



**LNG SALES AND ASSET OPTIMIZATION**

**RFP # 30552**

**Questions & Answers**

**April 26, 2016**

<b>QUESTIONS</b>		<b>ANSWERS</b>	
<b>Q1</b>	<p>Daily Load history for PGW utility and for third parties.</p> <p>a. Could you please provide daily historical Firm load and non-firm load history split by TETCO and Transco city gates for the past three (3) years?</p> <p>b. The assumption is that PGW would utilize the capacity in the AMA for the “Firm” load and the 3<sup>rd</sup> party providers would use other capacity to supply the “Non-Firm” load. (I.e. some utilities refer to the “non-firm” as third party transport customers.)</p>	<b>A1</b>	Response to follow.
<b>Q2</b>	<p>Daily schedule to the city gate by third parties by TETCO and Transco.</p>	<b>A2</b>	Response to follow.



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<p><b>Q3</b> Projected liquefaction dates/volumes that would be helpful as well.</p>	<p><b>A3</b> The proposed Liquefier is estimated to produce approximately 5,800 million standard cubic feet per year and is expected to operate between March and December per year.</p> <p>The existing Liquefier produces the following average amounts a monthly basis:</p> <table border="1" data-bbox="1129 773 1965 1398"> <thead> <tr> <th data-bbox="1138 776 1619 849">Dates</th> <th colspan="2" data-bbox="1627 776 1957 849">Avg Daily Rate</th> </tr> </thead> <tbody> <tr> <td data-bbox="1138 855 1619 894">March 1 - March 31</td> <td data-bbox="1627 855 1835 894">10,562</td> <td data-bbox="1843 855 1957 894">Mcf/d</td> </tr> <tr> <td data-bbox="1138 901 1619 940">April 1 - April 30</td> <td data-bbox="1627 901 1835 940">9,939</td> <td data-bbox="1843 901 1957 940">Mcf/d</td> </tr> <tr> <td data-bbox="1138 946 1619 985">May 1 - May 31</td> <td data-bbox="1627 946 1835 985">3,068</td> <td data-bbox="1843 946 1957 985">Mcf/d</td> </tr> <tr> <td data-bbox="1138 992 1619 1031">June 1 - June 10</td> <td data-bbox="1627 992 1835 1031">448</td> <td data-bbox="1843 992 1957 1031">Mcf/d</td> </tr> <tr> <td data-bbox="1138 1037 1619 1076">July 1 - July 31</td> <td data-bbox="1627 1037 1835 1076">-</td> <td data-bbox="1843 1037 1957 1076">Mcf/d</td> </tr> <tr> <td data-bbox="1138 1083 1619 1122">August 1 - August 31</td> <td data-bbox="1627 1083 1835 1122">-</td> <td data-bbox="1843 1083 1957 1122">Mcf/d</td> </tr> <tr> <td data-bbox="1138 1128 1619 1167">September 20 - September 30</td> <td data-bbox="1627 1128 1835 1167">812</td> <td data-bbox="1843 1128 1957 1167">Mcf/d</td> </tr> <tr> <td data-bbox="1138 1174 1619 1213">October 1 - October 31</td> <td data-bbox="1627 1174 1835 1213">6,264</td> <td data-bbox="1843 1174 1957 1213">Mcf/d</td> </tr> <tr> <td data-bbox="1138 1219 1619 1258">November 1 - November 30</td> <td data-bbox="1627 1219 1835 1258">11,890</td> <td data-bbox="1843 1219 1957 1258">Mcf/d</td> </tr> <tr> <td data-bbox="1138 1265 1619 1304">December 1 - December 31</td> <td data-bbox="1627 1265 1835 1304">10,831</td> <td data-bbox="1843 1265 1957 1304">Mcf/d</td> </tr> <tr> <td data-bbox="1138 1310 1619 1349">January 1 - January 31</td> <td data-bbox="1627 1310 1835 1349">4,372</td> <td data-bbox="1843 1310 1957 1349">Mcf/d</td> </tr> <tr> <td data-bbox="1138 1356 1619 1395">February 1 - February 28</td> <td data-bbox="1627 1356 1835 1395">3,532</td> <td data-bbox="1843 1356 1957 1395">Mcf/d</td> </tr> </tbody> </table>	Dates	Avg Daily Rate		March 1 - March 31	10,562	Mcf/d	April 1 - April 30	9,939	Mcf/d	May 1 - May 31	3,068	Mcf/d	June 1 - June 10	448	Mcf/d	July 1 - July 31	-	Mcf/d	August 1 - August 31	-	Mcf/d	September 20 - September 30	812	Mcf/d	October 1 - October 31	6,264	Mcf/d	November 1 - November 30	11,890	Mcf/d	December 1 - December 31	10,831	Mcf/d	January 1 - January 31	4,372	Mcf/d	February 1 - February 28	3,532	Mcf/d
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<b>Q4</b>	Last month, PGW released an asset optimization AMA which was scheduled to begin on May 1, 2016. It appears that Option 2 (2.2.2 Asset Management and Optimization of Pipeline Capacity) could potentially start sooner than the other options (1, 3, and 4). How soon can the Asset Optimization portion of the deal begin? Would there be a potential for May 2016 start date?	<b>A4</b>	The AMA scheduled to begin on May 1, 2016 for a period of 1 year is for asset management of 1.5 bcf of PGW's Transco WSS storage contract. PGW solicits proposals each year for asset management or capacity release for parts of its storage.  The Asset Optimization option in the current RFP is firm pipeline capacity to be managed in conjunction with the additional LNG would not start until the added LNG production is completed, approximately 1 <sup>st</sup> quarter of calendar year 2019.
<b>Q5</b>	What is the process to obtain copies of the existing transport contracts?	<b>A5</b>	Copies will be provided with these responses.
<b>Q6</b>	At the Passyunk location, does the RFP depiction of the site show all Passyunk PGW owned acreage, contiguous or nearby, e.g. other Passyunk PGW parcels not depicted?	<b>A6</b>	The depiction shows all PGW owned and operated acreage; approximately 59 acres.
<b>Q7</b>	The CH-IV "Dispersion Modeling" at the Passyunk location included analysis of Propane. Does this demonstrate that additional peak shaving may have been considered for this location?	<b>A7</b>	Additional liquefaction capacity was considered at the Passyunk Plant in the CH-IV study.



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<b>Q8</b>	Has PGW ever contacted Texas Eastern to determine the cost associated with a Passyunk connection to facilitate small scale liquefaction of no greater than 35 mmscfd. Gas pipeline connections are not mentioned in the 2015 CH-IV Feasibility Study other than “no allowance is made” reference.	<b>A8</b>	There is an existing connection to the Texas Eastern pipeline from the 060 gate station into the Passyunk Plant that serves the Veolia cogeneration plant. PGW currently does not nominate supply through this station. The incremental physical capacity of the 060 gate station and pipeline into the Passyunk Plant beyond what is required by Veolia is approximately 40,000 mcf.
<b>Q9</b>	Is it anticipated that there will be a need for new tariff rates required to facilitate Options 1, 1A or 1B?	<b>A9</b>	A tariff for firm LNG Sales will be required. PGW has a tariff for interruptible LNG Sales.
<b>Q10</b>	Please confirm the Transco Capacity Transportation contracts that make up the 160,400 MCF/Day listed in Appendix G, namely is that contract that goes from Zone 1-2-3 to Zone 6?	<b>A10</b>	See Q60. Corrected Transco Contract FT1 capacity is 165,212 dth.
<b>Q11</b>	Are there any Leidy Line Zone 6 rights that come with that capacity?	<b>A11</b>	No.
<b>Q12</b>	Are the storage contracts that PGW holds on Transco part of the AMA contemplated in Option 2?	<b>A12</b>	No.



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<b>Q13</b>	Please confirm the TETCO Capacity Transportation contracts that make up the 72,816+23,128+4,854 listed in Appendix G?	<b>A13</b>	See Q60. Corrected volumes are: TETCO CDS contract capacity is 75,000 dts. TETCO FT1 contract capacity is 23,822 dts.
<b>Q14</b>	Are the storage contracts that PGW holds on TETCO part of the AMA contemplated in Option 2?	<b>A14</b>	No.
<b>Q15</b>	Has PGW participated in or signed a precedent agreement for any new capacity on either TETCO or Transco?	<b>A15</b>	No.
<b>Q16</b>	Has PGW been provided a forecasted rate on TETCO's Greater Philadelphia Expansion Project that would enable future gas supply?  <a href="http://www.spectraenergy.com/Operations/US-Natural-Gas-Operations/New-Projects-US/Greater-Philadelphia-Expansion-Project/">http://www.spectraenergy.com/Operations/US-Natural-Gas-Operations/New-Projects-US/Greater-Philadelphia-Expansion-Project/</a>	<b>A16</b>	No.



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<b>Q17</b>	What makes up the Sales Service Charge in Appendix F, does this include all fixed demand charges on TETCO and Transco that PGW has contracts for?	<b>A17</b>	The SSC includes all fixed demand charges for firm pipeline capacity and storage on PGW TETCO and Transco contracts.
<b>Q18</b>	Does the SSC charge include fuel and variable commodity charges on the pipelines?	<b>A18</b>	No.
<b>Q19</b>	Is the SSC charge a weighted average of all flows / look back at actual costs vs. forward estimates?	<b>A19</b>	Yes. It is adjusted quarterly in PA PUC 1307(f) PGC filings.



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<p><b>Q20</b> Please provide an average consumption and peak load profile by month for PGW's system requirements that match annual sales volumes and restrictions listed in 2.1.1.3 and 2.1.1.4</p>	<p><b>A20</b> The average daily system send out and the highest daily send out can be found below:</p> <table border="1" data-bbox="1129 626 1726 1247"> <thead> <tr> <th colspan="2">10 year Daily Average Send out(Mcf)</th> <th>10 Year Maximum (Mcf)</th> </tr> </thead> <tbody> <tr><td>Jan</td><td>372,244</td><td>607,062</td></tr> <tr><td>Feb</td><td>361,395</td><td>645,370</td></tr> <tr><td>Mar</td><td>261,759</td><td>538,891</td></tr> <tr><td>Apr</td><td>140,257</td><td>316,326</td></tr> <tr><td>May</td><td>83,332</td><td>160,396</td></tr> <tr><td>Jun</td><td>66,649</td><td>81,261</td></tr> <tr><td>Jul</td><td>60,870</td><td>71,051</td></tr> <tr><td>Aug</td><td>60,838</td><td>72,857</td></tr> <tr><td>Sep</td><td>68,797</td><td>95,406</td></tr> <tr><td>Oct</td><td>108,503</td><td>282,433</td></tr> <tr><td>Nov</td><td>205,050</td><td>415,370</td></tr> <tr><td>Dec</td><td>296,471</td><td>507,476</td></tr> </tbody> </table> <p>During the LNG sales pilot program, the duration to load a trailer was monitored. On average, loading time per trailer was 60 minutes.</p>	10 year Daily Average Send out(Mcf)		10 Year Maximum (Mcf)	Jan	372,244	607,062	Feb	361,395	645,370	Mar	261,759	538,891	Apr	140,257	316,326	May	83,332	160,396	Jun	66,649	81,261	Jul	60,870	71,051	Aug	60,838	72,857	Sep	68,797	95,406	Oct	108,503	282,433	Nov	205,050	415,370	Dec	296,471	507,476
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<b>Q21</b>	What is the maximum gas pipeline capacity expansion possible for LNG given existing pipeline constraints?	<b>A21</b>	Maximum LNG production at the Richmond Plant as currently configured would be limited to approximately 500,000 gpd, or 42,000 mcf.
<b>Q22</b>	History of PGW and relationship with surrounding community, ports?	<b>A22</b>	PGW has a very good relationship with the community and port.
<b>Q23</b>	Who is the truck/trailer owner/operator? Review of existing relevant contracts?	<b>A23</b>	The successful Proposer(s) would need to procure their own truck/trailer operator.
<b>Q24</b>	History of discussions around adding marine terminal. Who are the relevant authorities to answer questions around port fees etc.?	<b>A24</b>	Contacts for the PRPA and DRS are in Appendix E of the RFP. The PRPA and DRS are interested in opportunities to expand port business and jobs that could result with the PGW LNG project.





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<p><b>Q25</b></p>	<p>List of agencies needed to approve the expansion.</p>	<p><b>A25</b></p>	<p>Agencies that may need to give approval may include but may not be limited to:</p> <p>Philadelphia Facilities Management Corporation</p> <p>Philadelphia Gas Commission (approval for New Liquefier and truck loading expansion only)</p> <p>Philadelphia City Council (approval for New Liquefier and truck loading expansion only)</p> <p>Philadelphia Fire Department has local jurisdiction.</p> <p>Philadelphia Department of Licenses and Inspections (construction permitting)</p> <p>Air Management have jurisdiction (environmental permitting)</p> <p>Approval parties will depend upon transaction structure.</p>
<p><b>Q26</b></p>	<p>Provide a detailed overview of financing plan.</p>	<p><b>A26</b></p>	<p>PGW expects to finance the LNG liquefaction and truck loading expansion on PGW property with revenue bonds or a combination of revenue bonds and internally generated funds if supported by contracts for purchase of the LNG. Additional facilities necessary to distribute the LNG would be funded by proposers.</p>



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<b>Q27</b>	What is the procedure to receive approval for LNG tanker access into the relevant waters, and who are the relevant authorities?	<b>A27</b>	Proposers are responsible for transporting the LNG. The Coast Guard controls movement on the Delaware River. If proposed activities are FERC jurisdictional, FERC approvals would also be required. The approval parties will depend on the selected project structure.
<b>Q28</b>	Is there officially published data regarding bridge heights, water depth, current, wind?	<b>A28</b>	This would be available from nautical charts of the area.
<b>Q29</b>	Is there data on ship traffic and schedule on the Delaware and Schuylkill Rivers?	<b>A29</b>	<a href="http://www.marinetraffic.com/en/ais/home/shipid:713444/zoom:10">http://www.marinetraffic.com/en/ais/home/shipid:713444/zoom:10</a>
<b>Q30</b>	For JV firms, does a rep from each company need to attend the mandatory site visit?	<b>A30</b>	No.
<b>Q31</b>	Do we need to confirm that we have received documents per 1.2.1?	<b>A31</b>	Yes.
<b>Q32</b>	Who else besides PGW will see the submitted proposals? It seems like PGW cannot guarantee that other proposers will not have access.	<b>A32</b>	PGW will endeavor to keep submitted proposals confidential through contract execution and approval. PGW may need to share all proposals with its regulators and other stakeholders (e.g., PFMC, the City of Philadelphia, the PUC, City Council and Philadelphia Gas Commission), and materials may also be subject to public inspection under the Pennsylvania Right to Know Law, Act 3 of 2008, 65 P.S. §§ 67.101 et seq.



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<b>Q33</b>	What is the expected remaining life for both the Richmond and Passyunk plants, and their expected maintenance schedule and costs on a go forward basis?	<b>A33</b>	The maintenance schedule for both facilities follows the regulations set forth in 49 CFR 193. LNG tanks do not experience internal deterioration. Diligent maintenance of exterior components provides for a long useful life of these tanks. We believe the PGW LNG tanks to have a useful life of another 30 years or more.
<b>Q34</b>	Does winning the RFP mean that the winner has exclusive access to PGW's LNG? If not, what is the "prize" for winning? Is the Proposer expected to structure their compensation as part of the offtake agreement with the end user?	<b>A34</b>	PGW will evaluate all proposals on their merits and the value to PGW. There can be more than one purchaser of LNG. Proposals should include a financial structure that details the proposed supply chain structure.
<b>Q35</b>	Is PGW looking for a take or pay contract or are you open to other structures?	<b>A35</b>	PGW is open to other structures. Longer term contracts that maximize benefit to PGW to support investment in the expanded liquefaction facility will get preference.
<b>Q36</b>	The RFP notes days for "curtailed operation" (2.1.1.4.2)? Does that mean that the 63M gal/yr is actually interruptible, or does this curtailment only affect the remaining capacity?	<b>A36</b>	The 63 million gallons/year will be firm. Curtailment of the existing liquefier during some of the colder days in the winter will not impact firm LNG supply but could impact the availability of the additional 12 million gallons/year of interruptible LNG.
<b>Q37</b>	Are there limits on the truck loading that would prevent 30 trailers/day capacity once the second truck rack is installed?	<b>A37</b>	30 trucks/day is based on a 24 hour/day operation. Planned or unplanned maintenance will result in outages at some times during the year.
<b>Q38</b>	Should questions aimed at PRPA and DRS be directed to those contacts directly or should they go through Barbara Thomas at PGW?	<b>A38</b>	Questions should be directed to the PRPA and DRS.



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<b>Q39</b>	Should questions aimed at Philadelphia Beltline Railway be directed to them or Barbara Thomas at PGW?	<b>A39</b>	Philadelphia Beltline Railway.
<b>Q40</b>	Does PGW have existing contacts at FERC or should Proposers contact FERC directly?	<b>A40</b>	Proposers should address FERC directly.
<b>Q41</b>	Does PGW have a preference of Option 1A and Option 1B other than the overall financial gain to PGW?	<b>A41</b>	No
<b>Q42</b>	Is a proposal that excludes a proposal for Option 2, 3 and 4 less attractive to PGW than a proposal for just Option 1, all else equal?	<b>A42</b>	No.
<b>Q43</b>	What is the minimal contract length that PGW will accept?	<b>A43</b>	PGW is open to all proposals but longer term contracts will receive preference.
<b>Q44</b>	Does PGW have minimal requirements for counterparty credit?	<b>A44</b>	Minimum requirements have not been established at this time.
<b>Q45</b>	Can PGW provide an example of the DBE participation plan (2.9)?	<b>A45</b>	Participation plans are unique to each proposal. PGW will look for proposers to define how they plan to include disadvantaged businesses in any proposed construction.



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<b>Q46</b>	Are environmental due diligence costs the responsibility of Proposer? What if site conditions prevent further development?	<b>A46</b>	Environmental due diligence for construction of the new liquefier will be the responsibility of PGW. The cost of additional work including environmental due diligence would be the responsibility of proposers.
<b>Q47</b>	Can Proposer be a JV that isn't yet legally established but commits to do so upon winning the RFP?	<b>A47</b>	Yes.
<b>Q48</b>	Can electronic version of proposal be submitted via thumb drive instead of CD?	<b>A48</b>	Yes. CD's are preferred, but the electronic version may be submitted via thumb drive.
<b>Q49</b>	Is it helpful for Proposer to develop a relationship with local labor unions and demonstrate agreements with such as part of the Proposal?	<b>A49</b>	It is not necessary as part of the Proposal. Proposer will be responsible to ensure that selected labor is compatible with existing forces in order to avoid labor disruption.
<b>Q50</b>	Does Proposer have the right to withdraw at any time without penalty, even after contract award? If not, what is that penalty structure?	<b>A50</b>	Purchaser may withdraw prior to contract execution.
<b>Q51</b>	Will PGW provide safety equipment during mandatory site visits?	<b>A51</b>	It is recommended that Proposers provide their own safety equipment, but PGW has the capability to provide temporary safety equipment if need be for visitors.



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<b>Q52</b>	How important is a demand LOI to become the winning bidder?	<b>A52</b>	Prior to execution of a contract, Proposers will be required to provide offtake commitments.
<b>Q53</b>	Did PGW hire a consultant to perform a feasibility study in order to evaluate its options? If so, can this report be provided?	<b>A53</b>	Yes – Pace Global. It cannot be provided.
<b>Q54</b>	Has PGW selected an EPC contractor? If so, what work has been completed so far?	<b>A54</b>	PGW has not selected an EPC.
<b>Q55</b>	Has PGW selected a liquefaction technology?	<b>A55</b>	No.
<b>Q56</b>	Can you provide the details of the \$120 million budget?	<b>A56</b>	Estimated cost information is available in the CH-IV study. PGW will develop a revised cost estimate for its capital budget.
<b>Q57</b>	Who will be the project lead at PGW?	<b>A57</b>	Janelle Johnson, PGW LNG Project Manager.
<b>Q58</b>	If PGW enters into an agreement with multiple parties, how will it address daily queuing issues?	<b>A58</b>	This will be addressed in final contract negotiations.
<b>Q59</b>	Has PGW explored marine exports with PRPA or DRS before? If so, what was their feedback?	<b>A59</b>	Yes. They were supportive when PGW considered larger scale LNG import and export projects.
<b>Q60</b>	What is the contract path of the pipeline transportation capacity?	<b>A60</b>	<p>Transco FT-1 capacity of contract 1003691 is 165,212 dekatherms. It is telescoped from zone 1 up to the zone six PGW city gate.</p> <p>The Tetco CDS capacity of contract 800232 is 75,000 dekatherms. It has receipt points in all the supply zones to the M3 PGW city gate.</p>



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			The Tetco FT-1 capacity of contract 800233 is 23,822 dekatherms. It has receipt points in all the supply zones to the M3 PGW city gate.
<b>Q61</b>	Is the pipeline transportation capacity going to be released at the max FT rates?	<b>A61</b>	Yes.
<b>Q62</b>	Could PGW provide any details about the asset management structure or is it part of the proposal?	<b>A62</b>	PGW requests this as part of the proposal.