

The Financial Crisis and Global Energy Investment

The global financial crisis has severely weakened investment on energy resources. Across the world, energy investment fell because of lowered end-demand for energy, tougher financing situation, and poor corporate cash flow conditions. For instance, statistical evidence from the industrialized countries has shown sharp falls in demand for energy. In turn, this has contributed to sharp decline in world prices of energy commodities.

Specifically, energy companies are drilling less oil and gas wells or cutting back expenditures on pipelines and refineries. Moreover, several projects were either scaled back or postponed due to a lack of operational funds, poor responses from governmental agencies, and downward projected profits. Similarly, households and enterprises are spending less on energy consuming appliances. While this has fostered increasing use of energy efficient appliances, the credit crunch has not made this new form of investment attractive. As a result, this has slowed deployment of more efficient production of machinery tools. In addition, equipment manufacturers will lower investment in research and development.

Lower international prices in energy as well as restricted corporate cash flow positions have stymied massive capital outlay and project cancellations in the oil and gas market. The International Energy Agency estimates that investment budgets for global upstream oil and gas sector has fallen by around 21.0% (or around USD 100 billion) in 2009. Since October 2008, more than twenty upcoming massive upstream oil and gas projects, valued at more than USD 170 billion in aggregate, were cancelled. Another 35 oil and gas projects were postponed for duration of two years. It is anticipated that the upstream sector will lower capital expenditure on drilling and exploration sharply in 2009. This is attributed to large capital spending associated with the completion of most ventures prior to 2007-08. Oil sands projects in Canada account for a large share of the postponed oil capacity. High development cost projects initiated by small players are more likely to be shelved.

In terms of power sector investment, the International Energy Agency estimates that global electricity consumption will fall by around 3.5% in 2009. According to recent figures available for the first quarter of 2009, electricity demand in the OECD sagged by 4.9% year-on-year, while China shrunk by 4.0%. Notably, severe demand contraction has led to less new capacity additions on part of the power generators, and less production of more energy efficient equipments by manufacturers. Highly geared power producers will also have to confront higher debt servicing charges due to ongoing global financial volatility. Some of these trouble producers may face bankruptcy without financial support from the relevant national authorities. There is a probability that the power sector will shift towards less-capital intensive feedstock, such as coal or gas-fired plants compare to capital-intensive alternatives, such as renewable and nuclear. This is true, especially if the global financial crisis prolongs beyond 2010 and global energy prices remain depressed.

According to industry experts, investment in the coal sector is anticipated to fall by 40.0% in 2009 due to high base effects in previous years. Prior to 2008, coal producers made huge profits and paid generous dividends to their stakeholders. In addition, high margins producers also rely less on external finance for the expansion purposes. However, smaller and less profitable ones will face higher financing terms for ongoing operations, and will have to cutback large capital outlays. This constitutes the large part of the contraction witnessed to date.

Similarly, the investment trend in renewable power projects is expected to fall by 38.0% in 2009. In 2007, investment in renewable energy assets rose by 85.0%. However, due to the global financial turmoil from 2008 onwards, investment fell as sources of finance became tighter in the wake of lower international energy prices, which reduced the attractiveness of renewable energy. Preliminary statistical evidence for the first quarter of 2009 has indicated that capital expenditure in renewable energy fell by nearly 42.0% quarter-on-quarter. Furthermore, lower prices of feedstock, namely crude palm oil and ethanol as well as high cost of capital has restricted investment in bio-refineries. Various fiscal stimuli by national governments have however cushioned the falling trend in renewable-based power investments.

What are the implications of falling investment in major energy products around the world? First, investment in energy infrastructure will only affect capacity with a lag of around 5 to 10 years. Hence, current weak demand will result in a rise in spare production capacity. In contrast, sustained lower energy investment will lead to capacity shortages, which would push up energy prices in the future. Rapid economic progress without adequate investment in energy infrastructure might derail the path of global economic performance. Supply restriction will lead to higher cost of production and inflation expectations across all economic sectors.

Second, current economic slowdown will lead to lesser greenhouse gas emissions in the near term. However, the ongoing financial turbulence may curtail investment in clean energy technology and thereby lead to greater emissions in the medium to longer term through the use of fossilized-fuel energy commodities. Concomitantly, risk adverse investors will divert funding for clean energy projects to proven technologies in attractive markets. It is worth noting that once the global economy recovers, any short-term emissions benefit will be negated off.

Third, weakened energy investment might limit poorer people's access to various forms of modern energy. There are nearly 1.6 billion people around the world without access to electricity. Financial difficulties will impede poorer households the ability to connect to electricity or other forms of energy. Hence, cutbacks in modern energy investment will stymie numerous efforts of poverty eradication around the world.

Importantly, these concerns strongly argue for prompt national policy actions to encourage investment in energy efficiency and clean energy. Through fiscal packages announced by various countries, some portions of public spending were already allocated towards research, development, and commercialization of these products. Much more need to be taken to invite the private sector or venture capitalist to join in the effort to promote higher investment in global energy investment. Government incentives should be increased to foster the attractiveness of investment in renewable power projects. Renewable energy products emit lesser amount of greenhouse gases with lower economic cost. This should be actively pursued by countries with abundant renewable sources of energy.

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