



key crossing reliability initiative

Background

In its role as a provider of essential public services, Baltimore Gas and Electric (BGE) is required by the Maryland Public Service Commission (PSC) to maintain specific levels of service and to provide them safely and reliably to the consumer. Since 2002, BGE has invested more than \$9 billion in system upgrades and expansions. These investments are expected to reduce outages and accelerate restorations when outages occur.

BGE owns and operates two high voltage transmission circuits that extend under the Patapsco River on the Harbor side of the Francis Scott Key Bridge from Hawkins Point to Sollers Point. These circuits are made of high voltage cables placed inside of steel pipes filled with dielectric fluid that acts as an insulating medium. These circuits were put in service in the early 1970's.

The circuits crossing the Patapsco River are a critical link in the electrical system. These cables are exhibiting symptoms of long-term failure and are approaching the end of their useful service life. A loss of these circuits will result in decreased reliability for the region. BGE is committed to investing to ensure that all customers benefit from excellent reliability.

Range of Alternatives Considered

BGE began assessing the feasibility of replacing the transmission circuits to maintain service reliability in the fall of 2013. All existing cables need to remain in service through the construction of the project.

This assessment analyzed several overhead & underground options which included:

- Operating the existing circuits until retirement is necessary
- Installing replacement cables in the existing pipes
- Installing replacement underground cables parallel to the existing cables
- Installing a replacement overhead transmission line across the river

BGE considered the following factors when identifying a recommended solution:

- Environmental impacts
- Permitting requirements
- Safety
- Reliability
- Operational requirements
- Community impacts
- Cost to ratepayers

Underground Analysis

BGE considered the following factors when identifying a recommended solution:

- Clearing within the Chesapeake Bay Critical Area
- Disturbance and disposal of river bottom sediment
- Impact to port operations during construction
- Duration of construction
- Potential environmental impacts during construction
- Environmental impacts based on construction method

Overhead Analysis

BGE also evaluated the environmental impacts of replacing the existing cables with overhead transmission lines. This solution:



Minimizes impacts within the Chesapeake Bay Critical Area and the Patapsco river



Has visual impacts to the waterway



Will have the lowest cost impact for BGE ratepayers



Has low impacts to current and future expanded shipping channel



Meets operational requirements



Has the greatest potential for local and domestic job creation



Uses proven technology for the foundations, towers, conductors and collision protection structures



Has the least environmental impact of the options that were considered

Next Steps

The existing circuits will be retired in place in the safest manner possible to minimize potential environmental impacts. BGE is required to obtain regulatory permits for the preferred alternative including a Certificate of Public Convenience and Necessity (CPCN) from the Maryland Public Service Commission, a Permit from the Army Corps of Engineers, and a Tidal Wetland License from the Maryland Board of Public Works. BGE is also required to assess the environmental impacts of constructing this line. This will include evaluating the existing conditions of the river bottom, soil conditions at proposed transmission tower locations, review of natural resources, protected species and habitats, and environmentally sensitive materials, and identifying historical and cultural resources.