

December 18, 2013

Governor Jerry Brown  
c/o State Capitol, Suite 1173  
Sacramento, CA 95814

Dear Governor Brown:

As you have noted previously, the “potential is extraordinary”<sup>i</sup> for developing oil and natural gas from shale and other tight formations in California. Development elsewhere in the country has created hundreds of thousands of jobs and, through lower energy costs, made manufacturing more competitive in the United States. According to several federal agencies, increased use of natural gas has helped the United States reduce its carbon dioxide emissions to a 20-year low, and many parts of the country are also seeing the added public health benefits of sharp reductions in air pollution.

Oil and gas development has also reduced energy costs for families across the country. According to the respected research firm IHS-CERA, shale development has increased average household income by roughly \$1,200.<sup>ii</sup> An analysis from Mercator Energy recently found that the energy cost-savings for low-income Americans last year was approximately \$10 billion, or about three times the value of the federal Low Income Home Energy Assistance Program (LIHEAP).<sup>iii</sup>

Obviously, the more of our own energy we can produce, the less we have to rely on imported oil. It was only a few short years ago that the United States was operating under the assumption that our energy supplies were scarce. Today, advanced technologies have allowed for the economic development of oil and gas that otherwise would not have been reachable. Domestic oil production now outstrips the volume that our country imports, and total U.S. production is at its highest level since 1989. As you noted earlier this year:

“We have 30 million vehicles in California. That’s a lot of oil. So I think we have room to supply our need even as we reduce oil consumption. We should be reducing it much faster than we are, and hopefully we can get some national policies to do that, but that still doesn’t mean that in the meantime there isn’t oil under the ground in California that can’t be made very useful.”

However, protecting the environment and public health must remain key components and focal points of future oil and gas development. California has always been at the forefront of environmental protection, and the state’s recent passage of new regulations governing the safe use of hydraulic fracturing technology is certainly part of that tradition.

As scientists, engineers and technical experts, we believe that careful risk assessment is critical to prudent decision-making. If the risks of an activity exceed the known benefits, there is little merit in proceeding with that activity until those risks can be better mitigated. Conversely, if the benefits exceed known risks, there is little merit in preventing that activity from going forward in a regulated and responsible way – provided adequate public protections and transparency measures are implemented and enforced.

We believe this is especially true when it comes to developing oil and natural gas from shale. Public concerns over development have given some communities pause in allowing such activity to proceed. To address these concerns, strong regulations are the best path forward, as they allow our country to realize the economic benefits of increased energy production, while also reducing and mitigating risks that attend those activities. In our research, we have found nothing to suggest that shale development poses risks that are unknown or cannot be managed and mitigated with available technologies, best practices and smart regulation.

Gina McCarthy, current administrator of the U.S. Environmental Protection Agency, recently said that “there’s nothing inherently dangerous in fracking that sound engineering practices can’t accomplish.”<sup>iv</sup> Ernest Moniz, who holds a Ph.D. from Stanford and is the current Secretary of the U.S. Department of Energy, has said “the issues in terms of the environmental footprint of hydraulic fracturing are manageable.”<sup>v</sup> Steven Chu, the former Secretary of Energy and a Nobel Prize-winning physicist with a Ph.D. from Cal-Berkeley, believes that shale development “is something you can do in a safe way.”<sup>vi</sup>

The economic benefits that can be derived from the expanded development of shale oil and gas reserves in California are potentially significant, leading to more jobs, greater economic growth, lower energy bills, and cleaner air. But there are also risks associated with developing oil and natural gas – indeed, not unlike those one would encounter developing any form of energy. The key, in our view, to leveraging the opportunity of shale into a “win-win” for both the economy and the environment is to insist that stringent regulation govern development at each and every stage of the process. We believe the balance that you and the legislature have worked to strike in California represents a model that can be replicated all across the country.

Properly crafted regulations can and will ensure that shale resources in California are developed responsibly. Although some have called for a ban on hydraulic fracturing, we see no merit in that course of action, provided the right regulatory approach is followed. In our view, the regulations currently being drafted by the California Department of Oil, Gas, and Geothermal Resources (DOGGR) certainly meet that requirement. We thank you for your continued leadership on this issue, and look forward to providing additional insight and expertise on these issues to you or your staff should that counsel be requested.

Signed,

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<sup>i</sup> Reuters, March 2013: <http://www.reuters.com/article/2013/03/14/us-california-brown-fracking-idUSBRE92D04320130314>

<sup>ii</sup> IHS CERA, September 2013: <http://www.ihs.com/info/ecc/a/americas-new-energy-future-report-vol-3.aspx>

<sup>iii</sup> Wall Street Journal, September 2013: <http://online.wsj.com/news/articles/SB10001424127887323734304578543613292394192>

<sup>iv</sup> David Abel, Boston Globe (Accessed via Twitter), November 2013: <https://twitter.com/davabel/status/397423532210020352>

<sup>v</sup> Platts, June 2013 (sub. req'd): <https://pmc.platts.com/Article.aspx?nl=Gas%20Daily&id=c29e47a02-1960-4491-9e57-b9a40cb4678e>

<sup>vi</sup> Investor's Business Daily, October 2013: <http://news.investors.com/ibd-editorials/102113-675997-california-governor-signs-bill-allowing-fracking.htm>