Recent NSG Decision: Setback to India’s Quest for Energy Security

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It was on 6 September 2008, after a long battle India finally got the grant of waiver from the NSG to adjust its guidelines to enable full civil nuclear cooperation with the suppliers. The decision was a welcome development for India because it waives from the requirement of ‘full-scope safeguards’ as a pre-condition for the NSG members to export nuclear material and fuel for use in its safeguarded civilian nuclear facilities. However, the recent upsurge of the NSG effort to tighten the general rules for the international transfer of enrichment and reprocessing equipment and technology (ENR) goes against the wish of India. Such a NSG insistence on supplying nuclear technology and its related materials only to NPT member is in contrary to the successful waiver of India by the same cartel few years back. Therefore, India have a huge task ahead at NSG in terms of ensuring that clean waiver from the latter remains intact that holds the key to India’s global civil nuclear commerce.

Strategic analysts in India have commented that the 2008 Nuclear Supplier Groups (NSGs) “clean waiver” is a “specific” NSG decision, and cannot be superseded by any “general” decision taken by the NSG. The earlier decision has been taken on the basis of India’s track record with regard to nuclear proliferation. India despite being out of the NPT has not transferred any form of nuclear technology and its related material to nuclear aspiring countries. The 2008 waiver was an India-specific waiver, which had been given despite of India’s non-NPT status and a clear stand of not opening our nuclear weapons facilities to international scrutiny. If the recent decision by NSGs of strengthening the guidelines on transfer of enrichment and reprocessing technology also includes India then it would pose a serious setback to the latter’s quest for energy security.

The Indian Prime Minister and other members have invested a lot of energy to successfully conclude nuclear agreement in a bid to show the way for nuclear energy to meet India’s energy demands despite opposition by other political parties in India. ‘The civil
nuclear cooperation agreement between India and the United States is aimed at facilitating a substantive and clean energy sources to a fast emerging, huge energy deficient nation like India’. Prime Minister Mr. Manmohan Singh in his briefing to the Parliament on 29 July 2005 had made it very clear that, “India’s quest for energy security as an essential component of our vision for our development was a significant theme of my talks.” He had also underlined the need for India to have unhindered access to all sources of energy, including nuclear energy, if we are to maintain and accelerate our rate of economic growth.….It was in this context that we affirmed the importance of cooperation in the civilian nuclear energy sector.”

Today, India suffers from a serious energy crisis. Energy security has become one of the serious issues of India’s foreign policy owing to certain factors such as growing energy demand, Carbon dioxide emissions and the issue of climate change, security of energy supplies and depleting fossil fuels. The situation is most likely to become worse due to the growing imbalance between the demand for energy and the supply from its indigenous sources.

India accounting for 17 per cent of the world population is holding less than 0.5 percent of the world’s hydrocarbon resources and consumes just 5 per cent of global energy consumption. India’s commercial energy basket is currently dominated by coal (53 percent); oil (31 percent) and gas (8 percent). Electricity generation continues to be predominantly coal-based followed by hydro power. To meet its increasing energy demands, New Delhi depends on unclean coal for more than half which can be highly dangerous for environmental and health reasons for not only India but also it would have its implications to the global community.

At present, India is the sixth largest energy consumer in the world and is projected to emerge as the fourth largest consumer after the United States, China and Japan in the coming decades. Its economy is projected to grow 7 per cent to 8 per cent over the next two decades, and in its wake there will be a substantial increase in demand for oil. For India to sustain this projected economic growth and eradicating poverty would require solving energy problem.

India currently imports roughly 70% of its oil from the oil supplying countries. Furthermore, India's proven oil reserves stand at 5 billion barrels in India. As the energy needs of India continue to grow, oil imports are set to increase substantially in the coming years. Due to the size of their populations and their rapid economic growth, India faces a formidable challenge in their pursuit of energy security. Such a quest for energy security is being impeded by India's sometimes tense relations with energy suppliers, energy transit
countries and energy competitors. The World Energy Outlook, published by the International Energy Agency (IEA), projects that India’s dependence on oil imports will grow to 91.6 per cent by the year 2020.

India currently suffers from a serious shortfall in electricity supply, estimated at 15 per cent and growing further. Presently, only 3 per cent of the country’s electricity is generated from nuclear power plants. About two-thirds (68 per cent) is generated from coal, 15 per cent from hydropower, 8 per cent from natural gas, 4 per cent from oil and 2 per cent from renewables. The seriousness of energy security can be gauged from the fact that only 660 billion KWh of electricity is what India produce and over 600 million populations have no access to electricity, and limited access to other clean, modern fuels such as Liquefied Petroleum gas (LPG) and kerosene. Lack of adequate energy access is reflected in human development index (HDI) of India. India’s HDI is very serious when compared with other countries such as Canada, United States, Norway, United Kingdom, Japan, etc.

Nuclear power would help increase energy security during a time of unstable competition and surging demand. Nuclear power is the key to reducing global emissions of carbon dioxide (CO$_2$) and sulphur dioxide (SO$_2$). The 17 percent reduction in emissions due to reduced coal-fired generation being taken up by nuclear (and renewable generation) is equivalent to 12 percent of UK emissions and 8 percent of emissions from the EU-25 countries. Increased share of nuclear power in the Indian energy mix will help diminish the reliance on fossil fuels and reduce carbon emissions from India.

Today, about 17 per cent of the world’s electricity is generated from over 441 nuclear reactors operating in 32 different countries. Besides, another 32 reactors are under construction, and many more are on the drawing board. Nuclear power in the coming decades would make significant contribution to global supply of electricity. For India too, Nuclear energy has the potential to provide a large scale of electricity generation that itself would help lift the standard of living for millions of population.

Other factors that makes nuclear energy more viable option is that hydrocarbon resources are yet to prove themselves as viable alternatives. In addition, renewable sources have only been able to supplement and not replace the fossil fuel requirements as mentioned above. No doubt, renewable energy sources are attractive but powerless. Moreover, they are capital and land intensive.

In a bid to raise the contribution of the nuclear power to energy generation, India plans to install another 25-30 nuclear reactors in the next three decades that is expected to fulfil its plan for 65,000 MW energy. By 2020 and 2050, India is expecting that the nuclear
energy would account for 10 per cent and 26 per cent of her energy demand respectively. This does not mean that nuclear energy would replace coal, but to some extent it would reduce the dependence on fossil fuel and low quality coal, thereby reducing environmental deterioration. Moreover, in the long run nuclear energy would be economical than any other alternatives.

Table about How India Plan to Increase Nuclear Power Capacity

<table>
<thead>
<tr>
<th>Year</th>
<th>Installed Capacity</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
<td>4,780 MW (20 reactors under operation) (3 %)</td>
</tr>
<tr>
<td>2012</td>
<td>7,280 MW</td>
</tr>
<tr>
<td>2017</td>
<td>10,080 MW</td>
</tr>
<tr>
<td>2020</td>
<td>20,000 MW (10 %)</td>
</tr>
<tr>
<td>2032</td>
<td>63,000 MW</td>
</tr>
<tr>
<td>2050</td>
<td>150,000 MW (26 %)</td>
</tr>
</tbody>
</table>


Source: Prepared using Table 4.

Despite its great potential, nuclear energy stands at a crossroad for India due to the recent unilateral decision taken by the NSG comprising of 46 nations to push for more stringent norms that govern enrichment and reprocessing (ENR) equipment and technology. If this materialises then it would derail the prospect of nuclear energy generation in the coming
decades. (See the table and chart as shown above). The decision came at the time when India is working hard to secure long-term uranium contracts to support nuclear expansion objectives. Since the clean waiver in 2008, India have entered into a civil nuclear cooperation agreement with a significant number of countries such as the United States, France and Russia, Kazakhstan, Namibia, etc.

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