

On March 15, 2016, Heidi Smith, Manager of Economic Development for Tideland Electric Membership Corporation, presented a history of the electrification of Ocracoke Island to members of the Ocracoke Preservation Society. The following account relies on Heidi Smith's presentation, the author's personal recollections, and various other sources.

In 1935, President Franklin D. Roosevelt issued an executive order to create the Rural Electrification Administration (REA), an independent federal bureau. The REA was authorized by the United States Congress in 1936. Three years later it was reorganized as a division of the U.S. Dept. of Agriculture. The REA was charged with administering loan programs for the electrification of rural areas.^[1] Although farming communities were the primary focus of the program, Ocracoke residents immediately understood the potential benefits for the island. However, Ocracoke's small population and the physical isolation of the village presented problems not found in most other rural areas.



President Roosevelt Establishes the REA:

In 1936, island native and visionary, R. S. (Stanley) Wahab, built the first modern hotel on Ocracoke Island. The two-story Wahab Village Hotel (now Blackbeard's Lodge) also housed a massive generator recovered from a cruise vessel sunk off the coast. This generator provided the first publicly available electricity to the Island.[\[2\]](#)

In May, 1937, the utility, now known as Ocracoke Power and Light Company, secured an REA loan for construction of a new facility near the Community Store (today the building houses Kitty Hawk Kites and an ice cream stand). The wood and concrete block structure housed not only the island's two new 60KW Worthington generators, used to provide electric power for domestic and business lights and newly introduced appliances, but also an ice-making plant. In 1937 ice was a highly important commodity sought by homeowners, businesses, and fishermen. Previously, ice had to be brought to the island in the holds of the freight boat *Bessie Virginia* or the mailboat *Aleta*. Now ice could be produced locally, on demand.



Ocracoke Power & Light Plant (looking northwest):

According to Captain Rudy Austin, as reported by Pat Garber, “water was pumped from a shed and cisterns on the other side of the road. The water was carried in a pipe under the sandy lane and into the building, where large blocks of ice were produced in metal sleeves, using the electricity generated there. Fresh water ice was made for use in island homes, saltwater ice, for use on the fishing boats.”[\[3\]](#)

Most island homes and businesses were soon electrified, if only with simple ceiling lights and a few wall outlets. In July, 1944, the Ocracoke Electric Membership Corporation, North Carolina’s smallest electric cooperative, was established to replace the Ocracoke Power and Light Company. It served just over 400 meters on 33 miles of line.[\[4\]](#)

Soon afterwards, on September 14, 1944, a fierce hurricane pummeled Ocracoke Island. Winds were estimated at over 100 mph, and tides were running at fourteen feet. The entire island was under water as powerful waves crashed into boats, homes and businesses. Six houses were completely destroyed, and serious damage was inflicted on the island’s diesel generators. As a result, Ocracoke EMC became one of only two electric cooperatives to default on their REA loans. As a temporary measure, two generators were borrowed from the island’s WWII Navy base. Power was restored, but only from 5 a.m. until midnight.

Repairs were soon made to the building and the diesel generators, but by 1957 electricity usage had increased to the point of necessitating more powerful generators. A 189KW Superior generator and a 100KW Murphy generator replaced the original equipment.

In 1958 Lindsay Taft Howard was hired as manager of the Cooperative. During his 16 year tenure two 300KW Fairbanks diesel generators replaced the previous engines. In 1973 Ocracoke EMC included three additional employees, Calvin O’Neal (bookkeeper), Ronald “Conch” O’Neal (lineman), and Richard Martin Garrish (apprentice lineman).



Taft Howard:

Ocracoke Island depended exclusively on locally generated electricity until 1966. Three years previously, the Herbert C. Bonner Bridge spanning Oregon Inlet was opened. “[W]hen the bridge was completed across Oregon Inlet, arrangements were made with Virginia Electric and Power Company [VEPCO] to buy wholesale electric power at the northern shore of the inlet. Cape Hatteras EMC received the power at that point and transmitted it across the bridge and along the length of Hatteras Island. Near the southern tip of Hatteras, Ocracoke EMC connected to the Cape Hatteras EMC line and used a submarine cable to carry the power across the bottom of Hatteras Inlet to the northern shore of Ocracoke.”[\[5\]](#)

On December 20, 1972, the members of Ocracoke EMC voted unanimously to merge with Tideland Electric Membership Corporation, a not-for-profit cooperative incorporated in 1971 from the merger of Pamlico-Beaufort EMC (energized its first line on July 27, 1942)

and Woodstock EMC (serving residents in the Belhaven and Pantego areas of Beaufort County since December 14, 1944). The formal merger of Ocracoke EMC and Tideland EMC took place on January 1, 1973. On March 31, 1975, Pamlico Power and Light, headquartered in Engelhard, NC, (established June 11, 1935), also merged with Tideland EMC.

Although electric power now came through lines connected to a generating plant on the mainland, Ocracoke EMC continued to rely on a local generator during emergencies and to supplement power during peak demand. Tideland EMC installed a 1,200 horsepower (1.5 megawatt) generator soon after the merger. This was later upgraded to a 1,700 horsepower (1.5 megawatt) generator.

The submarine cable laid under Hatteras Inlet proved to be a troublesome component of Ocracoke's power grid. However, Conch O'Neal, independent, creative, and resourceful island native, was hard-working and dedicated, and knew how to handle any situation. According to Heidi Smith, whenever the cable was accidentally parted (by a careless mariner's anchor or by natural causes) Conch took a skiff out into the inlet with his nephew, Bobby, who was now also working for Tideland EMC. Conch then sent Bobby overboard to dive down and locate the cable. During one incident, Bobby returned to the skiff repeatedly, saying he couldn't find the cable. Finally, Conch told Bobby that was his job; he had to locate it. With that Conch pushed Bobby down with an oar until he finally found the cable. Heidi pointed out, with a wry smile, that today's Safety Director would probably frown on Conch and Bobby's innovative solutions to troubleshooting. But they got the job done.

Tragedy struck Ocracoke Island in 1982. On June 5, four young men, Stanley H. Hassinger, III, Robert Diego Proctor, Stuart L. Powell, and Rex King sailed two 18-foot Hobie Cat sailboats across Pamlico Sound to Silver Lake. At approximately 1:00 p.m., after the two boats entered Silver Lake, the four men decided to beach their sailboats on a sandy area near where the Jolly Roger restaurant is now located. The four men got off their boats and began to pull one of the Hobie Cats ashore. The top of the mast contacted an energized, uninsulated, overhead power line carrying 7,200 volts. Hassinger, Proctor and Powell were electrocuted. King survived by being knocked clear of the boat when the mast contacted the power line.

No one had anticipated the danger of overhead power lines around the harbor. The presence of small pleasure sailboats in Silver Lake was a relatively recent development. When Ocracoke village was first electrified, most local fishermen had already removed the masts from their sail skiffs, and converted them to gas-powered vessels. The tragedy shocked the community. Shortly thereafter Tideland EMC removed all power lines from the

shores of Silver Lake.

In the late 1980s it became apparent that Ocracoke's generator was not powerful enough to meet the growing demands of a burgeoning tourist economy. Directors of Tideland EMC contracted for the purchase of a new, four million dollar, 4,400 horsepower (3.5 megawatt) generator to replace the existing 1,700 horsepower (1.5 megawatt) engine. The generator was purchased in 1990 and installed in Tideland EMC's new building on Odd Fellows Road in October of that year.

On October 26 gale force winds tore the dredge *Northerly Island* from its moorings, and drove it into the bridge over Oregon Inlet. Three hundred and sixty-nine feet of the Herbert C. Bonner Bridge toppled into the inlet, severing telephone lines and 3,400 volt power cables that were connected to the span. Tideland engineers were able to quickly re-program the brand new generator, originally set up as an auxiliary power source, and put it into operation as the primary supplier of electricity for Ocracoke and Hatteras Islands.

The generator burned 167 gallons of fuel per hour during the crisis (under a full load it burns 200 gallons of diesel fuel per hour). Tanks at the plant on Odd Fellows Road can hold 18,000 gallons of fuel.[\[6\]](#)

In 1998 the old 1,700 horsepower generator was donated to a small village in Bolivia.

In 2005 a new, four million dollar armored electric cable, with additional fiber optic cables inside, was laid under Hatteras Inlet.



Cross-section of the Armored Cable:

In 2016 Tideland EMC made additional improvements to help serve the needs of Ocracoke village, and to reduce costs. An initial step was to donate 300 high-tech programmable thermostats for use in island homes and businesses.

Later in the year a collection of ten 4,000 pound Tesla batteries and several solar panels were installed at the Tideland EMC property on Odd Fellows Lane. This was the first microgrid laboratory put in place for North Carolina's electric cooperatives.



Tideland EMC Solar Panels:

Although the batteries can not support the entire village in the event of a power outage, they are capable of assisting the island's emergency generator during start up to overcome the initial demand placed on the generator, which often exceeds capacity.

As Heidi Smith emphasized more than once in her presentation, the cheapest power is the power we never use.

[1]https://en.wikipedia.org/wiki/Rural_electrification#United_States

[2]<http://blackbeardslodge.com/about-the-hotel/>

[3]<http://islandfreepress.org/2014Archives/07.15.2014-LookingBackOcracokesHistoricCommunitySquare.html>

[4] "Ocracoke EMC Joins with Tideland," *Carolina Country*, February, 1973

[5] "Ocracoke EMC Joins with Tideland," *Carolina Country*, February, 1973

[6] "New Tideland Generator Rushed Into Service During Herbert C. Bonner Bridge Incident," by Ivey Belch, *Carolina Country*, November, 1990