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Energy and Air Quality

Energy and Commerce Committee

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I. BACKGROUND – LEUCADIA NATIONAL CORPORATION:

This written statement is submitted by Leucadia National Corporation (LUK), a New York Stock Exchange company with a market capitalization of approximately $6.0 billion. Leucadia is a diversified holding company with headquarters in New York City, corporate operations in Salt Lake City and San Diego and affiliate operations throughout the world. The company focuses primarily upon "value investments," that is, investments that are judged to create long-term and sustained value. The portfolio of projects and companies that constitute the majority of Leucadia's holdings represent our strategy to focus upon these long-term investments. For nearly three decades this strategy has resulted in a compounded annual return to shareholders of greater than twenty percent. LUK has holdings in such diversified investments as energy, mining, timber, communications, banking, insurance, manufacturing, healthcare, and real estate.

II. LEUCADIA'S INVOLVEMENT IN GASIFICATION:

For the last several years, Leucadia has undertaken a comprehensive examination of investment opportunities in various emerging energy-related industries, particularly those related to the gasification of coal and other carbon-based fuels. Currently, the company is evaluating potential involvement in several gasification-based projects that would utilize coal resources or petroleum coke to manufacture high value chemical feed stocks, substitute natural gas (SNG) and alternative transportation fuels, including zero sulfur diesel fuel, gasoline and jet fuel.

To assess the opportunities related to emerging gasification technology the company has assembled a group of experienced industry professionals with varied backgrounds related to the technical and financial aspects of gasification technology, major energy project development as well as market and environmental expertise.

Leucadia is actively developing several gasification projects. The first project is a polygeneration gasification project being designed to provide a slate of industrial chemicals as well as electricity generation for use at a Gulf Coast industrial site. A second project involves the use of gasification technology to manufacture pipeline quality substitute natural gas (SNG) that can be distributed and utilized in the same manner as conventional natural gas. Finally, we are actively pursuing a coal-to-liquids (CTL) project to be located near a large mid-western metropolitan area where demand for clean diesel fuel, gasoline and jet fuel is among the highest in the Nation. These alternative fuels could be generated from the large-scale project that we have under consideration.

III. SIGNIFICANT RISKS ASSOCIATED WITH GASIFICATION PROJECTS:

An assessment of technology risk and long term commercial risk must be thoroughly analyzed before Leucadia, or any investor, will make contributions.

A. THE TECHNOLOGY RISK:

There are 117 operating gasification plants with a total of 385 gasifiers in operation worldwide. These gasifiers are being used to produce synthetic gas used for making hydrogen for ammonia (agriculture use), transportation fuels by means of the Fischer-Tropsch process, and electricity.

What about the gasification projects we have under consideration? In the United States there is one "coal–to-chemicals" facility operated today by Eastman Chemical Company in Kingsport, Tennessee. The facility, which began operation in 1983, gasifies about 1,200 tons per day of central Appalachian medium sulfur coal into a syngas that is used to make a variety of industrial chemicals.[1] The Great Plains Synfuels Plant, operated by Dakota Gasification Company in Beulah, North Dakota, began operations in 1984 and is currently the only coal to substitute natural gas facility in operation in this country. This facility converts 16,000 tons per day of North Dakota lignite into SNG, fertilizers and chemicals. Importantly, the CO_2 from this coal plant is captured, pressurized and transported by pipeline some 200 miles to Saskatchewan, Canada and sold for use in enhanced oil recovery. Finally, the only large-scale coal-to-liquids facilities in the world are operated by Sasol in South Africa. These projects began operations in 1955 using Lurgi gasifiers and the Fischer-Tropsch process to convert the coal-derived syngas to

[1] The Eastman Chemical facility manufactures methanol which, in turn, is the feedstock for producing gasoline. While the Fisher-Tropsch process is often cited as the means by which liquids (e.g. transportation fuels) are derived from the gasification of coal, the Kingsport facility respresents an alternative approach to the production of gasoline-from-coal.

liquid fuels. Today these facilities process about 90,000 tons of coal per day into 150,000 barrels per day of liquid fuels.

It is important to understand that while there is a great deal of developmental activity underway in the United States and worldwide to apply gasification technology to the production of SNG, chemicals and alternative fuels, there are limited developed markets and as a result Wall Street is skeptical.

With respect to our projects what distinguishes the polygeneration and SNG projects from the CTL project is the degree of certainty that the underlying gasification technology can be utilized successfully to manufacture industrial chemicals or synthetic natural gas (SNG). While the proposed CTL project would utilize gasification technology as well there is only one commercial scale CTL facility in operation in the world compared to many gasification units in operation worldwide producing chemical feedstocks and SNG. Furthermore, a CTL project is much larger and more costly and the level of certainty within the financial community about a dependable and sustained market for coal-to-liquids is much less certain.

To address the technical risks associated with gasification as perceived by Wall Street and to finance any large-scale project using gasification technology today we will require significant guarantees and warranties from creditworthy suppliers and construction/engineering firms. The costs for equity and debt in these projects will depend directly upon the level and form of those guarantees as well as the entities providing them. In the case of a large scale (at least 20,000 barrels per day of crude oil equivalent) coal-to-liquids facility, where there is but one commercial sized facility currently in operation in the world, funding will be very difficult to obtain unless

technical risks are adequately addressed and long term price certainty for product offtake has been assured.

B. THE COMMERCIAL RISK OF MARKET PRICE VOLATILITY:

The biggest issue for the financial community with respect to CTL projects is long term price certainty for product offtakes.

We have found strong interest in the marketplace for long term contracts for the products of our polygeneration and SNG projects. We believe industrial customers of chemical feedstocks and utility customers of SNG are looking for a hedge against natural gas price volatility and by creating greater price stability through the purchase of product offtakes from our projects they can establish, in turn, more predictable commodity prices for their operations and/or their customers. This need for greater price stability means that our polygeneration and SNG projects enjoy a high degree of certainty with respect to future markets as well as product prices. This certainty exists for both the short term and the longer term and thus there is a strong basis to obtain project financing.

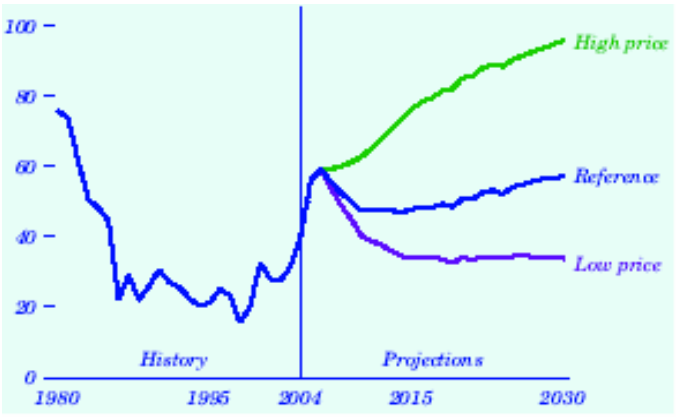
On the other hand the alternative fuels from a CTL project must compete in a volatile market where crude oil prices are essentially controlled and the crude oil market is not a free, open market. This last point is critical. Crude oil markets are controlled by OPEC. When supply is short, they can drive the price up to $60-70 per barrel or higher and extract rent unrelated to the cost of developing and producing their product. An American CTL program would create an alternative and signal to the market that this extraordinary rent is not justified. The response of OPEC might well be to drive the price of oil below a CTL breakeven price to crush the potential competition. The marginal cost to produce a barrel of OPEC oil is well below $15 per barrel so a few CTL projects

standing alone could never survive a predatory pricing attack by OPEC. Some would argue that this fact demonstrates that CTL projects are unjustified as they cannot compete. In a truly free market, free of politics and national security issues, we might well agree with this argument. Current events around the world, however, strongly suggest that the trend unfortunately is moving further away from free markets for oil and gas. It is imperative that the United States and other coal rich nations develop alternatives to this monopoly control. To do so, we need to address the technology challenges, financing challenges and environmental challenges associated with a CTL project.

In the liquids market, unlike the SNG and coal-to-chemicals markets, the desire for price certainty, does not resonate with potential buyers of our alternative fuels output. One exception is the airline industry which is clearly seeking predictably priced fuel. Unfortunately, it is not possible at this point to develop a CTL project based on jet fuel offtake as the certification of jet fuel from a CTL project can come only after the project is up and running and the jet fuel is demonstrated to meet all specifications. This is a classic chicken or egg dilemma. Even if our CTL project were to sign purchase agreements, it is highly unlikely that such agreements will extend beyond a couple of years and certainly not for the operational lifespan of the project. For these same reasons, coal-to-liquids projects, in our view, will not be able to acquire long-term financial hedges to address the price volatility in the crude oil market. This uncertainty means that a large scale CTL project will be difficult or impossible to finance. If ultimate financeability is not assured, project developers like Leucadia, will be unwilling to commit the $30-50 million per project of development capital required to get a project to the point where long term financing can be obtained and construction can commence.

When Leucadia evaluates the market risk presented by the volatility of world oil prices, the risks are truly daunting. The figure below charts the historical crude oil price record and the range of EIA projections for the next 25 years.

World oil prices (2004 dollars per barrel)



Source: EIA Energy Outlook 2006

The literature on coal-to-liquids projects, and our own analysis of the technology and project potential, concludes that a barrel of oil equivalent produced by a coal-to-liquids facility (whether zero-sulfur diesel fuel by the Fischer Trospch process or gasoline by converting coal first to methanol) might range in cost from $40 to $50 per barrel. With oil trading at above $60 per barrel, coal-to-liquids facilities become attractive investments. Because crude oil prices are not determined in a free market and as OPEC has demonstrated many times over the last thirty years, the market power of the producing nations easily dictates world prices. While EIA and others project sustained higher prices for a barrel of crude oil, the fact remains that prices can be dropped dramatically and intentionally.

More than sixty percent of this country's oil and finished petroleum products are being imported today, and there is a growing demand for even more transportation fuels.

If we are to avoid becoming ever more dependent upon imports there is a compelling rationale for U.S. federal government involvement to assist the fledgling coal-to-liquids, as well as other home grown alternative fuels, industries.

IV. ASSESSMENT OF GOVERNMENT FINANCIAL INCENTIVES DESIGNED TO ASSIST NEW TECHNOLOGY DEPLOYMENT:

What should be the form of government involvement to help in addressing the risk of very volatile markets?

First, federal loan guarantees to support the considerable debt required to construct large scale coal-to-liquids projects, which require $1.0 to $3.0 billion for projects in size from 10,000 to 30,000 barrels of oil equivalent per day, are very important in our judgment to lower the cost of debt and provide the financial community with a level of assurance – through federal government support of the project -- that their perceptions of the risks associated with CTL technology can be managed. Without such government support, the ability to raise financing for the first generation of U.S. coal-to-liquids projects at a size that will achieve economies of scale is difficult at best and probably not possible.

Moreover, while loan guarantees are an excellent mechanism to assist in the management of technology risk or as a means to raise low cost financing that will ultimately result in lower commodity prices, they do not address market price risk.

If oil prices fall below breakeven, the loan will default, the federal guaranty will be called and the federal government will be left to unravel the problems of a failed or seriously burdened project. We believe a price support mechanism, discussed below, is

better suited to manage this price risk, ensure long term project sustainability and ultimately provide a near zero cost to the federal government.

Second, outright government grants similar to the DOE project demonstration grants provided through the Clean Coal Power Initiative would not address the long-term price volatility issue. It is unlikely that there will be a sufficient amount of federal dollars ever available to provide cost-sharing towards a CTL project that will exceed $1.0 billion in costs.

Third, investment tax credits, if provided in significant volume will be attractive to the equity investor in a project because such credits relate to an immediate recoupment of some or all of the up front equity. It is important to weigh the generosity of an investment tax credit with the need for the long term commitment of the equity investor to remain active in the project. If a project experiences a drop in product prices where the tax leveraged rate of return on equity drops significantly below a minimum rate, the commitment of the equity investor diminishes or vanishes and the project may be abandoned.

Likewise, production tax credits, along with measures that allow taxpayers to rapidly depreciate or expense costs, all serve to lower the effective price of the products from a project, which can make the project more competitive if market prices fall, but do not provide needed certainty that the project's products will be competitive under all conditions in the face of highly volatile prices. Conversely, if market prices are high, these incentives, including the production tax credit, unnecessarily improve project economics when the economic boost is not needed. The bottom line is that production tax credits improve project economics, but do not get at the core problem facing CTL

projects, which is exposure to volatile oil prices that are not governed by free market economics.

V. H.R.2208– PRICE FLOOR LOANS FOR CTL PROJECTS:

Leucadia supports the concept embodied in legislation (H.R. 2208) introduced by Chairman Boucher and Mr. Shimkus as a straightforward mechanism to address market price volatility.

This legislation, if enacted, would mitigate the product market risk directly through a federally-backed price floor or price guarantee which would permit a project to rely on a predetermined price for its product. Under a price floor or price guarantee the government would be authorized to issue price guarantees to a coal-to-liquids project that would be intended to insulate the project from downside price risk in the world crude oil market. If the guarantees were triggered by a drop in world crude prices (a possibility in a market that is essentially controlled by oil producing nations) below an agreed upon price, the qualifying coal-to-liquids project could receive price guarantee payments. The payments made are loans to be repaid.

Specifically, the Boucher /Shimkus proposal, unlike other proposed price floor mechanisms is coupled with an agreement between the project and the federal government under which the project would commit to making payments to repay the loans if/when the prevailing market price exceeds an agreed upon price cap.

In effect, the coal-to-liquids project would be offered a mechanism whereby a jointly determined "price band" would be recognized. While product is sold within that price band the project, presumably, is operating within its projected economic viability. As we understand the legislative proposal, if the market price were to fall below the

lower end of the price band, the project could receive a payment from the government for the product actually produced from the project. If at any time during the course of the agreement, prices were to exceed the upper levels of the band, then the government would receive payment from the project as repayment for any prior disbursements. In addition, it is our view that if or when prices rise above the "cap" and are not required to repay prior disbursements by the government, these revenues represent a level of return not expected by the project and such "profits" should be shared with the government where the government has assumed a potential downside risk. It should be noted that the Boucher/Shimkus proposal provides specific authority to the Secretary to enter into this type of "profit-sharing" arrangement with the project.

If the price band is set correctly, the probability that prices will drop below the agreed upon floor will be equal to, and no greater than the probability prices will rise above the cap. The revenue impact to the Federal treasury should be zero. Like the loan guarantee program authorized by Title XVII of the Energy Policy Act of 2005, this proposal also includes a self-funding mechanism that requires the project to make an upfront payment to the government for the "cost" of the loan as determined by the OMB. In this regard, it is vitally important, if this mechanism is to work, that the calculation of "upfront cost" be transparent. Given the historical uncertainty that has attended the market price of crude oil, there will be hesitation, we suspect, over the ability to predict long term prices. We believe there are models available to provide that greater certainty and that the government should work with industry in the design of the program to utilize those models. In addition, there is a requirement in Boucher/Shimkus that provides an added safeguard to the government. If, at the end of the primary term of the loan

agreement (the 20 year period during which disbursements may be made to the project) there remains any outstanding loan balance, such amount, with interest, is required to be amortized and paid in full during the remaining term of the agreement.

Several more elements should be designed into the program to avoid uncertainty and also assure the program's rapid and successful implementation with credit worthy participants. These design elements include the following:

A prohibition on "double dipping" of federal incentives is also included. If a loan guarantee is in effect for a project the price floor mechanism is not available. However, it may be appropriate, and indeed necessary, for a project to utilize a loan guarantee to support construction of the project. The price floor mechanism would then be used at commencement of commercial operations after the loan guarantee for construction is no longer in effect.

This program cannot be dependent upon the stop and go, stop and go nature of government programs similar to the production tax credits available to renewable energy projects. It is possible that this might occur if after the authorization of the program, it is judged that further Congressional action is required; for example, action by the Congressional appropriations committees to authorize ceilings as is currently the case with the Title XVII loan guarantee program. At a minimum, if a project is judged to be revenue neutral, then some statutory language should be included to allow the project to proceed after a specified layover period for any Congressional review.

It will be necessary to address the issue of CO_2 emissions from coal-to-liquids plants.

The science appears compelling and where Leucadia is engaged in a number of gasification projects we are mindful of the need to address this important concern. We are currently reviewing mechanisms to capture various amounts of CO_2 emitted and to determine how best to use the CO_2 or enable long term storage. Liquefaction plants generate carbon dioxide in a highly concentrated form and we are confident that both capture and use or storage can be accomplished.

We also support broad based public policy programs that promote the continued development of carbon capture sequestration technology, encourage market based solutions to the issue and spread the initial cost of development across the entire economy so that we can advance the technology needed to address this most urgent concern. The potential of using coal, petcoke or other carbonaceous fuels to produce significant quantities of domestically controlled alternative fuels is so great that every effort should be made to encourage development of several pioneer projects. Secondly, and equally as important, the production and use of zero sulfur diesel fuel, particularly in our Nation's non-attainment metropolitan areas, should be carefully weighed as a benefit to our environment. The totality of the environmental impacts of a given project should be given great weight. Leucadia has done considerable analysis on the environmental benefits of using products like zero sulfur diesel fuel in a major metropolitan area where our project might be located and our products used. We would be happy to make that analysis available to the Committee.

VI. CONCLUSIONS

The legislation introduced by Chairman Boucher and Mr. Shimkus addresses the major concern we see to financing a coal-to-liquids project.

Other forms of government incentives may be helpful to other projects, but Leucadia has determined that loan guarantees to assist during construction and loans that might be called upon if or when prices dip below an agreed upon price floor are the two critical needs for financing CTL projects. If applied correctly neither form of assistance should cost taxpayers anything yet the assistance allows these types of projects to move forward in a market where prices are controlled by outside forces.

It is important to emphasize that any price floor loans are to be repaid. As noted earlier, the proposal requires that price floor loans are only available for a portion of the project's life and if loans are outstanding at the conclusion of the loan program any outstanding amounts must be repaid during the continuation of the project. In addition, we support the concept of sharing profits with the government where prices exceed a price cap; if the government assists the project during a period of depressed prices, it should expect to share in the profits of increased price periods. Of course depressed crude oil prices means that the U.S. economy is enjoying lower prices and when the U.S. consumer is required to pay higher market prices for crude oil, the government, under this program, at least, will share in the profits occasioned by those high prices.

We strongly support the legislation introduced by Chairman Boucher and Mr. Shimkus and urge its enactment.