable costs as detailed in Exhibit A-1 will also apply. If requested by PGW, PEC will evacuate some or all stored volumes (through truck loading or vaporization, if available) within 12 months from the month of injection into the Richmond Plant storage tanks.

- All requested services are subject to the system Maintenance Impacts and constraints described below.
- Unless otherwise agreed to by PGW, PEC may store LNG produced outside of PGW's facilities in PGW storage tanks only if PGW cannot meet the Availability Standard after liquefaction services were requested by PEC, and PEC wishes to offset lost production. Any LNG stored by PEC in PGW storage tanks must meet PGW's LNG standards, and must be injected, if due to PGW's failure to meet the Availability Standard, into the Passyunk Plant in quantities not exceeding PGW's production failure shortfall, and not later than 12 months from the date that liquefaction services were requested by PEC. If PEC elects to store such LNG in PGW storage tanks due to PGW's failure to meet the Availability Standard, PGW agrees to waive any standalone (injected) storage fees and any truck unloading fees (but not truck loading fees) for such LNG.

Payments:

PEC's payments to PGW shall be the following and shall be paid as set forth on Exhibit A-2:

- The following rates per Dth associated with throughput ("Fees for Service"):
 - Intra-city on-system (PGW) Transportation (Gas Delivery Point to Passyunk Plant) \$.20 (due upon liquefaction)
 - Liquefaction/Storage: \$0.20 (due upon liquefaction)
 - Extended storage fee (e.g., for volumes stored longer than one year at Passyunk or 2 years at Richmond): \$0.20 per annum
 - Standalone (Injected) Storage: \$0.20 (due upon injection)

- Truck Loading: \$0.20
- Truck Unloading: \$0.20
- Vaporization: \$0.20

Fees for Service are subject to an annual escalator equal to the positive CPI. Fees for Service will be based on throughput volume, with a minimum PEC annual take or pay volume of 2.25 Bcf, for an initial total minimum fee of \$1.35M, subject to annual escalation. If PGW fails to make liquefaction services available for purchase by PEC at the Passyunk Plant at least 227 days per year, then, at PGW's election (a) the total minimum fee of \$1.35M will be reduced for that year on a pro rata basis with days of availability as the numerator and 227 as the denominator, or (b) PGW will provide, subject to operating conditions and capacity availability, a, liquefaction/storage service entitlement to PEC at the Richmond Plant equivalent to 10,000 Dth multiplied by each day less than 227 that PGW failed to provide liquefaction services at Passyunk Plant when requested by PEC.

- All Incremental Costs of PGW ("Incremental Costs") as described on Exhibit A-1.
- A sum equal to the following calculation ("Net Earnings"),
 - Gross Sales Revenues, less
 - Delivered Gas Costs; less
 - Incremental Costs; less
 - Debt Service P&I Payments (annual maximum P&I debt service of \$3M) made by PEC and Financing Fees (not to exceed 1% of loan value); less
 - PEC Return of Equity fixed at \$1.35M a year, regardless of volume; less
 - PEC Costs set at \$200,000 per year subject to annual escalation.

(the Delivered Gas Costs, Incremental Costs, Debt Service P&I Payments, PEC Return of Equity, and PEC Costs, collectively, the "Share Costs"), as set forth on Exhibit A-2.

Multiplied by 50%, and LESS all sums paid to PGW as Fees for Service ("Percentage Sales Fee"):

In no event shall PGW owe PEC any amounts if the foregoing sum is negative.

If, per the foregoing formula, after paying PGW the Fees for Service and the Percentage Sales Fee (if any that year) the amount retained by PEC in any year shall be less than 50% of Net Earnings (such shortfall, the "PEC Share Carryover"), such PEC Share Carryover shall be treated in any successive year (and therefore deducted from that successive year's Net Earnings), as a Share Cost retained by PEC until such PEC

Share Carryover credit is fully applied as a Share Cost; *provided* that the PEC Share Carryover amount treated as a Share Cost in any given year shall not result in a loss of any other sums due to PGW (e.g., for Fees for Service or Incremental Costs), nor shall PEC Share Carryover(s) when aggregated exceed \$7.5M over the entire Term. The PEC Share Carryover will carry over into the next successive year(s) with sufficient Net Earnings until such PEC Share Carryover amount is fully credited (up to \$7.5M total). Any amount uncredited at the end of the Term shall be forfeit.

The Percentage Sales Fee shall be paid quarterly in equal monthly installments, based on an annual forecast reasonably prepared by PEC and accepted by PMA. The Percentage Sales Fee shall be trued up annually.

Schedule:

- PEC and PGW shall meet annually and monthly to review maintenance schedules and other outages, and finalize monthly production and delivery schedules. Production and delivery schedules shall be finalized for each month not later than the 25th of the prior month.

Conditions of Delivery:

- System 'Maintenance Impacts': All requested services by PEC are subject to the following planned PGW requirements and constraints, in addition to other unplanned maintenance and outage requirements as recommended by the equipment provider and/or PGW's prudent utility practices with respect to all PGW equipment (including, the existing facilities, for example, storage tanks) used to provide services hereunder:
 - Passyunk Plant's vaporization facilities may be offline for planned maintenance between April 15th and November 1st of each calendar year. Richmond Plant's vaporization facilities may be offline between April 15th and November 1st.
 - LNG liquefier and pretreatment facilities may be offline for a pre-determined period of time for planned maintenance between March 1st and June 1st.
 - Truck loading facilities may be offline for up to a contiguous 30 days for planned maintenance activities between April 1st and May 1st of each calendar year.

The parties will meet on an annual basis to discuss the maintenance period(s) required for the upcoming year for the New Facilities and existing facilities. To the extent practical, PGW will endeavor to accommodate PEC's maintenance scheduling requests. Modification of the above requirements, if acceptable to PGW, could incur additional Incremental Costs chargeable to PEC.

- Services to PEC are not exclusive. PGW reserves the right to

provide LNG services to other customers, subject to PGW's production and delivery obligations to PEC.

- Gas delivered to PEC from the Passyunk or Richmond Plants may be redelivered by PEC, provided the means and conditions of such redelivery do not render the plants subject to FERC jurisdiction (unless PGW expressly agrees to such jurisdiction).

Contingencies:

- Vaporization/Exchange Service availability is subject to PGW interstate pipeline capacity/access and regulation. PGW shall not be required to obtain additional interstate pipeline capacity to provide Vaporization/Exchange Services for PEC.
- Tariff approval
- PUC approvals (if required)
- FERC approvals (if required)
- Curtailment by PGW for operational reasons.

Miscellaneous:

- Boiloff gas generated through liquefaction and/or storage of any PEC LNG volumes shall be deemed to be sold to and become the property of PGW, and shall be paid by PGW to PEC calculated at the lower of (a) PEC's Passyunk Plant WACOG, or (b) Texas Eastern Market Zone M3 Inside FERC Gas Market Report First of Month Index Price. Such sums shall be credited by PGW as an offset to PEC's payments to PGW.
- Regeneration gas: PGW shall provide regeneration gas needed to liquefy gas (approximately 3,800 Dth per day) at no additional cost to PEC.
- "Year" is PGW's Fiscal Year. Annual true ups will be based on costs/revenues as of August 31 of each year. Invoices shall be rendered by October 31. Payments shall be made not later than November 30 of each year.
- All Incremental Cost items performed by a third party shall be procured by PGW per PGW's normal procurement practices.
- Late Payment Charges shall accrue on all untimely payments by PEC: Annual rate: PGW Customer Deposit Rate + 300 bps (subject to tariff/regulatory requirements). Sums unpaid after 150 days shall be considered a material breach of the Agreement. Late Payment Charges shall not be considered project costs for any reason.

Performance Security:

- To secure PEC's obligations throughout the Term, PEC will provide performance security, which may be in the form of a guarantee by an affiliate of PEC with adequate financial capacity to secure PEC's obligations, or a letter of credit. PEC

must ensure that the combined amount of such performance security and the value of PEC's gas stored at the Passyunk and Richmond Plants is at all times equal to at least \$5M.

- Title to all PEC LNG stored in the Passyunk Plant will automatically transfer to PGW, without the need for further action on the part of any Party, in the event of a PEC default under any of its agreements with either PMA or PGW. Any LNG so transferred shall be valued per Dth and deemed to have been sold by PEC to PGW at the lower of (a) PEC's Passyunk Plant WACOG, or (b) Texas Eastern Market Zone M3 Inside FERC Gas Market Report First of Month Index Price.
- In the event of PEC's default, PGW or its designee shall be afforded and may exercise step-in rights with respect to the Loan Documentation and any outstanding debt on the New Facilities.

Force Majeure:

- The occurrence of an event, act, omission, condition, or circumstance beyond either parties' reasonable control and due to no fault of either party, or those for whom either party is responsible, that materially prevents or delays the parties from performing any of their obligations pursuant to the Agreement. An event is not a Force Majeure Event if such event is otherwise specifically dealt with in the Agreement or arises by reason of:
 - the negligence or misconduct of the non-performing party;
 - any act or omission by the non-performing party in breach of the provisions of the Agreement;
 - lack or insufficiency of funds or failure to make payment of monies or provide required security; or
 - market conditions and economic conditions affecting the availability, supply, or cost of labor, equipment and materials, construction equipment and supplies, or commodities.
- Either party may terminate the Agreement if a Force Majeure event preventing material performance has continued for 2 years.
- A labor stoppage by PGW employees shall be deemed a Force Majeure event.

Events of Default:

- PEC's failure to make any payments due, subject to permitted deferred payment periods (and accrued late payment charges);
- Default by the Developer under the Turnkey Lease shall be deemed a PEC default; and/or
- Termination of the Turnkey Lease for any reason that results in

	<p>the termination of PGW's leasehold shall be deemed a PEC default.</p> <p>Remedies:</p> <ul style="list-style-type: none"> • If Developer fails to make any payments due to PGW under the LNG Services Agreement, and such payment is not under dispute and is not paid within 150 days (including any cure period), PGW, subject to Lender's rights to cure such defaults, may seek all normal and customary remedies (i.e., call on performance remedies, seek actual damages, cure and chargeback, etc.). • In the event of PEC's default, PGW or its designee shall be afforded and may exercise step-in rights with respect to the Loan Documentation and any outstanding debt on the New Facilities.
<p><i>Agreement - LNG Call Option Agreement</i></p>	<p>Parties: PMA and PEC</p> <p>Term: Same as LNG Services Agreement</p> <p>Key Terms:</p> <ul style="list-style-type: none"> • PMA (acting through PGW) will have call rights on up to 45,000 Dth/day, 100,000 Dth/month, of PEC's LNG at the Passyunk Plant each November 1 through April 14, up to a maximum annual aggregate volume of 250,000 Dth. (PEC shall condition its own delivery requests under the LNG Services Agreement such that not less than the "heel" and Call Option volumes are available in the tank at Passyunk Plant (i.e., PEC shall ensure that not less than 100,000 Dth plus the heel be in the storage tank on the first of each month, November through April, inclusive).) PMA's call can be delivered at PMA's option via truck delivery from the Passyunk Plant, or vaporized into PGW's distribution system at Passyunk. • PEC will have call rights for up to 200,000 Dth/day, of PGW's LNG at the Richmond Plant each November 1 through April 14, up to a maximum annual aggregate volume of 250,000 Dth; in such case, PEC's call can be delivered at PEC's option via truck delivery from the Richmond Plant, or vaporized into PGW's distribution system and exchanged for an equal volume of PGW flowing natural gas pursuant to the Exchange Service. Vaporization variable costs as detailed in Exhibit A-1 for the Richmond Plant will apply to volumes vaporized at the Richmond Plant. • At the end of April of each year, the parties shall compare call volumes utilized, and net out volumes to determine whether there is an imbalance. In the event of a PMA imbalance where PMA's use of its call rights at the Passyunk Plant exceeded PEC's use of its call rights at the Richmond Plant, then PMA will cause PGW to allow PEC to take delivery of up to an equivalent volume of PGW LNG via trucking from Richmond

	<p>Plant up to and including October 31 of that year. If any remaining imbalance remains on November 1, PMA, at PEC's election, shall (a) cause PGW to provide an equal volume of flowing gas to a delivery point specified by PEC pursuant to the Exchange Service using PGW's existing interstate pipeline capacity/access (i.e., PGW shall not be required to obtain additional interstate pipeline capacity to deliver flowing gas to PEC), or (b) pay PEC per Dth PEC's Passyunk Plant WACOG for the month of April plus a \$0.20/Dth liquefaction fee for either (a) or (b). In the event of a PEC imbalance where PEC's use of its call rights at the Richmond Plant exceeded PMA's use of its call rights at the Passyunk Plant, then PMA or its designee may take delivery of up to an equivalent volume of PEC LNG via trucking or vaporization from either the Passyunk Plant or the Richmond Plant up to and including October 31 of that year. If any remaining imbalance remains on November 1, PEC, at PMA's election, shall (a) provide an equal volume of flowing gas to a PGW delivery point agreeable to PGW, or (b) pay PMA per Dth PMA's Richmond Plant WACOG as of April 30, plus a \$0.20/Dth liquefaction fee for either (a) or (b).</p> <ul style="list-style-type: none"> • All requested services are subject to Force Majeure, System Maintenance Impacts, and operating conditions described in the LNG Services Agreement. • The parties agree that notwithstanding any other provision or entitlement, the call rights of PEC and PMA, are, subject to and limited by any use or volumetric restrictions in PGW's existing bond documents. <p>Contingencies:</p> <ul style="list-style-type: none"> • Subject to such pipeline terms, existing and available capacity, and renewal rights enabling the Exchange Service • Subject to such regulatory requirements and access to capacity necessary for the Exchange Service • PUC approval (if required) • FERC approval (if required) <p>Events of Default:</p> <ul style="list-style-type: none"> • A material representation or warranty is false or misleading; • Failure to comply with any material obligation, covenant, agreement, term or condition; and • Failure to make any payments when due.
<p><i>Agreement - LNG Call Sub-Option Agreement</i></p>	<p>Parties: PMA and PGW Term: Same as LNG Services Agreement Key Terms:</p> <ul style="list-style-type: none"> • Shall mirror the terms of the LNG Call Option Agreement with PMA as

	<p>conduit/designee for PGW.</p> <ul style="list-style-type: none"> All requested services are subject to Force Majeure, operating conditions, and system Maintenance Impacts described in the LNG Services Agreement. <p>Contingencies:</p> <ul style="list-style-type: none"> Subject to PEC’s performance under the LNG Call Option Agreement.
<p>Agreement - Loan Documentation</p>	<p>Parties: Developer and Lender(s)</p> <p>Term: Not to exceed the term of the LNG Services Agreement</p> <p>Developer will fund construction of the New Facilities with a combination of equity and the proceeds of debt. Any debt will be structured as non-recourse and off-balance sheet to the City, PMA and PGW.</p> <p>Key Terms:</p> <ul style="list-style-type: none"> Developer may not borrow more than \$30M. Lender(s) may not be an affiliated entity or owner of PEC or Proposer or their affiliates. Maximum annual debt service for P&I payments (the “P&I cap”) made by PEC shall not exceed \$3M. In the event of Developer’s default under the Loan Documentation, PMA or its designee shall be afforded and may exercise step-in rights with respect to the Loan Documentation and any outstanding debt on the New Facilities. Developer must reduce principal indebtedness during the Term to \$0 in accordance with a level debt service schedule. Developer may refinance its indebtedness over the Term, provided debt service (P&I) does not increase at any time. <p>Financing Fees (including refinancing fees) shall not exceed 1% of loan value), and shall be included within any then-applicable P&I cap. “Financing Fees” means: financing and banking charges that are not part of principal of or interest on any indebtedness, including but not limited to: market fee, ticking fee, funding fee, commitment fee, structuring fee, duration fee, administration fee, legal fee and any rating agency fee.</p> <p>Except for the initial loan (and any permissible refinancing), and PMA’s security interest, the New Facilities may not be pledged as collateral by Developer for any indebtedness. Collateral value shall decrease as P&I is repaid by Developer.</p>
<p>Agreement – Intergovernmental Agreement</p>	<p>Parties: The City, PGW and PMA</p> <p>Term: Same as the Turnkey Lease Agreement</p> <p>Key Terms:</p> <ul style="list-style-type: none"> Agreement shall specify that all activities to be performed by PMA

	<p>under the various agreements shall be performed by the City or PGW.</p> <ul style="list-style-type: none"> • All fees and reimbursements paid by Developer to PMA under the Turnkey Lease will be paid by PMA to PGW. • The City/PGW shall defend, indemnify and hold harmless PMA for its activities under the various agreements. • Agreement shall set forth the fees and costs to be paid to PMA for its role as conduit under the agreements.
<i>General Provisions</i>	
<i>Step-In Rights</i>	Developer and Lenders shall afford to PMA (and its assignees) step-in rights in the event that Developer and Lenders are unable or unwilling to fulfill its obligations as under the Loan Documentation.
<i>New Facilities Expansion</i>	In the event that the parties desire to undertake additional projects improving or enhancing the New Facilities installed at Passyunk Plant or the Richmond Plant, or the revenues generated thereby, they may separately agree to do so by written amendment to one or more of these agreements, provided that any costs are more than fully offset by the anticipated increase in revenues due to PGW.
<i>Indemnification; Damages</i>	Developer/PEC will indemnify and hold harmless PGW, PMA, PFMC, the City and their respective affiliates, officers and employees for certain liabilities and damages (including environmental claims) caused by Developer/PEC's negligence or willful misconduct. PMA, PGW, PFMC and the City will not indemnify. In no event will PMA, PGW, PFMC and City be liable for or pay special, punitive, indirect or consequential damages, or lost profits.
<i>Approvals</i>	Additional approvals for the transactions contemplated by the Agreements may be required. Primary responsibility and deadlines for seeking such approvals shall be as set forth in the Agreements, however, the parties acknowledge that such approvals are not guaranteed, and each party is undertaking any and all risk, including risk of significant financial loss, that approvals necessary to the contemplated transactions may not be obtained.
<i>Terms of Definitive Agreements</i>	The City Solicitor is authorized to review and to approve the documents necessary to effectuate the Project, which documents shall contain such terms and conditions as the City Solicitor shall deem necessary and proper to protect the interests of PGW and the City of Philadelphia.
<i>Economic Opportunity Plan</i>	The Project is subject to an Economic Opportunity Plan ("EOP") which will provide significant opportunities for women, minority and disabled person owned businesses. The Developer is committed to creating opportunities for local hiring, including women and minorities The EOP is attached as Exhibit B.
<i>Expenses and Fees:</i>	<p>In no event shall a party be liable for another party's development or other costs, unless agreed to in the Agreements, if and when executed.</p> <p>In the event that a change in law (unless for income tax) during the Term shall result in increased performance costs to a party exceeding \$5M, the parties agree to meet and discuss options to potentially share in such increased costs.</p>

	Beyond an obligation to meet and discuss, no further duty to negotiate shall exist if a party does not wish to modify existing cost apportionments or categories.
<i>Costs; Audits; Margins</i>	The parties shall retain and make available for audit all documents reasonably necessary to substantiate claims, costs, sales, and other transactions resulting in charges, fees or reimbursements of the project. Profits or margins accruing to a Developer/PEC affiliated entity shall not be deemed allowable costs of the project for any reason.
<i>Project Volumes</i>	Contract volumes may be modified by the parties at any time by mutual agreement. No duty to negotiate shall exist if a party does not wish to modify volumes.
<i>Assignment</i>	No party may, except as expressly set forth in the Agreements, assign their rights under the Agreements.
<i>Governing Law; Venue</i>	All Agreements entered into by the various parties will be governed by the laws of the Commonwealth of Pennsylvania, without giving effect to any choice-of-law rules that may require the application of the laws of another jurisdiction. All disputes arising out of any of the agreements will be subject to the exclusive jurisdiction of the state and federal courts located in Philadelphia, Pennsylvania and each party consents the personal jurisdiction of these courts.
<i>Compliance with Laws</i>	Each Party shall comply in all respects with all applicable legal requirements governing the duties, obligations, and business practices of that party and shall obtain any permits or licenses necessary for its operations. Neither party shall take any action in violation of any applicable legal requirement that could result in liability being imposed on the other party.
<i>Non-Recourse to PFMC and the City</i>	It is understood and agreed that in entering into any agreement, the Philadelphia Facilities Management Corporation ("PFMC") does so solely in its capacity as operator and manager of the municipally-owned Philadelphia Gas Works under the Agreement dated December 29, 1972 between PFMC and the City, as amended from time to time, and not otherwise; and further, that any payments required to be made by PFMC and/or the City, as a result of or arising out of entering into any Agreement shall be made solely from the revenues of PGW, and not any other asset of the City or PFMC. Further, certain obligations shall be recourse only to sums equivalent to payments made by Developer/PEC under the transactions.
<i>Relationship</i>	Proposer, Developer/PEC and/or Contractor are not and will not claim to be a partner or joint venturer of PGW, PMA, PFMC and/or the City.

Exhibit A-1 – Incremental Costs

Fixed Incremental Costs and Variable Incremental Costs shall be as set forth below:

- **Fixed Incremental Costs:**
 - Category I: Annual “Known” Fixed Cost Items
 - Category II: Occasional Actual Fixed Cost Items
- **Variable Incremental Costs:**
 - Category I: All Variable Items, Except Vaporization Costs
 - Category II: Vaporization Variable Costs

Fixed Incremental Costs – Category I:

Routine maintenance activities that PGW would perform for new liquefaction and truck loading at Passyunk Plant. The list below is indicative but not exhaustive.

I. Annual “Known” Fixed Cost Items	Frequency
Recycle Compressor Calibrations and Checks	Annually
Control Valve Diagnostic	Annually
Fan and Motor Vibration	Annually
Instrument Air Dryers/Compressors	Quarterly
Filter Separator and Filter Cartridges	Annually
Relief Valve Certifications	Annually
Gas Chromatograph Calibrations	Quarterly
Hazard Detection System Testing	Bi-annually
Weigh Station	Bi-annually
Glycol/Water Testing	Annually
Computer Leases and Software Upgrades	As-Needed
Replace Facility Lighting	As-Needed
Instrument Loop and Calibrations	Annually
Plant ESD Testing	Annually
Grounding and Rod Surveys	Annually
Grease Fans and Motors	Annually
PM Check Motors	Annually
UPS Inspections	Monthly
Electric Transfer Switch	As-Recommended
Inspect Heat Trace	Annually
Pressure Test LNG Hoses	Annually
Flow Meter SCADA Calibrations	Quarterly
MCC Inspection Cleaning	Annually
Transformer Inspections	Annually
Start-up, Monitor, Shut down	Annually
ESTIMATED ANNUAL COST DURING FIRST YEAR OF OPERATION	\$200,000

Fixed Incremental Costs – Category II:

Occasional activities that will be performed as-required for new liquefaction and truck loading at Passyunk Plant. The list below is indicative but not exhaustive.

II. Occasional Actual Fixed Cost Items	Description
Recycle Compressor Overhaul	5-year at \$25,000
Pretreatment Molecular Sieve	5-year at \$2,550,000
Compander Overhaul	As-Recommended
Control Valve Overhaul	As-Recommended
Pretreatment Valves	Annually
Insulation and Painting	As-Needed
Snow, weeds	As-Needed
Elevation surveys	2-Years
Foundation Up-keep	As-Needed
Pavement Repair	As-Needed
Heater tuning	As-Needed
Spring Hanger and Pipe Shoe Inspections and Repair	Every 3 years
Unplanned Repairs	As-Needed
FTE's for Truck Loading and Unloading Operations	As-Needed, actual cost
Actual PGW Insurance, Regulatory and Regulatory Legal Costs	As-Needed, actual cost
ESTIMATED TOTAL ANNUAL COST	\$880,000

Variable Incremental Costs – Category I:

Variable expenses that are incurred with an anticipated 2.7 BCF annual production. These costs exclude vaporization activities. The list below is indicative but not exhaustive.

I. Variable Costs Excluding Vaporization	Amount
Electric Power During Liquefaction	6.3 MWH @ 120,000 USGPD
Regen Heater During Liquefaction	2 Dekatherms Per Hour
Liquefied Nitrogen During Liquefaction	2,000 USGPD @ 10,000 Dekatherms per day Rate
Liquid Nitrogen During Standby	100 USGPD
Electric Power for LNG Truck Fill	30 KWH for 0.5 hours per Truck
Electric Power 24 Hours per day	30 KWH
ESTIMATED ANNUAL COST WITH 2.7 BCF PRODUCTION	\$2,500,000

Variable Incremental Costs – Category II:

Variable expenses that are incurred during vaporization activities. The list below is indicative but not exhaustive.

II. Vaporization Variable Costs	Amount
Natural Gas Used as fuel during Vaporization from Passyunk	10.5% of Dekatherm Send-Out, charged to PEC at the lower of PEC's WACOG or M3 pricing.
Natural Gas Used as fuel during Vaporization from Richmond	1.60% of Dekatherm Send-Out, charged to PEC at the lower of PEC's WACOG or M3 pricing.
Odorant During Vaporization	0.5 Pounds per million cubic feet
Electric Power During Vaporization	75 KWH During Vaporization
ESTIMATED ANNUAL COST	\$1,000,000

Exhibit A-2 – Fees and Payment Terms

1. Fees for Service: Paid Monthly in arrears (per Dth associated with actual throughput):
 - Intra-city on-system (PGW) Transportation (Gas Delivery Point to Passyunk Plant) \$0.20 (due upon liquefaction)
 - Liquefaction/Storage: \$0.20 (due upon liquefaction)
 - Extended storage fee (e.g., for volumes stored longer than one year at Passyunk or 2 years at Richmond): \$0.20 per annum
 - Standalone (Injected) Storage: \$0.20 (due upon injection)
 - Truck Loading: \$0.20
 - Truck Unloading: \$0.20
 - Vaporization: \$0.20

Fees for Service are subject to an annual escalator equal to the positive CPI. Fees for Service will be based on throughput volume, with a minimum PEC annual take or pay volume of 2.25 Bcf, for an initial total minimum fee of \$1.35M, subject to annual escalation. If PGW fails to make liquefaction services available for purchase by PEC at the Passyunk Plant at least 227 days per year, then, at PGW's election (a) the total minimum fee of \$1.35M will be reduced for that year on a pro rata basis with days of availability as the numerator and 227 as the denominator, or (b) PGW will provide, subject to operating conditions and capacity availability, a, liquefaction/storage service entitlement to PEC at the Richmond Plant equivalent to 10,000 Dth multiplied by each day less than 227 that PGW failed to provide liquefaction services at Passyunk Plant when requested by PEC.

2. Incremental Costs: Fixed and Variable Costs:

A Fixed Incremental Costs – Est: \$1,080,000 annually – Paid Monthly, estimated ratably with Reserve Fund:

- Category I: Annual “Known” Fixed Cost Items (Est: \$200,000): Flat fee paid in equal monthly installments.
 - Known Fixed Cost items will not be trued up, but will be subject to an annual escalator equal to the positive CPI.
- Category II: Occasional Actual Fixed Cost Items (Est: \$880K includes incremental labor)
 - Actual cost items will be paid in equal monthly installments based on estimate.
 - Overages will fund reserve fund (up to \$5 million).
 - Estimated costs will be reset every year, but not lower than prior year if reserve fund is less than \$5M.
- Fixed Incremental Cost Reserve Fund: Overages will fund Reserve Fund (up to \$5 million).

B. Variable Incremental Costs

- Category I: All variable incremental costs, except vaporization costs – Est. \$2.5M

- Charges paid equally monthly (based on level 2.7 Bcf production expectation). If sales to other customers occur, amounts will be prorated at end of year based on actual annual liquefaction volumes attributable to each customer.
 - True Up (under/over) at end of year.
 - Category II: Vaporization variable incremental costs – Est. \$1M
 - Actual charges paid monthly.
3. Percentage Sales Fee: In addition to Fees for Service and Incremental Costs, a sum equal to the following calculation (“Net Earnings”),

- Gross Sales Revenues, less
- Delivered Gas Costs; less
- Incremental Costs; less
- Debt Service P&I Payments (annual maximum P&I debt service of \$3M) made by PEC and Financing Fees (not to exceed 1% of loan value); less
- PEC Return of Equity fixed at \$1.35M a year, regardless of volume; less
- PEC Costs set at \$200,000 per year subject to annual escalation.

(the Delivered Gas Costs, Incremental Costs, Debt Service P&I Payments, PEC Return of Equity, and PEC Costs, collectively, the “Share Costs”),

Multiplied by 50%, and LESS all sums paid to PGW as Fees for Service (“Percentage Sales Fee”).

In no event shall PGW owe PEC any amounts if the foregoing sum is negative, or for any other reason.

“Gross Sales Revenues” include, but are not limited to: Revenues derived from PEC sales transactions, including demand charges, commodity charge differentials, reservation charges, call option charges or any arrangement that provides revenue to PEC (including volumes delivered by Exchange Service). Notwithstanding the foregoing, Gross Sales Revenues shall not include any sales or excise taxes assessed by a government entity that are charged or otherwise passed through to any PEC customer(s) for remission by PEC to the government entity, unless considered a Delivered Gas Cost (defined below).

“Delivered Gas Costs” are: Commodity price plus or minus a basis differential at the receipt point plus net interstate pipeline transportation costs delivered from the receipt point to PGW Gate Station 73060, including any sales or excise tax directly assessed by a government entity on any commodity PEC purchases and transports to PGW City Gate 73060 for use under this Agreement, unless excluded from Gross Sales Revenues.

If, per the foregoing formula, after paying PGW the Fees for Service and the Percentage Sales Fee (if any that year) the amount left to be retained by PEC in any year shall be less than 50% of Net Earnings (such shortfall, the “PEC Share Carryover”), such PEC Share Carryover shall be treated in any successive year (and therefore deducted from that successive year's Net Earnings), as a Share Cost retained by PEC until such PEC Share Carryover credit is fully applied as a Share Cost; *provided* that the PEC Share Carryover amount treated as a Share Cost in any given year shall not result in a loss of any other sums due to PGW (e.g., for Fees for Service or Incremental Costs), nor shall PEC Share Carryover(s) when aggregated exceed \$7.5M over the entire Term

(“PEC Share Carryover Aggregate Cap”). The PEC Share Carryover will carry over into the next successive year(s) with sufficient Net Earnings until all PEC Share Carryover amounts (“PEC Share Carryover Balance”) is fully credited (up to \$7.5M total). Any amount uncredited at the end of the Term shall be forfeit.

To avoid confusion, and for illustrative purposes only, in Year One of the table below, where Gross Sales Revenues are \$80, Delivered Gas Costs are \$30, PGW Incremental Costs are \$20, PGW Fees for Service are \$7, PEC Debt Service P&I Payments are \$10, PEC Costs are \$1, PEC Return of Equity is \$7; Net Earnings = \$12, PEC would pay PGW \$7 Fees for Service and \$0 in additional Percentage Sales Fees, and PEC would retain \$5 in Actual Profit Share and accrue \$1 in a One Year Share Carryover based on the difference from 50% of \$12 Net Earnings. \$2 would remain available under the PEC Share Carryover Aggregate Cap for future years’ Share Carryovers.

In Year Two of the table below, where Gross Sales Revenues are \$77, Delivered Gas Costs are \$30, PGW Incremental Costs are \$20, PGW Fees for Service are \$7, PEC Debt Service P&I Payments are \$10, PEC Costs are \$1, PEC Return of Equity is \$7, PEC Share Carryover credit is \$1; Net Earnings = \$8, PEC would pay PGW \$7 Fees for Service and \$0 in additional Percentage Sales Fees, and PEC would credit \$1 towards the PEC Share Carryover Cap Balance, retain \$1 in Actual Profit Share and accrue \$2 in a One Year Share Carryover based on the difference from 50% of \$8 Net Earnings and due to the \$2 Remaining Carryover Available under Cap after Year 1. There would be \$0 Remaining Carryover Available under Cap such that no further PEC Share Carryover would be available in future years.

In Year Three of the table below, where Gross Sales Revenues are \$91, Delivered Gas Costs are \$30, PGW Incremental Costs are \$20, PGW Fees for Service are \$7, PEC Debt Service P&I Payments are \$10, PEC Costs are \$1, PEC Return of Equity is \$7, PEC Share Carryover credit is \$2; then Net Earnings = \$21, PEC would pay PGW 50% of \$21 (\$91-\$30-\$20-\$10-\$7-\$1-\$2), LESS \$7 = Percentage Sales Fee of \$3.50. PEC would retain \$10.50 in Actual Profit Share and \$2 in PEC Share Carryover credit. The total PEC Share Carryover Balance would decrease to \$0 and no further PEC Share Carryover would be available in future years.

Assumptions

Delivered Gas Costs	\$30
PGW Incremental Costs	\$20
PGW Fees for Service	\$7
PEC Debt Service	\$10
PEC Costs	\$1
PEC Return of Equity	\$7
PEC Share Carryover Aggregate Cap	\$3

YEAR YEAR YEAR
YEAR 1 2 3

Net Earnings Calc

Gross Sales Revenues
Delivered Gas Costs
PGW Incremental Costs

\$80.0	\$77.0	\$91.0
(\$30.0)	(\$30.0)	(\$30.0)
(\$20.0)	(\$20.0)	(\$20.0)

PEC Debt Service	(\$10.0)	(\$10.0)	(\$10.0)
PEC Costs	(\$1.0)	(\$1.0)	(\$1.0)
PEC Return of Equity	(\$7.0)	(\$7.0)	(\$7.0)
PEC Share Carryover credit	\$0.0	(\$1.0)	(\$2.0)
Net Earnings	\$12.0	\$8.0	\$21.0
50% Net Earnings	\$6.0	\$4.0	\$10.5

PGW Payments

PGW Fees for Service	\$7.0	\$7.0	\$7.0
PGW Profit Share	\$0.0	\$0.0	\$3.5
PGW Payments	\$7.0	\$7.0	\$10.5

PEC Payments

PEC Return of Equity	\$7.0	\$7.0	\$7.0
PEC Actual Profit Share	\$5.0	\$1.0	\$10.5
PEC Share Carryover credit	\$0.0	\$1.0	\$2.0
PEC Payments	\$12.0	\$9.0	\$19.5

One Year PEC Share Carryover	(\$1.0)	(\$2.0)	\$0.0
One Year PEC Share Carryover Credit	\$0.0	\$1.0	\$2.0
Total PEC Share Carryover Balance	(\$1.0)	(\$2.0)	\$0.0
Remaining Carryover Available under Cap	\$2.0	\$0.0	\$0.0

Share carryover accrued
Share carryover credit paid

The Percentage Sales Fee shall be paid quarterly in equal monthly installments, based on an annual forecast prepared by PEC and accepted by PMA. The Percentage Sales Fee shall be trued up annually.

Miscellaneous/Assumptions:

- “Year” is PGW’s Fiscal Year. Annual true ups will be based on costs/profits as of August 31 of each year. Invoices rendered by October 31. Payments made not later than November 30.
- All Incremental Cost items performed by a third party shall be procured by PGW per PGW’s normal procurement practices.
- Late Payment Charges: PGW Customer Deposit Rate + 300 bps (subject to tariff).
- Grants: From time to time the parties may apply for grant awards concerning the operation of the New Facilities and related LNG facilities at Passyunk Plant. The parties intend to share

equitably in the proceeds of any grants received. Any cash reimbursement grants received will be shared 50/50 between PEC and PGW to the extent allowable under law or the grant agreement. If sharing is impermissible under a grant agreement or requires development of additional facilities, the parties will jointly work to ensure that the grant proceeds will mutually benefit the parties.

Exhibit B – Economic Opportunity Plan (EOP)

Project name: New PGW Liquefaction Facilities at Passyunk Plant

Name of developer: "Passyunk Energy Center, LLC"

Name of Guarantor: Liberty Energy Trust

Name of Contractor: NorthStar

Headquarters location: West Conshohocken, PA

No. employees: 5

Annual revenues: \$1 million

Project budget (construction): \$60 million, including equipment

Project budget (professional services): \$1 million

**City of Philadelphia
Economic Opportunity Plan**

**New PGW Liquefaction
Facilities at Passyunk Plant**

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I. Introduction and Definitions

The City of Philadelphia, by and through its Philadelphia Gas Works (PGW), strongly encourages the use of certified Minority ("MBE"), Women ("WBE"), Disabled ("DSBE") and Disadvantaged ("DBEs") Business Enterprises (collectively, "M/W/DSBEs") and minority and female workers in all aspects of the construction of certain New PGW Liquefaction Facilities at Passyunk Plant (the "Project") located at 3100 W. Passyunk Ave. ("the Site") which may include financial investment, design, and construction.¹ Liberty Energy Trust has created a special purpose entity, Passyunk Energy Center, LLC ("PEC"), hereinafter referred to as "Developer," to develop the Project; PEC will own the resulting facilities for a period of twenty-five years. Construction and management of construction for the Project will be performed by NorthStar Industries, a 51% owned subsidiary of Liberty Energy Trust. Accordingly, in support of the City's objective of maximizing opportunities for diverse businesses and worker inclusion, the City will require that Developer commit to this Economic Opportunity Plan ("EOP" or "Plan"). This Plan contains ranges of projected M/W/DSBE utilization and goals for the employment of minority and female workers in connection with the Project at the Site. This Plan shall be a part of and incorporated into the Turnkey Development Lease between Developer and the Philadelphia Municipal Authority (the "Agreement") for the purpose of binding Developer to the requirements and obligations expressed in this Plan and requiring Developer to bind NorthStar Industries and any other of its subcontractors regardless of tier, to the requirements and obligations of this Plan.

Developer verifies that all information submitted to the Office of Economic Opportunity ("OEO") in response to this Plan is true and correct and takes notice that the submission of false information is subject to the penalties of 18 PA C. S. Section 4904, relating to unsworn falsification to authorities and 18 PA C.S. Section 4107.2 (a)(4), relating to fraud in connection with minority business enterprises or women's business enterprises.

For the purposes of this Plan, MBE, WBE, DBE and DSBE shall refer to certified businesses so recognized by OEO. Only the work or supply efforts of firms that are certified as M/W/DSBEs by an OEO-approved certifying agency will be eligible to receive credit as a Best and Good Faith Effort.² In order to be counted, certified firms must successfully complete and submit to the OEO an application to be included in the OEO Registry which is a list of registered M/W/DSBEs maintained by the OEO and available online at www.phila.gov/oEO/directory.

For this Plan, the term "Best and Good Faith Efforts," the sufficiency of which shall be in the sole determination of the City, means: efforts, the scope, intensity and appropriateness of which are designed and performed to foster meaningful and representative opportunities for participation by M/W/DSBEs and an appropriately diverse workforce and to achieve the objectives herein stated. Best and Good Faith Efforts are rebuttably presumed met when commitments are made within the M/W/DSBE participation ranges established for the Project and a commitment is made to employ a diverse workforce as enumerated herein.

¹ Disadvantaged Business Enterprises ("DBEs") are those socially or economically disadvantaged minority and woman owned businesses certified under 49 C.F.R. Part 26.

² A list of "OEO approved certifying agencies" can be found at www.phila.gov/oEO.

II. Project Scope

Construction of a natural gas liquefaction plant, with associated interconnections to PGW infrastructure. PGW will exclusively operate the facilities but PEC will remain owner of the facilities for twenty-five years and have the right to purchase and store certain quantities of natural gas at the facilities for sale to customers of PEC. PEC will be responsible for paying for certain capital replacement obligations during the twenty-five-year period which activities are also subject to this Plan.

III. Goals

A. M/W/DSBE Participation Ranges

As a benchmark for the expression of "Best and Good Faith Efforts" to provide meaningful and representative opportunities for M/W/DSBEs in the Project, the following participation ranges have been established. These participation ranges represent, in the absence of discrimination in the solicitation and selection of M/W/DSBEs, the percentage of MBE, WBE and DSBE participation that is reasonably attainable through the exercise of Best and Good Faith Efforts. These percentages relate to the good faith estimated cost of the entire Project, which is estimated to cost \$20 Million,³ excluding the value of the equipment. In order to maximize opportunities for as many businesses as possible, a firm that is certified in two or more categories (e.g., MBE and WBE and DSBE or WBE and DSBE) will only be credited toward one participation range as either an MBE or WBE or DSBE. The ranges are based upon an analysis of factors such as the size and scope of the Project and the availability of MBEs, WBEs, and DSBEs to participate in this development.

The following contract goals have been set for the Project⁴:

Contracts	Minority Owned	Female Owned	DSBE	Total
Construction	20-25%	15-20%	BGFE	35-45%
Capital				
Maintenance	20-25%	15-20%	BGFE	35-45%

B. Workforce Goals

Developer agrees to exhaust its Best and Good Faith Efforts to employ women and minority persons in the Project. With such efforts, absent discrimination, and given availability in the workforce, the OEO and Participants expect participation in Participants' workforce of apprentices and journeypersons at approximately the following levels:

African American journeypersons: 22% of all journey hours worked across all trades
Asian journeypersons: 3% of all journey hours worked across all trades
Hispanic journeypersons: 15% of all journey hours worked across all trades

³ \$20 million project value is subject to review by all parties as the project start date approaches and contracting opportunities are assessed; in no event shall this project value, for the purposes of Plan compliance, be reduced by more than 10% without the prior knowledge of the Executive Director of the certifying agency.

⁴ Contract goals are subject to review by all parties as the project start date approaches and contracting opportunities are assessed; in no event shall these goals be reduced without the prior knowledge and written approval of the Executive Director of the certifying agency.

Female journey persons: 5% of all journey hours worked across all trades
Minority apprentices: 50% of all hours worked by all apprentices
Female apprentices: 5% of all hours worked by all apprentices

Developer and its contractors will endeavor to recruit and hire local residents across all building trades. Developer will be required to submit to the City, no later than seven (7) days before the starting date of work on the Project, a Workforce Diversity Goal Plan which shall include specific availability and utilization strategies for meeting these Workforce Diversity goals.

IV. Equity Ownership

The Philadelphia Code 17-1603 requires that each Economic Opportunity Plan include information concerning the Equity Ownership, i.e., the beneficial ownership held by minority persons, disabled persons or women in the corporate entity and requiring periodic reports for the purpose of updating Equity Ownership information, all under certain terms and conditions as prescribed in The Philadelphia Code.⁵

V. Diversity Practices

In compliance with Chapter 17-1603, this Plan contains a statement summarizing past practices and identifying and describing examples of processes used to develop diversity at all levels of Liberty Energy Trusts' organization including, but not limited to, Board and managerial positions. This statement also summarizes strategic business plans specific to current or past practices of M/W/DSBE utilization on government and non-government projects and procurement:⁶

1. *Employment and recruitment policies used to achieve diversity:*

Liberty Energy Trust strives to be an organization that embraces diversity for the mutual benefit of our employees, customers, investors, and the communities where we work and live. We believe success hinges on teamwork, sound work ethics, honesty, integrity, dignity, and mutual respect for others. In order to

⁵ Per The Philadelphia Code 17-1603: *Continuing Reporting Requirements:*

(i) Within 30 days of each anniversary of the date that the Plan is finally certified, Developer shall file with the Chief Clerk of Council and the certifying agency an addendum to the original Plan that provides the Equity Ownership information required by § 17-1603 (g)(2), updated so that it is accurate as of the anniversary date. This requirement shall continue until the project is completed.

(ii) The final EOP report required pursuant to § 17-1604(2)(a) shall include updated Equity Ownership information that is accurate as of the date of the final report.

(iii) After the final EOP report has been filed, the owner or owners of the completed project shall have a continuing obligation to file a Statement of the owner's or owners' Equity Ownership within 30 days of each anniversary of the date that the final EOP report is submitted. The Statement shall be accurate as of the relevant anniversary date, and shall be filed with the Chief Clerk of Council and the certifying agency. No Statement shall be required if the completed project is not privately-owned.

⁶ The Plan shall also contain a statement from Developer, as applicable, identifying all City contracts and financial assistance entered into or received by Developer and any of its related corporate entities in the three years before execution of this Plan, (or such greater amount of time as may be set forth in the record retention requirement of an applicable EOP), that were subject to an EOP that contained M/W/DSBE goals and/or workforce diversity goals. "Related corporate entities" shall mean any business entity controlled by a person or business with a majority interest in the business agreeing to the EOP.

remain competitive, we must attract, develop, motivate, and retain the most qualified employees regardless of age, color, race, religion, gender, disability, national or ethnic origin, family circumstances, life experiences, marital status, military status, or sexual orientation. Liberty Energy Trust is committed to creating a culture where individual differences are respected, understood, and valued.

2. *Race, gender, and residential (local) status:*

- | | |
|----------------------|---|
| A. Directors | 5 directors, one woman, 4 located in Montgomery & Delaware Counties Pennsylvania. 1 in Virginia. |
| B. Management | 3 management, one Asian woman. Residential status: one located in Delaware County, the other two in Virginia and Texas. |
| C. General Workforce | The entity is a private equity fund with only 5 employees. Outside of management listed above, there is an additional Asian female employee located in Delaware County and another employee based in Connecticut. |

3. *Methods of solicitation and utilization of Minority, Woman and Disabled Businesses (M/W/DSBEs) including outreach and procurement policies focused on creating or sustaining business relationships with M/W/DSBEs:*

This Project, with an estimated development cost of \$60 Million, represents a significant opportunity to introduce a new business model and technical competency to OEO registered firm(s). Since we are a private equity firm and this will be our first construction project in Philadelphia County, we have reached out to the Urban Affairs Coalition. They are partnering with us this project and have significant experience identifying opportunities and experience with the local M/W/DSBE business community.

Liquefied Natural Gas is a niche industry within the larger gas distribution sector. There currently are not a lot of M/W/DSBE firms who have experience working with this technology and equipment. Working with the UAC, we are hoping to help at least one firm to make the investment in building their capabilities to deliver some of the more specialized services in this industry. We are confident much of our identified opportunity can be delivered by firms with the requisite skills in other engineering and construction aspects outside of the specialized LNG equipment in civil, mechanical and electric contracting.

4. *Liberty Energy Trust's total spend with M/W/DSBEs in the last 12 months:*

We are a private equity fund, much of our investments are made on an equity basis. As an operating company, our main outside vendors and suppliers are legal and engineering support for various projects we are pursuing. Our lead attorney at Ballard is a diverse lawyer - outside legal expenses are our largest vendor spend and Ballard is our largest attorney.

5. *Initiatives made by Liberty Energy Trust to increase investment and promote equity ownership by minorities and women:*

Liberty Energy Trust actively seeks out new investment partners, especially in the local communities where we invest. Most of our capital comes from institutional investors and we have reached out to a number of impact investment groups, including those working on behalf of women and minorities.

VI. Responsiveness

A. Developer shall identify M/W/DSBE commitments evidencing its intent to use Best and Good Faith efforts at the levels stated herein. The identified commitments constitute a representation that the M/W/DSBE is capable of providing commercially useful goods or services relevant to the commitments and that the Developer or its contractors have entered into legally binding commitments with the listed M/W/DSBEs for the work or supply effort described and the dollar/percentage amounts set forth. In calculating the percentage of M/W/DSBE participation, the standard mathematical rules apply in rounding off numbers. In the event of inconsistency between the dollar and percentage amounts listed on the form, the percentage will govern.

B. M/W/DSBE commitments are to be memorialized in a written subcontract agreement. Letters of intent, quotations, contracts, subcontracts and any other documents evidencing commitments with M/W/DSBEs become part of and an exhibit to the Agreement.

C. OEO will review Developer's commitments for the purpose of determining whether Best and Good Faith Efforts have been made. OEO reserves the right to request further documentation and/or clarifying information at any time during the construction and development of the Project.

VII. Compliance and Monitoring of Best and Good Faith Efforts

A. Developer agrees to cooperate with OEO in its compliance monitoring efforts, and to submit, upon the request of OEO, documentation relative to its implementation of the Plan, including the items described below:

- Copies of signed contracts and purchase orders with M/W/DSBE subcontractors
- Evidence of payments (cancelled checks, invoices, etc.) to subcontractors and suppliers to verify participation; and
- Telephone logs and correspondence relating to M/W/DSBE commitments.
- To the extent required by law, Developer shall ensure that its on-site contractors maintain certified payrolls which include a breakout of hours worked by minority and female apprentices and journeypersons. These documents are subject to inspection by City.

B. Prompt Payment of M/W/DSBEs

Developer agrees and shall cause its contractors to ensure that M/W/DSBEs participating on the Project receive prompt payment for their work or supply effort within five (5) days after receipt of a proper invoice for approved work.

C. Oversight Committee

For this Project, an Oversight Committee ("Committee") is required. Within the sole discretion of the City, this oversight committee may consist of representatives from the Developer's firm, representatives of the building trades, the construction manager, PGW, and the City which may include the Project site's district councilperson, OEO, and appropriate community organizations. The Committee will meet regularly to provide advice for the purpose of facilitating compliance with the Plan.

D. Reporting

Developer agrees to file an annual report with the City of Philadelphia and City Council concerning the performance of the Economic Opportunity Plan through the duration of the Project. In addition, the City may require "snapshot" reports containing updates for certain categories of information contained in the annual report on a monthly basis during construction. Snapshot reporting will include: (i) utilization of M/W/DSBEs, and (ii) the hiring and employment of minorities and females. All reports (quarterly & annually) provided to the City under this section will also be provided to the Office of Economic Opportunity.

VIII. Remedies and Penalties for Non-Compliance

Developer agrees that its compliance with the requirements of this Plan is material to the Agreement. Failure to comply with the Plan may constitute a substantial breach of the Agreement and is subject to the remedies and penalties contained therein or otherwise available at law or in equity. In addition, non-compliance may invoke remedies reserved under Section 17-1605 (3) of The Philadelphia Code. Notwithstanding the foregoing, no privity of contract exists between the City and any M/W/DSBE identified in any contract resulting from implementation of the Plan. Neither the Developer nor the City intends to give or confer upon any such M/W/DSBE any legal rights or remedies in connection with subcontracted services under any law or policy or by any reason of any contract resulting from implementation of the Plan except such rights or remedies that the M/W/DSBE may seek as a private cause of action under any legally binding contract to which it may be a party.

[The remainder of this page has been left blank intentionally. Signature page follows.]

IN WITNESS WHEREOF, the parties hereto have caused this Economic Opportunity Plan to be properly executed by their duly authorized officers as of the date written below.



Liqun Pan⁷
Chief Financial Officer
Passyunk Energy Center, LLC
liqunpan@libertyenergytrust.com
832 646-8898
One Tower Bridge, 9th Floor
West Conshohocken, PA 19428

Date



Lola Harper⁸
Deputy Commerce Director for the
Office of Economic Opportunity
Department of Commerce
The City of Philadelphia

9/20/18

Date

⁷ The Developer is required to sign and date, but the City reserves the right to obtain the Developer's signature thereon at any time prior to Plan certification. The Developer will receive from the City a certified copy of its Plan which should be filed with the Chief Clerk of City Council within fifteen (15) days of the issuance and published by OEO, in a downloadable format, on the OEO website.

⁸ Pursuant to Section 17-1603 (2) of The Philadelphia Code, the representative of the City of Philadelphia's Office of Economic Opportunity, the "certifying agency", certifies that the contents of this Plan are in compliance with Chapter 17-1600.

Exhibit C – New Facilities***

Major Facilities –Designed, built, and paid for by Developer:

LNG Liquefier, including all equipment skids, analyzer shelters, motor control centers, etc. necessary to support liquefaction processes.

Pretreatment Facilities: capable of providing enough treated gas to supply the new LNG liquefier to nominally produce 120,000 gallons per day.

LNG Truck Loading bay and weigh station: capable of nominally filling a trailer at a rate of 300 gallons per minute at a nominal pressure of 90 psig.

LNG Truck Loading Pump (dike area).

Optional Upgraded Facilities - (Designed, built, and paid for by Developer):

Additional capital additions to the New Facilities installed at Passyunk Plant (upon agreement of PMA and Developer).

Interconnection Facilities (Designed, built and paid by Developer):

Natural Gas Piping: Piping required for raw feed (plant boundary to liquefier) and regeneration gas.

LNG Piping: Stainless steel piping required to handle LNG from liquefier to storage tank, liquefier to truck loading, and tank to loading area, boil-off gas, truck loading to existing boil-off gas piping.

Electrical Services: All connections required to deliver power to the motor control center (MCC) of the new liquefier.

Communications: All connections that require a fiber optic connection (e.g. phone lines, Distributed Control Systems communication, Fire system communications).

Treated water: All connections that would be required to deliver treated (non-chlorinated) water to the new liquefier.

Fire Protection water: All connections that would be required to deluge any equipment at either the new liquefier or truck loading facilities.

Odorization systems: All connections that would be required to deliver odorant or measure gas flow to deliver the correct amount of odorant into the regeneration gas piping.

Emergency Shutdown System interconnects: All connections required to connect the emergency shutdown systems of the new liquefier and the truck loading facilities into PGW's existing emergency shutdown system.

Supports: This entails any supports for either piping, conduit, cable trays, etc. that must be constructed in order to make tie-ins into PGW's existing systems.

SCADA Interconnects: Any signals that will be required by PGW to monitor the flows and pressures leaving the new liquefier.

Ground Grid Interconnects: any connection required to connect the ground grid of the new liquefier and truck loading facility to PGW's existing ground grid.

Instrument air system Interconnects: any connections required to connect PGW's instrument air system to equipment at the new liquefier and/or truck loading facility.

*** All final tie-ins (e.g., raw feed gas piping from the New Facility that must be connected to the raw feed interconnect piping, power lines that must be connected from the New Facility to the interconnect cabling) must be performed by PMA (through PGW labor) at Developer's sole cost.

Exhibit D – Spare Parts to be Provided by Developer

Spare parts are defined as any long lead items or frequently replaced equipment (e.g. oil filters, etc.). Spare parts must be reordered or immediately sent for overhaul upon use. The items listed below are indicative but not exhaustive:

Spare CAPEX Items provided by PEC	Description	Estimated Initial Cost
2-TBX Cartridge Spares* (i.e., companders)	As-Needed	\$230,000
Spare glycol pump & motor*	As-Needed	\$20,000
Spare fin-fan motor/bearings*	As-Needed	\$10,000
Pair of 3” LNG transfer hoses	As-Needed	\$3,000
20-Relief Valves*	For Annual Switch Certification	\$25,000
PIT, TT, TIT, Temperature Elements	As-Needed	\$20,000
Facility Lighting	As-Needed	\$1,000
Filter Separator and Filter Cartridges	As-Needed	\$15,000
Gas, Flame, Heat, Smoke Detectors	As-Needed	\$10,000
Facility Lighting	As-Needed	\$2,000
Flex Gaskets, Nuts, Bolts	As-Needed	\$3,000
Glycol/Distilled Water (4 55 gallon drums of 50/50 glycol and distilled water)	As-Needed	\$5,000
Miscellaneous	As-Needed	\$27,000

* denotes items that may be overhauled and then placed back into inventory.

(Note: Quantities may vary)

Exhibit "B"
Proposed Ordinance

AN ORDINANCE

Authorizing the Philadelphia Gas Works by Philadelphia Facilities Management Corporation, Philadelphia Municipal Authority, and the Commissioner of Public Property (on behalf of The City of Philadelphia) to enter into certain transactions and contracts regarding a liquefied natural gas project on property and facilities owned by the City of Philadelphia and operated by the Philadelphia Gas Works, including certain leases and licenses, and contracts related to the purchase of natural gas, all under certain terms and conditions.

WHEREAS, The Philadelphia Municipal Authority (the "Authority"), incorporated pursuant to the Municipality Authorities Act, 53 Pa. C. S. Ch. 56 (as amended from time to time, the "Act"), is authorized by Ordinance approved April 3, 2014 (Bill No. 140073), to undertake any project (as defined in the Act) that the Authority is specifically authorized to undertake from time to time by ordinance of the City Council; and

WHEREAS, The Philadelphia Gas Works ("PGW") by Philadelphia Facilities Management Corporation ("PFMC"), has requested that the Authority undertake a project whose purpose is to provide liquefied natural gas ("LNG") equipment and ancillary facilities and services (the "Project") at PGW's Passyunk LNG Plant, and to a lesser extent, PGW's Richmond LNG Plant; and

WHEREAS, Liberty Energy Trust GP, LLC, through its affiliate, a newly formed special-purpose entity, Passyunk Energy Center LLC ("PEC"), has been selected through a competitive process to develop and finance facilities for the Project and, in connection therewith, to purchase and sell LNG services and/or gas; and

WHEREAS, The Project will require the Authority to enter into contracts with The City of Philadelphia (the "City"), PEC, and PGW, including certain leases and licenses respecting property owned by the City and operated by PGW, and other contracts related to the purchase of gas; and

WHEREAS, Paragraph 2 of Section II of the agreement dated December 29, 1972 between the City and PFMC relating to the operation and management of the Philadelphia Gas Works, authorized pursuant to an Ordinance of Council approved December 29, 1972 (Bill No. 455), as amended ("Management Agreement"), provides in part that contracts and agreements for purchases of gas by or for PGW shall be submitted to the Philadelphia Gas Commission for its recommendation and approval and shall be submitted to City Council for its approval by ordinance; and

WHEREAS, Paragraph 3 of Section VIII of the Management Agreement provides in part that leases of real estate by or for PGW shall be submitted to the Philadelphia Gas Commission for its action and approval and shall be submitted to City Council for its approval by ordinance; and

WHEREAS, The Philadelphia Gas Commission at a public meeting duly held on _____ 2018, approved transactions and contracts regarding the Project, including

certain leases and licenses, and contracts related to the purchase of Natural Gas, pursuant to terms substantially as set forth in the document attached hereto as Exhibit "1," and favorably recommended approval of the transactions and contracts to City Council; and now, therefore

THE COUNCIL OF THE CITY OF PHILADELPHIA HEREBY ORDAINS:

SECTION 1. The Philadelphia Gas Works by Philadelphia Facilities Management Corporation, the Philadelphia Municipal Authority, and the Commissioner of Public Property (on behalf of The City of Philadelphia), are hereby authorized to undertake and enter into certain transactions and contracts regarding a liquefied natural gas project on property and facilities owned by the City of Philadelphia, and operated by the Philadelphia Gas Works, including certain leases and licenses, and contracts related to the purchase of natural gas, all pursuant to terms substantially set forth in the document attached hereto and made a part hereof as Exhibit "1."

SECTION 2. The City Solicitor is hereby authorized to review the contracts necessary to effectuate the transactions authorized by this Ordinance, to impose such terms and conditions on them as the City Solicitor may deem necessary and proper to protect the interests of the City of Philadelphia and to carry out the purpose of this Ordinance, and to approve such contracts of the City of Philadelphia and the Philadelphia Gas Works by Philadelphia Facilities Management Corporation.

SECTION 3. This Ordinance shall be effective immediately.

EXHIBIT "1"

(PLEASE SEE THE SUMMARY OF KEY TERMS – PETITION, EXHIBIT "A")

Exhibit "C"
PFMC Board Resolution

SECRETARY'S CERTIFICATE

I, **MAUREEN WAGNER**, Assistant Secretary of **PHILADELPHIA FACILITIES MANAGEMENT CORPORATION**, do hereby certify that the following is a true and correct copy of action taken by the Board of Directors of said corporation by unanimous consent to the adoption of this resolution dated June 27, 2018, pursuant to provisions of Section 5727(b) of the Non-Profit Corporation Law of the Commonwealth of Pennsylvania.

"RESOLUTION

APPROVING THE KEY TERMS OF CERTAIN PROPOSED TRANSACTIONS TO BE ENTERED INTO BY THE PHILADELPHIA GAS WORKS, THE CITY OF PHILADELPHIA, THE PHILADELPHIA MUNICIPAL AUTHORITY, AND PASSYUNK ENERGY CENTER, LLC (AND OTHER RELATED PARTIES) FOR THE DEVELOPMENT, CONSTRUCTION AND FINANCING OF CERTAIN FACILITIES AT PGW'S PASSYUNK PLANT AND THE PURCHASE AND SALE OF CERTAIN NATURAL GAS PRODUCTS AND SERVICES, AND AUTHORIZING PGW TO SEEK THE RECOMMENDATION AND APPROVAL OF TRANSACTIONS ON SUCH TERMS BY THE PHILADELPHIA GAS COMMISSION AND THE PHILADELPHIA CITY COUNCIL

WHEREAS, pursuant to that certain Management Agreement by and between the Philadelphia Facilities Management Corporation ("the Company") and the City of Philadelphia dated December 29, 1972, as amended, Company is the manager and operator of the Philadelphia Gas Works ("PGW"); and

WHEREAS, in light of favorable results from feasibility studies by Pace Global ("Pace") and CH-IV International and a non-binding solicitation of potential customers, PGW, with Board approval, issued a request for information ("RFI") to potentially interested parties to further explore options to expand PGW's LNG liquefaction and develop sales through PGW and third party financing and cooperation; and

WHEREAS, PGW received fifteen responses to the RFI, met with nine respondents and broadly discussed LNG plant expansion and development options, as well as market opportunities for LNG sales; and

WHEREAS, PGW then issued RFP #30552 (the "RFP") to identify a purchaser/developer to further PGW's interest in LNG liquefaction expansion at the Passyunk and/or Richmond Plants in order to facilitate sales of LNG; and

WHEREAS, Liberty Energy Trust GP, LLC (“Liberty”) was the sole proposer with an expansion plan for Passyunk Plant, whereby Liberty would build and finance a liquefier and take delivery of the offtake to sell to its LNG customers; and

WHEREAS, PGW, after careful and deliberate consideration of Liberty’s RFP response, entered into a Memorandum of Understanding (“MOU”) with Liberty in order to mutually explore LNG plant and sales expansion measures at Passyunk; and

WHEREAS, pursuant to the MOU, PGW and Liberty undertook the following regarding the optimization of PGW’s Passyunk LNG assets:

- a) conducted initial site and operational feasibility studies;
- b) determined key transactional/financial/structural terms;
- c) determined regulatory obstacles/processes based on final terms and deal structure; and
- d) explored the potential customer base; and

WHEREAS, consistent with the foregoing, PGW and Liberty have been able to structure related transactions to develop, construct and finance new LNG facilities at PGW’s Passyunk Plant, so as to facilitate the purchase and sale of additional natural gas products and services, and create additional operational reliability with LNG; and

WHEREAS, PGW and Liberty have summarized (on the exhibit attached hereto as Exhibit “A”) the key terms of such proposed transactions among the Philadelphia Gas Works, the City of Philadelphia, the Philadelphia Municipal Authority, and Passyunk Energy Center, LLC (and other related parties);

WHEREAS, PGW Management believes the transactions described and key terms summarized on Exhibit “A” to be advantageous to PGW because PGW will:

- a) Have use of a new LNG liquefier and loading facilities at Passyunk Plant at a nominal rental cost (\$10 per annum) for 25 years, and take ownership of the new facilities at the end of the term for \$1;
- b) Receive guaranteed annual fees for service (take or pay) estimated at \$1.35 Million, escalated annually;
- c) Receive an additional fee derived from net revenues earned by Passyunk Energy Center, LLC after deduction of certain costs and fees;
- d) Be reimbursed for all capital and operating costs for maintaining the new facilities;

- e) Benefit from additional system redundancy and reliability due to the addition of liquefaction facilities at Passyunk Plant;
- f) Be able to reduce or eliminate trucking costs associated with transporting PGW LNG from the Richmond Plant to the Passyunk Plant;
- g) Facilitate meaningful opportunities for diverse businesses (M/W/V/D) and a diverse workforce in conjunction with the construction of the new facilities;
- h) Revitalize underutilized sites at Passyunk Plant, and incorporate the new facilities into PGW's property remediation plans; and
- i) Optimize existing storage and vaporization capacity at Passyunk Plant by cycling LNG through existing facilities; and

therefore recommends their approval to the Company; and

WHEREAS, in accordance with the Management Agreement, certain of the described transactions require the recommendation of the Philadelphia Gas Commission and the approval of the Philadelphia City Council, as proper authorization.

NOW THEREFORE, BE IT

RESOLVED, that the Company has reviewed and approves the transactions described on Exhibit "A", and the key terms summarized therein, subject to final Board review and approval of the definitive agreements, when drafted, as memorializing said terms, and all requisite recommendations or approvals of the Gas Commission and City Council; and

FURTHER RESOLVED, that the President and Chief Executive Officer, or any such other officers as are designated in writing by the President and Chief Executive Officer, be and they hereby are authorized to initiate proceedings as are necessary to obtain the requisite recommendation and approval by the Philadelphia Gas Commission and the Philadelphia City Council, as appropriate, of the transactions summarized on Exhibit "A" attached hereto; and be it

FURTHER RESOLVED, that the President and Chief Executive Officer, or any such other officers as are designated in writing by the President and Chief Executive Officer, are hereby authorized and directed consistent with the terms set forth on Exhibit "A", to take such other action, including seeking regulatory approval(s), as they deem necessary or appropriate to effect the intent of the foregoing resolution."

IN WITNESS WHEREOF, I have hereunto set my hand and have caused the corporate seal of said Corporation to be hereunto affixed this 18th day of September, 2018.

PHILADELPHIA FACILITIES
MANAGEMENT CORPORATION

By: 
Maureen Wagner
Assistant Secretary

EXHIBIT A

(PLEASE SEE THE SUMMARY OF KEY TERMS – PETITION, EXHIBIT “A”)