Women in Engineering at Exelon

Christie McMullen
VP, Gas Distribution

Julia Sichler
Associate Engineer, Gas Distribution
The Exelon Family

Generation

Energy Sales & Services

Transmission and Delivery

Exelon Generation

constellation

BGE

ComEd

PECO

Pepco Holdings
Exelon by the Numbers

- FORTUNE 100 Company
- Nation’s Leading Competitive Energy Provider
- In 48 states, D.C. and Canada
- 10 million customers in Maryland, D.C., Delaware, Illinois, New Jersey, and Pennsylvania
- $31.4 billion in revenue in 2016
- 34,000 Employees nationwide
BGE - Who We Are

The Leading Gas and Electric Provider in Maryland

Founded in 1816, Maryland’s largest provider of electricity, serving 1.25 million+ electric customers and 650,000+ gas customers, and the nation’s first provider of natural gas.
Operating in Central Maryland, BGE is a subsidiary of Exelon Corporation with six other utilities delivering electricity and natural gas to approximately 10 million customers through Atlantic City Electric, BGE, ComEd, Delmarva Power, PECO and Pepco.

### BGE Services Maryland’s Major Population Centers

<table>
<thead>
<tr>
<th>Service area</th>
<th>Electric Customers</th>
<th>Gas Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anne Arundel County</td>
<td>243,549</td>
<td>103,415</td>
</tr>
<tr>
<td>Baltimore City</td>
<td>266,090</td>
<td>204,509</td>
</tr>
<tr>
<td>Baltimore County</td>
<td>365,060</td>
<td>220,174</td>
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<tr>
<td>Calvert County</td>
<td>7,864</td>
<td>n/a</td>
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<tr>
<td>Carroll County</td>
<td>58,231</td>
<td>15,789</td>
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<tr>
<td>Cecil County</td>
<td>n/a</td>
<td>585</td>
</tr>
<tr>
<td>Frederick County</td>
<td>n/a</td>
<td>1,059</td>
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<tr>
<td>Harford County</td>
<td>102,625</td>
<td>46,425</td>
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<tr>
<td>Howard County</td>
<td>126,127</td>
<td>59,839</td>
</tr>
<tr>
<td>Montgomery County</td>
<td>13,900</td>
<td>46</td>
</tr>
<tr>
<td>Prince George’s County</td>
<td>82,541</td>
<td>7,680</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,265,987</strong></td>
<td><strong>658,890</strong></td>
</tr>
</tbody>
</table>
BGE - Who We Are
Quick Facts

- Service Area: Electric - 2,300 square miles,
  Gas - 800 square miles
- Employees: approx. 3,200
- Substations: 243
- Power Lines: Over 25,000 circuit miles distribution,
  1,300 circuit miles transmission
- Natural Gas Pipeline Network: Over 7,100 miles
200 Years of BGE

Moving smart energy forward

1816
1816-1840
1841-1895
1896-1900
1891-1910
1911-1920
1921-1930
1931-1940
1941-1965
1966-1980
1981-1995
1996-2010
2011-2016
2016

1816: The Gas Light Company petitions city of Baltimore to begin laying underground gas pipelines. Paris expands the following year.

1819: The Gas Light Company of Baltimore is founded on June 17th. It is the first gas company in the nation.

1819: Baltimore Mayor promises customers the Gas Light Company will begin plans for city street lights.

1830: First gas meters installed; street gas replaces flat rate—making it more cost effective for residential customers.

1836: Baltimore Gas and Electric expands to other industries. Opens appliance stores and starts WAMS radio (1930).

1837: The company signs a fully integrated gas and electric service agreement to form the new Consolidated Gas Company of Baltimore.

1851: Gas street lighting is completed in Baltimore City.

1854: Consolidated Gas Electric Light and Power Company of Baltimore is formed.

1860: Gas street lighting is completed in Baltimore City.

1865: The company signs a fully integrated gas and electric service agreement to form the new Consolidated Gas Company of Baltimore.

1873: The company signs a fully integrated gas and electric service agreement to form the new Consolidated Gas Company of Baltimore.

1875: The company begins a nuclear generating plant at Calvert Cliffs. By 1970, Unit 1 is fully operational.

1897: Consolidation Energy Group becomes the official holding company for BGE and affiliates.

1917: The Gas Light Company of Baltimore is incorporated and chartered by the Maryland Legislature on February 17th with Hernando Pestle as the primary subscriber.

1923: The company expands to other industries. Opens appliance stores and starts WAMS radio (1930).

1925: The first part of a high voltage ring around Baltimore is completed.

1938: The company establishes headquarters in December.

1948: Baltimore City replaces 7,000 remaining gas lamps with electric lights.


1958: The company begins a nuclear generating plant at Calvert Cliffs. By 1970, Unit 1 is fully operational.

1965: Baltimore Gas and Electric expands to other industries. Opens appliance stores and starts WAMS radio (1930).

1977: Consolidation Energy Group becomes the official holding company for BGE and affiliates.

1987: Smart Energy Manager® provides smart meter customers with online tools for managing energy use.

1990: BGE Smart Energy Savers Program encourages the Maryland House of Representatives.

1999: Smart Energy Savers™ encourages the Maryland House of Representatives.

2001: BGE Smart Energy Savers Program encourages the Maryland House of Representatives.

2006: BGE Smart Energy Savers Program encourages the Maryland House of Representatives.

2010: BGE Smart Energy Savers Program encourages the Maryland House of Representatives.

2015: BGE Smart Energy Savers Program encourages the Maryland House of Representatives.

2016: More than 1.7 million smart meters installed with more than one million customers enjoying energy and bill savings programs.
Gas Distribution
Gas Distribution

- **STRIDE (Strategic Infrastructure Development and Enhancement)**
  - In 2013, the STRIDE Legislation was signed into law to establish a framework for the MDPSC to authorize a replacement plan to improve public safety and system reliability, as well as a surcharge for cost recovery of *accelerated* gas infrastructure replacement investments.
  - BGE’s STRIDE Plan was approved in 2014, with an Amendment added in late 2016

Abandonment of 30” Cast Iron main (BOP: Edmondson)

Workspace of Catonsville BOP job
Gas Distribution

- Gas Operations
  - Maintain existing infrastructure
  - Support new projects

2017 Interns with Distribution Operations and TIMP

Joint Encapsulation completed by Maintenance and Repair
Gas Distribution

- Peak Shaving Facilities
  - Liquefied Natural Gas Plant (LNG)
  - Propane Air Plant
Personal Experience

BGE’s Hydrovac Truck

Electric Operations Overview
Summer Interns 2017

Installing Black Diamond Carbon Fiber Wrap

Gould Street Power Plant Tour
Summer Interns 2017

Inspecting Transmission Pipe

Trade Floor Tour at Constellation
Example Responsibilities

▪ Optimize future gas pipe routes
▪ Develop service packages for STRIDE
▪ Participate in leak cycle time reduction project
▪ Research diesel consumption due to idling
▪ Summer long innovation project with other interns throughout BGE
Come Visit Us!

UMBC Fall Career and Internship Fair
- Wednesday, September 27, 2017
- 11:30-3:30 PM
- UMBC Retriever Activities Center (RAC)

Apply Online at http://www.exeloncorp.com/careers
  - Job Posting: 2018 Summer Internships – Engineering – Midatlantic (207574)