

# The Great Game of Energy: Imperfect Past and Future Tense



5<sup>th</sup> Asia Energy Security Summit 2015  
2<sup>nd</sup> - 4<sup>th</sup> March, 2015, Gokarna Forest Resort, Kathmandu, Nepal

# Index

Topics	Pg
<b>Part 1 - IPPAI Research Report</b>	<b>7</b>
<b>The Great Game of Energy: Imperfect Past and Future Tense</b> <i>Harry Dhaul &amp; Pathikrit Payne, IPPAI</i>	9-47
<b>Part 2 - Guest Columns</b>	<b>49</b>
<b>Is International Terrorism a Threat to India's Energy Security?</b> <i>Meenakashi Lekhi, Member of Parliament, Lok Sabha, Republic of India</i>	51
<b>Building an Asian Energy Buyers Club</b> <i>Dr. Gal Luft, Executive Director, Institute for the Analysis of Global Security</i>	55
<b>New Paradigms of Energy Politics- India as a Key Player</b> <i>Lt Gen (Retd) Sudbir Sharma, Chairman, Mitkat Advisory Services Pvt Ltd.</i>	57
<b>Title: A Constructivist Approach to Energy Security Paradigm</b> <i>Amrisha Dhaka, Associate Professor, Jawaharlal Nehru University, India</i>	59
<b>Needs &amp; Drivers for a comprehensive South Asian Energy Cooperation</b> <i>Naveen Singh, Director, India Electron Exchange</i>	62
<b>Naval Power and Energy Security- A Geopolitical Perspective</b> <i>Commander (Retd) Kartik Vig, General Manager, Indianeye Security Private Limited</i>	66
<b>Overcoming Hurdles for Sustainable Nuclear Energy Development in India</b> <i>Kavitha Kunbi Kannan, LAMP Fellow, PRS Legislative Research</i>	72
<b>Middle East Crisis and India's Energy Security- Concerns &amp; Way Forward</b> <i>Pabitra Dey, Qatar based Senior Management Professional</i>	76
<b>A Vision for India to be a Power 'Superpower': How a Plug-and-Play Power architecture in India can herald a paradigm shift in the Power Sector in South Asia</b> <i>Cmdr (Retd) Gurumurthy Aiyar, Independent Consultant</i>	82
<b>New Outlooks for Asian Energy Security</b> <i>Changing Global Dynamics and Regional Responses</i> <i>A Workshop Report by John Ryan &amp; Clara Gillispie, National Bureau of Asian Research</i>	84

# A Constructivist Approach to Energy Security Paradigm

Ambrish Dhaka

## Introduction

Energy is a very wide and ambiguous term unless its concrete end-use are predefined. The availability of any source of calorific value itself does not entail the availability of energy. The ability to harness that resource perceived in the given array of end-use makes its strategic worth. The physical gradient however lies from low calorie output to high calorie output, which prioritizes into market trends. The major story over the half century since 1950s has been that coal used to be an important source for energy production and it still remains one of the most vital sources along with natural gas even now. The crude oil remained a very important source, however its share in overall production scenario has relatively declined. The decades from 70s onward saw rapid expansion of nuclear electricity plants and they continue to be one of important source for electricity generation in developed world. And, wind energy and photo-voltaic cells have just started picking momentum. The biomass energy production and the non-conventional energy resources such as wind, solar, tidal and geothermal together would surpass the traditional sources of energy production. One such scenario calls for re-assessing the hydro-electric dams for electricity generation. These are high investment projects and their development encompasses wide regional and structural change to the geomorphology of the region. The environmental concerns are high and the realisation of the costs involve decades of gestation period. Also, the maintenance of these dams involve huge costs which only pass over to the consumer of electricity produced from these dams. There is also the flip side of the coin. The consumption has also changed drastically over the second half of 20th century. The energy consumption by industrial sector almost peaked out in 1970s and 80s for world. The transport sector has become one of the major consumer of energy in last 02 decades. The residential and commercial sector consumption have grown only proportionately. The electrification of energy consumption has increased across all the four sectors. Today nearly 40 percent of the consumption in these four sectors is in the form of electric power, which was only 18 percent in 1960. This only reveals growing per capita use of electricity has been the major driver of energy efficiency in consumption.

The energy production and consumption scenario act as parentheses to access energy by the humanity. This is a big economic question in terms of choices available to billions of people, who find it difficult to access modern form of energy. The consumption also remains a vital underscoring point in terms of per capita especially when it comes to account for environmental challenges. The Africa has more than adequate energy resources, but even then more than two thirds of the population lives without electricity, and the use of fuelwood and charcoal outweighs all the other sources combined. According to IEA chief economist Fatih Birol, every single dollar invested in sub-Saharan oil gives a boost of \$15 dollar to their economic output. One of the biggest ironies is the lack of interface between energy and human development. This has been an important concern with the policy makers as apart from this disconnect, there is also visible gap to factor in the major transitions in energy production and consumption pattern. The convergence of these could be one of the major scenario to deal with energy poverty. One of the important challenge is the assessment of energy and its relation to poverty. It can be a single variable scale that is unbiased but devoid

of any subjective treatment to various conditions of human development. The usage of energy in multiple ways augurs inclusion of multiple array of factors to make it more representative of various forms of energy deficit. There is also the need to weigh in the damages accruing to health from usage of biomass fuel that also has gender specific impact. All these demand a composite valuation to judge the need for transition in energy scenario. There is also a challenge to look into energy as a state goal versus energy as subaltern perspective. The social constructivist approach deals with national interest, which are real in an international society, an ideal conception. The environmental concerns are pursued by international society pushing for the energy efficiency goals that often run into the national development goals of developing countries where there is yet to attain certain optimum degrees of sectoral goals.

Today nations factor energy into foreign policy. For example, the Indo-US civilian nuclear deal has been the key element to gauge the success of bilateral relations between the two nations. The fact that even Pakistan clamoured for similar status, which was denied reveals strategic significance of energy cooperation among nations. Energy also became a foreign policy challenge for India when the US asked India to enforce embargo on Iranian oil. This lent considerable disadvantage as Iran had accepted Indian rupee to settle oil payments. The issue of uninterrupted supply of crude oil and natural gas at affordable price has been the fiduciary limit of geopolitical chessboard. The Russian pressure is felt by the European buyers. Similarly, the Central Asian oil and gas is witnessing many contenders, with China edging out others for the present. The role of energy in social development becomes a domain of plethora of interpretive schemes where in to chart out least risk and maximum advantage becomes the guiding rope for all forms of negotiations. The importance must be given to the socialisation of the states at international level that can augment complementarities within the region and globally at large. The evidence of such behaviour is visible in the form of transnational energy routes, but they are devoid of any inclusion of human development goals. In fact, most of these deals were signed at the behest of oil giants working with national governments under the framework of perceived strategic security interests. The rationale of shifting the goal post from strategic to human security is implicit in growing entropy among the states over competing security strategies that have many a times hindered the access to these resources and also affecting the global transition towards cleaner and secure sources of energy. But, energy has fair degree autonomous sources of production and consumption and technology is an important variable that keeps on restructuring energy production and consumption.

The constructivist approach to energy security demands address of energy deficit at several tiers of social strata. And, then for each strata there must be charting of transition path that can finally lend them to energy efficient environment. The problem is already recognized at global level where states are standing on the different steps of growth ladder. Similar situation too exists within the states as well. There is also a case of international clubbing of populations across borders if there is common watershed or energy resources base shared across the international boundary. All these are meant to optimise economies of production and consumption. There is also an important concern of climate that haunts energy paradigm. The rise in global warming due to burning of hydrocarbons is a serious concern for developed world. The sustainable use of energy can be visualised with a better composition of energy inputs with other another major element that vital to daily lives of billions, the water. A composite index that serves the measure of access to clean and safe drinking water and clean source of energy can be developed to calculate energy-water deficit, or the energy-water poverty. This would allow to incorporate the macro-demand of the people living below \$1 per day. The states have took to the path of nuclear securitisation or decarbonisation of energy security paradigm. However, the need is to look into hydrated-energy security paradigm. The maxim that

can explain it all is “Energy is needed to produce water, and water is needed to produce energy”. The more and more conservation techniques to conserve either of them shall have double impact on conservation of environment. Therefore, it is important that energy audit must be done on watershed basis and ways of recycling water usage with the help of naturally abundant energy must be devised that can help minimise the use of biomass and fossil fuel. This invariably feeds into lives of the poor people who do not have access to safe drinking water and also cannot afford to buy electricity. Easier said than done, but the state has big responsibility to deploy conventional resources towards making these watershed based energy cycles a feasible paradigm. The scale and size of the resource can be the basis for defining relation between the people and the energy-water usage. This brings in the question of agriculture and industry that simply are energy and water guzzling sectors and no signs of decline in usage is visible. The need to develop conservation techniques in these sectors plus the conservation in other sectors would allow to visualise long-term intended transition in ultimate usage of energy-water in these sectors. An integrated approach shall help in addressing the plethora of issues hovering around energy security from various perspectives.



Ambrish Dhaka is an Associate Professor at the School of International Studies, Jawaharlal Nehru University, New Delhi. *The views expressed are his own and do not necessarily represent the views of IPPAI.*