

**Committee on Science, Space, & Technology**  
**Energy & Environment Subcommittee**  
**United States House of Representatives**  
**"Unconventional Energy Development in Utah"**  
**Testimony of Samantha Mary Julian**  
**Director**  
**Office of Energy Development**  
**Thursday, May 10<sup>th</sup>, 2012**

**WRITTEN**

Thank you Chairman Harris, Ranking Member Miller and members of the Committee. I am Samantha Mary Julian, Director of the Governor's Office of Energy Development for the State of Utah, the epicenter of unconventional energy development in the United States. Utah is proud of being a major energy producer (11<sup>th</sup> Crude Oil, 9<sup>th</sup> Natural Gas, 15<sup>th</sup> Coal). Our office was created to be the voice for responsible energy development within our State.

I am not here to say that oil shale and oil sands will drop prices at the pump and immediately solve our Country's devastating dependence on foreign oil. I am here to say that the responsible development of unconventional energy is happening today in Utah. Leading technology companies have settled in Utah, permits have been granted and efforts begun. Hundreds of millions of private dollars are being invested and jobs are being created as we speak. These critical resources in Utah are no longer on the horizon. The unconventional industry is operational in Utah and poised for continued growth.

These developments are important to note, as the federal Government needs to understand that these industries are commercially viable and proven. The BLM's 2012 PEIS (Programmatic Environmental Impact Statement) as well as the 2010 GAO report "Energy-Water Nexus" should have recognized that oil shale and oil sands technology is quite advanced, with completed pilot and demonstration projects. The fact is that both industries have been commercial outside of the United States for over 50 years, with the most obvious examples being in Estonia for oil shale and in Canada for oil sands. Operators and technology from both countries are now in Utah and continually seeking public lands certainty and federal policy consistency.

The size of the oil shale and oil sands resources are so large it is difficult to comprehend. The United State Geologic Survey<sup>1</sup> estimates that within Utah's Uintah Basin alone there is the equivalent of over 1.32 Trillion barrels of oil. Simply put, this is more than the entire reserves of OPEC and enough to supply the United States with over 100 years of oil consumption.

Special interest groups often attack these industries claiming massive use of water that is anyways unavailable in our State. Not only do we fervently believe and assert that water is available for oil shale and oil sands development, but water is owned by the State in trust for its citizens, and as such it is subject to the State water appropriation system managed by the Utah State Water Engineer. Water is available both through existing water rights and through the general market system. The

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<sup>1</sup> *Assessment of In-Place Oil Shale Resources of the Green River Formation, Greater River Basin in Wyoming, Colorado and Utah*, United States Geologic Survey, June 2011

state can and will, consistent with the authority of the State Water Engineer, process applications to approve or transfer water rights for oil shale, oil sands or any other use. This process is well known and has been in place for over a hundred years.

In addition, advances in technology should lay to rest false estimates from f GAO's Energy-Water Nexus<sup>2</sup>, BLM's 2012 PEIS and special interest groups. The EcoShale technology from Red Leaf Resources utilizes low temperatures for heating and requires no process water<sup>3</sup>. Enefit's Enefit280 oil extraction process uses no water<sup>4</sup>. Every oil sands company proposing operation in Utah recycles its process water.

We were asked to speak specifically about the challenges associated with the federal government's involvement in unconventional energy. These challenges are critical as approximately 75% of oil shale and tar sands resources are under federal lands. This request is timely; as right now would be optimum timing for Secretary Salazar and the BLM to take steps forward in implementing policies and practices that support Congress's mandate in the 2005 Energy Policy Act to establish a commercial leasing program for oil shale and tar sands. We are extremely concerned with this and ask the Committee to do everything in its power to encourage the current administration to embrace legislation passed by Congress.

Despite the lack of efforts of some federal agencies, the unconventional energy industry is alive and growing in Utah. Red Leaf Resources, a Utah technology company has just entered into a \$200 million Joint Venture with the French oil company TOTAL and received mining permits for its first project. Mr. Cameron Todd from US Oil Sands has successfully raised significant funds and just testified about his efforts in our State. These two leading projects are both on State land and this is no coincidence. Utah actively manages its lands to promote the responsible development of its energy resources as it produces the main source of funding for our schools. Simply put, Utah educators and students depend on responsible energy development. As any operator will tell you-coal, oil, gas, wind, solar, shale, sands, etc- working on State land is not only more clearly streamlined but consistently regulated. We are very proud of this in Utah.

Besides making land available for responsible development, the State is leading additional efforts at providing pathways for responsible unconventional energy development. One of these efforts is an 'Oil Sands Technology Zone', where technology companies and entrepreneurs are given a rent-free lease on a 'pre-permitted' site adjacent to an active oil sands mine. This facilitates the technological advancement of sometimes nascent bench-scale technology and allows for 'proof-of-concept' at a level sufficient enough to remove technology risk for capital providers. We hope that this will enable the identification and successful development of the most environmentally friendly, economical oil sands technology in the world.

In addition, the State has created an Alternative Energy Development Incentive which is managed through our office. Unlike similar policy tools, this incentive was not created to make winners out of uneconomic energy resources. This incentive was created to encourage responsible energy development as Utah's education system relies on it for funding classrooms and textbooks. It was created to make Utah the epicenter of unconventional energy and we believe it is. Through this incentive, a significant portion of State tax liability is refunded to responsible energy developers,

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<sup>2</sup> <http://www.gao.gov/assets/320/311896.pdf>

<sup>3</sup> [http://www.icse.utah.edu/assets/archive/2011/assets/pdfs/red\\_leaf\\_nelson\\_2011\\_ucf.pdf](http://www.icse.utah.edu/assets/archive/2011/assets/pdfs/red_leaf_nelson_2011_ucf.pdf)

<sup>4</sup> <https://www.energia.ee/en/oil/international/enefit>

including oil sands and oil shale producers. This incentive is based on previous tax payments and thus incentivizes meaningful development of resources at a commercial scale at no risk to the State.

Perhaps the most important effort made by the State to develop a pathway for responsible unconventional energy development is Governor Gary R. Herbert's 10 Year Strategic Energy Plan. This plan is the product of stakeholders throughout industry, government, academia, environmental concerns and other important viewpoints. This massive undertaking aligned all relevant parties to identify goals and recommendations to provide a pathway for the responsible development of Utah's energy resources.

The third topic we were asked to speak on was how the federal government could contribute to expand production through support for research and development. I will repeat that the most consequential assistance that the federal government can provide is to assure that BLM is consistent with what Congress has already mandated. There is, however, strong opportunity for the federal government to provide support on the R&D side as well. The current DOE procurement processes favor internal government R&D providers (national labs) over external providers (industry & research universities). If funding decisions were instead calculated proportionally (at a minimum) to a States GDP or energy production ranking, the R&D resources of Utah's leading industry and research universities would increase from ~\$3.5M to over \$60M. Given that Utah's industry and universities are a clear leader in unconventional energy R&D this would elevate the support for oil shale and oil sands from the federal government almost 20 fold. In the words of DOE Undersecretary Arun Majumdar, "the road to a secure future is to invent locally, make locally and sell globally." Increasing Utah's share of R&D funding to represent its size and that fact that Utah is an energy producing state would mean additional resources to concentrate on Utah's critical unconventional resources, i.e. 'inventing locally'.

I will conclude my comments by again requesting that Congress leverage its overwhelmingly bipartisan support for the Energy Policy Act of 2005. You instructed BLM in section 369 to create a commercial leasing program. Proactive work by BLM would positively affect our energy independence, national security, and decrease our dependence on foreign oil. Utah, as a robust and business friendly State, is successfully fostering this crucial industry. We would truly appreciate the support of Congress to make unconventional energy an R&D priority and to help federal agencies understand that taking steps to ensure public lands certainty and federal policy consistency would create an energy game changer. Thank you for your time and offering me the opportunity to speak today.