Time to Act on U.S.-India Energy Cooperation

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With Brent crude prices in the high $40s per barrel and West Texas Instrument (WTI) prices hovering around $47 per barrel, India's energy policy, which has not been on a sustainable basis, has been given a new lease on life presenting unique opportunities for enhanced U.S.-India bilateral cooperation during President Barack Obama's forthcoming visit. The fall in oil prices since June 2014 has been staggering. With domestic crude oil production hovering around one million barrels per day (b/d) and imports at 3.2 million b/d the plummeting price of petroleum is saving India nearly $3 billion per month in foreign exchange. India has also saved foreign exchange from falling prices for oil indexed prices for liquefied natural gas (LNG) as well as price softness in the coal market. The government has also received a revenue boost (of about $11 billion) from the immediate decontrol of diesel and phase out of natural gas price controls as well as lower inflationary pressures. However, there is no cause to be sanguine. Indian companies have substantial oil trading and financial interests in Venezuela, Russia, Nigeria and the Gulf all of which are at risk with low oil prices. With prices yet to touch bottom, India's entire strategic and energy trading diplomacy may have to be reassessed.

Despite the profound nature of these developments, energy challenges are not new to India. Although India accounts for 17 percent of the global population, it possesses less than one percent of the world's oil and gas reserves and only 10 percent of global coal reserves. With energy demand projected to double in the next decade, imports could rise from 30 percent of primary energy demand today to 50 percent by 2030 making India one of the most energy import dependent economies among the major global powers. India faces additional challenges: how to meet the energy needs of an expanding middle class; provide energy to an additional 300-500 million people who have no or only limited access to modern forms of energy; and simultaneously deal with the country's rising carbon-dioxide emissions. It is for this reason that India has to act fast to develop its estimated 63 trillion cubic feet (TCF) of shale gas resources with low water-based fracking technologies as well as develop its vast biomass, wind, solar, hydro, coal and nuclear power resources while making energy efficiency and conservation the centerpieces of all its energy policies For these opportunities to be seized, India and the U.S. must be open to a more balanced relationship with each side being candid on what it can and cannot do as well as being realistic about the time frame in which major changes can be accomplished.

ENERGY DIALOGUE: PAST COOPERATION AND NEW OPPORTUNITIES

Since May 2005, the U.S. and India have engaged in a high level dialogue to promote increased trade and investment in the energy sector. The dialogue comprises of five working groups: oil & gas, coal, power & energy efficiency, new technologies & renewable energy, and

civil nuclear co-operation. Since its formation, a new working group on sustainability has been established.

LNG

During the President's visit, India will seek special exemption to import LNG from the U.S., though it is unclear why the Indian Government believes there are any real obstacles to buying LNG today, other than a cumbersome regulatory process. To date, the U.S. Department of Energy (DOE) has approved export of LNG from seven liquefaction terminals, for exports to countries with which the U.S. does not have a free trade agreement (FTA). Two of these permits include off-take agreements with Cheniere Energy of 3.5 million metric tons and Dominion Energy of 2.3 million metric tons with the Gas Authority of India Limited (GAIL.) These terminals are expected to be complete and in a position to export cargo by late 2016/early 2017. Despite the openness of the market, there is a perception that the US has too stringent a licensing process and that India would benefit from greater US export volumes since they would be cheaper than imports from elsewhere. Nothing could be further from reality. Only market forces will determine where LNG flows.

Shale Gas

The development of shale gas has been transformative for the U.S. domestic and international gas market. Nonetheless "fracking" remains extremely controversial, especially with new developments, such as New York State recently announcing a ban on fracking throughout the state despite the fact that it has some of the most prolific reserves in the nation. As fracking has progressed, concerns over water availability and contamination have ebbed as new technologies using far less or no water at all have begun to be developed. Additionally, the U.S. has a wealth of regulatory experience at the state level which could be shared with Indian counterparts. Already Indian companies – the Indian Oil Corporation, Reliance Industries, and Oil India – have stakes in US shale gas projects having invested in commercial fracking operations in both U.S. oil and gas fracking technology. The U.S. government could sponsor a number of visits for high level Indian officials and commercial concerns to major fracking regions and help to establish interaction with local and state regulators to learn more about this technology.

Strategic Reserves

For some years India has contemplated developing strategic reserves. While the caverns have been dug, they have not been filled. With oil prices likely to drop further in the short run, now is the time for Delhi to begin fast tracking the process of filling its reserves. The U.S. has years of managing strategic crude oil reserves and this expertise could prove invaluable to India. Likewise, if India were to join the Organisation for Economic Co-operation and Development or seek an exemption allowing it to join the International Energy Agency (IEA) – with strong support from the U.S. – it would be eligible to join the IEA oil sharing mechanism, which could prove invaluable during a supply crisis. Membership though would also obligate India to fill its reserves and potentially in a supply crisis share them with other IEA states.

Nuclear Energy

Both President Obama and Prime Minister Narendra Modi have reaffirmed their interest in the implementation of the civil nuclear agreement. The deal, negotiated some years ago, was designed to promote the sale of U.S. reactor technology and then was left to flounder over a number of critical issues. Both leaders should remove the red tape and move to implement the agreement.

Carbon Capture, Utilization And Sequestration (CCUS)

India and the U.S. have a shared interest in further developing CCUS technology to help address the air quality problems that accompany abundant fossil fuel usage. Though in recent years natural gas has become more competitive price-wise as a fuel to generate electricity

in the U.S., it is important to note that until 2035 coal is expected to remain the dominant fuel. In India coal usage will continue to grow since it is available domestically (though India does also import coal), is a cheap resource, and much of India's existing electricity generation capacity is coal based. Given these facts, it is vital that both nations find ways to accelerate R&D into CCUS technology to prove that the technology is both technologically and commercially viable in order to offset further air quality contamination.

Clean Energy

Owing to the vital importance of increasing energy access, reducing greenhouse gas emissions, and improving resilience in the face of climate change, President Obama and Prime Minister Modi agreed to a new and enhanced strategic partnership on energy security, clean energy, and climate change in the September 2014 joint statement. They have pledged to strengthen and expand the highly successful U.S.-India Partnership to Advance Clean Energy (PACE) through a series of new programs including a new Energy Smart Cities Partnership to promote efficient urban energy infrastructure; a scaling-up of renewable energy integration into India's power grid; cooperation in upgrading India's alternative energy institutes; development of new innovation centers and a host of other energy efficiency programs. Expansion of this program could yield benefits to both countries since the government of India under its Green Energy Mission has made solar and wind power development key priorities. The challenge however will be to pick the right technologies and to define clearly the level of support that the government should provide and what incentives might be put in place for the private sector to augment the government's involvement. The U.S. has tremendous experience in the financing of green energy investments and could share these with the Indian government and Indian entrepreneurs. It is also vital to determine the multiple incentives that may be required to reach the stated objectives of the overall Green Energy Mission including the level of investment in new engines, smart and efficient infrastructure, battery storage and to develop innovative financing schemes.