# Redefining Responsible Oil and Gas Development Pete Morton, PhD and Joe Kerkvliet, PhD<sup>1</sup> Working Draft Platform November 3, 2013

#### **Core Values**

- 1) Protecting the environment and our "natural amenities" (e.g. outdoor recreation, clean air and water, fertile soils, abundant wildlife habitat, etc.) can sustain our health, our quality of life, and our economy.
- 2) Natural amenities when combined with community amenities can lead to community economic health by attracting a high skill labor force, small businesses and entrepreneurs, recreation and tourism-based businesses, retirees who bring their accumulated wealth and talents. If not properly regulated and timed, we believe that oil and gas development may threaten the health of our economy both today and in the future.
- 3) In communities where oil and gas drilling does occur, we believe that boom and bust cycles should be mitigated and the "resource curse" avoided -- in order to promote more sustainable economic development patterns.
- 4) We believe that the exploration and extraction of oil and gas is a hazardous and inherently very dangerous activity that needs to be regulated.
- 5) We support the right of local communities to take precautions through regulations and/or issuance of moratoria or bans on oil and gas extraction technologies such as hydraulic fracturing ("fracking"). Information based moratoria, for example, provide time to allow additional scientific information to be developed and incorporated into local decisions.
- 6) A moratoria may be necessary to insure due diligence by making sure there is adequate time and budget to collect high quality pre-drilling baseline socio-economic and environmental data. We believe baseline data should be collected before drilling in order to detect future change in environmental and socio-economic conditions. Having high quality baseline data is a prerequisite for protecting taxpayer interests in case of future damage. If for example, drilling results in pollution in local drinking water, having good baseline data will help quantify the damages due in court

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- 7) We believe that the externalized damages from exploring, extracting, and burning oil and gas and coal must be internalized into our energy policy decisions in order for fossil fuel markets to be efficient provide the greatest possible social benefit.
- 8) We support "greening up" the energy supply chain by responsibly sourcing the extraction and transport of the fossil fuels that we use in power plants, our autos, and to heat our homes.
- 9) We believe we have a responsibility to future generations to mitigate the damage currently being done by fossil fuel extraction as we transition to alternative sources of energy.
- 10) We believe we should compensate our children and grandchildren for the use of fossil fuels that could have been available to them.
- 11) We support a government that reduces our exposure to oil and gas hazards, regulates the emergent technological risks from fracking, and collects better information and funds applied research to decrease the uncertainty and risk in energy and climate policy decisions.

## Platform: Legislatively Re-define Responsible Oil and Gas Development

In order to support these core values we believe that the legislative views on what constitutes "responsible oil and gas development" must be updated with new goals and redefined in terms of the above core values.

# New Framework for Implementing Responsible Oil and Gas Development

We propose a framework that utilizes a phased energy development strategy<sup>2</sup> guided by the precautionary principle, adaptive management, and sustainability -- backed by a suite of economic instruments based on the polluter pays principle.

Phased development regulates the pace and scale of drilling and production. These are the key variables for mitigating boom and bust cycles, reducing and internalizing the externalized damages, and managing risk. Regulating the pace and scale of drilling

<sup>&</sup>lt;sup>2</sup> Haefele, M. and P. Morton. 2009. The Influence of the Pace and Scale of Energy Development on Communities: Lessons from the Natural Gas Drilling Boom in the Rocky Mountains. Western Economic Forum, Winter 2009. Morton, P. 2012. Phased Energy Development and the Precautionary Principle: Good for Critters and Communities. Presentation at the Restore the West Conference, Utah State University, Logan, UT

and production is a fiscally and economically sound approach to oil and gas development.

Phased energy development can be implemented by limiting the acres leased (scale), limiting the number of drilling permits granted (pace), capping number of wells allowed (pace-scale), allowing new wells only after old ones are closed and site fully restored (scale and pace), and placing some areas off-limits to drilling (scale).

Phased development requires full disclosure to reduce uncertainty and to make more informed decisions. All data should be made publically available in a searchable database. The type of disclosure data collected should also be expanded to include information such as: the location and characteristics of wells; the disposal of waste; the compliance history of each operator; amount and source of water used for hydraulic fracturing; chemical content of backflow and produced waste water; quantity and quality of recycled fracking water; volume of methane emissions; and frequency of spills and accidents.

Adaptive Management requires pre-drilling collection of environmental and socioeconomic baseline data, and follow-up monitoring of environmental and socioeconomic impacts by 3rd parties.

The pace and scale of drilling can be adjusted based on monitoring results. Such a regulatory approach provides a built in incentive system for adequately funding data collection and monitoring (i.e. if no monitoring is completed pace and scale cannot be increased). By regulating pace and scale local communities can better manage cumulative impacts.

The total number of wells can also be capped to control for cumulative effects. Once the cap is reached, new wells are allowed only after old ones are closed and the site successfully restored. This type of regulatory approach provides a built-in incentive system for closing and reclaiming old wells in a timely fashion.

The Precautionary Principle is the guiding principle for managing risk while implementing phased energy development. The Precautionary Principle can be summarized with two phrases: "try to do no harm" and "the less you know the slower you go".

The Precautionary Principle can be used to mitigate the emergent technological risks from oil and gas extraction technologies like fracking. If there is plausible risk – local governments should take precautionary actions.

Good governance requires good data and information – and not having data does not mean there isn't any harm.

In order to pay for responsible oil and gas development, we need a suite of economic instruments to help enforce, inform, and successfully implement a phased energy development strategy. The current set of economic instruments applied to the oil and gas production and exploration are inadequate. Economic instruments must be

updated and appended to provide more economic incentives (and disincentives) for successfully implementing responsible oil and gas development.

## For example:

Penalties must be increased to provide a larger disincentive to discourage industry violations of rules and regulations.

Royalty rates should be increased for oil and gas produced from state and federal lands. The increase in royalty revenue can be used to collect and monitor baseline environmental and socio-economic data, and pay for the inspection and enforcement needed for successful implementation of responsible oil and gas development.

Bonding is used to help insure funding for the closure and reclamation of wells. Blanket state and nationwide bonding need to be eliminated and replaced with site specific bonding. Site specific bonding allows states and communities the ability to tailor bonding amounts to the reclamation costs for specific sites.

User fees should be collected and saved in an "untouchable" fund with the earnings from the fund's investments going to future generations.

## **Closing Thoughts**

We believe sustaining the core values with the proposed framework above provides a more responsible approach to oil and gas development than recent and historic oil and gas development patterns.