

# Nantucket Peak Load

## Frequently Asked Questions

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### 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 initiates from Hyannis, MA and the other from Harwich, MA. One cable has 36 megawatts (MW) of capacity and the other has 38MW of capacity.

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

Under normal conditions, the average demand for electricity amounts to approximately 15-20MW 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 45MW. 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 are turned on. To maintain the appropriate levels of reliability, National Grid is required to prepare for emergency situations like this to mitigate the risk of power outages throughout its service territory.

### 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. In recent years, Nantucket's demand for electricity has increased significantly and as a result, there is 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%, which is higher than the average growth rate for the state of Massachusetts.

### 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 will be completed by the end of 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 its residents and businesses at a reasonable cost. National Grid is investigating 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 potentially deferring any future plans to construct a 3rd cable. A proposal for a pilot project has been developed by National Grid with input from the Town Energy Office and was shared with the Nantucket community in an open meeting held in September 2014. The initial phase of this pilot project began implementation in 2015 with a set of energy efficiency incentives. National Grid is proposing to continue these incentives in 2016 pending approval from the Massachusetts Department of Public Utilities (DPU). A DPU decision is anticipated in Q1 2016.

### How can I get more information?

National Grid and the Town of Nantucket Energy Office will continue to communicate new information about the study and pilot project. To see the latest, please visit [www.ngrid.com/nantucket](http://www.ngrid.com/nantucket) or contact your Town Energy Coordinator, Lauren Sinatra, at (508) 325-5379.

### What can I do today?

The simplest way to get started is to sign up for a home or business assessment by calling 1-844-615-8316. National Grid will send an energy expert to survey your home or business, provide you with a personalized list of energy efficient recommendations, generous rebates, conservation tips and even LED replacement bulbs. It's free. If you have already had an assessment recently, you may still be eligible for some of the new, enhanced incentives that are being offered exclusively for Nantucket customers. Call the number above to determine your eligibility.

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### **Is National Grid partnering with the Nantucket Town Energy Office on this project?**

Yes. The Town of Nantucket Energy Office and National Grid are working together to promote a sustainable environment in Nantucket through energy efficiency and environmental responsibility while also maintaining safe, reliable electric service for its residents and businesses at a reasonable cost. To that end, the Town of Nantucket Energy Office is an active proponent of National Grid's initiatives to reduce electricity use during peak times through enhanced incentives and serves as a key liaison to the community with public outreach efforts such as a comprehensive education campaign to increase program awareness and participation. National Grid also incorporates input and feedback from the Town of Nantucket Energy Office to enhance the deployment of these initiatives and the effectiveness of the outreach to more concretely articulate connections between the goals of the initiatives and what matters to the Nantucket community.

### **Why do some products have enhanced incentives while others don't?**

Different products and enhancements to the home provide energy savings that vary depending on the time of day and time of year. For example, purchasing an efficient window AC unit will provide energy savings during the summer months when it is in use, but not in the winter months when it is likely not in use. Similarly, an LED bulb provides energy savings during the early morning and evening hours when the lights are turned on, but not during the daytime hours, when it is likely turned off. The existing energy efficiency programs available statewide offer incentives on a broad range of products in an effort to achieve energy savings for customers throughout the year. Because, as described earlier in this FAQ document, during the afternoons and evenings of the summer months on Nantucket the demand for electricity is much higher than normal, the focus of National Grid's initiatives to reduce energy on the island are focused around these specific timeframes. Therefore, its enhanced incentives are focused on products and home enhancements that reduce the demand for electricity during these times.



