Lakes, Electricity & You

Why It’s So Important That Lakes Are Used To Generate Electricity
Why We Can Thank Our Lakes For Electricity

Because lakes were made to generate electricity. Back in the mid-1940s, Congress recognized the need for better flood control and navigation. To pay for these services, Congress passed laws that started the building of federal hydroelectric dams, and sold the power from the dams under long-term contracts. Today these dams provide efficient, environmentally safe electricity for our cities and rural areas.

And now these beautiful lakes are ours to enjoy. There are now 22 major man-made lakes all across the Southeast built under these federal programs and managed by the U.S. Army Corps of Engineers — lakes that help prevent flooding and harness the renewable power of water to generate electricity. Power produced at these lakes is marketed by the Elberton, GA–based Southeastern Power Administration (SEPA).
Electricity from lakes helps provide renewable, affordable public power.

Today, hydroelectricity is among the most economical and environmentally friendly sources of power. Even though only a relatively small part of all electrical power is generated by lakes, hydropower makes electricity more affordable by lowering the overall cost to the consumers of public power. And the renewable nature of hydroelectric power makes it an important part of our power generating mix.

How The Sale Of Electricity From Lakes Benefits Everyone

The sale of electricity pays back all the costs of building, operating and maintaining hydroelectric facilities — and covers most of the costs of the reservoirs, which provide flood control, navigation and recreation.

The original cost of building the dams and creating the lakes was considerable, and initially hydropower (electricity produced by lakes) was more expensive than power from other sources. Forward-looking consumer-owned electric utilities, however, believed hydropower would be an important future resource and contracted to buy the electricity produced by the lakes. The revenue from the sale of hydropower pays back not only all of the costs of building, operating and maintaining the hydroelectric facilities, but also covers most of the costs of the reservoirs, which also provide flood control, navigation and recreation at each of the lakes. So everyone benefits from the sale of electricity from our lakes.
Sometimes special interest groups oppose the use of lakes for hydropower generation.

Water from lakes must pass through dams to generate electricity. Normally, this does not affect lake levels because, on the average, the same amount of water flowing into the lakes is released through the dam for downstream flow. Occasionally, however, during drought conditions, lakes drop below ideal levels. Sometimes when this happens, individuals and special interest groups try to exert pressure on the Army Corps of Engineers and government officials to restrict the flow of water through the dam. This is when everyone needs to remember that lakes and dams were built primarily to generate electricity and for flood control. Most of the time, enough electricity can be generated without affecting boating, fishing and swimming. But, during those rare times when lakes drop below ideal levels, it is important to remember why the lakes are there in the first place.
How Hydropower Works

The Hydrologic Cycle:

Water constantly moves through a vast global cycle in which it:

- Evaporates from lakes and oceans,
- Forms clouds,
- Precipitates as rain or snow, and
- Then flows back to the sea.

The energy of this water cycle, which is driven by the sun, is tapped most efficiently with hydropower.

Types of Hydropower Facilities

Impoundment Hydropower – Uses a dam to store water (see illustration). Water may be released to meet changing electricity needs and maintain appropriate reservoir levels.

Diversion Hydropower – Channels a portion of the river through a canal to a penstock, but may require a dam.

Pumped Storage – Pumps water from a lower reservoir to an upper reservoir at times when demand for electricity is low. During periods of high electrical demand, the water is released back into the lower reservoir to generate electricity.
How You Can Say “Thanks To Electricity”

Now that you know that lakes were created for flood control and to generate electricity, we hope you will become a supporter of clean, renewable hydroelectric power. This is important because often it is only the special interest groups who are heard when lake levels are low.

You can say “thanks to electricity” by speaking out to your neighbors, the media, and your local, state and national government representatives. With your help, we can protect our lakes and preserve the great natural resource of water.

The Power of Water

The Southeastern Federal Power Customers Inc. is a group of electric cooperatives and municipal power companies that represent more than six million consumers of public power in the Southeast. Our goal is to raise awareness and build understanding of the benefits of hydroelectricity and to protect it as a natural resource.

Hydroelectric Project Lakes

Hartwell Lake
Richard B. Russell Lake
J. Strom Thurmond Lake (formerly Clarks Hill)
Carters Lake
Allatoona Lake
Lake Sidney Lanier (Buford Dam)
West Point Lake
Walter F. George Reservoir (Lake Eufaula)
Jim Woodruff Project (Lake Seminole)
Robert F. Henry Dam (Bob Woodruff Lake, Jones Bluff Plant)
Millers Ferry Project (William B. Dannelly Lake)
Philpott Reservoir
John H. Kerr Reservoir
Lake Barkley
Cheatham Lake
Old Hickory Lake
J. Percy Priest Lake
Cordell Hull Lake
Center Hill Lake
Dale Hollow Lake
Wolf Creek Project (Lake Cumberland)
Laurel River Lake
Southeastern Federal Power Customers

**Alabama**
PowerSouth Energy Cooperative  
Andalusia, AL 36420-0550  
334/427-3000

Alabama Municipal Electric Authority  
Montgomery, AL 36103-5220  
334/262-1126

**Florida**
Jim Woodruff Preference Customers  
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Chattahoochee, FL 32324  
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**Georgia**
Municipal Electric Authority of Georgia  
Atlanta, GA 30328-4840  
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Oglethorpe Power Corporation  
Tucker, GA 30084-5336  
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**Kentucky**
East Kentucky Power Cooperative, Inc.  
Winchester, KY 40392-0707  
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Big Rivers Electric Corporation  
Henderson, KY 42419-0024  
270/827-2561

**Mississippi**
East Mississippi Electric Power Association  
Meridian, MS 39302-5517  
601/483-7361

Municipal Energy Agency of Mississippi  
Jackson, MS 39201-2898  
601/353-4763

South Mississippi Electric Power Association  
Hattiesburg, MS 39404-5849  
601/268-2083

**North Carolina**
North Carolina Eastern Municipal Power Agency  
Raleigh, NC 27262-9513  
919/760-6000

North Carolina Electric Membership Corporation  
Raleigh, NC 27611-7306  
919/872-0800

North Carolina Municipal Agency No. 1  
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**South Carolina**
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Orangeburg Dept. of Public Utilities  
Orangeburg, SC 29116-1057  
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**Virginia**
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Santee Cooper  
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843/761-8000

Blue Ridge Power Agency  
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Virginia Cooperative Preference Power Customers  
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Virginia Municipal Electric Association #1  
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Richard B. Russell Lake  
Photo courtesy Jonas Jordan,  
U.S. Army Corps of Engineers