

# **Peermont Project**



#### **Borough of Avalon Upgrades**

August 8, 2015

#### **Purpose & Need**

- Surrounding area has grown substantially over the years
- Existing substation and transmission lines are near their load capacity
- New infrastructure is required to meet growing electric demand
- Increased reliability from steel pole infrastructure during coastal storms & extreme weather



#### **Overview of the Power Delivery System**

#### HOW ELECTRICITY GETS FROM POWER PLANT TO PEOPLE



- Electricity leaves a power plant
- Voltage is increased at a "step-up" substation
- Electricity travels through a high-voltage transmission line to the area where power is needed
- Voltage is decreased, or "stepped-down", at another substation
- Electricity is distributed locally through power lines
- 6 Electricity is delivered to homes and businesses



A PHI Company

#### **Peermont Project – Transmission Route Overview**





## **Summary of Upgrades for the Peermont Project**

- Two existing 23kV transmission lines will be upgraded to new 69kV transmission lines to accommodate need for additional capacity
- Steel pole designs for transmission projects are now a standard across the Atlantic City Electric service territory to withstand extreme weather events.
- Wood poles will be replaced with galvanized steel poles on the island and causeways
- 12kV distribution lines in Stone Harbor and Avalon will be reconductored as part of the project
- The existing Peermont Substation will be demolished and rebuilt with a new 69/12kV substation. Work began in Spring 2015 for this upgrade.



# **Existing Peermont Substation**





# **Proposed Peermont Substation – 60th Street**





## **Proposed Peermont Substation – 61st Street**





#### **Improving Reliability - New Transmission Lines**

- Some existing poles and wires on the island are approaching 45 years old
- The salty coastal environment puts wood utility poles and equipment at a higher risk for damage, especially during significant storm events such as Hurricane Sandy
- Upgrading wood poles to steel poles with additional capacity at 69kV will allow ACE to continue to provide safe reliable electric service to customers on 7 Mile Island well into the future
- New poles are designed to withstand 120 mph winds



# March 2013 Storm







#### **Benefits of Steel Poles**

- Self Supporting
  - Steel poles can eliminate the need for guy wires, stub poles & push poles
- Longevity
  - Steel poles have a longer service life than wood poles and require much less maintenance over time
- Size
  - New poles will be taller and slightly larger in diameter due to National Electric Safety Code requirements and ACE electrical clearance standards
  - Regardless of the new pole material, many of the pole dimensions would be similar
  - Many of the new conductors will be raised
- Visual Impact
  - Steel poles of the same type will be uniform in shape, size, and color

#### **Peermont Photo Simulations – Route**

#### PEERMONT TRANSMISSION PROJECT





## **Peermont Photo Simulations – Viewpoint 3**





#### **Peermont Photo Simulations – Viewpoint 3 Existing**





#### **Peermont Photo Simulations – Viewpoint 3 Proposed**



## **Peermont Photo Simulations – Viewpoint 5**





#### **Peermont Photo Simulations – Viewpoint 5 Existing**





#### **Peermont Photo Simulations –Viewpoint 5 Proposed**



Viewpoint 5 • Date: 8/21/2014 • Time: 10:17 AM • View Direction: North



# **Project Timeline**

- Construction for Peermont Substation & all transmission lines on 7-Mile Island will occur September 2015 – May 2016
- The majority of construction is scheduled to occur during the daytime and the work will be completed in the off season
- Some of our upgrades will require roadwork but we plan to minimize disruptions to customers whenever possible
- Sidewalk and curb impacts by construction activity will be replaced joint to joint and restored to preconstruction conditions
- Notifications to property owners in the project area will provide updates on pre-construction and construction activities
- Additional 12kV distribution feeder upgrades on the island will continue into 2017

