Request for Information

Delivery of Performance Evaluations for Operator Qualification

Northeast Gas Association
75 Second Ave.
Suite 510
Needham, MA 02494
1.0 Introduction

The U.S. Department of Transportation regulations require operators to develop and maintain a written qualification program for individuals performing Covered Tasks. These regulations are detailed in Title 49 CFR 192, Subpart N: Qualification of Pipeline Personnel and are commonly known as Operator Qualification (OQ). The regulations are intended to promote safety and minimize human error by having qualified personnel who are able to perform work tasks safely and recognize and react to abnormal operating conditions.

The Northeast Gas Association (NGA) administers an Operator Qualification (OQ) Program on behalf of its membership. OQ Program administration includes the development and ongoing updates to an OQ Program Written Plan and Covered Task list, as well as the conduction of written and performance evaluations. NGA is contemplating a significant expansion in the number of performance evaluations available through our OQ Program. This pending change has prompted a review of how we administer OQ performance evaluations.

This Request for Information (RFI) is part of NGA’s review of the performance evaluation delivery process. NGA is requesting responses to this RFI to help determine if outsourcing the delivery of performance evaluations would be beneficial to membership. Feedback received will help make this determination and, depending on the outcome, may result in a more definitive Request for Proposal for the delivery of performance evaluation services.
2.0 Northeast Gas Association

The Northeast Gas Association (NGA) is a regional trade association that focuses on education and training, technology research and development, operations, planning, and increasing public awareness of natural gas in the Northeast U.S. NGA represents natural gas distribution companies, transmission companies, liquefied natural gas importers, and associate member companies. These companies provide natural gas to over 13 million customers in nine states (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont).

NGA was established on January 1, 2003. Its predecessor organizations were The New England Gas Association (founded in 1926) and the New York Gas Group (founded in 1973).

NGA's functional areas include:
- operations,
- technology research, development and deployment,
- gas supply planning,
- education and training, and
- outreach and marketing.
3.0  NGA Members Participating in the NGA OQ Program

NGA’s OQ Program is currently being utilized by 17 local distribution companies (LDCs) and approximately 350 contractor companies throughout the northeast. Collectively, there are approximately 25,000 active accounts (individual people) within the NGA OQ database. The NGA OQ Program is one of the largest (possibly the largest) OQ Program in the U.S. Relative to OQ performance evaluations, NGA delivers approximately 50,000 performance evaluations annually equating to approximately 1,600 delivery-days (man-days).

Natural Gas Utilities Utilizing NGA’s OQ Program:

1. Avangrid (Berkshire Gas, CNG/SCG, Maine Natural Gas, NYSEG/RG&E)
2. Bangor Gas Company
3. Central Hudson Gas and Electric Corp
4. Columbia Gas
5. Consolidated Edison Company of New York
6. Corning Natural Gas
7. Holyoke Gas and Electric Corp.
8. Liberty Utilities (MA, NH, St. Lawrence Gas)
9. Middleborough Gas and Electric Department
10. National Fuel Gas Distribution Company
11. National Grid
12. New Jersey Natural Gas Company
13. Norwich Public Utilities
14. Orange & Rockland Utilities
15. Unitil
17. Village of Hamilton
4.0 Background and Supporting Information

4.1 Performance Evaluations

NGA delivers performance evaluations in support of its OQ Program to both LDC and contractor personnel. In simple terms, performance evaluations are assessments of an individual’s knowledge, skill, and ability to perform a Covered Task. Please see Appendix A for NGA’s Covered Task List. These evaluations are typically performed via a simulation or demonstration of the task. These are typically conducted at an LDC or contractor’s facility utilizing materials and equipment furnished by the client. Each performance evaluation follows a prescribed scenario regarding the task, equipment, operating scenario/conditions, materials, etc. with a pre-defined checklist of critical steps/elements that must be observed during the evaluation. A sample performance evaluation may be found in Appendix B. Each assessment must be documented and entered into an online database through a tablet. The database currently utilized by NGA is the OnBoard LMS system by Industrial Training Services, Inc. Evaluators performing the assessment must have relevant experience and be competent in the task to perform the evaluation.

4.2 Existing Business Profile

For the period of July 2018 – June 2019, NGA performed approximately 50,000 performance evaluations for 20 LDCs and 139 contractors. These evaluations were completed at locations across the northeast through a 10-state region of CT, MA, MD, ME, NH, NJ, NY, PA, RI, and VT. These evaluations were performed over 1,641 delivery-days (or man-days) for an average of approximately 30 evaluations per day. Approximately 74% of these evaluations were related to pipe joining tasks, 23% were related to distribution tasks, 3% corrosion, and smaller percentages for pressure control, instrumentation, compressors stations, and LP-Air facilities. Performance evaluations are delivered throughout the year, as requested by LDC and contractor companies. A large share of the work (69%) is delivered during the months of December through April. Appendix C of the RFI provides supplemental information on both the existing business profile as well as projections for future growth in performance evaluation services.
### 4.3 Current Business Model

NGA currently utilizes 25 - 30 individuals to provide performance evaluation and training services. Individuals providing these services are predominantly retired natural gas industry professionals with 20+ years of experience. NGA classifies and treats these individuals as independent contractors with work being offered on a per diem basis. This existing workforce plays a critical role in conducting performance evaluations for NGA membership. As such, the retention of these individuals in these roles is considered important to the continuity of the OQ Program.

### 4.4 Forthcoming Changes with Performance Evaluations

Federal and state regulatory agencies have placed emphasis on the need for OQ programs to utilize performance evaluations to validate the skills of individuals performing covered tasks. NGA constituted a working group comprised of leadership from both our OQ Committee and our Training & Qualification Committee to review this issue and develop recommendations. The outcome from this process was a recommendation that NGA expand the number of covered tasks requiring performance evaluations from the current level of 39% to 77%. The timing for this increased demand for performance evaluation services will likely begin in late 2020 through 2021.

Additionally, certain operators, initially in NY and CT, are considering the development of company-specific performance evaluations for tasks where their procedures are substantially different than those utilized in the NGA program. This company-specific activity could further expand the demand for performance evaluation services. NGA plans to expand the current scope of services to include delivery of company-specific performance evaluations, when requested by an operator.

As a result, NGA strongly believes the demand for competent, experienced, operating personnel to conduct performance evaluations will increase significantly. NGA estimates that the number of resources required to meet the projected demand will nearly double in the coming years. The information provided in Appendix C outlines these projections. Note that this forecast is just that, a forecast, as there are many operational, regulatory, and business factors that will influence the future demand for performance evaluations. That said, NGA desires to address this pending demand proactively and is
exploring options which would help us meet both the current and projected demand for performance evaluation services.

4.5 New Business Model Under Consideration

In June 2019, the NGA Board of Directors authorized staff to explore a new business model for performance evaluations conducted in support of NGA’s OQ program whereby NGA would contract with 3rd party firm(s) to provide performance evaluation services in accordance with NGA standards. Staff believes this model would allow for the growth in resources to deliver performance evaluations commensurate with the projected expanded use of both NGA and company-specific performance evaluations in the qualification process. The model proposed calls for NGA to select one or more firms to deliver performance evaluation services to LDC and contractor personnel. This would include the scheduling of evaluations, conducting evaluations with associated paperwork and data entry, and management oversight of the process. Once the new model is established and functional, NGA would transition out of the delivery of performance evaluation business. It is expected that the majority of resources currently performing evaluation services for NGA would transition to the new firm(s) providing these services. NGA has constituted a steering committee comprised OQ and Training & Qualification Committee leadership along with a cross-cutting mix of LDC and contractor subject-matter experts to provide guidance and direction to NGA staff as we explore this new business model.

Firms that will be considered to provide performance evaluation services are those that currently provide related technical services to the natural gas industry and therefore have the technical expertise on staff and/or have the capability to expand staff to meet regional demand. In particular, companies providing 3rd party evaluation services and/or 3rd party inspection services will be considered. The steering committee believes that the membership would be better served by selecting one firm with the capability to meet regional demand. The ability of one organization to meet projected demand and the benefits associated with this model will be explored through this Request for Information.

This proposed “authorized evaluator model” or outsourcing model is similar to NGA’s administration of other major OQ services such as online evaluations, where that function was outsourced to Prometric, and similar to that of database services, which are outsourced to Industrial Training Services (ITS).
this evolving model, NGA’s focus is on the content, quality, and integrity of the program and services along with oversight of service providers, leaving delivery of services to the expertise of 3rd parties.

To enable this model, NGA will establish criteria for firm(s) providing performance evaluation services, criteria for individuals who will conduct evaluations, a process to vet both companies and individuals, a process to train and onboard individuals regarding NGA’s performance evaluation process, as well as an audit process to ensure evaluators and evaluations meet expectations. The steering committee is currently outlining criteria and requirements for each of these processes.

To avoid potential conflicts of interest, personnel who routinely work for an LDC or Contractor in any capacity would not be allowed to conduct performance evaluations for that same company.
5.0 Request for Information

5.1 Objectives

The objective of the RFI is to explore a number of issues associated with this proposed business model for performance evaluation services and to gauge the interest and ability of firms to supply these services to NGA and its member companies. Recipients of the RFI are requested to respond to the following questions in as much detail as needed to adequately answer the question.

5.2 Request for Information

NGA requests that the responding firm address the following topics/questions:

Topic 1 – Company Profile

- Please provide an overview of your company including the number of employees, geographic footprint, and technical services provided.
- Please provide an overview of your company with emphasis on services currently provided to the natural gas industry, existing clients within the natural gas industry, and more specifically to NGA member companies in the northeast.
- Please provide an overview of technical competencies as compared to those outlined in Appendix A and C, along with the number of resources which align to these competencies.
- Please indicate if your firm currently provides performance evaluation services and/or 3rd party inspection services to the natural gas industry.
- Please provide an overview of management/administrative resources to accomplish back office functions such as scheduling, invoicing, document/database administration.

Topic 2 – Competency of Personnel

NGA recognizes the importance of having competent personnel providing performance evaluation services. Competencies include work experience, technical background, and training along with soft skills such as professionalism, oral and written communications, authoritative presence, organizational skills, and fundamental computer/tablet skills. Additionally, NGA expects that evaluators will qualify
in the tasks that they evaluate (written and performance evaluations) unless there is a physical/medical condition which prohibits said qualification.

- Please provide feedback regarding NGA’s expectations of personnel and the degree to which these expectations align with your firm’s expectations of personnel and your experience in recruiting and vetting personnel to meet similar standards.

NGA recognizes the importance of staying current with new technology, equipment, procedures and materials of construction. Currently NGA hosts annual refresher training for all evaluators.

- Please provide an overview of how your firm ensures continued technical competency of personnel, with emphasis on the areas noted above, along with recommendations as to how this can be accomplished cost effectively.
- Please indicate if your firm has regional centers which could host classroom and hands-on demonstrations for refresher training and qualification of personnel who will conduct performance evaluations.

**Topic 3 – Ability to Meet Current and Future Demand for Performance Evaluation Services**

NGA’s initial belief is that there are operational benefits and efficiencies from contracting with one firm capable of meeting the current and future demand for performance evaluation services required by NGA membership vs. contracting with multiple firms. As mentioned previously, NGA assumes that most technical resources currently conducting performance evaluations for NGA will be transitioned to the new firm(s).

- Please provide an indication if your firm is currently capable of meeting current and future demand to deliver performance evaluations as outlined in this RFI.
- Please indicate your firm’s receptivity or concerns with bringing on NGA’s current evaluators.
- Please provide an indication if your firm currently has seasonal technical resources for related services, such as 3rd party construction inspection, which could be leveraged during peak periods for NGA performance evaluations.
- Please provide an overview of your firm’s ability to recruit incremental technical resources to meet regional demand for performance evaluation services.
**Topic 4 – Quality Assurance**

NGA recognizes the need for quality assurance in the delivery of performance evaluation services to ensure consistency, fairness, and overall quality of the service provided.

- Please provide an overview of quality assurance measures used by your firm to help ensure the overall consistency and quality of the services being performed.
- Please provide feedback as to your firm’s use of Customer Satisfaction (CSAT) measures to help ensure services meet client’s expectations.
- Please provide feedback as to what quality assurance measures would be applicable to performance evaluation services.
- Please indicate if your firm has a management of change (MOC) process in place which could be used to address periodic changes in performance evaluations or OQ program policy changes.

**Topic 5 – Training Services**

In addition to performance evaluation services, NGA is occasionally requested to conduct instructor-led training on specific gas distribution topical areas (e.g. pipe joining, installation of pipe, etc.) NGA has secured a license from the Gas Technology Institute to utilize GTI’s *Field Skills Training Program* as the baseline resource to conduct these trainings. NGA anticipates that the license to use the GTI program could be extended to an NGA sub-contractor. To avoid potential conflicts of interest, NGA has a restriction that the same person cannot train and then qualify personnel.

- Please provide background on your firm’s experience and ability to provide instructor-led training.
- Please provide background on your facilities or equipment that could be leveraged for training.

**Topic 6 – Business Model**

NGA’s current business model for performance evaluation and training services is as follows:

- NGA schedules and bills member companies on a day-rate basis with a day being defined as up to 8 hours worked, inclusive of data entry and paperwork.
- NGA has an “extended day” rate for a maximum of 3 additional hours.
- NGA pays evaluators a flat fee per day plus travel and expenses.
- Travel and expenses are fixed rates based on IRS mileage and regional government data.
For this new business model, NGA will be the “customer” to the firm(s) providing performance evaluation services. NGA envisions a similar billing structure in which NGA would be invoiced a flat fee per day for services performed, inclusive of administrative and overheads costs. This fee would be inclusive of travel expenses provided the services are rendered within the ten-state region currently serviced by NGA. This model provides an incentive for service providers to secure regional technical resources as driven by market demand. See Appendix C for regional data. NGA would, in turn, invoice the LDC or contractor with a mark-up for program management and oversight. Furthermore, given stringent labor laws in certain northeast states, NGA believes that personnel supporting this effort should be classified as part-time or full-time employees, versus independent contractors.

* Please provide feedback on this proposed business model and/or suggest alternatives which would meet intended outcomes.

**Topic 7 – Other**

* Please provide additional thoughts, input, or feedback that NGA should consider as we contemplate this change in business model for OQ related technical services.

* Should NGA elect to pursue this topic, please indicate if your firm would be interested in participating in a Request for Proposal or subsequent communications in pursuit of this objective.
5.3 Closing Date for Responses

- Please respond with 5 business days of receipt of this RFI with an indication of your intent to respond.

- Please submit complete responses to this RFI not later than 5:00 pm on March 24, 2020.

Responses may be electronic via email to parmstrong@northeastgas.org or hard copy to the mailing address below. Clearly label responses “Request for Information – Delivery of Performance Evaluations for Operator Qualification”.

Mailing Address:
Northeast Gas Association
Attention: Paul Armstrong
75 Second Ave., Suite 510
Needham, MA 02494,

5.4 Inquiries

All questions and clarifications pertaining to this RFI should be emailed to Paul Armstrong no later than 5:00 PM on March 16, 2020. Questions and clarifications received after this date and time may not be answered. parmstrong@northeastgas.org
6.0 Request for Additional Information from Respondents

NGA reserves the right to request additional information from the respondents after the closing date. NGA reserves the right to alter this Request for Information at any time and may, at its sole and exclusive option, solicit proposals from any prospective bidders as it deems appropriate.

7.0 Copyright / Intellectual Property Rights

NGA has ownership and copyright for all OQ materials utilized and/or developed or produced through the course of this RFI or any resulting contract unless otherwise stipulated.

8.0 Contact Information

<table>
<thead>
<tr>
<th>Name:</th>
<th>Paul Armstrong, Vice President, Training &amp; Qualification Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email:</td>
<td><a href="mailto:parmstrong@northeastgas.org">parmstrong@northeastgas.org</a></td>
</tr>
</tbody>
</table>
Appendix A

NGA Covered Task List

COVERED TASK LIST

1. Inspecting for shorted casings
2. Measuring pipe-to-soil potential
3. Conducting a soil resistivity survey
4. Conducting interference testing
5. Electrically checking for proper performance of diodes and interference bonds
6. Inspecting for atmospheric corrosion
7. Ensuring operation of a rectifier
8. Visually inspecting for internal corrosion
9. Removing coupons/sample gas or liquids for analysis and evaluation of internal corrosion
10. Clearing a shorted casing
11. Applying pipe coating in the field
12. Cleaning and either coating or jacketing pipe for atmospheric corrosion
13. Installing/replacing a rectifier on a pipeline
14. Installing or replacing an anode on a pipeline
15. Installing, replacing, and testing electrical isolation couplings on a pipeline
16. Installing/replacing a corrosion test station on a pipeline
17. Repairing coating on steel pipelines
18. Conducting gas leakage surveys
19. Patrolling and inspecting pipelines
20. Investigating leak/odor complaints

1 Task does not currently require a performance evaluation, but a performance evaluation will be required in the future.
2 Task currently requires a performance evaluation.
21. Line locating and mark out
22. Inspecting 3rd party excavations for damage prevention
23. Inspecting the condition of exposed pipe
24. Inspecting pipe for damage
25. Repairing a transmission pipe
26. Repairing and maintaining transmission line valves
27. Lubricating transmission line valves
28. Uprating
29. Repairing distribution line leaks
30. Repairing a non-leaking pipe
31. Installing pipe
32. Purging a pipeline into service
33. Purging a pipeline out of service
34. Performing pressure test on a pipeline
35. Stopping gas flow
36. Abandoning facilities
37. Tapping pipelines under pressure
38. Starting up or shutting down any part of the pipeline that could cause MAOP to be exceeded
39. Removing service tee or fitting from steel and cast iron pipe
40. Installing/replacing tracer wire
41. Inspecting, lubricating, and operating distribution valves
42. Repairing distribution line valves
43. Repairing inline welds
44. Restoring service
45. Abandoning a gas service line
46. Mechanical joining of pipe other than plastic
47. Joining plastic pipe
48. Installing tapping tee on pipe

3 Evaluation for this task is addressed outside the scope of NGA’s OQ Program.
52. Inspecting plastic pipe joint
53. Non-destructive testing of welds
54. Welding on a pipeline
55. Maintaining a pipeline compressor station
56. Operating a pipeline compressor station
57. Repairing a compressor
58. Maintaining gas detection systems and alarms in compressor stations
59. Controlling and monitoring gas pressures and flows
60. Operating remote control valves
61. Inspecting a pressure recording gauge
62. Inspecting and testing pressure regulator station
63. Installing and testing overpressure protection at a pressure regulator station
64. Inspecting telemetering equipment at a pressure limiting or regulating station
65. Bypassing a regulator
66. Field interpretation of pressure recording devices
67. Inspecting a pressure regulator vault
68. Operating an odorizer
69. Monitoring natural gas odorization levels
70. Identifying and responding to abnormal operating conditions and unsafe conditions, and knowledge of properties of natural gas
70P. Identifying and responding to propane air plant abnormal operating conditions, and knowledge of properties of natural gas and propane
71. Operator excavating and backfilling in the vicinity of a pipeline
72. Installing customer meters and regulators
73. Inspecting and maintaining air compressors at LP-Air plants
74. Inspecting and maintaining instrument air dryers at LP-Air plants
75. Inspecting and maintaining emergency shutoff systems at LP-Air plants
76. Maintaining fire protection systems at LP-Air plants
77. Inspecting and maintaining storage tanks, piping, valves, and fittings at LP-Air plants
78. Inspecting and maintaining vapor compressors at LP-Air plants
79. Inspecting, operating, and maintaining vapor detection systems at LP-Air plants
80. Inspecting and maintaining propane vaporizers at LP-Air plants
81. Loading, unloading, and transferring liquid propane at LP-Air plants
82. Inspecting and maintaining auxiliary power sources at LP-Air plants
83. Operating a propane air plant
84. Bending of steel pipe
85. Identifying and reacting to meter assembly abnormal operating conditions
86. Conducting interior jurisdictional piping safety inspections
87. Conducting interior jurisdictional piping and construction maintenance activities
Appendix B

Sample Performance Evaluation Checklist

Stopping Gas Flow - Mechanical

The skill assessment shall be conducted in a location that meets the following criteria:

1. Simulated in a classroom/shop setting
2. Steel pipe 2” - 4” diameter with welded line stopper fitting
3. Steel pipe a minimum of 2 feet in length
4. Tool and Accessories

<table>
<thead>
<tr>
<th>PERFORMANCE STEP TITLE</th>
<th>PASSED / FAILED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Verified equipment correct and is in good working order</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>2. Attached the Gate Valve</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>3. Remove Completion Plug</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>4. Attached Stopper to Stopping Machine</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>5. Attached Stopping Machine to Gate Valve</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>6. Equalize Pressure in Housing and Open Gate Valve</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>7. Insert Stopper into Fitting</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>8. Expand Stopper</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>9. Contract Stopper</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>10. Extract Stopper, Close Gate Valve, and Relieve Pressure</td>
<td>Passed / Failed</td>
</tr>
<tr>
<td>11. Remove Stopping Machine</td>
<td>Passed / Failed</td>
</tr>
</tbody>
</table>

SCORE THE INDIVIDUAL PASSED IF ALL PERFORMANCE MEASURES ARE PASSED. SCORE THE INDIVIDUAL FAILED IF ANY PERFORMANCE MEASURE IS FAILED. IF THE INDIVIDUAL SCORES FAILED ON ANY PERFORMANCE MEASURE, HE/SHE FAILS THE ENTIRE COVERED TASK SKILL ASSESSMENT.
Appendix C

NGA Performance Evaluation Metrics

Performance Evaluations Delivered by NGA Evaluators

Number of Performance Evaluations Delivered by NGA Evaluators, July 2018 - June 2019

<table>
<thead>
<tr>
<th>Company Type</th>
<th># Companies</th>
<th># PEs Delivered</th>
<th>% LDC vs. Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDCs</td>
<td>20</td>
<td>9,808</td>
<td>19%</td>
</tr>
<tr>
<td>Contractors</td>
<td>139</td>
<td>40,554</td>
<td>81%</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>50,362</td>
<td></td>
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Projected Incremental Performance Evaluations Delivered Annually

<table>
<thead>
<tr>
<th>Company Type</th>
<th># Companies</th>
<th># PEs Delivered</th>
<th>% LDC vs. Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDCs</td>
<td>20</td>
<td>4,563</td>
<td>23%</td>
</tr>
<tr>
<td>Contractors</td>
<td>155</td>
<td>15,121</td>
<td>77%</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>19,684</td>
<td></td>
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</tbody>
</table>

Projected Performance Evaluations Delivered Annually

<table>
<thead>
<tr>
<th>Company Type</th>
<th># Companies</th>
<th># PEs Delivered</th>
<th>% LDC vs. Contractor</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDCs</td>
<td>20</td>
<td>14,371</td>
<td>21%</td>
<td>47%</td>
</tr>
<tr>
<td>Contractors</td>
<td>155</td>
<td>55,675</td>
<td>79%</td>
<td>37%</td>
</tr>
<tr>
<td>Total</td>
<td>184</td>
<td>70,046</td>
<td></td>
<td>39%</td>
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</table>

Note regarding projection of Performance Evaluations: NGA is providing baseline data on performance evaluations for the period of July 2018 – June 2019 along with initial projections for increases expected in the future. This information is provided such that respondents can understand the order of magnitude of performance evaluation services. These projections should not be construed as a guarantee of workload volume. Actual demand for services is influenced by many factors including LDC and contractor participation with NGA, use of LDC or NGA evaluators, development of company-specific performance evaluations, regulatory and business drivers. That said, the estimates provided herein are likely conservative estimates.
Regional Breakdown of Performance Evaluations

# NGA PE Delivery Days by State/Region

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<thead>
<tr>
<th>Region</th>
<th>No. of Delivery Days Delivered</th>
<th>%</th>
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<tbody>
<tr>
<td>CT</td>
<td>36</td>
<td>2%</td>
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<tr>
<td>MA</td>
<td>287</td>
<td>17%</td>
</tr>
<tr>
<td>ME</td>
<td>22</td>
<td>1%</td>
</tr>
<tr>
<td>NH</td>
<td>47</td>
<td>3%</td>
</tr>
<tr>
<td>NJ</td>
<td>99</td>
<td>6%</td>
</tr>
<tr>
<td>NY Downstate</td>
<td>535</td>
<td>33%</td>
</tr>
<tr>
<td>NY Upstate</td>
<td>427</td>
<td>26%</td>
</tr>
<tr>
<td>PA</td>
<td>139</td>
<td>8%</td>
</tr>
<tr>
<td>RI</td>
<td>37</td>
<td>2%</td>
</tr>
<tr>
<td>VT</td>
<td>7</td>
<td>0%</td>
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<tr>
<td>MD</td>
<td>5</td>
<td>0%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>1,641</strong></td>
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Technical Competencies of Performance Evaluations

Existing PEs Delivered by Technical Competency

- Pipe Joining - 74%
- Distribution - 23%
- Corrosion - 3%
- Pressure Control & Instrumentation - <1%
- Transmission/Engineering - 0%
- Welding - 0%
- Compressor Stations - <1%
- LP-Air Facilities - <1%

Projected PEs Delivered by Technical Competency

- Pipe Joining - 49%
- Distribution - 44%
- Corrosion - 5%
- Pressure Control & Instrumentation -1%
- Transmission/Engineering - 1%
- Welding - 0%
- Compressor Stations - <1%
- LP-Air Facilities - <1%
Seasonality of Performance Evaluations

Seasonality of Performance Evaluations

Seasonality of Performance Evaluations, Number of Performance Evaluations Delivered by NGA Per Month

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<tbody>
<tr>
<td>NGA Delivered PEs, July</td>
<td>9031</td>
<td>8461</td>
<td>7484</td>
<td>4874</td>
<td>3501</td>
<td>1900</td>
<td>1759</td>
<td>1700</td>
<td>1226</td>
<td>2685</td>
<td>3172</td>
<td>4569</td>
<td>50362</td>
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<tr>
<td>2018-June 2019</td>
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<td>Incremental PEs – LDCs</td>
<td>463</td>
<td>728</td>
<td>526</td>
<td>391</td>
<td>169</td>
<td>168</td>
<td>225</td>
<td>261</td>
<td>284</td>
<td>338</td>
<td>426</td>
<td>357</td>
<td>4335</td>
</tr>
<tr>
<td>(Projected)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental PEs –</td>
<td>2489</td>
<td>1968</td>
<td>1984</td>
<td>1123</td>
<td>752</td>
<td>671</td>
<td>760</td>
<td>942</td>
<td>1242</td>
<td>1155</td>
<td>1112</td>
<td>923</td>
<td>15121</td>
</tr>
<tr>
<td>Contractors (Projected)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Projected</td>
<td>11983</td>
<td>11157</td>
<td>9994</td>
<td>6388</td>
<td>4422</td>
<td>2739</td>
<td>2744</td>
<td>2903</td>
<td>2752</td>
<td>4178</td>
<td>4710</td>
<td>5849</td>
<td>69818</td>
</tr>
<tr>
<td>Percent increase</td>
<td>33%</td>
<td>32%</td>
<td>34%</td>
<td>31%</td>
<td>26%</td>
<td>44%</td>
<td>56%</td>
<td>71%</td>
<td>124%</td>
<td>56%</td>
<td>48%</td>
<td>28%</td>
<td></td>
</tr>
</tbody>
</table>
Delivery-Days for Performance Evaluations

Factors Impacting Delivery-Days for Performance Evaluations

<table>
<thead>
<tr>
<th>Factor</th>
<th>Low Estimate</th>
<th>High Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Number of PEs</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Evaluator/Student ratio and/or hold points for Pipe Joining PEs</td>
<td>0.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Addition of Critical Fail Questions into PEs</td>
<td>0.05</td>
<td>0.1</td>
</tr>
<tr>
<td>Reduced class size due to number of people and task complexity</td>
<td>0.05</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Aggregate Multiplier</strong></td>
<td><strong>1.40</strong></td>
<td><strong>2.00</strong></td>
</tr>
<tr>
<td><strong>Most Likely</strong></td>
<td><strong>1.70</strong></td>
<td></td>
</tr>
</tbody>
</table>

Delivery-Days for Performance Evaluations, Number of NGA Delivery-Days Per Month

<table>
<thead>
<tr>
<th>NGA Delivered PEs, July 2018-June 2019</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact of Increased Number of PEs, lower use case</td>
<td>218</td>
<td>181</td>
<td>228</td>
<td>178</td>
<td>140</td>
<td>84</td>
<td>115</td>
<td>111</td>
<td>47</td>
<td>116</td>
<td>131</td>
<td>96</td>
<td>1645</td>
</tr>
<tr>
<td>Impact of Increased Number of PEs, upper use case</td>
<td>305</td>
<td>253</td>
<td>319</td>
<td>249</td>
<td>196</td>
<td>118</td>
<td>161</td>
<td>155</td>
<td>155</td>
<td>162</td>
<td>183</td>
<td>134</td>
<td>2393</td>
</tr>
<tr>
<td>Impact of Increased Number of PEs, lower use case</td>
<td>436</td>
<td>362</td>
<td>456</td>
<td>356</td>
<td>280</td>
<td>168</td>
<td>230</td>
<td>222</td>
<td>222</td>
<td>232</td>
<td>262</td>
<td>192</td>
<td>3418</td>
</tr>
</tbody>
</table>