



UTAH OFFICE OF
ENERGY DEVELOPMENT

Advancing Utah's Energy Future

Governor's Energy Advisor & Office of Energy Development (OED)

Annual Report to the NRA&E Committee October 15, 2014

Cody Stewart – *Energy Advisor to Governor Herbert*
Dr. Laura Nelson – *Director, OED*





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Overview

- **Energy Primer & Other Documents**
 - *UT Energy & Minerals Production, Associated Benefits*
- **OED Initiatives/Accomplishments - 2014**
- **Policy Recommendations**
- OED Budget/COBI
- OED Initiatives/Goals – 2015

- Addenda



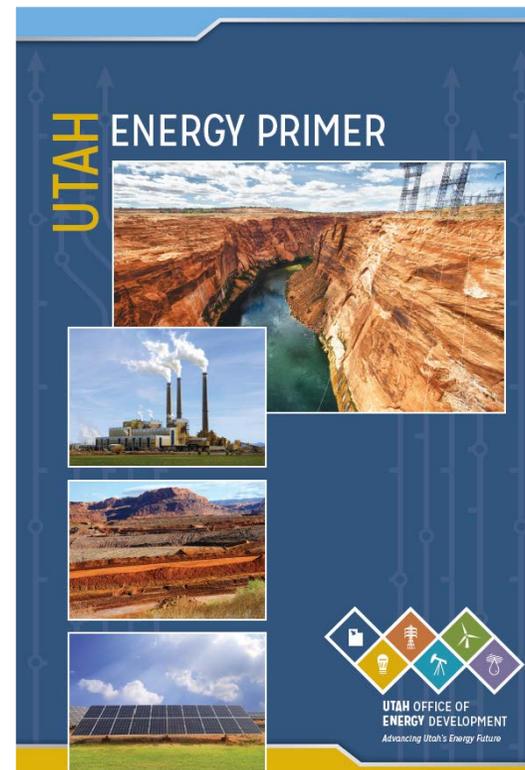
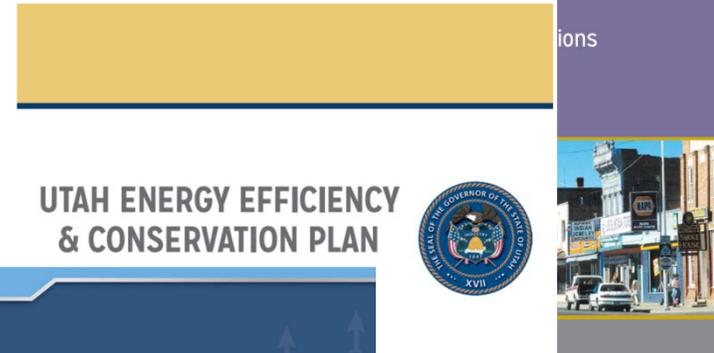
Resource Primer, Conservation Plan, Nuclear Study

Educating the public, and providing leaders with the tools they need to develop effective energy policies for the 21st Century.



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State Energy & Minerals Production

- Oil – *\$2.3 Billion*
- Natural Gas – *\$1.23 Billion*
- Coal – *\$626 Million*
- Natural Gas Liquids – *\$406 Million*
- Uranium – *\$31 Million*
- Renewable Energy – *\$166 Million*
- Other Minerals – *~\$4.5 Billion*
- Energy Efficiency – *1.6% of PacifiCorp's UT portfolio in 2013, 7.3% by 2022*

“Direct production value of energy is \$5 billion and other minerals over \$4.5 billion, which together means \$30 billion according to standard economic multipliers.”





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Benefits of Energy Production

- Low energy costs: Capital investment, job growth
- Rural development
 - *Tax base growth (30-80% of rural property tax base)*
 - *High-paying jobs (190% of state mean wage)*
- Energy self-sufficiency and export potential
 - *Electric generating capacity fueled w/UT resources (91% hydrocarbon, coal/gas, and 9% renewable)*
 - *Produce 56% of oil we consume*
 - *Exporting 31% of all energy (gas exports driving trend)*





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OED Initiatives – 2014 Snapshot

- **Industry Engagement**
 - *Infrastructure Authority, Development Incentive, Production Tax Credit, Site Visits, Recruitment*
- **Outreach, Education & Research**
 - *Summit, Conservation Plan, Nuclear Study, Alternative Transportation Education, Partnering on Rural Development, Energy Research Triangle*
- **Policy Initiatives**
 - *Leading on comments on EPA CAA and CWA proposed rules, Updating State's Energy Policies, Keeping Law In-Step w/Sector Advances*
- **Policy Implementation**
 - *Alternative Energy Incentives, State Energy Policy, Revolving Loan Fund, Incentives, Bonding, Emergency Preparedness*





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OED: Advancing Critical Energy Projects

- Infrastructure initiatives outline paths to public-private partnership
 - *Multiple transmission developments and energy storage to support a diverse energy portfolio*
 - *Pipeline and transportation initiatives to support production growth and market access*
- Incentives to facilitate Utah's first commercial shale and sands projects





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OED Partners to Invest in Rural Communities

- In recent years OED has partnered with rural communities on diverse projects ranging from efficient street lighting to school HVAC systems.
- OED's \$9.2 Million investment in a sampling of 36 representative projects will yield \$20.5 Million in energy savings to impacted communities.
- **Energy savings in first 10 years will pay back total investment,**
- **System Lifetime ROI of 124%.**
- Rural partners: *Beaver, Blanding, Ephraim, Enterprise, Fillmore, Hatch, Holden, Kanosh, Kaysville, Monroe, Morgan, Oak City, Parowan, Price, Richfield, Roy, Santa Clara, Smithfield, Spring City, Springdale, etc.*





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Advancing Energy Education & Research

- Utah Energy Research Triangle
 - \$445K awarded to 25 researchers participating in one-of-a-kind collaborative program.
 - Topics Funded in '14:
 - *Uinta Basin Air Quality – Ozone*
 - *CO2 to Methanol*
 - *Electric Vehicle Batteries*
 - *Molten Salt Energy Storage*
 - *Advanced Hydrogen Fuel Cells*
 - *High Efficiency Solar Cells*





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Policy Recommendations

- Updating State Energy Policy (63M-201, 301, 401)
 - *Minerals; energy storage; representing Governor in utility regulatory sphere*
- Energy Research Triangle: *Ongoing funding*
- Alternative transportation incentive updates: *Streamlined, results-oriented*
- Updating Utah Energy Infrastructure Authority
 - *Inclusion of C-PACE, reconfiguration of Board*
- Industry/Partner Goals: Coordination with industry on transportation options





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Compendium of Budget Information (COBI)

- OED Budget
 - *\$1.3M General Fund (ongoing), \$0.3M Federal (formula grant), \$1.5M PVE (one-time, non-lapse)*
- COBI Metrics: 2012–2014
 - *Investment Leveraged*
 - *Incentives Authorized*
 - *Attendees Hosted/Educated*
- 2015 Recommended COBI Metrics
 - *Investment Leveraged (Captures value added by incentives)*
 - *Attendees Hosted/Educated*
 - *Total Energy Produced*





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OED 2015 Goals & Initiatives

- **Continue to enhance conventional, alternative and commercial energy projects**
 - Leveraging UEIA: *Pipelines, transmission, substations, C-PACE*
 - Leveraging existing incentives to drive investment: *AEDI, RESTC*
 - Advancing new/developing OED programs: *Industrial & Agricultural EE, Transportation*
- **Continued leadership/collaboration on federal issues impacting energy:**
111(d), Waters of the U.S., etc.
- **Energy Education**
 - Economic Assessment: *Comprehensive study on impact of energy and minerals development*
 - *Energy and minerals education K-12*
- **Stakeholder Outreach**
 - Governor's Energy Development Summit
 - Uinta Basin Applied Technology College Partnership





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Questions?

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*4th Annual Governor's Energy
Development Summit*

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*May 21, 2015 at the Salt
Palace Convention Center*





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Utah's OED-Led Response to EPA's 111(d)

Coordinated Effort

Stakeholder input on technical issues

- Investor-owned, municipal, and rural co-op utilities: *PacifiCorp; Utah Associated Municipal Power Systems (UAMPS); Utah Municipal Power Agency (UMPA); Intermountain Power Authority (IPA); Deseret Power*
- State agencies: *Department of Environmental Quality (DEQ); Division of Public Utilities (DPU); Public Service Commission (PSC)*

Modeling

- OED-directed in-state modeling (Energy Strategies)
- Regional modeling by Western Interstate Energy Board (WECC)

Consultation with other states

- Center for the New Energy Economy (thirteen western states)





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Utah's OED-Led Response to EPA's 111(d): Snapshot of Technical Comments

- UT's coal plants are already better than many others. State targets should be based on unit-specific performance.
- Proposed heat rate improvements (6 percent) are not feasible.
- Reducing coal dispatch will degrade coal plant efficiency.
- Turbine improvements and new construction require significant lead time.
- Interim compliance period (2021 – 2029) does not allow enough time.
- Lake Side 2 was still under construction in 2012.
- State plan must allow flexible responses to market or technological developments.
- The renewable building block was set on the basis of neighboring state RPS' – not on the basis of actual Utah potential or policy choices.





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Key OED Team Members

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