

FUTURE FUELS FROM MONTANA

To make America less dependent on foreign oil, Montana Governor Brian Schweitzer pushes for investment in synfuel technology.

BY LEE BUCHSBAUM

"This country has no energy plan, no vision for the future," says the Democratic Governor of Montana, Brian Schweitzer. "We give more tax breaks and money for the oil industry, and what do we get? Three-dollar gas and wars in the Middle East. If you want to control the destiny of this country, it's going to be with synthetic fuels."

Since being elected in 2004, Governor Schweitzer has made transforming his state into a major energy producer one of his central political goals, and today he enjoys a 70% approval rating. Part of this is derived from his stance that Montana, which has more coal reserves than any other state, should become a leader in developing and harnessing the coal-to-liquids processes inherent in synfuel production, and that America's vast coal supply nationwide would be better utilized as an alternative to imported oil.

"At 120 billion tons, Montana's coal is, in liquid terms, one quarter the size of the entire Middle East oil reserve—enough fuel to power every American car for decades," Schweitzer said. "The amount of coal that it would take for a 50,000 barrel plant is not much. Especially when you get two barrels of oil from every ton of coal. If even a fraction of Montana's reserves were responsibly developed and converted to synfuels, we could greatly reduce the oil we now import from foreign regimes and offer our military, the largest consumer of foreign oil, a domestic alternative, as well as giving the average consumer some relief at the pump."

In his speeches, both in Montana and more frequently on the road, he calls for coal. To become the "New Fuel" filling up our cars, trucks, railroad locomotives, and airplanes. He firmly believes that synfuels from coal can be used as the bridge between the petroleum economy of the past and the hydrogen economy of the future.

SYNFUEL TECHNOLOGY

Coal gasification is used widely around the world to create other forms of energy and industrial products. The gas is cleansed of sulfur, mercury, arsenic and other toxins, as well as greenhouse gasses, and then distilled



Gov. Schweitzer believes that Montana can become a leader in the development of synfuel technology.

into a synthetic form of crude oil which can be refined on site to create any liquid fuel.

The resulting fuels burn dramatically cleaner than petroleum-based fuels and can help America reduce emissions. "Synfuels," Schweitzer wrote in the recent *New York Times* op ed, "have remarkable properties: they are high-performing substances that run in existing engines without any technical modifications, and they burn much more cleanly than conventional fuels. And the technology has other applications: a synfuel plant can generate electric power, make synthetic natural gas, and produce the hydrogen that many (including President Bush) believe is the energy source of the future." Currently, the U.S. has 45 times as many potential synfuel resources as oil reserves, Montana alone has the equivalent of billions of barrels of crude, "assets we can't afford to ignore" said Schweitzer.

Schweitzer understands that many within the coal industry remain quite skeptical to yet another scheme to promote the resource, but he feels quite passionately that now is the time to begin to really harvest those resources.

The United States imports about 13 million barrels of oil a day. To replace that oil would be a monumental undertaking, with hundreds of coal-to-fuel plants.

What's prevented a large scale coal-to-liquids development program from being implemented in the U.S. historically is cheap oil and the legislative power of the oil industry. "The U.S. government was seriously exploring synfuel as early as 1925," said Schweitzer. "In the 1940s, a Synthetic Liquid Fuels Act passed by Congress even appropriated over \$80 million for research and production. By the 1950s, America was producing thousands of gallons of synthetic gasoline a day at a test plant in Missouri. But with the discovery of cheap oil, combined with a lobbying effort by the oil industry, the Federal government abandoned its synfuel research. During the oil crisis in the late 1970s, the federal government once again briefly discussed synfuel production, but abandoned the idea when the price of oil receded."

With the barrel price only rising, the potential profits for those willing to invest in synfuels are now rising. "Most people in the energy business believe that the price of oil is going to remain high. If you think it will drop below \$30 a barrel again, then don't walk away from this technology, run. But if you think it will stay above, then this is a great opportunity. And most of the cost of synfuel production is in American labor," said Schweitzer. "Bottom line is that if you're convinced that the price of oil is going to drop, then you should continue to import oil from these sheiks and dictators. But if you think it's going to stay high, or only go up, then now is the time to be looking toward coal as the alternative."

The governor, who is a trained soil scientist and spent seven years working in Saudi Arabia on various irrigation projects, believes that despite their country's vast reserves, they have reached the point where there is no excess production capacity. "The Saudis are producing flat out and so is the rest of the world while demand increases constantly. Think about it, only 8 tenths of the population of China has a car and

that country is already the second largest importer of oil. They will continue to import oil wherever it is from. There is no way that we can significantly decrease the price of oil without both decreasing our dependence upon it and simultaneously developing our own vast coal resources as an alternative. That's my whole premise."

Schweitzer also believes harnessing synfuels would be a double barreled positive for our nation's military, first as a steady supply of readily available domestically derived fuel, and also a way of realigning our military's overseas posture and the costs, both human and financial, involved. "The Office of the Secretary of Defense recently issued a Clean Fuels Initiative, a proposal to run all battlefield machinery on a single synthetic fuel. This would enable the military to avoid buying oil from unstable regimes that are known sponsors of terror, and would reduce the military's supply chain vulnerabilities such as those now occurring in the aftermath of hurricane Katrina. Being able to run battlefield equipment on a single fuel, rather than multiple fuels, would give the military a strong logistical edge. Also, there is already a \$5 premium cost per barrel associated with the U.S., as the last remaining super-power, being forced to defend those oil fields with our military."

Schweitzer is quick to blame the government for its lack of foresight on how to address our nation's energy problems, but he also has a definitive vision and plan for how to solve much of those same concerns. "If you build a single coal conversion plant that produces 50,000 barrels a day, why stop there? What if you build 20 and you have 20 separate facilities across the country, not just Montana. They could all be in Montana, but why steal it? Wyoming can produce, North Dakota, Illinois, Indiana, West Virginia, Pennsylvania, all the coal states could see tremendous gains from this. Those 20 plants across the nation could produce a million barrels per day."

While there is already a small facility in North Dakota that converts coal to natural gas and an ongoing project in Pennsylvania to produce diesel from coal, neither of these plants would come close to the scale of the plants Schweitzer is envisioning in Montana, where it would cost upward of \$2 billion to build a plant that could turn out 150,000 barrels of synthetic fuel a day. "It's not that hard to envision the costs of building 20 plants. Because 20 plants would cost only \$40 bil-

lion. That's less than 10% of what we've spent in Iraq so far. We've spent \$400 billion there already. So if we spent the same amount of money that we've spent thus far in Iraq, there's our 200 plants. Simple as that."

FUTURE FUELS

The governor mocks what the Federal government has proposed so far as progressive thinking on coal usage, specifically the much touted FutureGen project which, while often discussed, not a single site has yet been determined for where it will be built. "FutureGen is not bold," lambasted an animated Schweitzer. "How is building a \$1 billion zero emissions IGCC electricity generation plant and the technology around it innovative when there are IGCC plants built around the world already? So we're going to take it from nearly zero emissions to completely zero emissions. How is that bold? How is that bold at all?"

WHAT I'M PUSHING FOR IS SOMETHING CALLED FUTURE FUELS, WHICH I BELIEVE OUGHT TO BE A PUBLIC-PRIVATE PARTNERSHIP TO PUT US IN A POSITION TO BUILD 20 COAL CONVERSION, SYNFUEL MANUFACTURING PLANTS.

Schweitzer strongly believes we should go much further. "What I'm pushing for is something called Future Fuels, which I believe ought to be a public-private partnership to put us in a position to build 20 coal conversion, synfuel manufacturing plants. And these plants ought not to be demonstration plants, not 5,000 barrel a day plants like we're currently building in Pennsylvania. These full scale plants should be producing 50,000 barrels a day.

Of course, in order for such a massive undertaking to happen, there has to be some financial incentives and some guarantees in place ensuring that the endeavor would prove profitable. It is here, says Schweitzer, that the Federal Government has a vital role to play. "Everybody wants to be the first company to build the second plant. The Federal government needs to give us an off take agreement to buy these million barrels at a minimum of \$1 a gallon and scale that up as the price of oil rises, whereby if oil prices are at \$50 a barrel and they go up, the synfuel producer gets more per barrel. But if prices ultimately go down, the producer still sells at \$1 a gallon. If the Feds do that, then

this is a bankable project. If they would do that and give loan guarantees, you can go out in private equity markets and raise the money to build these plants.

"Heck, the DoE itself has said they want to buy all this fuel—all that million gallons a day. They have told us that. They want to convert the military to use this synthetic fuel, that's 600,000 barrels per day. And if you consider the rest of the Federal Government, they need a million barrels total, if not more. The cost of production for diesel right now is around \$1.50 a gallon. We saying guarantee us for 20 years a minimum of a dollar a gallon and we'll build these plants. There's my vision and it can't come about soon enough."

Schweitzer, and a consortium of other energy progressive statespeople have a plan to bring their combined vision into a reality. "We're going to start this process at the governor's level, and we're going to put the big press on private industry to be part of this. Peabody, Westmoreland, Arch, I'm calling you out. I want you to be part of this Future Fuels project that I'm talking about. What it's going to take is some governors getting together and getting private industry to put some money in the pot [like they're doing with FutureGen already] so that we can go to Congress and begin this dialogue. We don't need lobbyists as we already have Governors to do that for us. We don't have another five years for FutureGen. It should long ago have been 'NowGen' already, and these Future Fuels should be Now Fuels too. If Congress thinks that somehow they've sponsored FutureGen and now they can walk away, I say no chance. We're going straight to Future Fuels."

What's at stake here, says the governor, is more than just our energy independence, but also losing our technological edge. "Shell is doing a dozen of these in China now. If we can create the IGCC and liquefaction technologies so that we can produce energy inexpensively and cleanly, then China and India will buy that technology. Then we can create a link between our technology and their energy production which will be good for the rest of the world, as well as for our own domestic economy.

Other governors, Schweitzer said, are already with him, building a consortium to bring about this energy revolution. "Dave Freudenthal, my neighbor in Wyoming, is

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with me. Joe Manchin, from West Virginia is there too and Ed Rendell of Pennsylvania is building a liquefaction plant already. There are other coal states that recognize the value of what we're doing.

"What we don't have is Congress. We don't have the president. He said the words, but then he cut the research dollars. They are not being bold. With Future Fuels, we need legislation that will create a market with a floor price that will give loan guarantees to build these and then private industry will build them."

Schweitzer firmly wants to locate many of these plants within his state and he's been actively showcasing certain coal reserves for one of these sites. "Although I am absolutely neutral on where we build these plants, some say it must be Otter Creek because the state of Montana owns the coal there. I'd love it to be Otter Creek, but I'm not going to dictate where private enterprise wants to invest their money. What we're doing is giving the private players the matrix of information that they need to make this happen. Throughout Montana we have proximity to water; overlay that with proximity to

transmission lines; overlay that with proximity to pipelines; overlay that with 10,000 workers who have the ability to commute to a potential jobsite within 60 minutes; overlay that with good railroad service and then overlay that with the more than 1 billion tons of coal in our state that's close to the surface. There isn't any single place in the nation that has all those features, but there are many, including many in Montana that can boast several of those features. Otter Creek has some and Roundup has some. And there are many other locations."

Another giant incentive for building a series of these plants and the coal mines that will fuel them is jobs. "It would take 120,000 people to do this," said Schweitzer. "We could absorb 100,000 construction jobs in this country. To be sure, if the price of oil stays up, there will be more layoffs in manufacturing. Where will these workers come from? How about in Detroit? Let's see if we can't find 35,000 people who would like to work? They used to work for General Motors and Ford."

With Montana's deregulated electrical economy, Schweitzer actually sees a further incentive. "Pipelines are regulated by the Federal Government in terms of immi-

nent domain. Transmission lines aren't. It's cheaper to move liquids than electrons right now and it's liquids that we have a critical problem with. We have the infrastructure to move liquids." Ironically enough, once again the railroads could, in a round about way, become one of coal's greatest users. "Railroads use over 250,000 barrels of oil a day," said the governor, "if you build this anywhere near their lines, they'll move it themselves. I'm talking about a quarter million barrels sucked up by the railroads a day." That's only 500,000 tons more coal to be shipped.

THE NATIONAL RESOURCE DEFENSE COUNCIL'S MAGAZINE FEATURED AN ARTICLE TALKING ABOUT THE BENEFITS OF COAL GASIFICATION. THEY TELL ME THAT THE SIERRA CLUB IS CLOSE TO ENDORSING THIS. CAN YOU IMAGINE THAT, ENVIRONMENTAL GROUPS ARE BEHIND COAL? SAYING THAT COAL IS THE FUTURE?

Many environmentalists, surprisingly, have been very supportive of Schweitzer's plans. "When I explain to them that we're going to sequester the carbon dioxide, we're going to remove all the mercury and sulfur, then what's your concern? They say, 'well, we wish we weren't using petroleum.' I say you have a choice: you can either use synfuels as a bridge over the next 50 or so years until we get to the next technology, or you continue to import foreign oil. The National Resource Defense Council's magazine featured an article talking about the benefits of coal gasification. They tell me that the Sierra Club is close to endorsing this. Can you imagine that, environmental groups are behind coal? Saying that coal is the future?"

"The president and Congress could announce a plan tomorrow saying we need to create a plan that makes us energy self sufficient, one that creates public-private partnerships, funds research projects, and is behind coal gasification, liquefaction, bio-fuels, and wind-power. We need to turn the creative, innovative spirit of the American people on. Give us something to dream about. Challenge our children to be a part of something bigger than themselves."

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