Engineering Competency: Performing Elevated Risk Functions

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NYS Public Service Commission Amendment

NYS Public Service Commission Issued Amendment to NYCRR Part 255 Effective March 18, 2022

255.604 – [Operator]Qualification[s] of Pipeline Personnel This section prescribes the minimum requirements for operator qualification and requalification of operator employees and CASE 19-G-0736 -9- contractor workers who[individuals] perform[ing] covered tasks on a pipeline facility.

(f) Engineering Functions. The operator shall determine engineering functions specific to the design, construction, operation, and integrity of pipelines that contain elevated risk. The operator shall have and follow a written program that includes a training, mentoring, and evaluation process to be CASE 19-G-0736 -17- used for establishing competency of personnel performing these higher risk engineering functions.

National Grid Written Policy Guideline

Purpose:

This policy provides a framework for developing a company specific program including training, mentoring, and evaluation process components to ensure ongoing competency of engineers performing elevated risk functions.

Address some of the ***elevated risk engineering functions*** are specific to the design, construction, operation, and integrity of pipelines as required by 16 NYCRR 255.604(f) in New York State

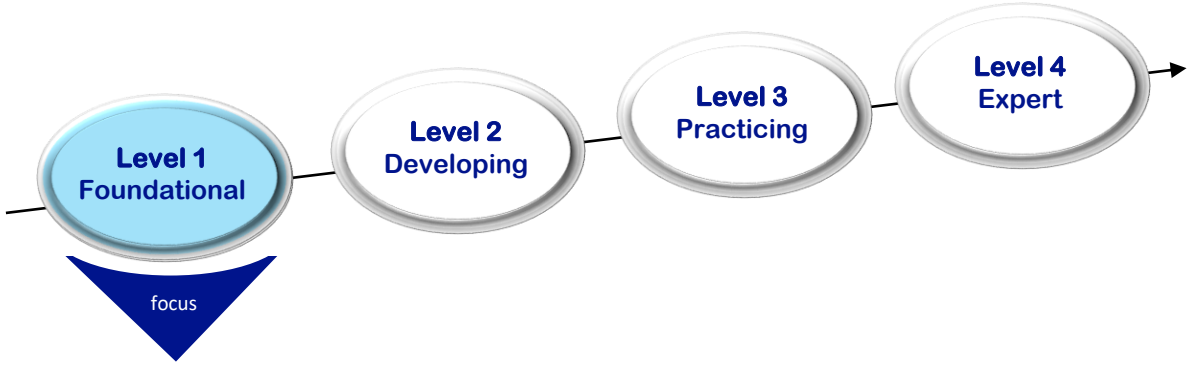
Describes the ***Engineering Competency Program*** through elements of formal education and/or equivalent field experience. For example, internal and external technical training will be combined with on-the-job (OTJ) work skills to provide the foundation for National Grid's engineering career path progression. This program will help ensure the appropriate level of knowledge, skill, and ability for engineers to manage operational risk

Elevated Risk Functions

1. Unplanned escape of product from a pipeline.
2. Fire or explosion
3. Unplanned pressure deviation (e.g., increase, decrease, high, low, absent).
4. Unplanned flow-rate deviation (e.g., high flow, low flow, no flow).
5. Pipeline damage (e.g., excavation damage, inappropriate handling of pipe/pipeline components during storage or installation).
6. Activation of a safety device(s) other than during planned testing (e.g., pressure relief, emergency shutdown, high-pressure shutdowns, case pressure shutdowns, high-temperature shutdowns).
7. Unplanned status change (e.g., unit startup, unit shutdown, valve open, valve close, without being directed to do so).
8. Interruption or failure of communications, control system, or power.
9. Inadequate odorization or reports of gas odor.

NG Engineering Competency Assurance

Engineering Competency Development Program (ECDP)



For recent National Grid Employees; Analysts, Supervisors, and Engineers who have < 24 months experience with National Grid. Focus is on expanding their foundational knowledge with practical skills and developing those competencies required to perform various engineering functions.

Engineer Design Review (EDR)

Gas EDR is an objective evaluation process in which National grid assesses the core elements of a gas system engineering design (piping systems, gas pressure/flow control facilities, gas processing systems and other facilities and equipment). An engineering design review should be considered a continuous process beginning with the design engineer internal/external design approvals, construction and final inspection and commissioning of the facility.

10 Course Topic Areas* – Foundational Training

The topic areas align with National Grid's organizational structure and provide a broad picture of all areas of Gas Engineering. The learner can cross-departmental boundaries to learn other areas of engineering, identify collaboration opportunities, develop competencies of tasks to be performed, and build interest in potential future roles.

1 – Intro to Natural Gas & Engineering at National Grid

An introduction to the properties of natural gas and how National Grid brings energy to life through sound engineering practices

2 – Safety & Compliance Leadership

Safety & Compliance is a core value at National Grid. All employees take an active role in ensuring the safety of our colleagues, customers, and communities

3 – Gas System Strategic Planning

An introduction to Gas System Strategic Planning and engineering which ensures reliable, cost efficient and adequate gas system capacity for our customers

4 – Networks & Future of Heat

An introduction to National Grid's strategy to enable a clean and fair energy future through decarbonization, electrification and alternative energy supplies

5 – Gas Asset Management & Engineering Transmission

An introduction to transmission assets and the associated engineering designs, rules and regulations

** An Excel ECDP Topic List is available for more content detail*

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6 – Gas Pressure Regulation LNG/CNG/I&R

An introduction to pressure regulation facility assets and the associated engineering designs, rules and regulations

7 – Gas Asset Management & Engineering Distribution

An introduction to distribution assets and the associated engineering designs, rules and regulations

8 – Public Works & City State Construction

An introduction to engineering & field management of natural gas infrastructure impacted primarily by municipal construction

9 – Construction & Maintenance

An introduction to various construction and maintenance practices utilized in the installation, repair and replacement of natural gas facilities

10 – Estimating & Complex Construction

An introduction to Estimating & Complex Construction which provides a broad spectrum of solutions for the business

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Thank You!

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