

# Nantucket Peak Load

## Frequently Asked Questions

### **How is Nantucket's electricity delivered?**

Electric service is delivered to all Nantucket residents and businesses through two undersea cables. Both cables are connected to the island at the National Grid substation on Candle Street. One begins in Hyannis, MA and the other in Harwich, MA. One cable has 36 megawatts (MW) of capacity and the other has 38 MW of capacity.

### **How much electricity do Nantucket residents and businesses really use?**

Under normal conditions, the average demand for electricity amounts to approximately 15-20 MW, with some amount of growth each year. This is less than the capacity of even one of the two cables. However, during certain times, such as the afternoons and evenings of hot, humid periods in the summer months, the demand for electricity is much higher. In fact, at its peak in 2013, demand was as high as 45 MW. The time frame of these high electric loads is typically between 2 pm and 10 pm.

### **Why are discussions about a 3rd cable taking place now?**

Under normal operating conditions, Nantucket's electricity is split between the two cables; however, if one cable were to go out of service (i.e., an emergency situation), the entire demand for electricity would be placed on the remaining cable. Since the maximum demand for electricity on Nantucket is now larger than the capacity of a single cable, if one of the 2 cables were to go out, residents and/or businesses could be at risk for a power outage until backup diesel generators were turned on. To maintain the appropriate levels of reliability, National Grid is required to prepare for emergency situations like this. In recent years, Nantucket's demand for electricity has increased significantly, and as a result, there are a growing number of hours each year in which the demand for electricity exceeds the capacity of one of the cables. Additionally, over the next five years the growth rate is currently forecasted to be approximately 3.2%, higher than the average growth rate for the state of Massachusetts.

### **What is National Grid's current backup plan?**

The good news is that the cables have a very reliable record of service. The probability of a cable going out of service during periods of maximum usage is very low, but National Grid must still plan for that contingency. National Grid's traditional plan, to cover any hours for which the electric demand is higher than the capacity of one cable, is to operate stand-by diesel generators in case of a cable failure.

### **Will a 3rd cable be necessary soon?**

At this time, there are no plans to construct a 3rd cable. In light of the most recent forecasts, National Grid is conducting a study that will take a deeper and more targeted look at the electric distribution infrastructure on Nantucket. This study will determine what, if any, changes and upgrades might be necessary to maintain reliable service to the island over the company's long-term planning horizon, which is approximately 20 years. This study is currently underway and is targeted to be completed sometime in early 2015.

### **What are National Grid and the Town of Nantucket doing to prepare?**

While the reality of the need for a 3rd cable on Nantucket is still uncertain, the growth in the demand for electricity is not. There is much room for improvement in the overall efficiency of the island's residences and businesses. To that end, National Grid and the Town of Nantucket Energy Office are teaming up to promote a sustainable environment on the island through energy efficiency and environmental responsibility while also maintaining safe, reliable electric service for residents and businesses at a reasonable cost. National Grid would like to investigate whether customer-side technologies can be implemented in a targeted way to achieve sustainable load reductions, possibly reducing the amount of backup diesel generation needed and deferring any future plans to construct a 3rd cable. A proposal for a pilot project is being developed by National Grid with input from the Town Energy Office and is currently planned to be filed with the MA Department of Public Utilities for a dedicated budget later in 2014. The proposal will be shared with the Nantucket community prior to any filing taking place.

### **How can I get more information?**

National Grid and the Town of Nantucket Energy Office will continue to communicate new information about the status of the National Grid study, as well as events related to the pilot project as it becomes available. To see the latest, please visit [www.ackenergy.org](http://www.ackenergy.org).

### **What can I do today?**

National Grid encourages residents to install high efficiency devices (e.g., advanced power strips, energy-saving pool pumps, etc.), but the simplest way to get started is to sign up for a home or business assessment through one of National Grid's existing energy efficiency programs. National Grid will send an energy expert to survey your home or business and provide you with a personalized list of energy-efficient recommendations, generous rebates, conservation tips, and even LED bulbs installed in place of incandescent bulbs—at no cost to you. To learn more, please call 800-632-8300 for residents and 800-332-3333 for businesses.