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An electricity escalation

Report: State will need to supply 50% more power by 2025

By Gargi Chakrabarty, Rocky Mountain News

Colorado's demand for electricity is on track to jump 50 percent over the next two decades.

To meet that burgeoning need, the state will require new power plants, which will cost billions of dollars, to generate 4,900 megawatts of additional electricity through 2025. And then there's the hundreds of miles of transmission lines to bring the added power to homes and businesses.

Unless Colorado's 61 electric utilities start planning immediately, customers will suffer more outages in the future and also pay higher rates. And that will mean thousands of job losses and millions of dollars in economic losses.

Those were the findings of a report titled "Colorado's Electricity Future" released by the Colorado Energy Forum today. A comprehensive, statewide report on the future of the state's energy needs was last compiled in the early 1990s.

"The purpose of the report is to clearly outline the magnitude of the problem," said Bruce Smith, former director of the Public Utilities Commission and executive director of the energy forum. "The economy will suffer if the problems are not addressed."

The new plants and power lines could cost \$6 billion to \$7 billion, estimated an industry observer. Utilities are allowed to recover their investment costs from customers. The energy forum worked with consulting firms R.W. Beck, Schmitz Consulting and the Colorado School of Mines for about six months to compile the report.

Smith said the report could be used by the 15-member task force discussing the state's electric infrastructure needs through 2020. The task force, comprising representatives from Xcel, TriState, Aquila, the Public Utilities Commission and other organizations, will present its recommendation to the governor on Nov. 1.

Colorado's current peak demand is 10,080 megawatts. The report projects demand will increase by 50 percent to 15,114 megawatts by 2025. One megawatt powers roughly 1,000 households.

Xcel Energy supplies more than half the current load. "We want to be part of the solution," Xcel spokesman Tom Henley said. "The condition of our participation (in the report) was not to recommend solutions; everybody should come to the table and look at positive ways to deal with or address those problems."

Former PUC chief economist Gary Schmitz, who worked on the report, said Colorado's electricity prices are below the national average, although the former rose faster in recent years. That rise is attributable to the state's growing reliance on natural gas, a volatile commodity whose price has more than doubled in the past four years.

"Increasing electricity prices are making Colorado's economy less competitive, reducing the future growth of its employment base and, as a result, its income," Schmitz said.

Inadequate capacity in the coming years could lead to outages and result in huge financial costs, found P.K. Sen with the division of engineering at the School of Mines who also worked on the report. For example, a one-hour summer outage of every Colorado business is estimated to cost \$500 million, while an eight-hour winter outage of all businesses could cost \$3.5 billion.

The report doesn't specify which resources should be used to meet the demand. The alternatives include coal, natural gas or nuclear power plants; renewables such as wind, solar, and fuel from plant and animal waste; and energy conservation.

Critics said the report's information is of limited value since it doesn't specify the resources mix.

"The report avoids a key question before us: What resource should we choose," said Howard Geller, executive director of the Southwest Energy Efficiency Project. "Tri-State, one of the funders of the report, wants it to be coal, and that would be a mistake. Conventional coal-fired power plants are a high cost, high-risk strategy."

Rick Gilliam at Western Resource Advocates said he'd like to see the underlying data of the report. Gilliam said his concern was that the "report appears to be a veiled effort to justify new coal-fired plants."

Gilliam referred to the report's estimate that about 50 percent of the future demand will be base-load power, about 28 percent intermediate power and 22 percent peaking power. Base-load plants are designed to run continuously and typically are hydropower or coal-fired plants. Peaking plants typically use natural gas and can be quickly switched on when demand spikes, such as during late afternoons in the summer. Intermediate plants bridge the gap between the two.

Tri-State plans to spend \$5 billion through 2020 to build three base-load coal-fired plants totaling 2,100 megawatts and more than 1,000 miles of transmission lines. Xcel is building a \$1.4 billion, 750-megawatt base-load coal-fired plant in Pueblo, which is scheduled to go online in 2009. The utility plans to spend \$420 million over the next five years on transmission lines.

"It could be a major coincidence that 3,000 megawatts of coal-fired plants are in the works, and the report identifies 3,000 megawatts of base-load requirement through 2025," Gilliam said. "What appears to be a resource-neutral report seems to be justifying new coal plants in other places."

Electricity report

- **Who compiled the report:** Colorado Energy Forum
- **Who paid for it:** Tri-State, Xcel Energy, Aquila, Colorado Association of Municipal Utilities, among others
- **Who headed it:** Bruce Smith, former Public Utilities Commission director and executive director of the energy forum

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