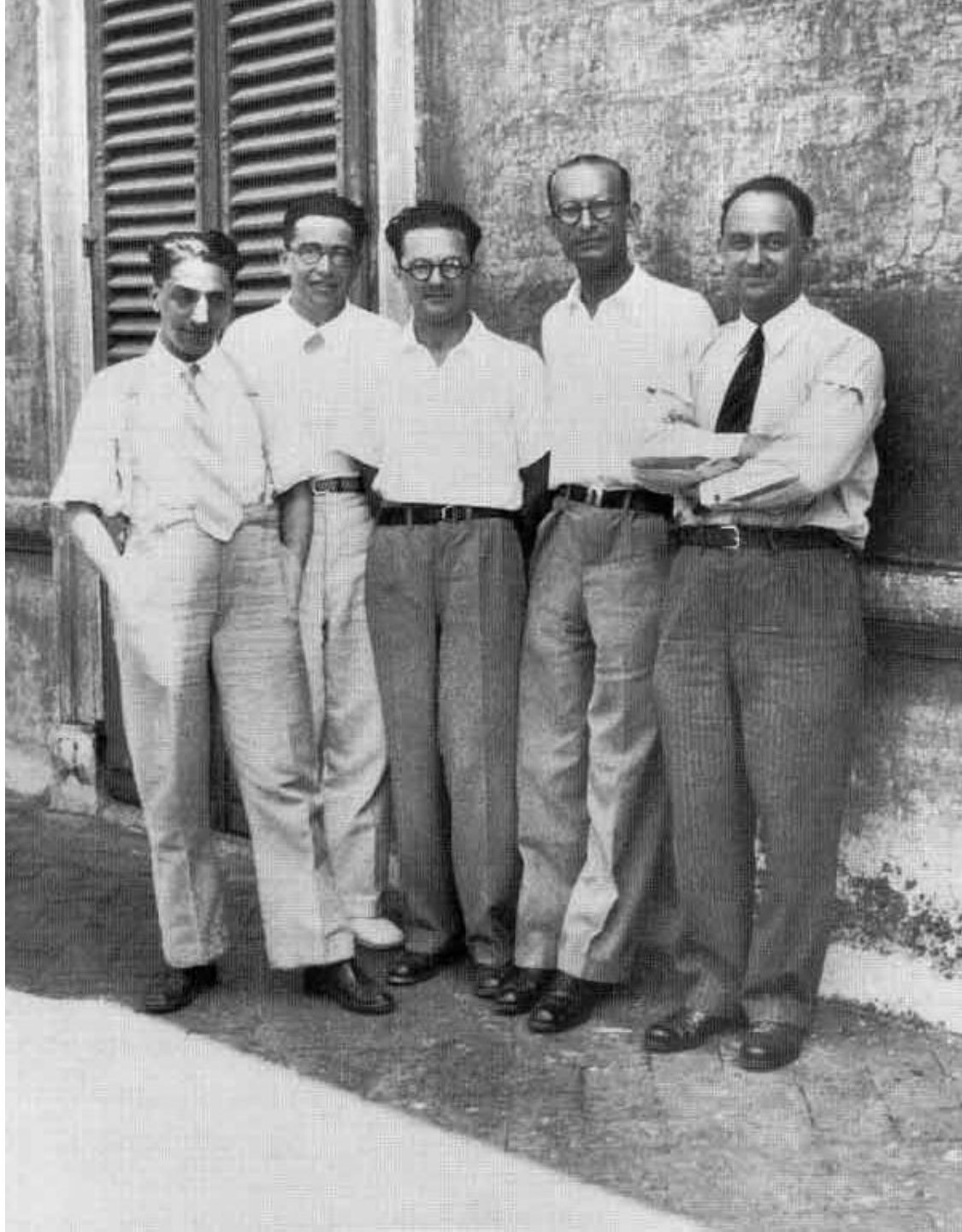


The Fermi speech

Kalev Kallemets | 05.02.2025 | Tallinn





Source: Wikipedia

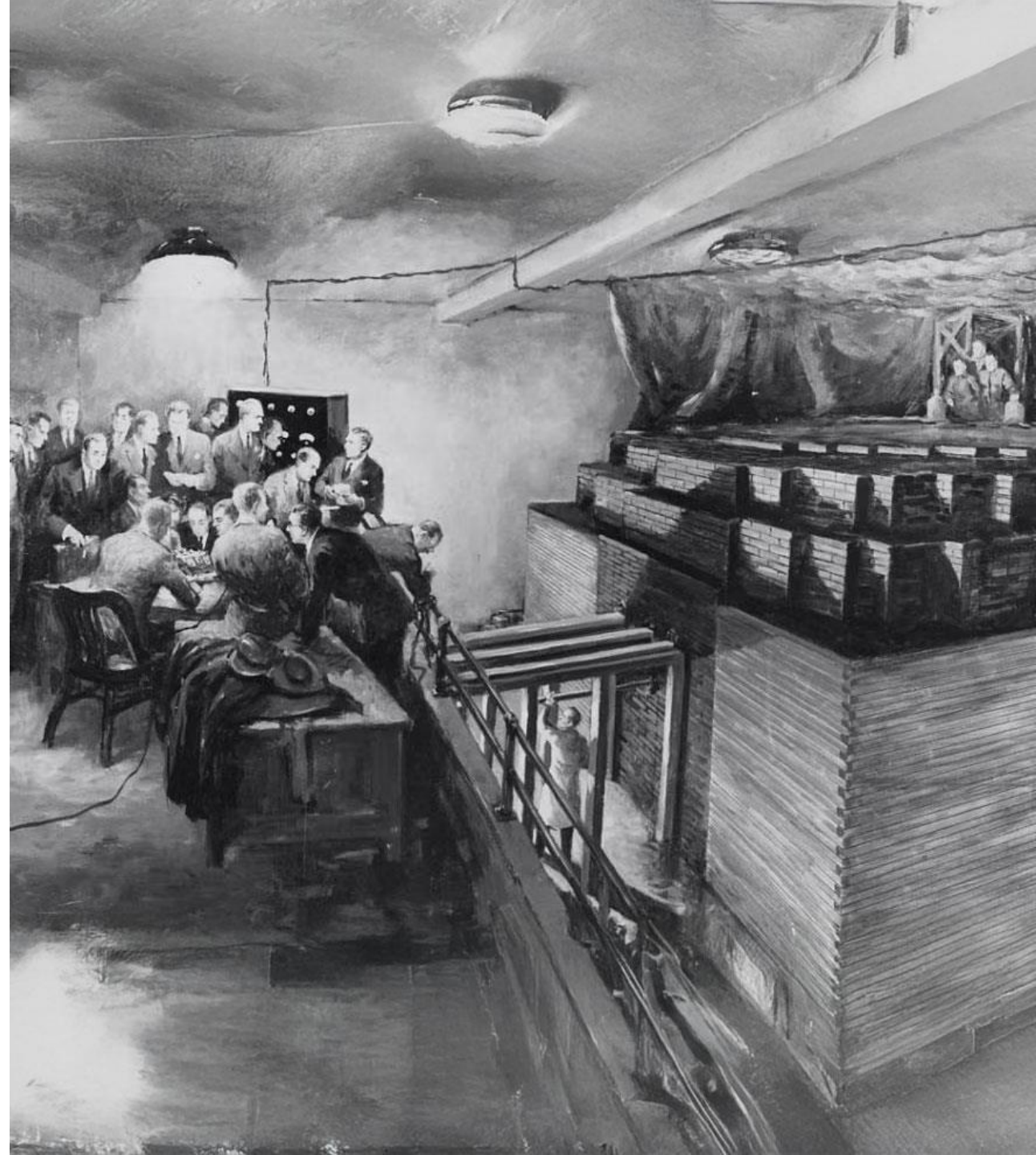


Chicago Pile 1

\$ 2,7 mln – 1945

\$ 40 mln – 2023

Source: UChicago Creative



USS NAUTILUS

1951 authorization

1952 keel laid

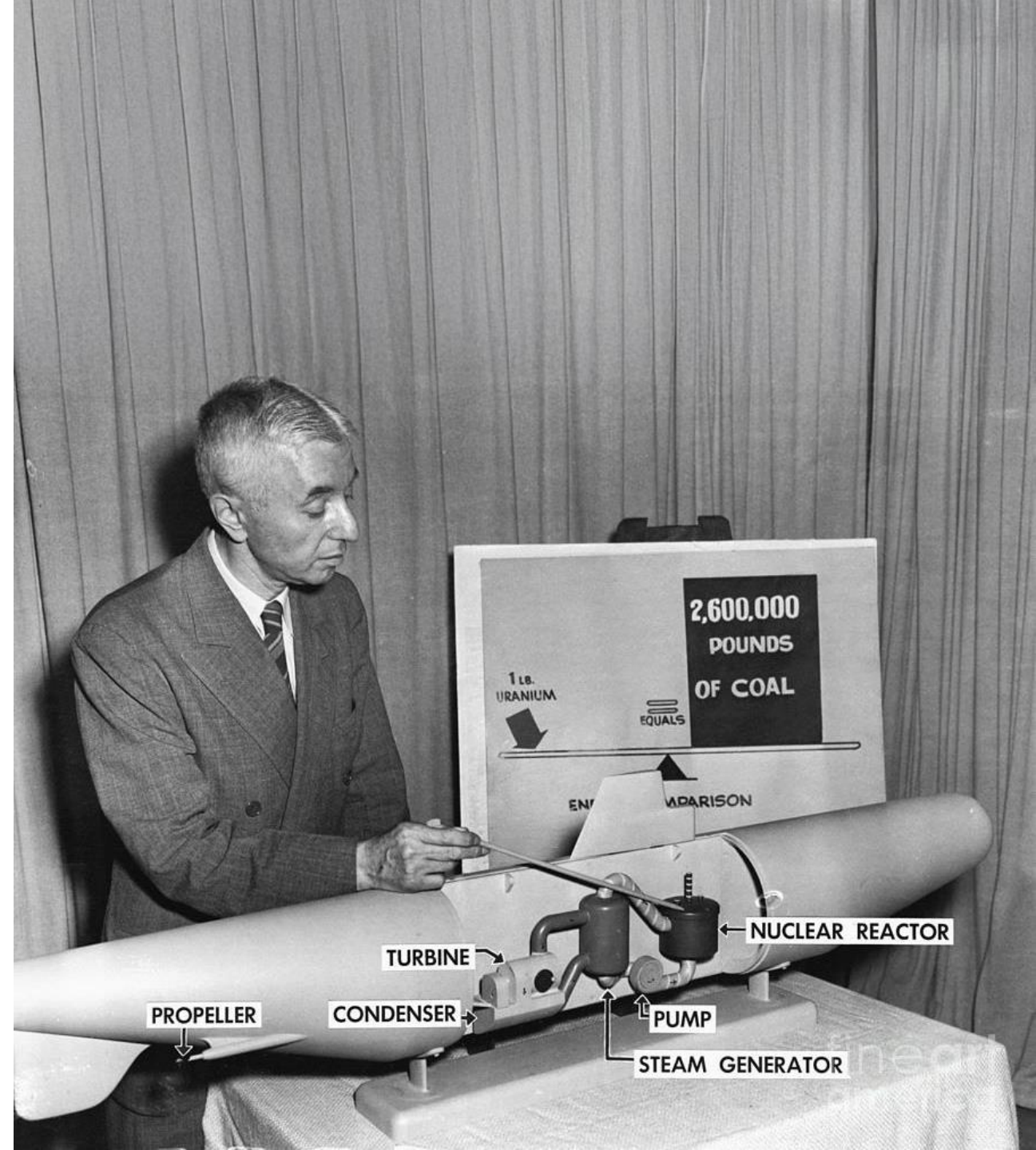
1954 in water

1955 fully commissioned

\$ 58 mln – 1955

\$ 870 mln – 2023

Source: Bettman



Shippingport NPP

60 MWe

\$ 73 mln – 1955

\$ 786 mln – 2023

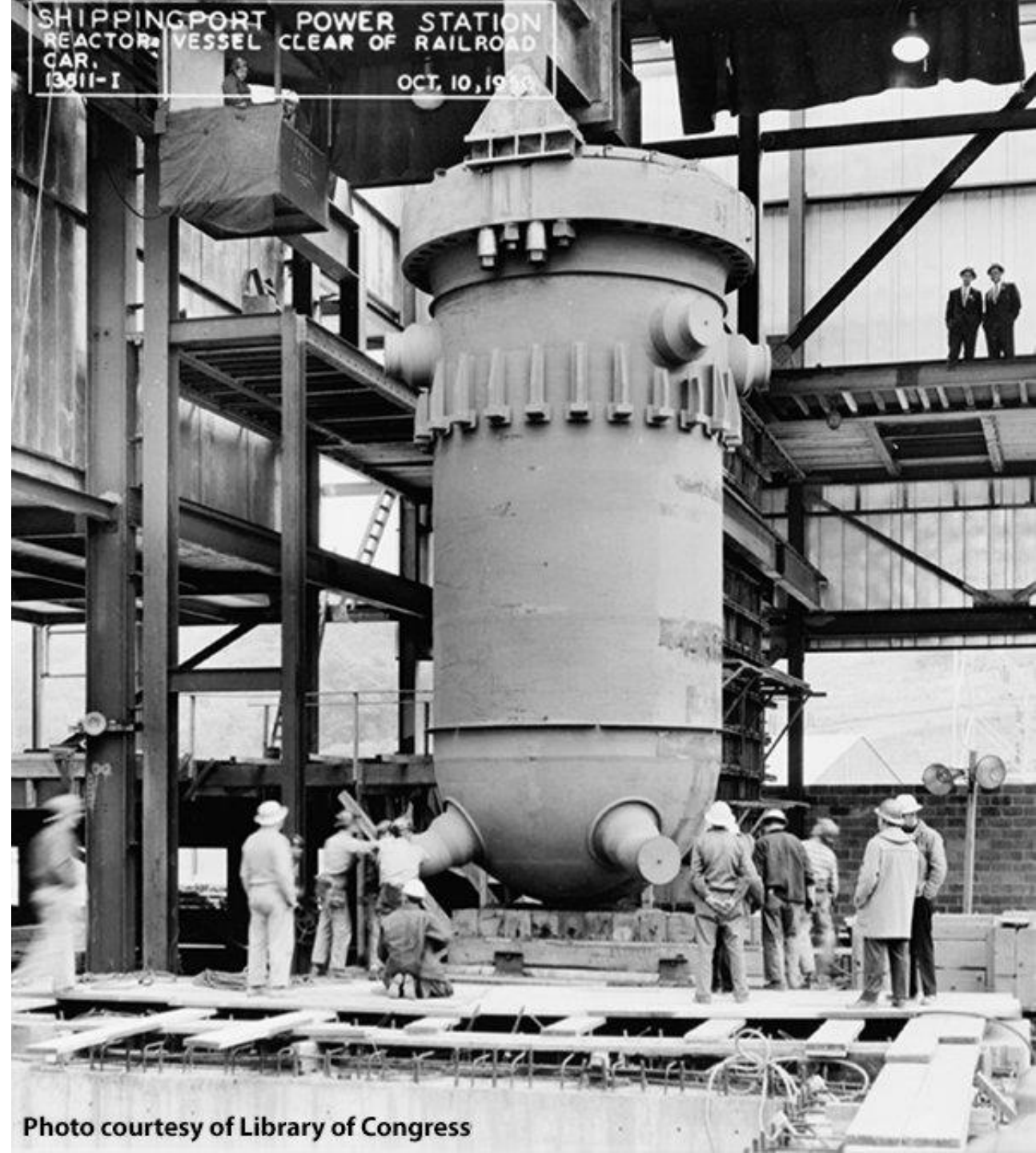


Photo courtesy of Library of Congress

Yankee Rowe

145 MWe

Planned cost \$ 57 mln

Actual cost \$ 45 mln

\$ 526 mln – 2024

Completed considerably ahead of the original schedule and at a cost about 23 % below the original higher estimate

Source: Wikipedia



Dresden 1 BWR

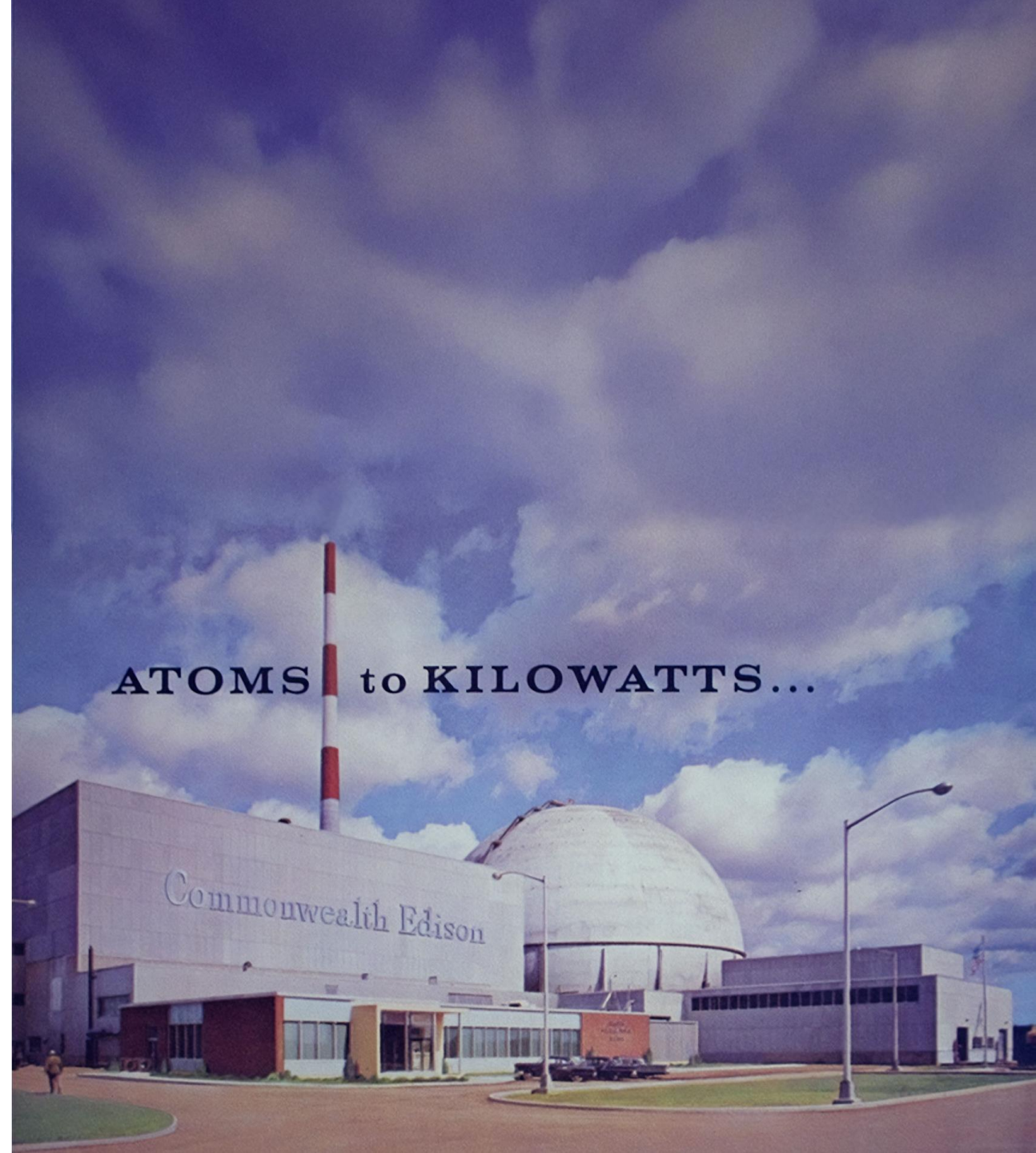
192 MWe

Constr start – 1956

Commission – 1960

\$577 mln in 2023 dollars

Source: Commonwealth Edison



Olkiluoto 1

660 MWe - 1978

890 MWe - 2019

970 MWe - 2035

Construction 4 years.

1 450 mln Finnish mark – 1979

243 mln eur – 1979

974 mln eur – 2024

Lifetime load factor: 92,6%

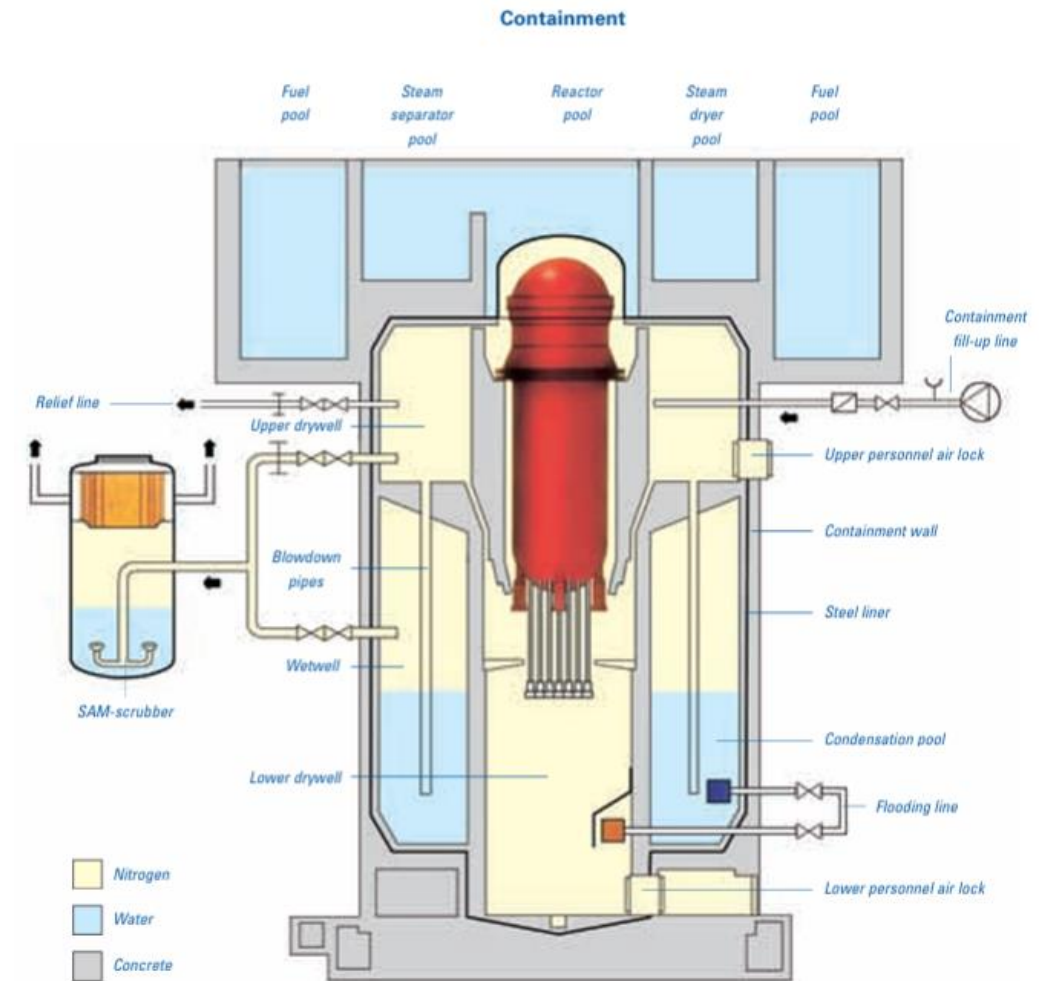
Electricity Supplied:

288.86 TWh @ 40€/MWh

11 524 mln eur – 2024

Likely generation until 2048

185TWh = 9,2 bn eur @50€/MWh



Reactor Type
BWR

Model
AA-III, BWR-2500

Reference Unit Power (Net Capacity)
890 MW_e

Design Net Capacity
660 MW_e

Construction Start Date
01 Feb, 1974

First Criticality Date
21 Jul, 1978

First Grid Connection
02 Sep, 1978

Commercial Operation Date
10 Oct, 1979

Source: TVO

BWRX-300

300 MWe – 2035

Annual generation 2,4 TWh

In 80 y 192 TWh

@ 60€/MWh = 11 520 mln eur

@ 70€/MWh = 13 440 mln eur

Cost of construction 1 700 mln eur

Cost of operation 5 200 mln eur (inc.
decom/spent fuel fund).

Source: GE Hitachi/Fermi Energia

