From:David K. BellmanTo:LNGStudySubject:2012 LNG Export StudyDate:Thursday, January 10, 2013 8:35:34 AM

Dear Secretary Chu,

I am writing to submit my comments in regards to the Department of Energy Macroeconomic Study of Liquefied Natural Gas (LNG) Exports. These comments are re-structured from my blog posting to be a more formal response - <u>http://allenergyconsulting.com/blog/2013/01/08/macroeconomic-impacts-of-lng-exports-from-the-united-states-review/</u>

For background, I have worked on several reports of this nature before. I was a key participant in the National Petroleum Council report "Facing the Hard Truths about Energy". I have served in industry and understand economic concerns as it tied directly to my role as the Managing Director Strategic Planning at American Electric Power. In addition, I have served in advisory roles at the National Renewable Energy Lab (NREL) and recently on the Northwest Power and Conservation Council (NWPCC). More bio information is available on my website: http://allenergyconsulting.com/about-us/

Macroeconomic Impacts of LNG Exports from the United States report done by NERA for the EIA brings to mind my saying, "**It is better to know what questions to ask than to have all the answers**". There are many wise quotes roughly espousing similar concept e.g. "It is better to ask some of the questions than to know all of the answers." James Thurber.

There are several modeling issues I could comment on in the report, but many are already discussed by the several commentators. A good acquaintance of mine, Carlton Buford, does a fine job highlighting his concerns with point 4 resonating with my response. However, as I discussed above, the report should have asked a bigger question beyond energy markets impact. I will agree with the overall conclusions of the report – exporting LNG will benefit the country to *some* extent. However, this should never have been the goal or the premise of the report. NERA cannot be faulted in terms of answering the question. However, as consultants, there is somewhat a responsibility to address the clients' real concerns.

I directly addressed this issue with another consultant's report done on renewables about green jobs, where I discussed with the author about not addressing net jobs. The author told me they did not do it, because they were not asked to. In both of these reports, someone at the consulting companies should have brought up the real issue to each of these clients. A true consultant will make sure their client is asking the right question before setting out and answering the question asked. The real concern for LNG is whether exporting LNG is the BEST option for the country in terms of maximizing the economic potential for the US. This question is not just an economic study to impact the energy markets, but it should be about getting the US back onto the path of economic prosperity.

Even if natural gas prices were to minimally changed, as the report indicated, the next question should be:" Will the US be better benefited from consuming its own resources knowing it is a net

consumer of most products?" This question was not addressed in the report. It is the crucial benchmark of deciding to export. It does not take a massive model to understand the holistic value of using your own resource. If you know you will have to consume products which are made from the natural resources that you have available; could you not economically increase the internal value of your system by using the resource to produce what you plan to consume?. Perhaps if the outside system can more effectively produce a good above and beyond the cost of shipping both the goods and resources to make it –the outside system could be a better option economically.

This then leads to the question:" why can they produce/manufacture goods we need with our resources more effectively?; which labor policies, subsidies, etc..should also be considered ". Is there a better way for us to produce and manufacture products in this country versus outsourcing? . In addition, simple economics typically do not cover the social economic issues at hand. The value of manufacturing a good goes beyond the simple economics of making the product. Manufacturing offers a level of social economic stability while still giving people the opportunity to aspire if they so wish. We need to make sure we take this into account. Many countries do value being able to keep their people at work. They know social unrest is likely when mass amounts of people sit around.

The report fails to address the root of the issue which the leaders of this country should be asking and thinking about – "how best to maximize the US economic well-by using the resources available?". I will contend we should do what we can to offer incentives to use our resource locally first and foremost. If our ineptness to do the right thing by restructuring our society to allow for manufacturing continues, I would then support the exportation of LNG through a strategic approach. First, there is an obvious US outlet for LNG. Right now Puerto Rico – one of the poorest regions in the US – has to purchase LNG at oil related prices. This brings to mind the technical concerns of LNG vessel. Will the LNG vessels be US flagged vessels - none so far?-If not, given the Jones Act, the US territories could not even benefit from the liquefaction facilities.

The largest deficiency in the report, as many of the others have commentated, is not considering the chess move made by the largest exporter of LNG – Qatar. This would be akin to forecasting oil markets with no consideration of Saudi Arabia – do we not remember the 70's oil crisis or 1998 when Saudi Arabia showed the rest of OPEC what it meant to take market share? The plain fact is the cost of natural gas in Qatar is likely below or near \$0.50/MMbtu. In the US, even with greater shale development, the cost will still be greater than \$2/MMbtu. Even if we subtract some value for liquids, development cost may approach \$1/MMbtu, still twice as large as Qatar. Who in their right mind can see grounds to compete with Qatar without some internal subsidy/incentive or it being a niche play? Unless foreign money is financing the projects, I would be skeptical on the *extent* of LNG exports vs. the report's conclusions in terms of the economic value to the US.

It is not an either/or issue in terms of export LNG versus using it domestically, but the report was done as if LNG exporting was the only issue. Ultimately a portfolio option with more of the portfolio balance to what will add value is the best approach. If the goal is to maximize the US economy, domestic uses of resources should be the number one priority, LNG exports should be examined in the context of first supporting the US territories, and only after those issues are resolved we should examine the exportation of our resources. I am optimistic that our

consumption levels are high enough to support the use of all our domestic resources. Plus, I anticipate that we can become a net exporter of products, keeping further margins in supplying products to the world.

As with everything I put out, this analysis was done given the current construct that exist today. There are many levers that could change my mind to believe LNG exportation is the BEST path for this country; but at this time I believe it is best to maximize our natural gas resources first. States and cities in the US will also benefit from this message – e.g. Ohio. Any economic system will likely be better off by using their resources to produce higher valued products. There will be more jobs and more capital within the system. Whoever advised the Houston Mayor, Anise Parker, was wrong. Houston could significantly gain more, if more industrial and manufacturing complexes were built near and around Houston than a few liquefaction facilities. The same can be said for comments made by Senator Jake Corman and State Representative Matthew E. Baker of Pennsylvania.

In order to right the economic ship of the United States, we must find better ways to use our resources: be it fossil, renewables, or human capital. Perhaps beyond the scope of the Department of Energy, but the real issue at hand is to transform our economy back into a balance economy with a strong producing/manufacturing sector. The DOE does have the capability to jump start the sector by continuing to signal that there will be cost effective resources for some time to come and support the use of our resources domestically. A strong and vibrant manufacturing sector will go a long way in creating a more stable and prosperous society. It will not make everyone wealthy, but it will allow those who are willing and capable to pursue their happiness.

Sincerely,

David K. Bellman

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