



Industrial Energy Consumers of America *The Voice of the Industrial Energy Consumers*

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February 25, 2013

The Honorable Steven Chu
Secretary
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

RE: LNG Export Studies

Dear Secretary Chu:

After carefully reviewing the Initial Comments filed by other parties in response to the Department of Energy's (DOE) December 11, 2012 Notice requesting comments, the Industrial Energy Consumers of America (IECA) believes that the bottom-line conclusion is clear – DOE needs to start over in assessing the potential cumulative impact of granting LNG export licenses for shipments to non-free trade countries. We urge the DOE to do so as soon as possible.

As stated previously, IECA is not opposed to LNG exports. However, we do expect the DOE to act appropriately under the Natural Gas Act statutes that guide exports of LNG and implementation of the public interest test for shipments to non free trade countries. The manufacturing sector and all other consumers are relying on the DOE to do a thorough analysis.

The conclusion that DOE must start over, is based in part upon the important flaws in DOE's LNG export study entitled "Macroeconomic Impacts of LNG Exports from the United States." A number of significant defects stand out:

1. By any standard, the DOE LNG export study is flawed and does not provide an adequate basis for decision-making on this issue of vital national importance.

As noted in IECA's initial comments, and comments filed by numerous other parties, both the EIA January 2012 study entitled "Effects of Increased Natural Gas Exports on Domestic Energy Markets" and the NERA study, indicate that even if limited to 6 to 12 Bcf/day, LNG exports could result in large increases in U.S. energy costs – ie., potential wellhead price increases as high as 36-54 percent, according to the Energy Information Administration (EIA) and 28 percent according to NERA.

These conclusions aside, however, as numerous commentators have pointed out, both studies are so significantly flawed that the DOE cannot validly rely upon them as a basis for its decision making. Both the EIA study and the NERA report rely on out-of-date data that is no longer reflective of market conditions and contain numerous other methodological flaws. As such, they do not shed light on the potential impact of LNG exports.

2. The NERA study in particular, is a hypothetical academic exercise that bears that by its own admission fails to take into account real world conditions and cannot properly be given any evidentiary weight.

The flaws in the NERA study – many, but not all of which were discussed in detail in IECA’s Initial Comments – render the NERA study useless. The cumulative list of flaws that emerge from the initial comments are quite long:

NERA examines only scenarios in which natural gas demand, prior to allowing LNG exports, is in the mid-60 Bcf/day level during this decade and rises very slowly to max out at just over 70 Bcf/day in 2035 – close to demand levels that already have been reached in the U.S. market. They are also far below EIA’s revised reference case assumptions in the Early Release version of AEO 2013. The use of this outdated starting point results from NERA’s decision to rely on EIA’s reference case assumptions in AEO 2011, which in turn is based upon 2009 data – a night and day difference, in terms of expected U.S. demand for natural gas and the role of natural gas in the U.S. economy.

Even if NERA were relying upon a more recent EIA forecast, the decision to rely upon EIA’s reference case forecast without examining other scenarios, would raise serious questions regarding the validity of NERA’s work, since EIA’s reference case *intentionally* excludes potential changes in federal/state energy or environmental policy and does not take into account the potential for faster than normal improvements in technology. Nor does it attempt to examine a range of scenarios regarding economic growth or other factors. Given today’s dynamic changes to supply and demand, these scenarios must be considered. Even without these dynamic changes, this would be a serious deficiency.

These are not normal times, however. Instead, a “once in a lifetime” shift is occurring in the U.S. and global markets. Further, at the same time, the Administration has issued a series of new environmental rules aimed at power plants and industrial boilers that had not yet been issued when AEO 2011 was published. And, the President has announced in his recent State of the Union address that he intends to use his Executive Authority to take aggressive action to reduce emissions of greenhouse gases.

The total increase in domestic demand for natural gas that could result is substantial. In total, aggregating the potential sources of incremental demand cited by various parties, it is entirely plausible that prior to taking into account LNG exports, demand could be 50 percent higher than the level assumed in the NERA study

CUMULATIVE DEMAND TABLE

SOURCE	INCREASED DEMAND
Industrial projects announced to date	8-11 Bcf/day
Additional industrial projects over next 20-25 years	5-10 Bcf/day
Increased power sector use of natural gas due to economic retirements and impact of new EPA rules	4-10 Bcf/day
Further increases in power sector use due	10-12 Bcf/day (see NRDC climate change

to climate change restrictions or other factors	proposal)
Industrial boiler rule	2-4 Bcf/day
Natural gas vehicles	7-14 Bcf/day
Additional exports to Mexico and Canada	2-4 Bcf/day
Total	38-65 Bcf/day

Further, even these figures do not yet take into account potential LNG exports to FTA countries or the export license already issued to Sabine Pass.

No one can predict with any confidence how much of this potential increase will occur. Over the 25-year plus period that is relevant to DOE's analysis, however, (the 4-5 year lead time between permit issuance and plant operation +20-25 year license life) a 20-25 Bcf/day increase is not only plausible – but very likely.

This flaw goes to the heart of DOE's commitment in the Sabine Pass decision to carefully examine the potential cumulative impact of additional LNG exports prior to determining whether it is in the public interest to allow additional exports. Starting with assumptions that are "out of date," is not an academic issue. For DOE to evaluate the potential cumulative impact of allowing additional LNG exports using an assumed starting point of 65 Bcf/day is unacceptable.

3. As a result of these deficiencies, the DOE LNG export study sheds no light on the central issues DOE must assess in order to determine whether it is in the public interest to allow LNG exports.

Even if all of the other flaws in the NERA study are ignored, all it purports to do is to assess the impact of a single incremental increase in demand (i.e., a maximum of 6-12 Bcf/day) in a much smaller market. By so doing, however, makes it impossible for DOE to determine whether it is in the public interest to allow additional exports without conducting additional inquiry.

No one disputes that, since the fall of 2010 (when DOE completed most of its work on AEO 2011) the supplies of natural gas available to the U.S. market have significantly increased. But so have the potential uses and demand – and the environmental requirements that govern fuel use in the U.S. And, there are numerous near term public policy decisions that could negatively impact production. They include removal of the Intangible Drilling Cost, the BLM rule to regulate hydraulic fracturing on federal lands and the potential for the EPA to regulate hydraulic fracturing on private lands.

No party submitting comments seriously contends that all of the increased demand needs can be met – at least without potentially substantial increases in prices for natural gas and electricity. Instead, choices must be made regarding which uses are most important and the level of increased energy costs that is acceptable.

These choices go to the heart of DOE's determination regarding whether it is in the public interest to allow additional exports. In making this determination, DOE has an obligation to proceed very cautiously, based upon a record that fully evaluates the issues before it.

How the domestic market pricing occurs versus LNG exports needs careful consideration. Natural gas procured for domestic use is usually purchased on a spot market basis or pursuant to short-term contracts (generally less than a year and seldom more than three).

LNG, however, is different. Because of the multi-billion capital investment required to build liquefaction facilities, and before a project moves forward, most of the output is usually committed pursuant to long-term contracts with stiff “take or pay” commitments and onerous penalties.

Once these contracts become effective, the purchaser in effect is guaranteed a right to receive natural gas no matter what the competing demands may be in the U.S. – putting the LNG purchasers in a “first right to use” position. Domestic purchasers, the great majority of whom do not have access to long-term agreements, come second. Furthermore, these long-term contractual commitments often last for 20-25 years.

To the extent DOE allows additional exports, it is likely to tie up significant amounts of U.S. supply until 2035 or later. ***This will reduce the supplies available to other potential users for many years, and force these users to pay the incremental cost of expanding U.S. supplies, no matter how high this price might be.***

This characteristic of the LNG market dictates that DOE proceed carefully and take into account fully the potential public benefits of competing interests (e.g., increased investment and jobs by the manufacturing sector, reducing dependence upon imported oil through expanded use of natural gas vehicles and reducing the potentially prohibitive costs of environmental compliance).

At a minimum, therefore, DOE has an obligation to carefully examine these competing uses, estimate potential demand for each category and evaluate the potential increase in demand under a range of different scenarios.

The decision on whether to allow additional LNG exports creates a major choice point. No natural resource is so abundant that it can be squandered. Instead, DOE cannot decide the LNG export issue without establishing – either directly or indirectly – a national policy on how we should use more plentiful natural gas.

Because it is so thoroughly outdated, and focuses on demand levels that have now been superseded – the NERA study provides little or no insight into this choice.

4. The NERA study is based upon faulty assumptions which render it useless as a basis for decision-making.

The flaws in the NERA study discussed above unfortunately are just half the story. In its study, NERA recognizes, as it must, that the January 2012 EIA LNG export study concluded that LNG exports could result in an increase in wellhead prices for natural gas of up to 54 percent, a significant increase.

NERA concludes, however, that an increase of this magnitude would not occur, finding instead that, if U.S. prices increased by more than \$1.09/MMcf, U.S. exports would not be able to

compete successfully in the global market. As a result, NERA contends, LNG would not be exported, and price increases higher than this level would never occur.

This conclusion, grossly understates the potential price increase that would be likely to occur even if NERA's other assumptions were valid.

Numerous flaws stand out. First, and most critically, NERA simply assumes out of existence the way in which the global LNG market functions, which is based upon 20-25 year long-term contractual commitments with onerous take or pay provisions and excludes from the scope of its analysis the impact of sunk costs. The lynchpin of the NERA study is its assumption that, if in theory other suppliers could build new liquefaction facilities and deliver LNG to destination markets at a lower total cost per MMBtu, the natural gas covered by these contracts will not be shipped. This assumption is absurd, as its disclaimer that it had not considered the impact of sunk costs surely indicates.

NERA's assertion that exports would never occur, which ignores common sense and contravenes basic principles of economics, bears no relationship to reality. Before multi-billion LNG liquefaction facilities are built, developers lock in recovery of all or nearly all of their sunk costs, by entering into long-term supply agreements that shift the burden of bearing these costs to purchasers. Notably, more than 5 Bcf/day of long-term purchase commitments *already* have been made – a fact that NERA simply ignores, since it contradicts the core conclusions of the NERA report.

Once long-term purchase commitments have been made, however, the all-in purchase price no longer matters. From the purchaser's perspective, the only choices are to take deliver or to incur exorbitant take or pay obligations and penalties. As a result, even in the \$3.00/MMBtu increase scenario NERA dismisses out-of-hand, the shipments will still occur – with a potential direct impact on domestic purchasers. *This decision to ignore reality is the most glaring flaw in NERA's report, invalidating NERA's core conclusion that exports will always result in a net benefit to the U.S. economy.*

Further, NERA's conclusion that other, lower cost sources of supply are available is also largely not real. For purposes of its study, NERA did *not* undertake any analysis of the future supply cost curve in other markets. Instead, it simply assumed, with little foundation and again contrary to common sense that the rate in which supply costs would escalate as demand increases would be identical in nearly every country in the world (i.e., in NERA's words, an assumed world-wide "constant price elasticity" curve. This assumption too has little or no foundation in reality. Instead, fundamentally, it's just a guess – and ought to be disregarded as such.

Finally, even if all of these other flaws are ignored, NERA's conclusion that the maximum prices might increase is \$1.09/MMcf is based upon an EIA price forecast that is \$1.00-1.50/MMBtu below EIA's most recent long-term price forecast in AEO 2013. The same logic applied in the NERA report, therefore, would lead to a predicted price increase in the range of \$2.00-2.50/MMcf – at least twice the estimate in the NERA study.

5. The Initial Comments submitted by permit applicants and other proponents of LNG exports have not been able to successfully defend the DOE Study.

With very few exceptions, the Initial Comments presented by proponents of LNG exports are brief and remarkably superficial, offering little of substance to support the position of these parties. Instead, most commenters merely crib one line from the Executive Summary of the NERA report out of context, quoting NERA's conclusion that in "every scenario" it examined, using the assumptions and methodology applied in NERA's study, there was a "net benefit" to the economy from allowing exports.

Quoting this sentence, however, ignores entirely NERA's use of assumptions that are out-of-date and no longer realistic, the serious flaws in NERA's methodology and NERA's own conclusions that allowing LNG exports would result in a major reduction in real income to wage earners in the U.S. in return for benefits that are negligible, even if all of the other flaws in the NERA report are ignored.

Further, this inability to defend the NERA report is particularly shocking and telling given the detailed criticisms of the NERA report by Senator Wyden (the Chairman of the Senate Energy and Natural Resources Committee), IECA and others long before comments were due.

Senator Wyden's letter, was publicly released during the first week of January and filed with the DOE as part of the current comment process on January 10th – two weeks before the deadline for submitting public comments. In it, the Senator offers several pages of well-founded detailed criticisms of the NERA report, based upon which he concludes that the current record is not sufficient for DOE to take action on any of the pending permit applications.

Most proponents of LNG exports, however, make no effort to respond to these criticisms – implicitly acknowledging that they have no response to offer.

Instead, the applicants for LNG export licenses and other parties favoring additional exports focus on two primary arguments, contending that: (i) the Early Release version of AEO 2013 demonstrates that U.S. supplies of natural gas are adequate to support large volumes of natural gas exports; and (ii) the "rebuttable" presumption that export licenses will be approved provided for under Section 3(a) of the Natural Gas Act eliminates the need for DOE to carefully examine the cumulative impact of granting multiple licenses.

Both of these arguments, however, are far off the mark:

AEO 2013 – Early Release version is a preliminary report, which has not yet been finalized, is missing key information and, most importantly, does not specifically address the issues that are in dispute in this proceeding.

The contention that AEO 2013 Early Release (ER) provides adequate information for DOE to properly assess the potential impact of large volumes of LNG exports reflects a fundamental misunderstanding of the scope of AEO 2013 ER and the issues DOE is attempting to address.

Notably, for starters, AEO 2013 ER *does not specifically address* the issue DOE is attempting to assess – the potential cumulative impact of allowing 6-12 Bcf/day of LNG exports *on top of* EIA's

base case estimate of future U.S. production. Instead, it projects future prices *only* in EIA's reference case.

On its face, therefore, AEO 2013 ER does not provide DOE with the information it needs in order to make its decision. This is not a trivial issue. At the high end of DOE's 6-12 Bcf/day range, the potential incremental demand from LNG exports is nearly identical to *total* direct use of natural gas by every residential consumer in the U.S. last year and nearly 1½ times total commercial use of natural gas. It defies common sense, therefore, to assume that the impact of an increase in demand of this magnitude can simply be assumed away.

Instead, to the contrary, while EIA's preliminary estimates indicate that the supplies of natural gas available to the U.S. market have increased during the two-year period since AEO 2011 was prepared, so has demand. Further, prices for natural gas are extremely sensitive to incremental increases in demand. The supply curve for natural gas, like any other natural resource, has the general shape of a hockey stick. As incremental demand is added, low cost reserves are used up more quickly. At a certain point, costs to develop additional supplies start to escalate rapidly. Further, in a deregulated market, every purchaser who has not yet locked in supplies under a long-term fixed price contracts, pay the prices set based upon the marginal cost of supply. As a result, even a relatively small increase in demand can lead to huge cost increases for end users. The only way to properly assess the impact of incremental demand from LNG exports, therefore, is to assess that impact directly – which AEO 2013 ER does not purport to do.

Further, by its very nature, AEO 2013 ER does not provide an adequate basis for DOE to rule on whether additional exports is in the public interest. Among a litany of obvious limitations that lead to this conclusion:

- i. Preliminary estimates only. By its terms, EIA's report is still subject to revision. In the rapidly changing U.S. market, EIA's conclusions could still change considerable.
- ii. Estimates provide only for EIA's reference case assumptions. EIA routinely looks at a wide range of scenarios – including scenarios with much higher growth rates for industrial and power sector demand, lower supplies and higher development costs. EIA also may have looked at scenarios involving much higher penetration for natural gas vehicles.

None of these results have been published yet. Even taking into account the limitations on EIA's studies, these scenarios could fundamentally alter perceptions about future market risks.

- iii. Underestimating demand. As discussed previously, the current reference case assumptions regarding demand are already wildly out of date. This is perhaps not surprising, since the shale revolution has resulted in a paradigm shift, which may not be fully taken into account for some time. DOE cannot fully evaluate whether LNG exports are in the public interest though until it analyzes the potential impact of LNG exports taking into account the potential sources of demand identified above.
- iv. Estimates provide only for EIA's reference case assumptions. EIA routinely looks at a wide range of scenarios – including scenarios with much higher growth rates for core

demand, lower supplies and higher development costs. EIA also may have looked at scenarios involving much higher penetration for natural gas vehicles. None of these results have been published yet. Even taking into account the limitations on EIA's studies, these scenarios could fundamentally alter perceptions about future market risks.

- v. Underestimating demand. As discussed previously, the current reference case assumptions regarding demand are already greatly out of date. This is perhaps not surprising, since the shale revolution has resulted in a paradigm shift, which may not be fully taken into account for some time. DOE cannot fully evaluate whether LNG exports are in the public interest though until it analyzes the potential impact of LNG exports taking into account the potential sources of demand identified above.
- vi. Limitations of the scope of EIA's study. The fact that the Early Release version of AEO 2013 does not even scratch the surface in terms of the potential for much higher core demand should not be surprising, for at least two reasons: (i) EIA, as a matter of policy, develops its reference case based upon the status quo (i.e., without attempting to take into account potential changes in state and federal statutes or regulations, or assessing the impact of programs that are still in an early implementation stage); (ii) EIA's estimates of industrial demand are based upon a relatively simplistic macroeconomic model, which does not attempt to assess in any meaningful way the ability of U.S. industry to compete successfully in global markets. Nor does it attempt to assess in any granular way the economic factors or risk analysis that will affect decisions by power plant operators or owners of coal-fired industrial boilers regarding whether to continue to operate coal-fired generating plants or boilers.

In more normal circumstances, where change occurs only slowly, these limitations may not make a significant difference. In the current circumstances, however, a study that fails to take these factors into account is meaningless.

Numerous studies have concluded, for example, that 90 GW or more of coal-fired generation could be retired (see, for example, The Brattle Group's January 2013 update of its early study) – only a third of which is included in EIA's reference case and most of which is likely to be replaced by increased use of natural gas-fired generating units. Similarly, the potential impact on natural gas use of shut-down of some or all of the 27,000 MW of coal-fired boilers covered by EPA's industrial boiler rule is largely ignored. The reference case also assumes only minimal increases in use of natural gas in the transportation sector over the 30-year period covered by EIA's estimates.

These are significant limitations and flaws. DOE cannot possibly determine whether it is in the public interest to allow large volumes of LNG to be exported until it has:

- Carefully evaluated the potential increase in demand for natural gas from new manufacturing facilities, use of natural gas for environmental compliance (both in the power sector and to replace industrial boilers) and in natural gas vehicles;
- Rigorously assessed the potential public benefits from these incremental uses of natural gas;

- Properly studied the potential increase in U.S. energy prices in a range of different scenarios involving increased use of natural gas in other sectors;
- Estimated the potential further increase of allowing different levels of LNG exports in each of these scenarios; and
- Assessed in this context whether it is in the public interest to allow LNG exports (and, if so, how much to allow).

So far, neither EIA nor DOE has performed any of this analysis. To contend that AEO 2013 already answers this question is significantly off the mark. Further, publication of the final version of AEO 2013, with a complete set of reference tables and numerous sensitivity cases, is expected in April – just a few weeks from the closure of the period for filing Reply Comments and long before DOE is likely to be able to finish processing the comments that already have been filed with the Department.

To the extent DOE intends to rely on AEO 2013 or any other recent EIA reports, therefore, it has a clear obligation to leave this docket open for further comments until there has been a reasonable opportunity to comment on EIA's final report (i.e., at least 45 days after the report has been issued).

6. DOE's own actions illustrate that the "rebuttable presumption" provided for under the Natural Gas Act already has been overcome.

As a fall back, proponents of LNG exports focus on the rebuttable presumption provided for under section 3(a) eliminates the need for DOE to examine the potential impact of large scale exports more carefully. A rebuttable presumption, however, is just that. Section 3(a) was not crafted with the notion that the DOE might be asked to decide at a single moment of time whether to allow export of significant amounts of natural gas. Instead, the drafters had in mind individual permit applications where the amount to be exported typically would be inconsequential – and in all likelihood unopposed.

In these circumstances, it made perfect sense to include a "rebuttable presumption" in the language of the statute – minimizing the burden of proof in a run-of-the mill case.

A rebuttal presumption, however, is just that: it is a presumption, a starting point. Once there is reason to believe exports might not be in the public interest, it has very little weight. Instead, as DOE has recognized, it has an obligation to decide, up or down, whether exports should be allowed.

Here, DOE has already recognized in its Initial Order granting a license to Sabine Pass, that in applying the public interest standard it has an obligation to assess the potential cumulative impact on energy prices of granting multiple export licenses. This is only common sense, particularly given the potential impact on U.S. energy costs, industrial growth, U.S. environmental policy and economic growth. Any reasonable person would recognize that allowing significant LNG exports, potentially comparable in scale to *total* residential use of natural gas in the U.S. could have a sufficient adverse impact so as to not be in the public interest – and therefore could not be presumed away.

As a result, to its credit, DOE, on its own initiative, directed preparation of studies relating to this issue. This decision, by its very nature, reflected a determination by DOE that the presumption no longer applied and that DOE has an obligation to make a reasoned determination, based upon the best record evidence it can develop regarding the potential cumulative impact on U.S. energy prices and other potential adverse impacts of allowing large volumes of LNG to be exported.

Until it makes this determination, up or down, based upon a properly developed record (i.e., a record that is adequate to properly assess the cumulative impact of these exports and all of the potential costs and benefits of allowing a high volume of exports) it cannot validly issue additional licenses to export LNG.

7. Other studies cited by proponents of LNG exports do not provide a proper basis for DOE to act.

Finally, several parties cite in passing other studies that purportedly conclude that allowing LNG exports will result in only modest increases in LNG exports, including studies by Deloitte and Rice Institute. Brief citations to these studies, however, are hardly sufficient to discharge DOE's responsibility to carefully evaluate the public interest regarding an issue of major national consequence.

Those who attempt to rely on these studies, however, have a heavy burden to overcome. The EIA and NERA studies were prepared at DOE's direction for the specific purpose of evaluating whether to allow LNG exports. These studies were prepared using the same methodology and data the DOE relies upon for all of its forecasts of U.S. energy prices. DOE in effect represents to Congress, the President and the public every year that these forecasts are the best estimates it is able to develop of U.S. energy prices.

Further, in this instance in particular, *both* studies conclude, using that methodology and data, that allowing LNG exports could result in substantial increases in U.S. well head prices – up to 54% in the EIA study – with carry over impacts on U.S. electricity prices. Using EIA's estimate as a starting point, NERA then attempts to prove that the maximum increase is *only* 28% (which is still a large increase), but does so using unrealistic assumptions regarding how the LNG market functions. Absent NERA's effort to exclude EIA scenarios that result in higher cost increases, EIA's estimate of a potential 36-54% increase in wellhead prices still stands.

Rather than proving that exports are in the public interest, the record indicates that, using DOE's own methodology and data, energy prices could rise significantly.

To refute this conclusion, the proponents must demonstrate to DOE that, in effect, its own studies are deeply flawed, and that, notwithstanding the conclusions of its own studies, DOE can confidently conclude, based upon appropriate record evidence, that the impact of LNG exports is only a fraction of its own estimates.

By any reasonable standard, this has not occurred. While Deloitte and others are certainly reputable organizations, with experience relating to energy markets, the studies that have been referenced are little more than a black box. The two Deloitte studies that have been presented, for example, are each 25 pages in length – with plenty of space between lines, wide margins and

many pictures. The Deloitte studies, and other studies that have been presented, are based upon proprietary data regarding reserves and proprietary cost curves, which have not been publicly disclosed. Little or no information is presented regarding how this data was developed, how current it is, and how or whether it has been developed.

Neither DOE nor any other party to this proceeding, therefore, has any basis for assessing how the validity of these studies compares to DOE's own work.

Further, to the limited extent these studies can be assessed, they seem to be subject to the same basic flaws as the EIA and DOE studies. The Deloitte study, for example, looks only at the potential impact of incremental demand for LNG, and makes no apparent effort to take into account recently-announced industrial projects or the potential impact of recently-adopted and pending environmental federal and state environmental requirements.

The Deloitte study also relies heavily on the assumption of massive continued growth in Australian exports of LNG, but fails to take into account recent estimates that greenfield projects in Australia will not be able to compete effectively with U.S. projects, since they are burdened with a cost structure that is likely to be at least 20 percent higher.

DOE cannot act, therefore, until it has conducted a properly prepared study, using a methodology it is willing to vouch for, and with sufficient disclosure of the inputs into the study to allow adequate public review. None of this has occurred.

8. Issues Requiring Clarification by DOE and An Additional Opportunity for Comments

In its request for public comments, DOE instructed parties filing comments to comment only on the EIA and NERA study. This instruction is peculiar and may needlessly invite legal challenges to DOE's rulings. In its Initial Decision regarding Sabine Pass, DOE recognized that the potential cumulative impact of issuing multiple licenses to export LNG raises issues of major national importance that transcend the boundaries of any one export license. In response, to its credit, DOE initiated an evaluation of the potential cumulative impact on U.S. energy costs and provided an opportunity for interested members of the public to submit comments.

Energy costs are just one of many public interest considerations regarding which the cumulative impact of granting multiple licenses may be much greater than the impact of granting a license to one project. Instead, the cumulative impacts may be just as significant in numerous other areas. These issues include, for example, impacts on the price and availability of steel and raw materials used that are needed to construct other manufacturing facilities, particularly in the Gulf Region (where a large number of new petrochemical facilities are expected to be constructed), impacts on wages and the availability of skilled labor and potential limitations on the number of facilities that can obtain environmental permits in the same geographic areas.

DOE cannot properly assess whether it is in the public interest to issue additional permits by arbitrarily addressing only one of these issues (viz., potential impacts on energy costs) and attempting to block the public from submitting comments on any of these other issues. Instead, the DOE's recognition that potential cumulative impacts transcend the impact of any single project requires that DOE address *every* issue regarding which the cumulative impact of granting multiple projects could materially affect the public interest – which it has not yet done.

9. Other Economic Impacts

This issue aside, however, as the Initial Comments reveal, the impact of granting multiple licenses on U.S. energy costs cannot be assessed in a vacuum. Instead, to intelligently address the potential impact of granting multiple licenses, numerous other issues must be addressed. These issues – *none* of which is addressed in either the EIA or NERA studies - include, for example:

- i. Number of licenses to be issued. Based the studies that have been issued to date, for example, it is unclear whether DOE intends to cap the amount of LNG for which it will issue licenses to an amount that it has determined can be safely exported without significantly increasing U.S. energy prices or, instead, as permit applicants have advocated “let the market decide” how much LNG will be exported, by issuing licenses to every qualified applicant (or at least for some unspecified level of LNG exports substantially above the 12 Bcf/day).

The potential impact of the choice between these alternatives varies radically. From the DOE’s statements and actions to date, however, there is no way to discern what the DOE intends – making it nearly impossible to determine the context in which DOE intends to apply the EIA and NERA studies.

NERA attempts to address this issue obliquely, by using its macro-level model to assess potential demand for LNG produced in the U.S. under a narrow set of assumptions. NERA’s analysis of this issue, however, is extremely superficial. As noted earlier, its analysis is based upon data which is no longer valid and uses unrealistic assumptions regarding how the LNG market functions.

Further, NERA makes no effort to take into costs a long litany of factors that already are causing potential purchasers to commit to large purchases from the U.S., notwithstanding NERA’s contention that other sources of supply theoretically can be brought to market at lower cost. These factors include, for example: (i) the far greater political stability of the U.S. (especially compared to other assumed sources of supply such as Nigeria, North Africa, the Caspian Sea region or the Middle East – all of which NERA contends can underbid U.S. suppliers); (ii) more stable currency; (iii) much lower required capital expenditure by project developers (compared for example to the \$55 billion cost for the Gorgon project in Australia), due to the ability to leverage off of the existing U.S. pipeline infra-structure structure and the ability to use the physical facilities that already have been built at existing import facilities.

The limited work DOE has undertaken to date, therefore, hardly guarantees that, if the Department issues additional permits, the volumes of exports that occur will be limited to the amounts NERA estimates. Instead, the long-term purchase commitments that already have been made, *before* permit applications have even been approved, strongly suggest that the market for U.S. LNG could be *much* greater. If the DOE were to issue multiple licenses, and “let the market decide” how much LNG actually will be exported, the results could be a significant damage to the domestic manufacturing sector and the U.S. economy.

In our judgment, therefore, the only responsible way for the Department to act is for DOE to limit the volume of exports for which it allows permits to amounts (if any) that it has determined with a high level of uncertainty will not harm the U.S. economy even if each permit is fully utilized. If subsequent events indicate that the market can absorb additional exports, the DOE can revisit this issue at a later time and issue additional permits, gradually increasing the amount of natural gas produced in the U.S. committed to other markets on a long-term basis, rather than making an immediate decision on 20 or more permit applications with unknown long-term impacts on the U.S. market.

- ii. Selection criteria. Similarly, it should hardly need to be said that the DOE cannot properly determine the potential impact on U.S. energy prices without developing criteria for selecting which projects will receive permits.
- iii. Whether licenses will be staged. Finally, the potential impact on the U.S. market of issuing multiple permits will also depend heavily on whether the permits that are issued allow exports to begin as soon as construction of the required new facilities has been completed or instead phase in exports over a period of several years. Here, too, DOE has been totally silent on its intentions, even though it is not possible to fully address the issues on which it has requested comments until DOE's intentions are known.

These are important issues, with major potential repercussions for the U.S. economy and for IECA's members in particular. It would be irresponsible, therefore, for DOE to arbitrarily decide these issues behind closed doors, without ever specifically studying these issues or providing the public with an opportunity to comment on its proposed action.

Instead, the DOE should specifically examine all three issues above, issue a proposed generic policy regarding the total number of permits it intends to grant, the criteria for deciding which permits to issue and the whether the start dates for allowing exports to begin will be staged, so that exports increase gradually on a phased basis.

Failing to follow this approach on issues of major national significance would send an open invitation inviting reversal by the courts, which ultimately would benefit no one. To avoid years of needless litigation and potential procedural chaos, there is an urgent need for DOE to clarify how it intends to take into account the interests of parties who have submitted comments in individual license proceedings.

In effect, DOE has taken a half in/half out approach, recognizing that the cumulative impact of issuing multiple licenses transcends the boundaries of any one proceeding, and recognizing that to assess the public interest it must assess issues that cannot reasonably be addressed in the context of a single proceeding, but providing no road map regarding what it intends to do next.

This has the potential to create a procedural nightmare. As a result of DOE's request for comments, and its (appropriate) intention to incorporate the EIA and NERA studies and the comments on these studies into every pending docket, a large number of parties who have demonstrated an interest in the issues raised by these studies and submitted comments are likely to seek to intervene in these dockets to ensure that their comments are properly taken into account in DOE's decision-making process.

Furthermore, as DOE's own actions demonstrate, many of these parties could not reasonably have been expected to intervene in individual license proceedings at the time license applications were filed, since they had no way of anticipating that more than 20 applications would be filed – and therefore no reason to be aware of the potential cumulative impact of these applications.

Under these circumstances, unless DOE develops a clearer set of procedures, and makes a commitment to develop a proposed set of generic policies and rules for determining how many licenses to issue and the factors to be considered in deciding among competing license applications and allow public comments on its proposal, it may have no alternative other than to allow every interested party to intervene in each proceeding. If it fails to do so, the likelihood that its rulings on individual applications will be overturned by the courts could be very high.

As a practical matter, therefore, having recognized the need to consider the cumulative impact of granting multiple exports licenses – a recognition that DOE itself did not come to until it issued its Initial Decision regarding Sabine Pass – DOE is obligated, pursuant to the hearing requirement of section 3(a) of the Natural Gas Policy Act and the Administrative Procedures Act, to initiate a generic proceeding in which all of the pertinent issues can be considered in an orderly manner and the public is allowed to submit comments on the Department's proposed resolution of these issues.

Any other approach is likely to result in years of unproductive litigation, and benefits no one.

Sincerely,

Paul N. Cicio
President

The Industrial Energy Consumers of America is a nonpartisan association of leading manufacturing companies with \$1.1 trillion in annual sales, over 1,000 facilities nationwide, and with more than 1.4 million employees worldwide. It is an organization created to promote the interests of manufacturing companies through advocacy and collaboration for which the availability, use and cost of energy, power or feedstock play a significant role in their ability to compete in domestic and world markets. IECA membership represents a diverse set of industries including: chemical, plastics, steel, iron ore, aluminum, paper, food processing, fertilizer, insulation, glass, industrial gases, pharmaceutical, brewing, cement, agricultural equipment, and automotive.