

INSIDE



Ambitious energy goals

Gov. Gary Herbert unveiled some pretty ambitious energy goals for the state of Utah at his Utah Energy Summit on May 15. The Energy Action Plan calls for a 25 percent increase in energy production by the end of 2020.

page F6

Oil Refinery List

page F10

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Utah could be the home of U.S.'s largest oil shale operation

John Rogers
The Enterprise

The U.S. Bureau of Land Management's (BLM) Vernal office released its final environmental impact statement (EIS) in late May that paves the way for a proposed utility corridor to support what could be the country's largest commercial oil shale mining project. The ramifications of the project's impact on Utah's energy future are mammoth, according to industry watchers.

Ever since 19th century settlers discovered that they could burn the viscous kerosene-like liquid that oozed from the shale in parts of eastern Utah, entrepreneurs have tried to figure out a way to commercially extract the oil from the vast deposits that lie trapped in the rocks beneath the land. All attempts have proved fruitless. The failed efforts even spawned a cynical tagline in a Colorado newspaper that pointed out the futility of the pursuit: "Oil shale, fuel of the future — always

has been, always will be."

But Eesti Energia, an Estonian state-owned energy company, hopes to break the mold. Enefit American Oil, a subsidiary of Eesti, is in the process of exporting its oil shale-mining technology to Utah and establishing what would be the first successful commercial oil shale operation in the United States. Enefit plans to construct a large oil shale mine and power plant in northeastern Utah, near the Colorado border.

Oil shale is a sedimentary rock that contains up to 50 percent organic matter rich in hydrogen known as kerogen. The extracted rock can be processed to produce shale oil, which can be refined into gasoline, diesel or jet fuel.

Eesti Energia operates two successful oil shale mines — one underground and the other a quarry mine — in Estonia, where it produces commercial petroleum products and operates an oil-fired electricity-generating plant. The company is in the process of constructing an oil shale extraction plant and a generating station in Jordan.

In order to build its project, Enefit needs to run utilities — most notably a water line — to the site. The actual utility corridor includes some land controlled by the BLM, which has reviewed the potential grant of five rights-of-way to Enefit and the Moon Lake Electric Association. The corridor would supply natural gas, electrical power, water and other needed infrastructure through one or more passageways to produce and deliver oil shale. Last month's EIS report opens the way for the rights-of-way to be granted.

Under the proposal, project developers would construct 19 miles of water supply pipeline, 9 miles of natural gas supply lines, 11 miles of oil product line and 30 miles of 138-kilovolt power lines. The BLM noted that full build-out of the project would likely occur regardless of the proposed utility corridor because Enefit already

see **SHALE** page F7

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New BLM planning process for managing sage grouse may offer relief to Utah energy producers

The U.S. Bureau of Land Management (BLM) has released for public comment, draft planning documents that may relieve Utah energy producers from regulatory restrictions imposed to protect the greater sage grouse by the previous administration. The BLM's preferred alternative for amending 14 resource management plans (RMPs) in Utah will release 448,600 acres of land — mostly in oil-and-gas rich Uintah County — from restrictive federal management directives, create additional flexibility for project developers in addressing impacts on the species and align federal actions with Utah's successful sage grouse management program.

The sage grouse, a chicken-sized bird that inhabits sagebrush steppe ecosystems in the inland West, has been the subject of years of federal litigation brought by environmental organizations contesting the adequacy of efforts to reverse declines in grouse habitat and populations. There

is no question that sage grouse populations have been declining across the West for years, but little agreement otherwise exists on primary causes for the decline. Predation, climate change, destruction of sagebrush habitat by wildfire, oil and gas development and



JOHN ANDREWS

livestock grazing have all been hotly debated, with much energy spent on legal efforts to either place federal public lands off-limits to significant development in the name of the grouse or to open those lands for greater use.

In 2010, the U.S. Fish and Wildlife Service made a preliminary determination that threats to the greater sage grouse were sufficiently severe that listing of the species as threatened under the federal Endangered Species Act (ESA) was warranted. A listing under the ESA would impose significant federal regulatory controls on all development in grouse habitat — over 134,000 square miles spread across the interior Western states. Faced with a regulatory and economic train wreck, mul-

multiple Western governors convened state-level task forces to improve state management of sage grouse, in hopes of arresting population declines and improving habitat without an ESA listing. At the same time, BLM and the U.S. Forest Service undertook revisions of their governing land use plans to provide protections for the sage grouse on federal public lands.

"The State of Utah's Conservation Plan for Greater Sage Grouse in Utah," first released in 2013 and revised on multiple occasions since that time, relies on the knowledge of state wildlife officials and local sage grouse working groups to identify the best-quality occupied habitat in the state, identify opportunity zones for improving habitat and populations, and create a flexible system for mitigating necessary disturbances to grouse habitat. State-identified top-tier habitat — titled Sage Grouse Management Areas or SGMA — are estimated to contain over 96 percent of the sage grouse populations in the state. Utah's Division of Wildlife Resources (UDWR) has managed an aggressive program to improve grouse

habitat through vegetation treatment, particularly removal of pinyon juniper woodlands that have encroached on sage habitats. Finally, Utah has created a state-level mitigation bank that allows some disturbance of habitat in SGMA, while creating or improving other habitat at a four-to-one ratio.

The federal land agencies initially took a different approach from Utah. Rather than identifying a single class of sage grouse habitat, BLM identified a top tier of habitat called Sagebrush Focal Areas (SFAs), a middle tier of Priority Habitat Management Areas (PHMAs), and a lower tier of habitat called General Habitat Management Areas (GHMAs). Significant limitations on surface disturbance, mineral leasing and construction of new areas were imposed on over 2,500,000 acres in the three categories in Utah. When the federal plans incorporating these concepts were released in 2015, the State of Utah identified a number of

GROUSE

from page F3

significant legal and factual flaws in the plans. These included the fact that the almost 450,000 acres of federal GHMAs contained almost no sage grouse, that Utah was treated more harshly in terms of management restrictions than directly adjacent population areas in Wyoming, and that federal mapping of habitat areas was based on outdated and inaccurate data.

Utah filed litigation challenging the federal sage grouse plans in late 2015 in federal district court in Salt Lake City. Other states and industry groups filed similar challenges in other courts. In the aftermath of the 2016 federal election and a federal court decision in Nevada invalidating a portion of BLM's plan in that state, BLM changed course.

On March 29, 2017, Secretary of the Interior Ryan Zinke issued Secretarial Order 3349, titled "American Energy Independence." In that order, Zinke directed department staff to identify obstacles to responsible energy development on federal public lands. The department's review identified certain portions of the BLM's sage grouse plan amendments as presenting unnecessary obstacles to energy development, and in particular echoed some of Utah's complaints about the prior federal plans. On June 7, 2017, Zinke issued Secretarial Order 3353 directing better federal coordination with state sage grouse conservation efforts and on Oct. 5, 2017, the BLM commenced formal amendment of the 2015 plans.

The preliminary result of this new planning effort in Utah — a Draft Resource Management Plan Amendment and Environmental Impact Statement — was released for public comment on May 4. The draft studies two alternatives: leaving the 2015 BLM plans in place, and a preferred "Management Alignment Alternative" that seeks to coordinate BLM's plans and efforts and those of the state of Utah as closely as possible.

Notably, the preferred alternative would condense SFAs into PHMAs, which would generally coincide with SGMAs. The federal category of GHMAs would be done away with in its entirety, since BLM recognizes that although GHMAs are large in size, few sage grouse are located in these areas (less than 4 percent of state sage grouse populations). Other common-sense changes include taking into account that not all lands in PHMAs are actual habitat; allowing site-specific modifications to development restrictions based on on-the-ground conditions; and relying, to the extent possible, on state wildlife managers'

data and expertise.

For Utah's energy industry, the elimination of the GHMA category will, in itself, have benefits. Of the 448,600 acres of GHMA in Utah, 245,000 acres are located in energy-rich Uintah County, with more than half of the rest in Carbon County. In total, 188,000 acres of these lands are currently "held by production," with active oil and gas activity ongoing. Given the minimal proportion of actual grouse habitat in these areas, removal of a substantial layer of regulatory control is likely to be welcomed by the industry.

These changes are not final. The

deadline for comments on the BLM's new draft plan amendment and EIS is early August. Environmental groups have already filed litigation in Idaho and Montana to halt BLM's plan amendment process and litigation seems likely in Utah once the new plans are finalized. The greater sage grouse seems likely to be a point of conflict in public lands management for more years to come.

John W. Andrews is an attorney with the Salt Lake City office of Snell & Wilmer. He focuses his practice in environmental and natural resources and has more than 30 years of practice experience in public lands, real estate, minerals and Native American law issues.

Conservationists, Fish & Wildlife Service settle on plan for recovery of Gunnison sage grouse

AP has reported that the coalition of conservation groups that sued the U.S. Fish & Wildlife Service over the recovery of the Gunnison sage grouse has reached an agreement with the agency that puts the lawsuit on hold. Ryan Shannon, attorney for the Center for Biological Diversity, said the agreement ensures the bird will get a recovery plan before it is too late.

The Gunnison sage grouse is found in Colorado and southeastern Utah and is on the endangered species list.

"This critically imperiled species has really suffered as its habitat has been lost to oil and gas drilling, urban sprawl and overgrazing. A robust recovery plan is a good first step toward preventing the grouse's extinction," Shannon said.

The groups sued to have the bird classified as endangered rather than threatened, but the new agreement stays that legal action and instead requires the federal agency to come up with a recovery plan within 30 months. Signed in April, the agreement had the nod from the states of Colorado and Utah, as well as San Juan County.

The plan requires details of threats to the species and site-specific management plans to either eliminate or mitigate those threats. It also requires monitoring to ensure recovery goals are met. The grouse is limited to a relatively small area of southwestern Colorado and southeastern Utah.

According to the coalition, a history of habitat loss and fragmentation has left the Gunnison sage grouse to dwindle to seven isolated populations, with a total of approximately 4,000 birds as of spring 2017. It says six of those populations are in decline.

The groups that brought the lawsuit are the Western Watersheds Project, the Center for Biological Diversity, WildEarth Guardians and Advocates of the West.

In other action, three of those groups filed a new lawsuit in May challenging the Trump administration over practices they say are gutting protections for the greater sage grouse on more than 2 million acres of the bird's prime habitat. The suit filed in U.S. District Court in Boise asserts the Bureau of Land Management acted outside federal law in its approval of oil and gas lease sales in multiple

Western states, including Utah.

"Sensitive wildlife, like the iconic sage grouse, face irreparable harm. We are asking the federal court to enforce the laws on the books and protect our magnificent public lands from these unlawful actions," said Laird Lucas of Advocates for the West, lead attorney on the case.

The lawsuit, filed by Western Watersheds Project, the Center for Biological Diversity and Advocates for the West, asserts the U.S. Department of Interior is illegally prioritizing oil and gas development over the protection of the bird's habitat.

Under land use plans adopted in 2015, the groups said the federal government is obligated to focus its oil and gas leases outside of sage grouse habitat. Those plans are intended to prevent the bird's decline and preclude its protection under the Endangered Species Act, but the groups said a BLM directive effectively eliminated those sage-grouse agreements.

The state of Utah filed a lawsuit two years ago against the federal government, objecting to the 2015 plans because it said they imposed unnecessary restrictions.



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Utah Renewable Energy Update

• Solar

The solar resource in Utah is simply world-class. This has been established in multiple studies and government actions, including the Western Renewable Energy Zones report, the Utah Renewable Energy Zones reports and, most recently, by the Department of the Interior's designation of three solar energy zones in the state. To date, solar in Utah has been distributed in nature, meaning that it has typically taken the form of 1-kilowatt-to-1.5-megawatt installations on homes and businesses to offset their load. It's an exciting time for solar in Utah!

• Wind

The wind resource in Utah has been developed to a greater extent than solar, and the state boasts two successful wind projects: a 19-megawatt project in Spanish Fork and a 306-megawatt project near Milford. While the high-value wind resources are concentrated in the southwest portion of the state, including, among others, Millard, Beaver and Iron counties, there are smaller pockets of prime wind resource scattered throughout the state, particularly in San Juan and Box Elder counties, but also in isolated canyon mouths, ridges and other sites where dramatic topography produces valuable resource.

• Geothermal

Utah is one of just a half-dozen or so states with a developable utility-scale geothermal resource and currently is ranked No. 4 with respect to total geothermal production, with about 70 megawatts of nameplate capacity. The Office of Energy Development's partners at the Utah Geological Survey have extensively mapped the state's geothermal potential — and it is immense. However, given the high cost of exploratory drilling necessary to “prove” the resource, Utah can expect to see cautious, if steady, growth in this unique baseload renewable resource.

• Hydro

Just as in every region in the United States, Utah's hydroelectric fleet is essentially fixed, as very little new hydro facilities are being deployed due to the concerns of conservationists. However, there are still a great deal of opportunities for smaller applications known as “micro-hydro” and there's always the potential for upgrading existing facilities to improve efficiencies and lengthen the life of equipment.

• Biomass

Due to the breadth of potential biomass resources — woody material and other plant-based resources, solid and liquid municipal solid waste, residual material from food processing, etc. — the resources are still being quantified and assessed, as are the options for utilization. Certainly, many wastewater treatment plants are already capturing methane and generating electricity to offset their load and incineration provides a tried-and-true option for municipal solid waste. But in terms of waste utilization, we have only scratched the surface. As for plant-based materials, there are a wide variety of uses — from co-firing with coal to generating bio-oils, or, even outside of the energy arena, to the production of plastics or soil amendments.



**GOVERNOR'S OFFICE OF
ENERGY DEVELOPMENT**

Advancing Utah's Energy Future

SHALE

from page F1

has vehicle access to its land. Water can be trucked into the site and product can be trucked out.

The BLM is expected to issue a final ruling on the utility corridor permitting after July 2. The agency is currently accepting comments on the proposal. The BLM only has jurisdiction regarding the utilities corridor. Actual permitting for the mine will come from the state.

Enefit plans to set up shop on 7,000-9,000 acres of commercial oil shale mining in eastern Uintah County, near the Colorado border. The project is about 40 miles south of Vernal and 25 miles southwest of Rangely, Colorado. The land is privately-owned or controlled by the Utah Schools and Institutional Trust Lands Administration. Enefit anticipates producing 50,000 barrels of oil per day over the 30-year life of the mine site, which is in the Green River Formation, believed to hold the world's richest, most concentrated oil shale deposits, according to energy industry reporting.

Enefit owns or is in the process of securing mineral rights to a large tract of the property within the "South Project," a 30,000-acre oil shale property which is one of the largest tracts of privately owned oil shale property in the U.S., according to the BLM. The area contains about 1.2 billion barrels of shale oil, Enefit estimates. As much as 1 trillion barrels of oil-equivalent product are within the Green River formation, although not all of it is recoverable, according to industry estimates.

Western Resource Advocates is part of a coalition of conservation groups that are opposing the corridor proposal and Enefit's shale project more generally. "At its peak, this proposal will likely produce more climate changing pollution than any other plant in America, will use tremendous amounts of precious water and will generate massive amounts of air pollution in an area already shown to be out of compliance with federal clean air regulations," the group said on its website.

In a news release on its website, Enefit hailed the completion of what it called the "long-awaited" environmental impact statement. It also projected that, "assuming there are no unforeseen, last-minute issues raised in the public comments," the corridor will be approved.

Enefit said a 30-day period will then follow for appealing the decision, which it expects environmental groups and others will do. "To date, however, all concerns raised

by third parties throughout the EIS process have been resolved to the BLM's satisfaction, so we're optimistic that any appeals will not be successful," the company said in its release.

In 2017, the BLM granted Enefit a five-year extension of its oil shale research, development and demonstration lease on 160 acres of federal land next to the private property where the proposed mining project would sit.



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Guv sets ambitious goals for Utah energy development

Gov. Gary Herbert has unveiled an ambitious plan for Utah's energy future. He wants to increase energy production in the state by 25 percent by the end of 2020.

Herbert released his "Energy Action Plan" at the Utah Energy Summit on May 15, setting in motion a blueprint on energy-related issues for the next two years.

"We will be able to produce 25 percent more energy," Herbert said. "The question will be, what will be the fuel of choice."

Herbert's plan features 10 goals that include emphasizing infrastructure development for conventional, unconventional and alternative sources of energy. Building on his 10-year strategic energy plan released in 2011, Herbert established objectives that include the realization of a solar battery system in southern Utah by 2019 as part of an effort targeting rural business development.

"We needed to have something here to get us through 2020 that is a little more specific, particularly for rural Utah," Herbert said.

At the summit, Herbert noted the abundance of natural gas, oil and coal in Utah; significant gains in renewable energy development; as well as the state's geothermal resources.

Utah is one of two sites in the country still vying for U.S. Department of Energy funding and the opportunity to develop an underground laboratory researching ways to tap man-made geothermal reservoirs. Utah's candidate is the Frontier Observatory for Research in Geothermal Energy site at Milford, which has been monitoring seismic activity since 1981 and has been the subject of intense drill and geothermal investigation and activity for 45 years.

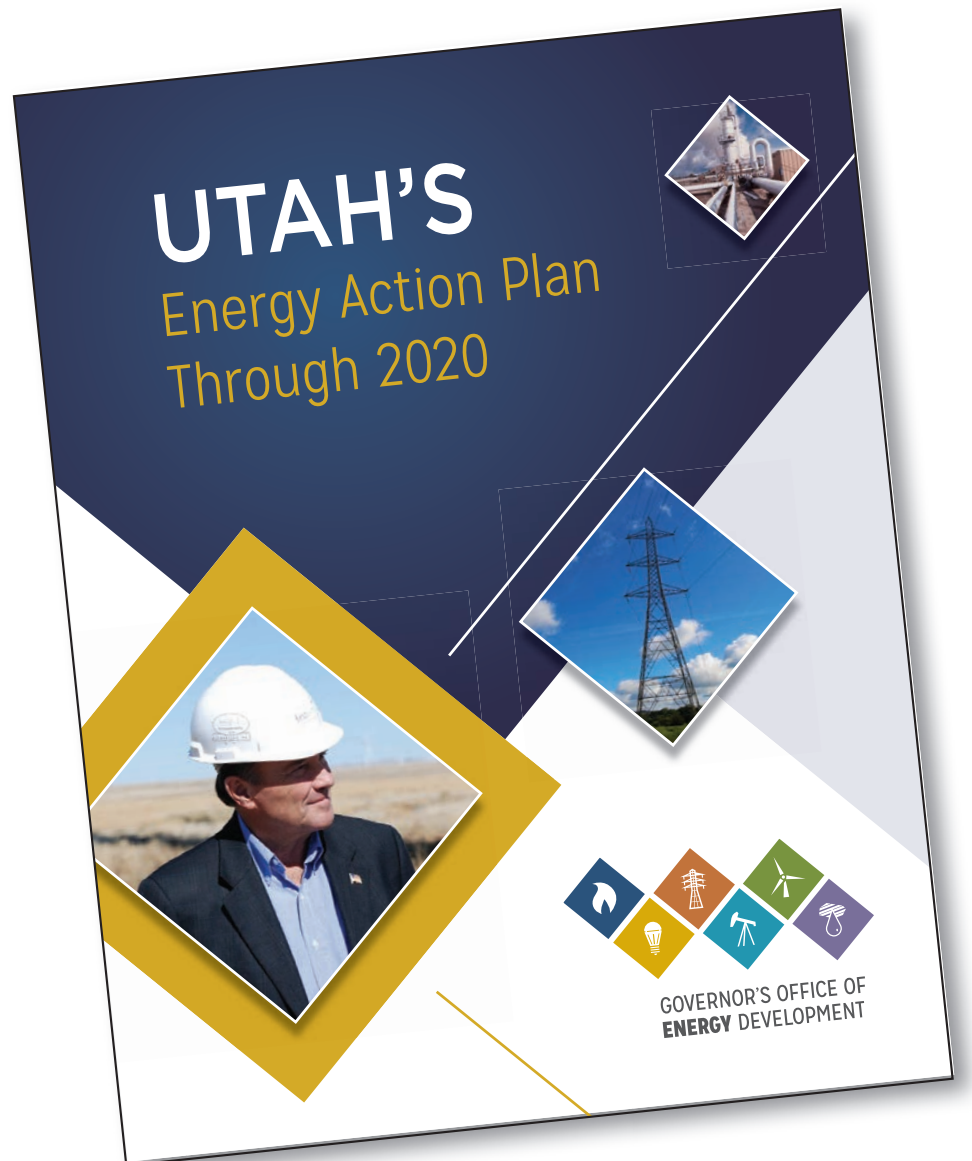
Herbert thinks Utah's chances are good. "I am optimistic. I think we are in a very good position. Our track record is good, and our resources are many," he said, adding "it does help rural Utah and further that goal of economic development."

Other goals in the plan call for improving the state's performance in the arena of energy efficiency. Since 2015, the state has improved its score from 26th in the country to 17th

based on rankings from the Advisory Committee on Energy Efficiency.

The balance between energy and air quality is also a big part of

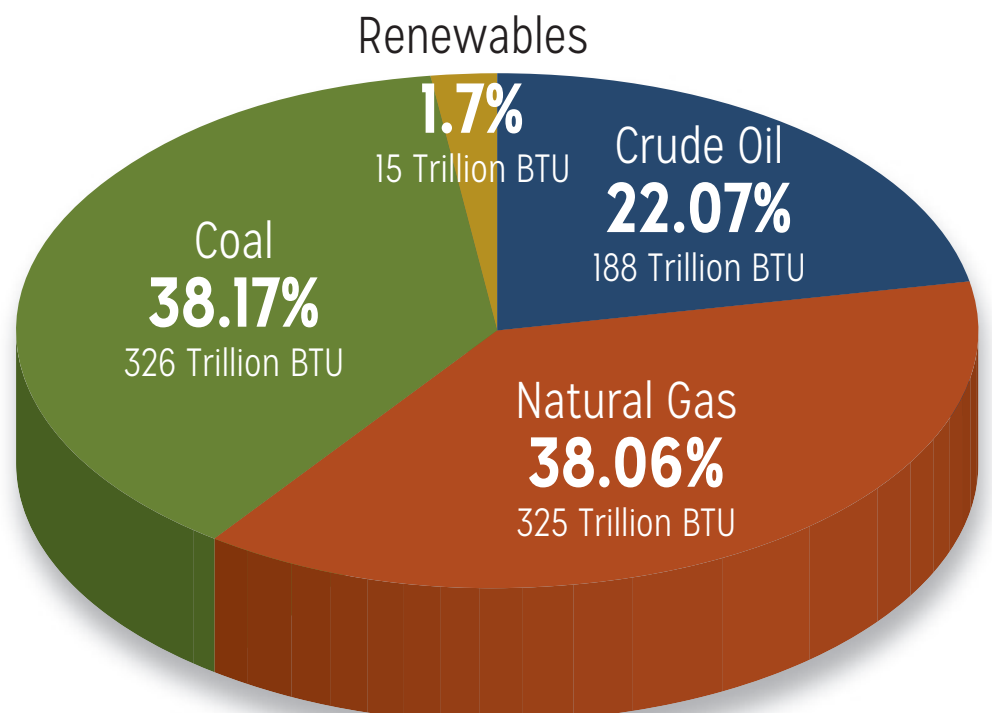
Herbert's. Herbert said there is much work left to do, but Wasatch Front emissions have dropped 35 percent in the past decade.



Original Goals of the 10-Year Strategic Energy Plan

1. Meet projected energy growth demands in a balanced and responsible manner
2. Ensure Utah's continued economic development through access to our own clean and low-cost energy resources
3. Develop new, cutting-edge technologies
4. Create new and support energy-related manufacturing opportunities
5. Update the regulatory environment to support today's business needs
6. Promote energy efficiency, conservation and peak consumption reductions
7. Facilitate expansion of responsible development of Utah's energy resources
8. Pursue opportunities to export Utah fuels, electricity and technologies
9. Enhance partnerships among industry, universities, local communities and government
10. Collaborate with other Western states to present a strong, unified voice to federal regulatory agencies

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