Q & A on the NERA LNG Export Study

*Does a detailed input-output model give more reliable estimates of the impacts of changes in trade policy than a comprehensive general equilibrium model of the entire economy?*

No. Using an input-output model alone to calculate industry and employment impacts of a change in national policy or energy costs is a gross misuse of the tool. Input-output models give a static snapshot of the supply chain for manufactured goods at a single point in time, whereas a general equilibrium model shows the dynamic changes that occur when resources are redirected to their highest-valued use when new business opportunities appear. Thus input-output models grossly overestimate the negative consequences of a shift in comparative advantage away from one industry and toward another.

*Why does the NERA study find negligible impacts of higher natural gas costs on manufacturing as a whole?*

Economists who analyze how changes in energy costs affect energy-intensive, trade-exposed industries have reached a consensus that only very narrowly-defined segments of manufacturing are at risk from higher energy costs. These sectors have relatively small employment and value added compared to manufacturing as a whole, so that even large impacts on these narrow segments translate into negligible impacts on manufacturing and the U.S. economy as a whole.

*What narrow subsectors have been determined to be vulnerable?*

The only chemical sector that previous studies done by the U.S. government find vulnerable to energy cost increases is the nitrogenous fertilizer industry, which employed approximately 3,920 workers in 2007. This subsector of chemicals is not typical of the chemicals sector as a whole, it is a unique outlier based on turning cheap natural gas into cheap fertilizer with low profit margins and little significance for the overall economy. It has experienced ups and downs in the past as natural gas prices rose and fell, with no detectable benefit to the rest of the economy when it grew or harm when it declined.

*Don’t the data show that 1 BCF of gas in manufacturing generates more value than 1 BCF of exports?*

Absolutely not, that is an error that any first year economics student would recognize. Value added in manufacturing is created by the labor and capital at work in the industry, not by physical inputs like natural gas. The value of natural gas is fully captured by the willingness of customers to purchase the natural gas – and if overseas purchasers are willing to pay more for natural gas than domestic producers from whom some gas might be bid away, then clearly natural gas generates more value as an export than when used domestically. That is the basis
for NERA’s conclusions, not some revolutionary change in the structure of industry over the past few years.

*Is there any possibility of a contraction of manufacturing because of higher energy costs?*

No, as prior NERA studies have shown, the real threat for manufacturing is growing government regulation, of which export restrictions would be another part. The one thing about LNG exports that is certain is that they will grow slowly, and that any difference they make will be a small change in the rate at which manufacturing expands. With the possible expansion of a very small slice of the chemical industry, there is no chance that LNG exports could turn robust growth into decline.

*How fast is it realistically possible for U.S. LNG exports to grow?*

The consensus in the industry is that all but the slowest growing of the export scenarios investigated in the NERA study are unlikely to be achieved due to the time required by the FERC permitting process and the capacity of contractors and construction firms. These opinions are confirmed by other independent studies of the likely pace of LNG exports, including those by Charles Ebinger at the Brookings Institution and Walter Medlock at Rice University.

*How does NERA explain the fact that 30 Bcf/d (12 Tcf/yr) of export capacity has filed applications for export permits with DOE?*

As DOE officials themselves explain, it is easy to apply to DOE for a license and necessary to have one in order to start the approval process at the FERC. But only three projects have officially begun the FERC process, and no expert familiar with the industry expects even a small fraction of the total capacity to be built in the next decade. It is ludicrous to talk about exports on the scale of 25 to 50% of domestic demand by 2030.

*Won’t these obstacles be overcome due to the immense profits possible from selling LNG to Japan and Korea at the prices they currently pay?*

Assuming that current LNG pricing differentials will persist in a world in which LNG exports increase at a rapid rate ignores everything we know about supply and demand, and is the fallacy that has led to the demise of many bubbles of energy investment. NERA’s analysis used a comprehensive model of global natural gas supply and demand to investigate many scenarios for how much LNG could be exported by the U.S. and how the netback to the U.S. would vary with the level of exports. Many competing suppliers are better positioned to serve growing LNG demand in Asia than the United States, and the prices they offer in the future in response to market competition will determine U.S. netbacks. These are the effects that NERA’s analysis captures and that are ignored by any comparison to current Asian pricing.

*How would lower processing and transportation costs affect U.S. exports?*

The NERA report compiled available data on shipping, liquefaction and regasification costs on a consistent basis, and took into account the lower construction cost for liquefaction facilities at
sites in the U.S. where export terminals are located and dock and storage facilities already exist. NERA’s bottom up analysis was based on public cost data for the facility most advanced in engineering design. Since most projects that have applied for DOE permits have not yet performed the detailed design and engineering required by the FERC, using an average of their announced costs per unit of capacity -- which are much lower than those in the completed engineering analysis -- is simply naïve.

*Does the NERA report take into account the benefits of low natural gas costs to U.S. manufacturing?*

Yes, it does. NERA used three baselines for its scenarios, ranging from low to high natural gas prices. In the high natural gas cost scenario, U.S. natural gas prices would be well above current levels even with zero exports, creating much larger risks for manufacturing than any level of exports in the other scenarios. With abundant supply of natural gas at low prices, levels of exports that are deemed feasible by industry experts would have little effect on natural gas prices and no adverse impacts on downstream industry.