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# Uranium mill clears Western Slope hurdles

**By Bruce Finley**

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A Canadian company's push to build the United States' first new conventional uranium mill since the Cold War has cleared local hurdles — despite environmental concerns — and won wary high-level support.

Many residents of the economically bereft western Colorado area around Nucla and Naturita (approximate population 700 each) now count on the Energy Fuels Inc. project to bring back Atomic Age prosperity. Beyond the mill, they envision uranium mining jobs as part of a national nuclear renaissance that could spur homebuilding, better schools, restaurants and recreational amenities.

"Nothing's going to happen without a mill," said Mike Thompson, 25, board member of the Naturita-based Western Small Miners Association. "Right now, we can't support 18- to 30-year-olds because we just don't have the jobs."

Thirty years ago, uranium production around western Colorado left toxic tailings and workers with cancer, but this operation will be "vastly different," Thompson said.

"You're not trusting a corporation. You're trusting regulators. Now if the corporation's out of compliance for an instant, regulators will shut it down."

## **Decision up to state**

The proposed Piñon Ridge mill awaits approval by the Colorado Department of Health and Environment. Montrose County commissioners, after 25 hours of hearings, last month issued a local permit. Federal environmental regulators will leave the decision to the state.

Energy Fuels executives are preparing to submit a 12-volume application to state health regulators, triggering a technical review.

Today, 85 percent of U.S. uranium is imported from abroad, federal data show.

Energy Fuels plans to dispose of its waste in pits and lined ponds, covered with nets to keep birds away from toxic liquids.

"Once you have a mill, you can develop mines. There were over 200 uranium mines in western Colorado at the peak," Energy Fuels chief operations officer Steve Antony said.

There'd be about 85 jobs at the mill, and Energy Fuels officials estimate the mill would generate at least 200 mining jobs in the region, with salaries ranging from \$45,000 to \$90,000 a year.

"It'll fit into a comprehensive national energy policy if we have support in Washington, D.C.," Antony said.

U.S. Rep. Mark Udall and others in Congress have embraced nuclear energy, which supplies 20 percent of the nation's electricity, as part of a cleaner energy future less dependent on others.

"Any potential uranium mill in Colorado must be done safely and responsibly and with the input and involvement of the public and local communities," Udall said last week.

### **Qualified support**

Colorado Gov. Bill Ritter also supports nuclear power and a Colorado role in producing required yellowcake — with caveats.

"With nuclear, we have to be sure that every phase of the process is protective of both human health and the environment. It's clear, beyond question, that during the last uranium boom we did not know a lot about the effects of how the ore was being mined and processed," Ritter's office said.

"Today's standards for a new mill . . . are far, far more protective of health and the environment. We believe it is possible to construct a mill today that fully protects workers as well as the air and water."

### **Toxicity worries**

Environmental groups led by the Sierra Club oppose the Colorado mill project.

Montrose commissioners "have approved yet another toxic threat that will result in a 7.3 million-ton radioactive waste dump site — a tragic legacy for future generations in Colorado," said Joan Seeman, who chairs the environmental toxics committee of Sierra Club's Rocky Mountain chapter.

Colorado Division of Wildlife officials also have raised concerns.

"Yeah, there would be impacts on wildlife, just as there would be for any other industrial development," said Jon Holst, the division's energy industry liaison for southwestern Colorado.

"There would be direct impacts to big game, and all of what they are putting in is right between two occupied areas for the Gunnison sage grouse," Holst said. "From our perspective, it would

be better if there was not an industrial site. We'd like the ability for grouse to go back and forth as they need to. And water depletion is a concern, too."

Today, the U.S. ability to process uranium is limited to four conventional mills, only one of them operational. Among those, a shuttered mill owned by General Atomics subsidiary Cotter Corp. at Cañon City is still being cleaned up as a state-supervised Superfund site.

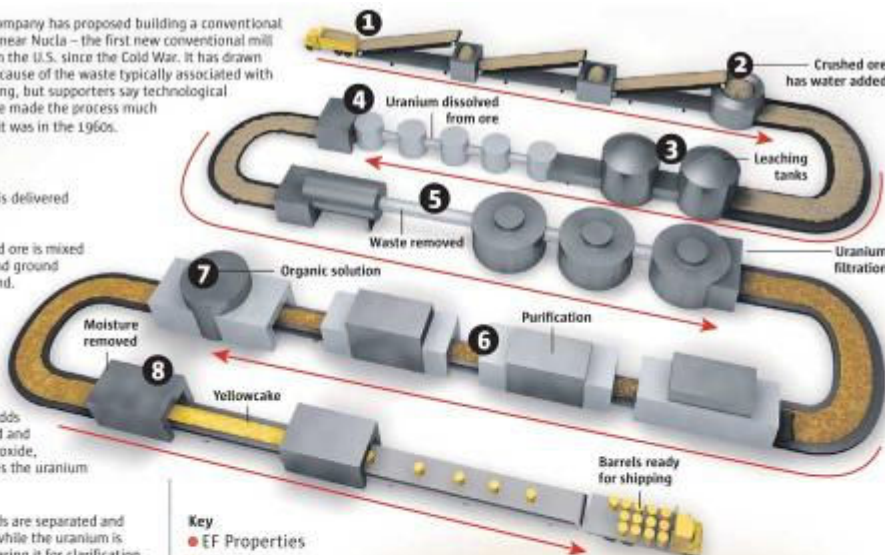
State health regulators charged with protecting public health "will not be commenting on the merits of (Energy Fuels') application, . . ." department spokesman Mark Salley said, "but will be actively soliciting public comment."

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A Canadian company has proposed building a conventional uranium mill near Nucla – the first new conventional mill constructed in the U.S. since the Cold War. It has drawn opposition because of the waste typically associated with uranium milling, but supporters say technological advances have made the process much cleaner than it was in the 1960s.

**The process:**

1. Mined ore is delivered and crushed.
2. The crushed ore is mixed with water and ground into a fine sand.
3. The slurry is pumped into leach tanks.
4. Leaching adds sulphuric acid and hydrogen peroxide, which dissolves the uranium from the ore.
5. Waste solids are separated and neutralized, while the uranium is filtered, preparing it for clarification. Excess waste from crushed rock and toxic chemicals is stored in pits and lined ponds, designed to hold 7.3 million tons of spent material.
6. The clarified solution is purified and concentrated. The uranium is then extracted using an organic solution.
7. Uranium is extracted from the organic solution using ammonium sulfate and purified again.
8. Excess moisture is removed, leaving a concentrated form of uranium called yellowcake. The yellowcake is sealed in specially-designed barrels and shipped to refineries.



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Sources: Energy Fuels Inc., AREVA Resources Canada Inc., Denver Post Research

Jonathan Moreno, The Denver Post