

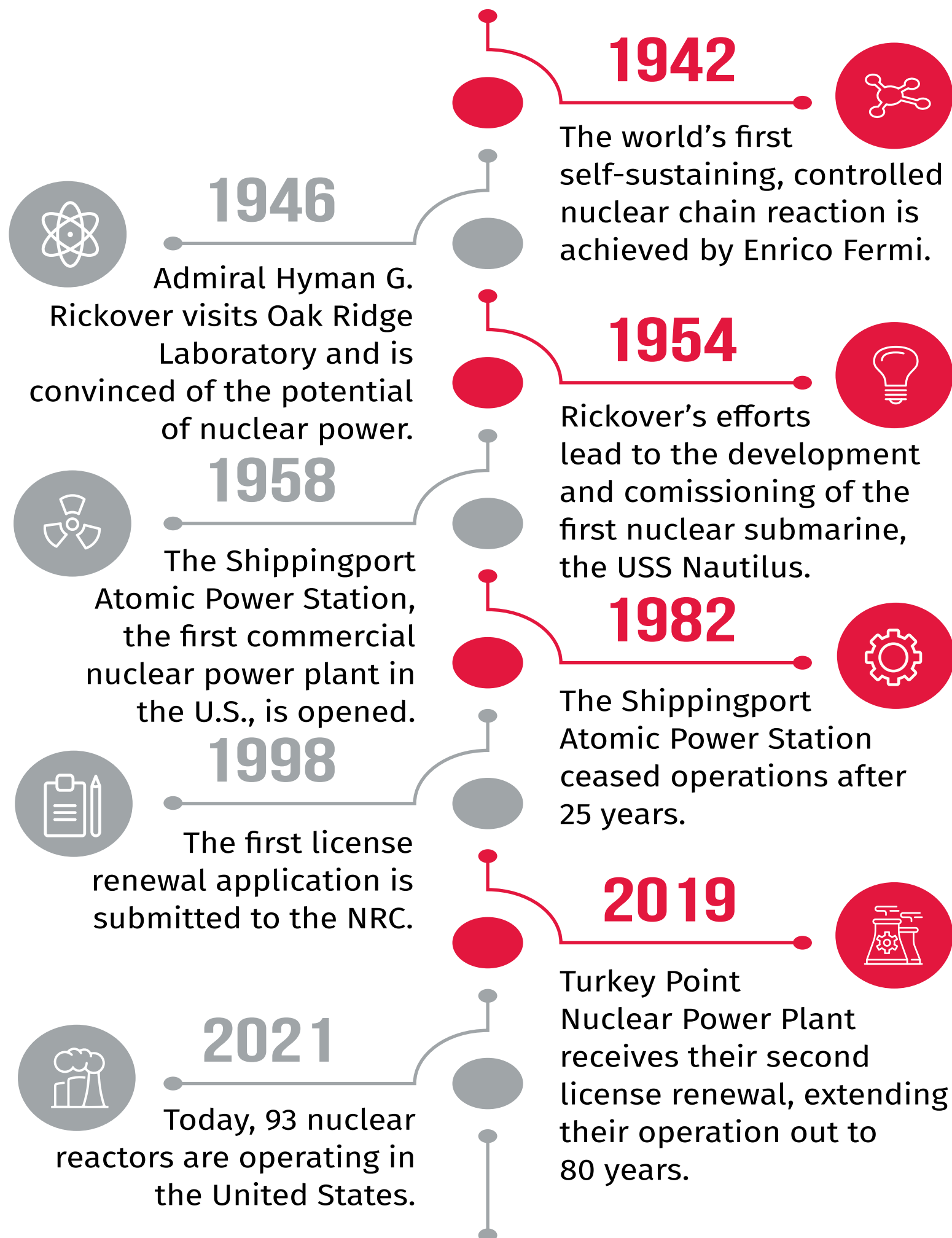


Nuclear Basics

**CURTISS-
WRIGHT**

THE ORIGINS OF NUCLEAR POWER IN THE UNITED STATES OF AMERICA

The history of nuclear power in the United States.



40 YEARS

Original License Period

60 YEARS

Initial License Renewal

80 YEARS

Subsequent License Renewal

In 2020, Nuclear Power Produced:



America's Total Energy



America's Clean Energy



NUCLEAR BASICS:

The Origins of Nuclear Power

Though the world's [first self-sustaining, controlled nuclear chain reaction was achieved by Enrico Fermi in 1942](#), it wouldn't be until 1958 that the [Shippingport Atomic Power Station, the first commercial nuclear power plant in the US](#), was opened in Pennsylvania. This journey from the first reaction to national actions was fostered by Admiral Hyman G. Rickover, a man considered by many to be [the father of the Nuclear Navy](#), who became convinced of the potential of nuclear power after a visit to Oak Ridge Laboratory in 1946. His efforts would lead to the development and commissioning of the [first nuclear submarine, the USS Nautilus, in 1954](#), which in turn led to the building of Shippingport.

Though [Shippingport is completely gone today](#), it was the catalyst that proved the viability and usefulness of commercial nuclear power. These first plants were given a 40 year license which could then be renewed on a 20 year basis. Each plant who has applied for a renewal so far [has proven their safe operations and received a renewed license](#), though some plants have chosen not to reapply or have withdrawn their applications for various reasons. Some sites like [Turkey Point have even received their second renewals](#), also known as a subsequent license renewal, extending their operation out to 80 years.

Today there are [93 reactors in the United States](#) generating [55% of America's clean energy and 20% of America's total power](#). In addition to these plants, research facilities continue to provide new technology and advancement for the industry; the Department of Energy continues to support nuclear power through initiatives creating both [short-term and long-term solutions](#), such as the advanced reactors being developed through its [Advanced Reactor Demonstration Program](#).