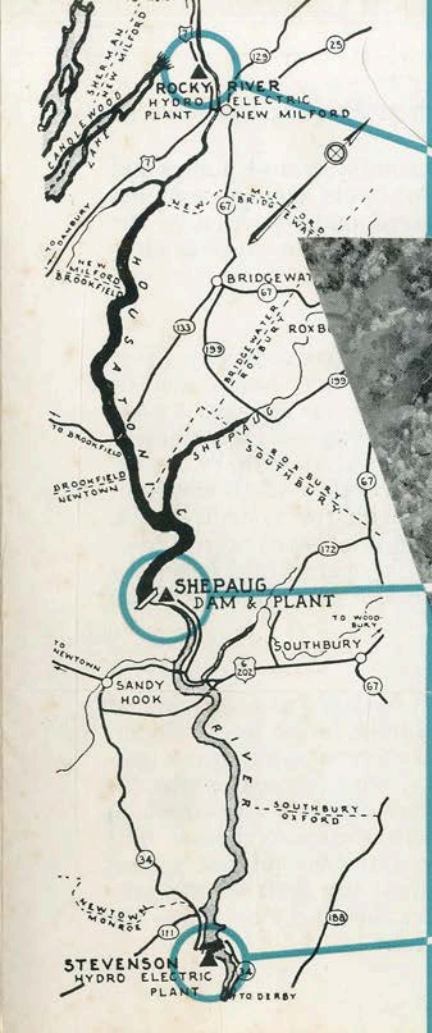
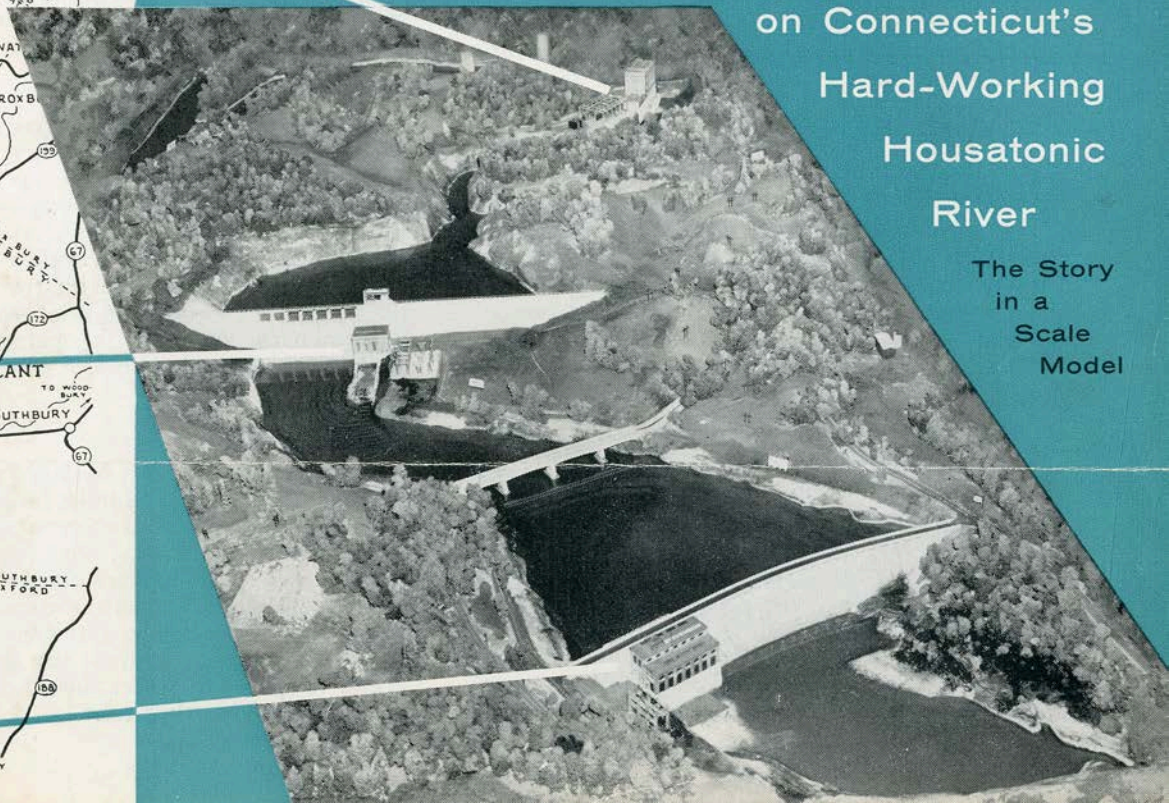
CL&P's

MAIN WATER POWER PLANTS

on Connecticut's Hard-Working Housatonic River

The Story in a Scale Model





A Few Facts About CL&P's Main Water Power Plants

ROCKY RIVER

Completed – 1928

Number of units – 1 generator and 2 pumps

Total capability of generator and pumps when operated as generators – 32,000 kilowatts

Name of lake created by project – Candlewood

Size of lake – almost 9 square miles

Length – 11 miles

Shoreline – more than 60 miles

Total storage – 46½ billion gallons, enough to cover the state of Rhode Island 2½ inches deep

SHEPAUG

Completed – 1955

Number of units – 1

Generator capability – 47,000 kilowatts

Average annual output – 118,000,000 [redacted] kwhrs.

Length of dam – 1,412 feet

Height of dam – 147 feet

Name of lake created by project – Lillinonah

Size of lake – about 3 square miles

Length – 14 miles

Shoreline – about 35 miles

Total volume – 24 billion gallons, enough to cover Rhode Island 1¼ inches deep

STEVENSON

Completed – 1919

Number of units – 4

Total plant capability – 28,750 kilowatts

Average annual output – 97,650,000 [redacted] kwhrs.

Length of dam – 1,213 feet

Height of dam – 122 feet

Name of lake created by project – Zoar

Size of lake – almost 1¾ square miles

Length – 10 miles

Shoreline – 27 miles

Total volume – 9 billion gallons, enough to cover Rhode Island ½ inch deep

Bulls Bridge

C L&P

THE CONNECTICUT LIGHT AND POWER COMPANY

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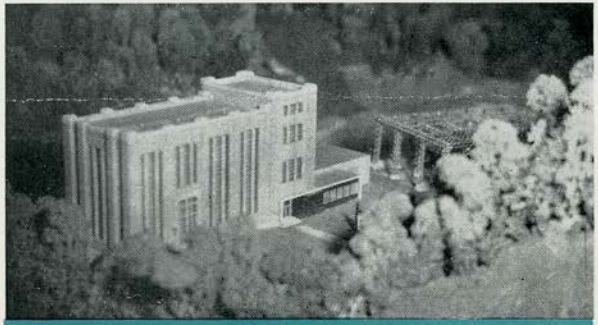
TO many thousands of Connecticut folks and almost equal numbers from neighboring states, the Housatonic River is recognized as one of the hardest working in this area. Its water power has been developed to an extremely high degree and The Connecticut Light and Power Company has harnessed it with dams and storage basins to provide electric power for the people it serves in Connecticut.

To illustrate this, the Company's three main water power projects on the Housatonic have been reproduced in a scale model showing the plant and pumping station at Rocky River, and the dams and plants at Shepaug and Stevenson. Moreover, real water is used in the display to form the Housatonic River and artificial lakes created by the three developments — Candlewood at Rocky River, Lillinonah at Shepaug, and Zoar at Stevenson.



Rocky River

An intricate and ingenious system of pumps and fans, operating on a time-cycle arrangement, has been built into the covered under-portion of the model to simulate the action of the river as electricity is generated at the plants.

Rocky River

The action of the model begins at Rocky River where, by the flick of a switch, water can be pumped from the Housatonic up through a pipe, known as a penstock, for storage in Lake Candlewood. This actually is done during times of low electric usage or of high river flow when economical electricity is available on the system. Again, the flick of a switch starts the stored water flowing down the penstock to operate the generator at the station during times of low water or when power is needed.

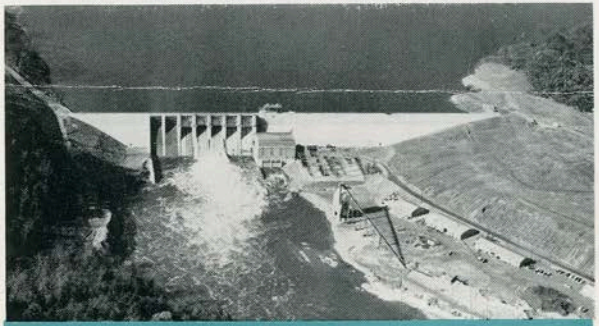
Shepaug

The cycle next causes bubbling and foaming of the water at Shepaug, 14 miles below Rocky River. This gives the illusion of electric power being generated there. In actuality, what happens is that the water flows from the lake through a penstock in the dam and underneath the powerhouse. The water surges down into a turbine pit and against the turbine blades, causing the shaft in the generator to spin. The water then flows back into the river through another tube.

Stevenson

Similar action in the model occurs next at Stevenson, 11 miles down the river at Monroe. Here, four generating units, smaller than the 47,000 kilowatt generator at Shepaug, use simultaneously the same amount of water as the Shepaug unit so that no water is wasted between the two plants. CL&P is now utilizing the entire 200 feet of fall in the Housatonic between Rocky River and tidewater, an actual distance of some 32 miles.

Spotted through the trees and along the hills of the display to increase its reality are scale models of high tension transmission towers, strung with thread to simulate power lines, also highways, railroad tracks, houses and farms, even animals grazing. The Rochambeau Bridge connecting Southbury and Newtown also has been constructed in scale as have been transformers, switches, and other equipment in the substations adjacent to each of the plants.



Shepaug

Stevenson

The model measures 12 feet in length by eight feet in width. All of the work on it was done by hand in order to achieve the scale desired. The project required about six months to complete.

Recreational Opportunities

The model was created to show those hard-working sources of vital electric energy which contribute so substantially to the convenience and prosperity of Connecticut and its citizens. At the same time, the model also illustrates how power projects such as CL&P's main water power developments have provided for the people of our state new scenic beauty and recreational opportunities along the shores of the three lakes created by the water power projects.