ARCO ELECTRIC PRODUCTS

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**ARCO Applications ■ First in a Series**

# Water Company Slashes Electric Bill, Eliminates Penalties

With 3 million gallons of water to pump every day to its 6,500 customers, Indiana American Water's Shelbyville District counts on its electric power to keep the flow going in its 110 miles of water main.

"Power costs are one of the largest expenses we have," says Wade Amos, operations superintendent. "Water weighs approximately eight pounds per gallon. We pump about 24 million pounds of water every day, and it's expensive to do that."

Not only was Indiana American Water paying for the electricity it used, it was paying capacity penalties of $250 to $500 a month.

"We are constantly striving to identify efficiencies, reduce our costs, and improve our customer service," Amos says. "Paying monthly power factor penalties when inexpensive alternatives exist was an easy decision for us."

## Power Factor a Problem

Indiana American Water turned to ARCO Electric Products for help.

"We were contacted to look at their power factor situation," says Manager Hal Pike. "After visiting their site, we determined that the solution would be to use fixed capacitors sized to individual motor loads."

Ten individual capacitor banks, engineered and designed for each application, were installed to serve eight large vertical turbine pumps, a backwash pump and an aeration pump.

## Capacitors Installed

"Individual capacitors were sized to the horsepower and RPM of each motor, properly sizing the capacitor," Pike says.

"By applying a fixed capacitor bank to each individual motor load, the capacitor was only energized when that motor or pump was energized, self-controlling the system," Pike explains. The project cost was $5,369.

## Six-Month ROI, Ongoing Savings

Meanwhile, Indiana American Water found that the capacitors were saving them .04 cents per 1,000 gallons of water pumped.

With average monthly gallons pumped at about 21 million, the average monthly savings in electrical costs is $840.

Besides the reduced electric bill, Indiana American Water improved its voltage as a result of former system losses.

"The project paid for itself in about six months," Amos says. "It also contributes to reduced use of resources. It's not only about a cost savings, it's the right thing to do."

## Up Close

### Indiana American Water
Shelbyville District

### 10 capacitor power banks
- Sized to individual motor loads
- Cost: $5,369
- **Return on Investment: 6 months**

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