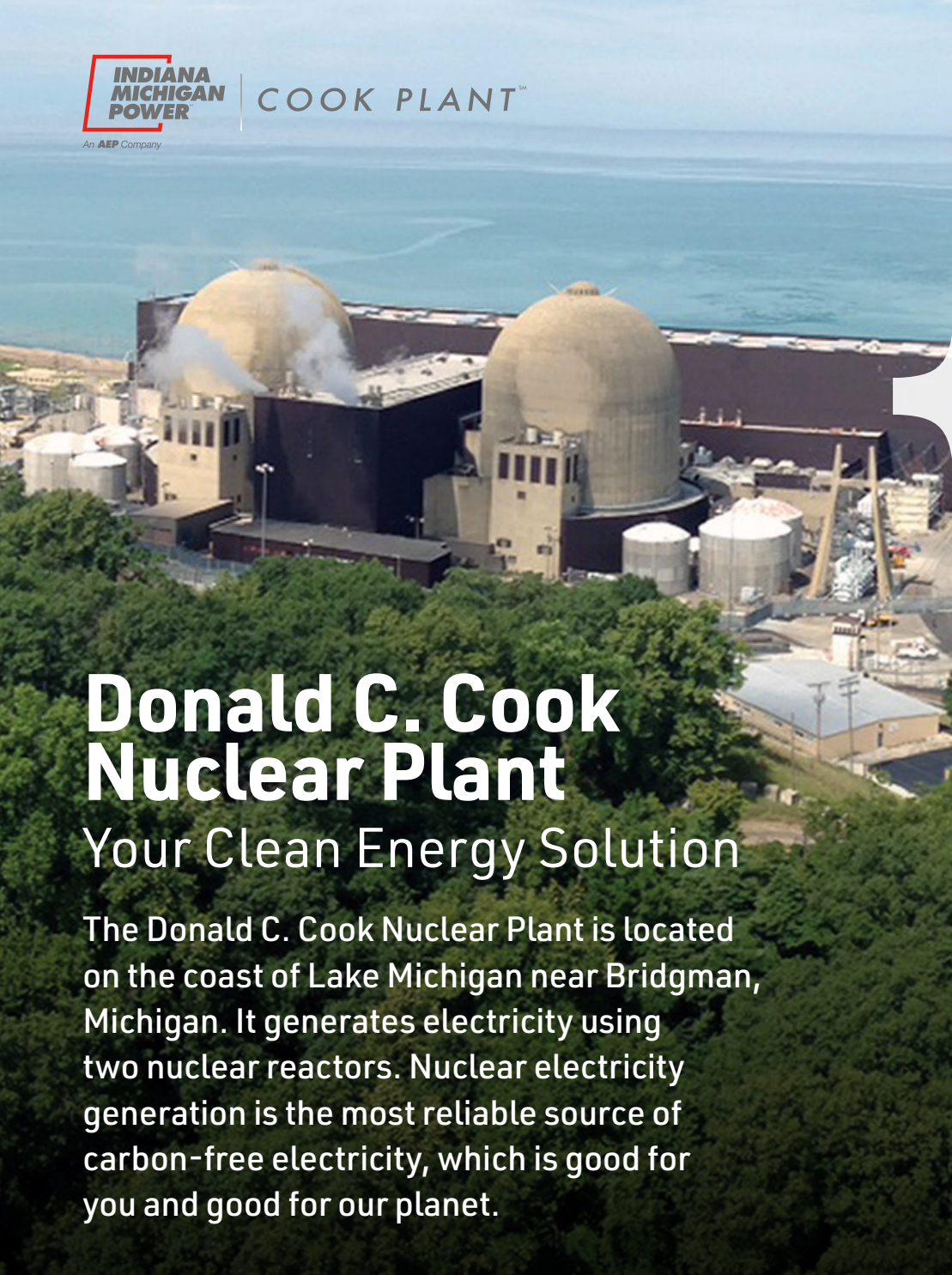




COOK PLANT™

An AEP Company



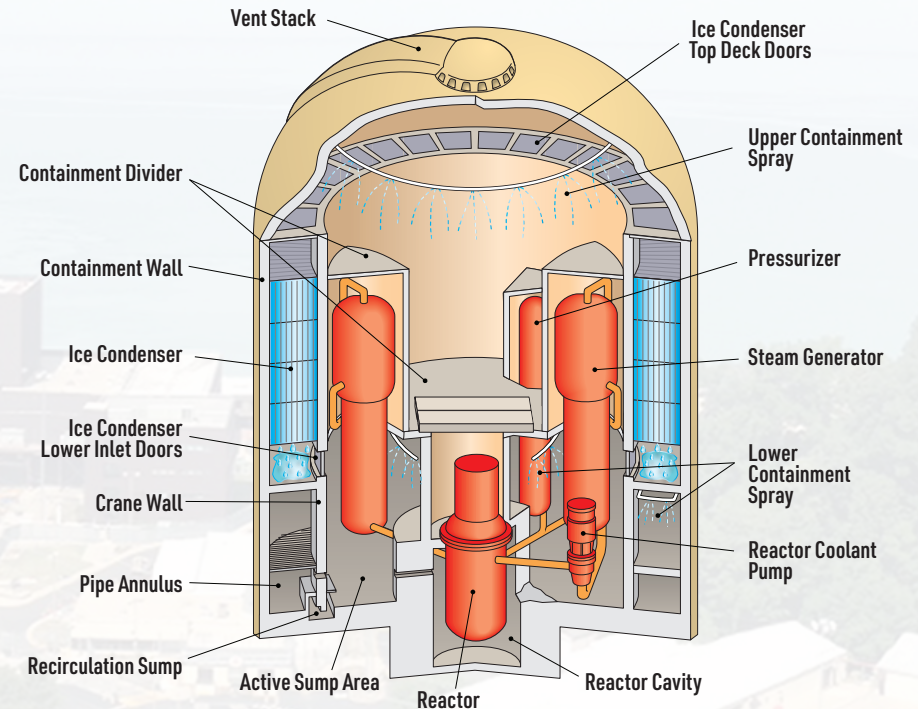
# Donald C. Cook Nuclear Plant

## Your Clean Energy Solution

The Donald C. Cook Nuclear Plant is located on the coast of Lake Michigan near Bridgman, Michigan. It generates electricity using two nuclear reactors. Nuclear electricity generation is the most reliable source of carbon-free electricity, which is good for you and good for our planet.

BOUNDLESS ENERGY<sup>SM</sup>

## INSIDE A NUCLEAR REACTOR



## PREPARED FOR ANY EMERGENCY

The best way to be safe in any severe weather, chemical spill, nuclear accident or other dangerous emergency is to **know what to do and how to help others**. Cook Nuclear Plant provides Berrien County residents and businesses with an emergency information calendar and notification card each year. While in Berrien County, you will be alerted about emergency situations including what to do and how to respond on your cell phone via the **Berrien County Sheriff Department's Integrated Public Alert & Warning System (IPAWS)**. Learn more about the Cook Plant Emergency Plan at <http://cookinfo.com/EmergencyPlan.aspx> and the IPAWS/B-WARN system at <http://www.bcsheiff.org/>.

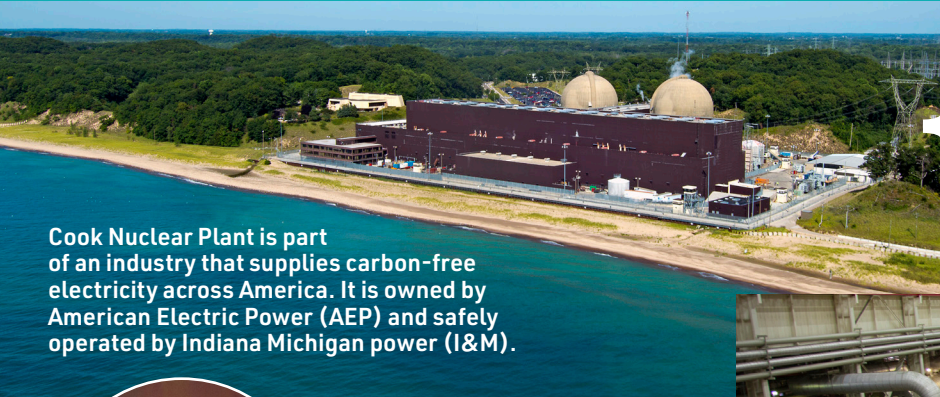


# Donald C. Cook Nuclear Plant

MAKING SAFE, RELIABLE, CARBON-FREE ENERGY. ALL DAY, EVERY DAY.

## MOST-ASKED QUESTION

**Q:** Does Cook use the power it makes for its own electricity needs?  
**A:** Yes. Cook uses 35 megawatts (MWe) from each unit to power our equipment and office buildings (70 MWe total).



Cook Nuclear Plant is part of an industry that supplies carbon-free electricity across America. It is owned by American Electric Power (AEP) and safely operated by Indiana Michigan power (I&M).



The plant is named for the late Donald C. Cook. He was born in Michigan and worked for AEP 23 years. He was AEP's chairman when he retired in 1976.

Cook Nuclear Plant has two Westinghouse pressurized water reactors that are used to create high-pressure steam inside eight steam generators (four on each reactor). The steam created by the steam generators is used to turn turbine blades which power a generator. There are two high-pressure turbines and six low-pressure turbines in total (four turbines on each unit).

### INSIDE THE TURBINE BUILDING



Cook Nuclear Plant uses a robust, high-tech security system to protect the physical plant, its cyber assets and our communities 24/7.

Cook Plant employs approximately 1000 people across many disciplines including operators, engineers, welders, pipefitters, electricians, laborers, maintenance, chemists, environmentalists, armed security, radiation protection, emergency planning, training instructors, financial analysts, legal and regulatory, and many others. **Learn more about careers at [aep.com/careers](http://aep.com/careers).**



Nuclear generation supplies nearly **55%** of the carbon-free energy generation and nearly **20%** of the total energy production in the United States.

ACTUAL SIZE



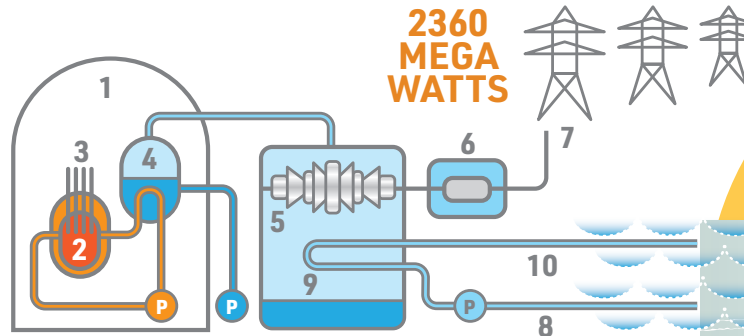
One pellet of Uranium-235 is the size of a Tootsie Roll®.



A single fuel pellet produces the same amount of heat as burning one ton of coal.

(NOT TO SCALE)

The Cook Nuclear Plant uses uranium dioxide pellets enriched with Uranium-235 inside the reactor to heat the water that generates the steam powering the turbine generator. There are approximately 50 million fuel pellets in the reactor. Cook Nuclear Plant refuels the reactor every 18 months.



**2360 MEGA WATTS**

- P = Pump
- 1 = Containment Building
- 2 = Nuclear Reactor
- 3 = Control Rods
- 4 = Steam Generator
- 5 = Turbines
- 6 = Generator
- 7 = Transmission Lines
- 8 = Cooling Water Inlet
- 9 = Condenser
- 10 = Cooling Water Outlet

At full power, Cook Nuclear Plant produces 2360 megawatts (MWe) [Unit 1: 1120 MWe, Unit 2: 1240 MWe] of electricity which is enough to supply power to approximately 1.5 million homes (a city the size of Detroit, MI). Unit 1 primarily services Southwest Michigan and Unit 2 services Northwest/Central Indiana (as far south as Fort Wayne, IN).



The Cook Nuclear Plant is located on a 650-acre wildlife preserve near Bridgman, Mich. It is in the Grand Marais Embayment along Lake Michigan. This tract was formed by glaciers and is part of the world's largest formation of freshwater dunes.



COOK PLANT™

To learn more about nuclear generation, Cook Nuclear Plant, careers or emergency information visit: [Cookinfo.com](http://Cookinfo.com) | [AEP.com](http://AEP.com) | [NEI.org](http://NEI.org)

