

# Committee on Resources

resources.committee@mail.house.gov

[Home](#) [Press Gallery](#) [Subcommittees](#) [Issues](#) [Legislation](#) [Hearing Archives](#)

**Mr. Hoke Thomas, Jr.**  
**Vice President**  
**Thomas Brothers Hydro, Inc**

Testimony  
Before the Subcommittee on Water and Power  
United States House of Representatives

Hearing on "Reviving Hydroelectric Power on the Savannah River"  
September 27, 2004

" Testimony"

Having devoted most of my productive adult life to the hydroelectric industry and being familiar with most of the hydroelectric installations in the Southeast, DNR/EPD regulations and utilizing USGS flow data in support of same, I request to make a brief presentation on the following:

With respect to downstream ecology, the need for a compromise between industry and the environment and the necessary and proper enforcement of EPA/DNR/EPD regulations pertaining to the Hydroelectric Industry all in the support and perpetuation of our "standard of living".

Recently, I replied to a gentleman's complaint from the State of N. C. This person and associated historical society, which he represented, were at odds with FERC and the owner of the hydroelectric station on the rights to use the minimum flow, 7Q10 per the license. Instead of converting a small amount of flow less than 100 CFS into electricity, the historical society desired to have this flow spill over the crest of the dam for all to enjoy. My conclusion was as follows:

I would like to agree with the request from the gentleman from N.C. and the local historical society and turn the flow in the river back to the fishermen, boaters, weekend users and the local historical association, but regretfully it is not going to happen, not over the "long term". We have no choice, we must leave the utilization of our rivers and streams to those in government that know and understand the present and future demands of our society and the perpetuation of our standard of living through the wise use of our natural resources. There is a place in our society for fishermen, boaters and historical associations, but well below that of our standard of living

Congress states the fact that the energy needs of this country are serious. The U.S.A. uses about 19,761,000 barrels of oil per day, which represents 26% of the world's consumption. Total global consumption is approximately 80 million barrels per day.

World oil supplies for all current and historic inventory is about 3.5 trillion barrels, until now we (the world) has consumed the first 1 trillion barrels, there are about 1.5 trillion barrels left that can be retrieved based on current prices. The last trillion will cost about five times as much per barrel to pull up from the ground based on tar sands and deep water extraction. Based on current world consumption we will go through the second 1.5 trillion barrels in about 13 years. Before we get to that point, hydroelectric development will, once again, out of necessity, become a growth industry in the U.S.A. In anticipation of this impending event, it is now time to make the changes in our national regulation policies toward the swift evaluation and development of any and all existing, unused sites having hydroelectric potential.

To a hydroelectric station, water is electricity. For the past decades, the minimum flow standard has been that of the USGS 7Q10. However, with the construction of dams, discharges of wastewater, inter basin transfer of water and the ever-increasing amounts of impervious surfaces; we now have two types of streams with respective minimum flow requirements. Regulated, meaning that the stream flow is actually regulated or altered by an upstream event such as inter basin transfer of water. Now days a stream can actually have more flow than that amount supplied by nature. On a regulated stream, USGS does not establish a 7Q10, only on unregulated streams. The State of Georgia, via its Interim Instream Flow Protection Strategy, is currently issuing diversion permits based on a much-increased minimum flow for both regulated and unregulated streams. Applying the Interim Instream Flow Protection Strategy on a National

basis equates to a 4.5% reduction of energy. A reduction of 4.5% in our nations total electrical production would mandate the importation of 360,000,000 barrels of foreign oil to make up the difference. It is a proven fact that the Aquatic life of a stream survives well on an annual 7Q10 passage. However, I feel that atmospheric pollution derived from the burning of 360,000,000 more barrels of foreign oil would further add to the demise of the health of our lungs. An annual, unregulated 7Q10 assures the continuing good health of our stream aquatic life, promotes good human health and the growth of this Nation's most economical source of electricity, hydroelectric.

The mandatory passage of water in excess of one annual low flow figure is a deathblow to hydroelectric production, not only in Georgia, but also across the entire 50 states. Most hydro plants were designed based on the original USGS 7Q10 minimum flow. This meant that the plant legally used all the available flow in the river while passing only the annual 7Q10. Some of the older hydroelectric plants were not designed according to the stream flow, but according to the electric power needs at the time of installation. These installations, out of necessity, can and in the future be increased in size to use all the available stream flow in an effort to produce more economically priced electricity in the face of our Nation's impending energy crisis. In the best interest of this Nation, it would make good sense when issuing a diversion permit, that the unregulated USGS figures be used to establish an annual 7Q10 and that any water in excess of that amount, be it regulated or unregulated, be used by the respective hydroelectric plant for the diverted purpose of making this Nation economically priced electricity. To view a mandated, increased amount of water going over the crest of a dam is a beautiful site, but economically it makes no sense at all.

This nation is now looking back at the era of abundant, economically priced energy with laws and regulations designed to govern their wise use; while at the same time this nation is nervously looking forward to an impending era of less energy, escalating priced energy and we now need new laws and regulations designed to govern their wiser use. Due to the increasing price of gasoline, natural and propane gas, in order to survive financially, our society must now use more public transportation, more car pooling and to reduce the overall home owners utility bills, the heating and cooling of only one to two rooms and not your entire house. As before, there is an abundant supply of un-tapped hydroelectric potential remaining in this country; namely the COFE locks and dams, such as the one here in Augusta on the Savannah river having no installed hydroelectric equipment; and municipally and privately owned dams that were originally designed for a specific output and not designed to capture the entire flow of the river, here we have room for much more production. Hydroelectric uses only the weight of the water to produce electricity, not the water itself; hydroelectric only diverts the water flow, it does not withdraw it. To operate a hydroelectric station, you must have an EPD diversion permit, not a withdrawal permit.

In order to supply this nation with a more abundant, stable (fixed) priced source of energy we must now promote the growth of hydroelectric energy. To a hydroelectric station, water is electricity; we need more water. This additional water can come from the total usage of the minimum flow and 7Q10 requirements. Currently our laws forbid this usage; with respect to the current and growing energy needs of this country; we need to immediately change the laws and make total usage of the minimum flow and 7Q10 water legal. We need to "dry up" the area from the back of every dam to the tailrace (discharge area) of all the installations. Here we are simply diverting the water. In this dried up area aft of the dams there can be no aquatic life, but the increase in hydroelectric energy is more important and necessary, at this time in our country, than the taking of a very small ecological area.

This nation has a huge, untapped supply of fixed, low cost energy flowing down our streams. This energy is in the form of minimum flows and 7Q10s, now is the time to change the laws and use it. Every hydroelectric site in this country that does not have sufficient equipment to use the entire river flow should be re-evaluated. The owner should be encouraged to install additional equipment making the station fully capable of turning the entire stream flow into electricity with absolutely no respect of minimum or 7Q10 flows. In conclusion, the use of more available water and more equipment will increase the hydroelectric production of our Nation by 19%.