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To cite this article: Sreemati Ganguli (2016) Energy Interdependence as a Strategic Factor in the Post-Cold War Context, *Strategic Analysis*, 40:3, 185-198, DOI: [10.1080/09700161.2016.1165468](https://doi.org/10.1080/09700161.2016.1165468)

To link to this article: <http://dx.doi.org/10.1080/09700161.2016.1165468>



Published online: 12 Apr 2016.



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Energy Interdependence as a Strategic Factor in the Post-Cold War Context

Sreemati Ganguli

Abstract: Energy, as a resource, has been considered only as a factor of complex geopolitical rivalries and geo-economic calculations globally. This article, on the other hand, attempts to analyse a parallel trend in the post-Cold War international scenario, a trend that shows how energy gains global relevance as a vector of alliance and a link for interdependence, and how economic and environmental challenges have become the compelling factors to push competitors to turn into allies and partners.

Introduction

Energy is a commodity that has acquired a strategic character, not in the military sense of the term, but by virtue of its vital significance for human civilisation. As Schumacher and Kirk noted, ‘energy is not just another commodity, but the precondition of all commodities, a basic factor equal with air, water and earth.’¹ Fernann categorised energy as a ‘strategic resource’, as without energy, ‘it is almost impossible to conceive socio-economic development within a particular historical era.’² The fact that energy impacts on so many levels of human interactions—economic, social, political, bureaucratic, legal, technological and environmental—shows the indispensability of the resource for an all-encompassing human security concept. More important, the survival as well as the future of human civilisation is intrinsically dependent not only on the supply but also on the nature of energy resources available.

The post-Cold War global realities provide the pertinent context for this discussion. In this era the competition for resources and influence are not so pronounced, the end of the ideological blocs offers countries the opportunity to come out of either/or binary choices for allies, and conflicting interests do not force nations to remain in isolation—they interact to engage others, to balance between mutual conflicting and cooperating interests—all in an attempt to pursue their own advantages in a changed context. In this era, it is evident that rivalry coexists with engagement for all the involved powers. Within a region, as Barry Buzan noted, states share ‘the interdependence of rivalry’ as well as ‘the interdependence of shared interests’;³ this is also true in the global scenario.

This article attempts to focus on some significant trends in the contemporary global energy scenario, trends that show that in spite of competition among countries to use energy as a coin of power, energy is being increasingly considered as a strategic asset: a vector around which mutual interests, of friendly and even not-so-friendly nations, meet. Interdependence of shared interests among the producer–transit–market

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states of the energy chain becomes actually a compelling factor to coordinate policies and decisions, and mutual concern for a greener, safer energy regime motivates even Cold War rivals to undertake joint research for environment-friendly technology. It is to be noted that the global energy basket is varied, from coal to oil, gas, nuclear, hydro, geothermal, renewables and so on, with much variation in each category. Here, cooperative endeavours on a global scale around some of these energy sources are discussed.

Energy: an effective weapon?

The then US Secretary of State Hillary Clinton remarked, during her address to Georgetown University in October 2012, that energy ‘rests at the core of geopolitics, because fundamentally, energy is an issue of wealth and power, which means it can be both a source of conflict and cooperation’.⁴ But it should be noted that rivalry or competition over energy resources is not a post-Cold War phenomenon—history can show the proof. For example, since the 1870s the nascent oil industry that Russia built up around Baku gained global attention due to the rising global demand for oil and the Russian decision to open the oil industry to international private investors, like the Rothschilds, Nobel brothers, Samuels and company etc. Baku eventually became the centre of international competition as oil was increasingly regarded as a strategic commodity; during World War I, Baku was first occupied by British forces (August 1918), then by Ottoman–German troops (November 1918) and then finally by Bolshevik forces in April 1920. This competition for Baku’s oil wealth again resurfaced during World War II, as Nazi Germany started ‘Operation Edelweiss’ in 1942, to gain control over the oilfields of the Caucasus, and though one of the oil cities of Maikop was captured, ultimately the plan to capture Grozny and Baku failed. It was an attempt on Germany’s part to deliver a blow to the economic might of the USSR and, thus, to gain crucial military advantages in the war. The linkage of energy to politico-military clout may be described by another event: the decision to switch over to oil from coal for fuelling of the British Navy was the most important factor in shaping the British interest in the Middle East. As Fermann commented, ‘The First World War made it both necessary and possible for Britain to take control over and exploit the oil-rich provinces’⁵ in Persia and Mesopotamia through her military presence in the Persian Gulf; and by the late 1920s, the USA, France and the Netherlands made their presence felt in the region for the same reasons—to have a control over oil for their blue-water navies.

Apart from these military adventures over energy, there are also occasions when producers use energy as a weapon to gain geopolitical leverage out of it. The question still remains, can this option be viable in a long-term scenario? Some notable instances may be referred to: Fredholm analysed that in August 1941, the USA embargoed its oil exports to Japan, which was 76.7 per cent dependent on American oil.⁶

The purpose was to coerce Japan into abandoning its war in China. The embargo caused the fall of the Japanese Government and became a decisive reason why Japan attacked the USA in December the same year. To antagonise a country was in this case clearly not an efficient way to influence its policy.

In another instance, in 1973, the Organization of the Petroleum Exporting Countries (OPEC) embargoed its oil exports to the West to force it to abandon its support for Israel:

The oil crisis hit hard but the effect became the opposite; methods were introduced by the West to increase their energy efficiency, so OPEC lost the leverage it thought it had. Western support to Israel increased. Again political leverage was illusionary and quickly lost.

In recent years, there have been a number of instances in EU–Russia relations where energy again became a tool of attaining geopolitical advantages. Russia, as the single largest energy exporter, did not act responsibly in relation to its market in Europe with repeated stopping of energy supplies to the transit states: the 2006 gas crisis with Ukraine, in 2007 with Georgia and again, with Ukraine in 2009, apart from the 2003 and the 2006 crises with Lithuania, are cases in point. Such decisions were based on a blend of political and economic calculations and Russia was, to a certain extent, successful in gaining enhanced rates for its energy supplies from these states. But Russia's moves affected large numbers of the population of the European Union (EU) during cold winter months on each such occasion. And this raised allegations of Russian use of energy as a foreign policy weapon—critics termed it 'energy blackmail'. The situation got worse as there still remains a historical baggage of mistrust between Russia and its former East European allies. Significantly, in 2006 Poland called for an increased role for the North Atlantic Treaty Organization (NATO) to guarantee the protection of energy supplies to its member states through the formation of an 'Energy NATO'. The Nord Stream project of Russia to bypass not-so-friendly transit states worsened the situation. As a response, the EU concentrated more on diversification of energy producers (like the Central Asian and Caucasus countries) and transit routes (through Turkey and East Europe) as well as on cleaner, renewable energy options for a low-carbon energy infrastructure. Also, Russia's relations with these transit states became highly strained with consequent geopolitical ramifications. So, in a long-term perspective, the results did not go the way Russia actually wanted.

A significant point is that geopolitical competition over natural resources is a practice as old as human civilisation—it encouraged expansion of territory, not only in terms of geography, but also of knowledge. But it is, at the same time, not the only reality. With the progress of human civilisation, there grew the realisation that uncontrolled competition over resources is detrimental to the security and sustainability of not only mankind but of the ultimate existence of the Earth, conducive for human existence at large. As a consequence, there has emerged the simultaneous trend to cooperate over better control and judicious use of natural resources, to protect the environment and to sustain human progress—and under these circumstances, it is entirely natural for the international system to follow the option of establishing cooperative ventures over resources to create a balanced and long-term view of human progress, as human nature is as much prone to cooperate as to compete.

Energy interdependence as a strategic variable

Cooperation around energy as a resource is also not a new phenomenon: OPEC, the International Energy Agency (IEA) and the International Atomic Energy Agency (IAEA) are all luminous examples. But this article discusses some new trends, some new facets in the complex, interactive, interdependent mechanisms around

energy in the contemporary world. It is significant to note, at the same time, that energy alliances often are a blend of geo-economic and geo-political interests, as are evident in the choice of routes of pipelines, of participants in a project and, most importantly, in the denial of participation of a state or a group of states in a project. These cooperative energy ventures are intrinsically characterised by their respective responses to new realities and new challenges of the post-Cold War era. But the most significant challenge remains to maintain a tacit and subtle balance between geopolitical ambitions and strategic policymaking. F. Verrastro and S. Ladislav analysed that:

The challenge going forward is to manage the increasing complexity of an energy-interdependent world while striving to meet economic, security, and environmental goals. This requires a much more sophisticated approach to energy policymaking, one that more fully appreciates the interdependencies of global markets, the complex nature of energy security, and the need to manage the trade-offs inherent in energy policy decision-making.⁷

For the energy cooperative ventures under discussion here, the forms and approaches to this challenge are different, but the common goal is to ensure energy security in an increasingly interdependent world.

Interdependence is a vital part of any energy geo-strategy, as pursued by a country or by a region. As A. Flores-Quiroga, the Secretary-General of the International Energy Forum (IEF), declared in the 13th IEF Meeting in Kuwait in 2012:

the world of energy is one of interdependence, and the multiple links connecting producers, consumers, and transit States, at every stage of the international energy supply chain, will in all likelihood deepen and expand. In every market for every energy source, from fossil fuels to wind, from exploration to power generation, passing through the myriad processes involved in transport, distribution, and delivery of energy products and services, nations will have to adapt to an increasingly complex environment. It will make little difference whether they are developed or less developed, industrialised or agricultural, rich in resources or not. Their fortunes will be intertwined. Their ability to understand their interdependence, as much as their willingness to work together to overcome their joint challenges, will be fundamental to the promotion of their energy security.⁸

This understanding of the significance of mutual energy dependence assures, in a limited sense, the producer–transit–market energy chain can operate without any disruption. In a longer-term perspective, there is the urgent need for the nations, friendly and not-so-friendly, to make mutual energy dependence a strategy to find sustainable solutions for emerging energy needs for humankind to ensure energy security as well as environmental security in a much more comprehensive sense. The post-Cold War trend towards establishing energy cooperative ventures is a testimony of the growing relevance of mutual energy dependence, which is not an exclusive but a simultaneous trend along with geopolitical competition over resources—Iraq's occupation of Kuwait in 1990 and the recent struggle to wrest control of oilfields in West Asia by ISIS are some notable cases in point.

Such a strategy of cooperation and mutual dependence is bound to be optimistic and futuristic, as any strategy, to become successful, should think of long-term planning and possible consequences, and as present geopolitical realities may not always be prevalent in the future. For example, the Turkmenistan–Afghanistan–Pakistan–India pipeline (TAPI) was thought of as a totally unviable project, during 1998–2001, when the USA had a tough choice between supporting the Taliban regime to make the project

a success and global opinion against the anti-humanitarian policies adopted by the regime in Afghanistan. Even the first West-sponsored pipeline project from Central Asia to Europe, the Baku–Tbilisi–Ceyhan pipeline was considered untenable at one point in time, as it was considered environmentally dangerous by a number of green activist groups, and as it was conceived to score geopolitical brownie points, through bypassing Iran, whereas a route through Iran could have been much more economically viable.

In this article, three broad trends of mutual energy dependence in global energy scenarios are discussed, and within each category there are some energy cooperative ventures. The list is not exhaustive, but the focus is on those trends that express the essential characteristics and nuances of the post-Cold War global context.

Inter-regional and regional cooperation

In this category, some notable instances of energy interdependence are discussed: when pipelines become the centre of inter-regional energy cooperation, when security organisations attempt to recreate themselves as alliances around energy or when regional economic unions choose energy as a new vector of mutual dependence.

The first is the Baku–Tbilisi–Ceyhan (BTC) project, that created an inter-regional alliance around energy, but the implications are far more significant. In this project, the geo-economics of the export potentials of energy and the geopolitics of promoting the multiple export pipelines concept of the US Government as well as forging an alliance of states that share pro-US orientations in foreign policy matters (that both are members of the US-backed grouping- Georgia-Ukraine-Azerbaijan-Moldova -or GUAM), through providing them with an alternative pipeline route—the first one to bypass Russian territory in Eurasia—are blended neatly. The pipeline proves to be beneficial for the participants: for Turkey, the gains are securing new supply options of oil as well as positioning itself as an important transit state between the Caspian and Europe; for Georgia, a steady source of oil and also transit fees are guaranteed; and for Azerbaijan, new markets in Europe ensure economic benefits and also political capital.⁹ Notably, the Eurasian region has become a theatre where competitive energy alliances around pipelines are promoted by other states also, such as Russia and China and the EU.

As an inter-regional project, the TAPI energy project presents a different scenario. The project is yet to be completed, but it is based on the idea of establishing an energy interdependence link between countries like India and Pakistan, which have a history of animosity, and with Afghanistan, which has a troubled present. If the project becomes successful, the economic benefits will be jointly shared, as the volume of energy and the amount of transit fees from the pipeline would go a long way towards economic restructuring for all the participants. Also, for Turkmenistan, the South Asian market would be a virgin one to explore and it will be an experimental cooperative venture that, if successful, may open up new vistas of energy cooperation involving other Central Asian states like Kazakhstan and Uzbekistan in the petro-energy and Tajikistan and Kyrgyzstan in the hydro-energy spheres. In such a scenario, hopefully in the future an interregional common energy market between Central and South Asia might become an economically viable project.

There is another inter-regional energy project, the Central Asia–South Asia Regional Energy Market (CASAREM) or CASA1000, funded by the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), the Islamic Development Bank (IsDB), the World Bank

(WB) and the International Financial Corporation (IFC). CASAREM involves Kyrgyzstan and Tajikistan (as exporters) and Afghanistan and Pakistan (as the market) to achieve the goal of a common electricity market among them.¹⁰ Interestingly, as in the case of the BTC pipeline, geopolitics of exclusion has a role to play even in this cooperative venture, so the vast and growing Indian energy market is still not included in the CASAREM project.

There are many instances of regional energy cooperation based on regional energy interdependence, like the South Asian Association for Regional Cooperation (SAARC) Energy Ring among South Asian countries, the North American Electric Reliability Corporation (NERC) between the USA and Canada, and the Southern African Power Pool (SAAP) among Angola, Botswana, Congo, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. But here only two cooperative groupings are focused on, as despite being successful global models of regional economic cooperation organisations, energy is again chosen by them as a new space for cooperative ventures. The first is the Association of South East Asian Nations (ASEAN) Energy Cooperation (AEC). AEC was initiated in 2003 for intensified cooperation for the development and exploitation of regional energy resources; and the ASEAN Vision 2020 (adopted in 2007) envisaged establishing interconnecting arrangements in the fields of electricity and natural gas through the ASEAN Power Grid (which operates 16 projects) and the Trans-ASEAN Gas Pipeline Projects and removing structural barriers in the fields of standards, rules and procedures of the energy systems of individual member-countries to facilitate integrated energy cooperation.¹¹

The other is the European Energy Union, as proposed by the European Commission in February 2015, to provide secure, sustainable, competitive and affordable energy for the citizens of the 28-member EU. The Declaration of the European Commission stated that the basic goals are to reduce the energy dependence on single suppliers, to treat energy as the 'fifth freedom' for the citizens, and to create a sustainable, energy-efficient, low-carbon society. This is truly 'the most ambitious European energy project since the Coal and Steel Community'.¹² While an appeal to develop a European Energy Community for a common energy policy was earlier made by Jerzy Buzek (the then President of the European Parliament) and Jacques Delors (former President of the European Commission) in 2010 and in 2011, the European Council declared the creation of a fully functional energy market by 2014.¹³

Another model of energy cooperation in this category is the inter-regional institutionalised groupings, promoted by energy producers like OPEC or the Gas Exporting Countries' Forum (GECF). Among all these groups, the SCO (Shanghai Cooperation Organisation) Energy Club holds some unique potential. Unlike OPEC or GECF, which are unions of only energy producers, the SCO Energy Club has institutionalised the idea of mutual energy dependence among all the stakeholders of the energy supply chain in an inter-regional context, as the nature of the members of the SCO presents a geo-economic combination of energy producers like Russia, Kazakhstan and Uzbekistan; energy consumers like China; and Tajikistan and Uzbekistan which are both producers of hydro-electricity and energy markets as well.¹⁴ If, in future, the Energy Club is restructured to include new member states with such significance in the global energy scenario as a producer like Iran and the second-fastest growing market like India, then it has the potential of becoming a formidable energy alliance in an extended Eurasia–South Asia–West Asian region. It is true that the Energy Club could best be described as an energy alliance in

formation, and it is an experiment, depending on the strategic worth of energy to build up an alliance of interlinked interests and to strike a balance among the interests of various involved states, particularly Russia and China. Michael Snyder analysed the true potential of the organisation as he commented that:

While the potential of the SCO may be limited in its military scope, the true promise of the organisation lies in its likely development as an economic superpower. With its expanded membership, it now contains two booming economies in India and China, as well as the enormous amounts of oil in Russia, Central Asia, and Iran. This influence on world markets and control over energy resources gives its members tremendous clout in the international arena.¹⁵

Notably, Len suggested a significant future role for SCO in a possible 'ASEAN-SCO Energy and presented a five-point formula of the benefits of such multilateral energy cooperation: an agenda that focuses on regional stability through the construction of emergency stocks and development of sharing mechanisms and an information system during energy crises; creation of norms of future territorial settlement through joint development of resources in disputed waters like in the Caspian and the East China Sea; cooperation between states and civil societies for the joint development of energy-efficient and eco-friendly technologies to address regional environmental issues; fostering of regional military cooperation to safeguard energy infrastructures against possible terrorist attacks; and greater intergovernmental commitments for successful energy cooperation.¹⁶

Balancing competition with cooperation

But the most significant trend of the post-Cold War era is presented by energy cooperative endeavours among states or group of states, who otherwise share relations which vary from not-so-friendly to potentially antagonistic. The uniqueness of such cooperation lies in the fact that green shoots of cooperation and interdependence in the energy sphere are being developed, as the parties involved try to balance competition with cooperation, and short-term tactical calculations with long-term policy-planning mechanisms. Here two such cooperative mechanisms on energy are discussed: EU–Russia and USA–Russia. It is true that Russia shares strained relations with both the EU and the USA, even after the end of the Cold War, in regard to different policy stances involving a host of issues: right from NATO's eastward expansion, Colour revolutions in the Eurasian space and Russia's involvement in Georgia and Ukraine to the Western involvement in Afghanistan, Iraq and Syria. In the energy sphere also, serious problems remain between the EU and Russia, as has been discussed earlier. Still, it is also a fact that energy is one of the most significant factors in their relations, notwithstanding the search for diversification by both for energy sources as well as markets. As P. Lowe, Director-General for Energy of the European Commission, declared, 'Our energy relations with Russia present both a challenge and a real opportunity.'¹⁷ On the other hand, for the USA, energy is a significant area of competition with Russia, as has been discussed earlier regarding the BTC pipeline issue. The recent phenomenon of shale gas as an alternate energy source gives the USA an unprecedented advantage as a producer and exporter in the global energy market, as T. Mitrova, Head of the Energy Research Institute of the Russian Academy of Sciences (RAS), analysed that:

the shale revolution provides a new source of resilience for the United States and enhances the U.S. position in the world, while at the same time challenging Russia's positions in all target markets, including Europe, Asia, and the Commonwealth of Independent States.¹⁸

So it is an amazing fact that still there are small segments in the energy arena where these two competitors have found the value and necessity of cooperation.

There is no denying the fact that Russia is the most important energy partner of the EU as 31 per cent of total EU gas imports, 27 per cent of total EU crude oil imports, and 24 per cent of total EU coal imports, apart from a significant amount of uranium imports are from Russia, and the EU remains Russia's largest trading partner; 47 per cent of Russian imports and 75 per cent of foreign investment in Russia come from the EU. An Energy Dialogue between Russia and the EU was launched at the EU-Russia Summit at Paris in October 2000. This Dialogue recognises the mutuality of interests of both EU and Russia for an effective energy relationship and some of the issues being addressed in the Dialogue are Projects for Common Interest (PCI), electricity interconnections, energy savings and energy efficiency, long-term contracts for natural gas, rehabilitation of the existing Russian hydrocarbon export network, and Production Sharing Agreements (PSA). Another relevant document of this cooperation is the EU-Russia Partnership Cooperation Agreement (1994) as Article 65 of this document deals with EU–Russian cooperation in such areas as the formulation of bilateral energy policies, improvement in management and regulation of the energy sector, introduction of institutional, legal and fiscal conditions necessary to encourage increased energy trade and investment, and modernisation of energy infrastructure including interconnection of gas/electricity supply networks. An EU–Russian Energy Efficiency Initiative was set up in 2006 and in 2010 a Common Spaces Facility Project on energy efficiency was launched to provide financial support for clean energy projects. After the completion of 10 years of existence, Lowe declared in the EU-Russia Dialogue Conference in Brussels that the 'Energy Dialogue has provided an effective framework for better understanding of each other's priorities and concerns', and P. Magonette, the Belgian Minister for Climate and Energy, in his Welcome Address to the Conference, considered it as 'a necessity based on the pragmatic and equitable principle of security of supply and security of demand'. The document *EU-Russia Energy Dialogue: The First Ten Years: 2000–2010* talked about their 'close interdependence' in the oil and gas sector, put emphasis on the EU-Russia Partnership for Modernisation as a framework agreement to determine bilateral energy projects, and acknowledged the efficacy of the establishment of an early warning mechanism to avoid any further energy transit crisis. It also emphasised the need to create suitable conditions for closer market and investment opportunities for both parties.¹⁹ More importantly, as the Dialogue stressed the need to think of a long-term vision of this relationship, the 2013 Declaration on the 'Roadmap: EU-Russia Energy Cooperation until 2050' that followed concentrated on the analysis of different scenarios on a short (before 2020), medium (up to 2030) and long-term (up to 2050) basis and their impact on EU–Russian energy relations in sectors like oil, gas, electricity, renewable energy and energy efficiency and on the identification of common areas of convergence like the preparation and sharing of energy scenarios and forecasts and early warning mechanisms.²⁰

The significant energy dialogue between the US and Russia was initiated in a May 2002 joint statement by President Bush and President Putin that created the opportunity to 'intensify cooperation in energy exploration and development,

especially in oil and gas, including in the Caspian region,²¹ and a Russian-American Working Group on Energy Cooperation was created. The Group has undertaken several initiatives to reduce national levels of carbon emission through advanced technologies, mobilisation of financial resources and creative energy management solutions. Some of these initiatives are Smart Grid and Smart City projects, collaboration on technologies to reduce methane emission in pipeline projects between Gazprom and the US Environment Protection Agency, energy efficiency trade missions to Russia and promotion of clean energy development in the Russian Far East region. Another important sphere of cooperation is covered by the U.S.–Russia Civil Nuclear Energy Cooperation Action Plan Working Sub-Group that facilitates the growth of safe, secure and affordable nuclear energy through development of innovative nuclear energy technologies. The key elements of this collaboration are reactor demonstration projects; Research and Development (R&D) for innovative nuclear energy technology options; modelling, simulation and safety; and development of a Global Civil Nuclear Framework.²² Notably, GNEP was started by the US Government in 2006 as an international partnership to promote the use of nuclear energy, without compromising on nuclear proliferation, through reprocessing of nuclear fuel waste. It was rechristened in 2010 as the International Framework for Nuclear Energy Cooperation (IFNEC). Russia, along with the USA, France, China and Japan, was one of the founding members of this programme (running since 2007) that now consists of 33 participants and 31 observer countries. The programme has two principal working groups: a reliable nuclear fuel services working group and a nuclear infrastructure development working group. So, while it is true that there has been US–Russian bilateral competition in the nuclear proliferation arena since the advent of the Cold War, it is also true that both countries have cooperated, in the post-Cold War era, in the R&D agenda of a multilateral programme, that declares in its Vision Statement that, ‘The Framework provides a forum for cooperation among participating states to explore mutually beneficial approaches to ensure the use of nuclear energy for peaceful purposes proceeds in a manner that is efficient, safe, secure and supports non-proliferation and safeguards.’²³

Environmental push towards cooperation

The 2014 Pacific Energy Summit, to assess and plan for energy interaction among states of the Asia-Pacific region, the USA and Russia, was held in Seoul on ‘Charting the Course to a Secure and Cleaner Energy Future’. There was the mutual understanding at the Summit that each country ‘is profoundly affected by developments in key consuming and producing nations, domestic and international politics and the pace and scale of technological change’ and Korean Vice Minister for Foreign Affairs, Cho Tae-yul, stressed a very relevant point, that ‘None of us can tackle all these challenges alone.’. Significantly, the promotion of cooperation among all the stakeholders in the region was highlighted as it was noted that, ‘In order for governments, industry, and citizens to optimise energy and environmental outcomes in this rapidly changing environment, it is essential for countries to work together to build transparent and flexible markets capable of responding rapidly and resiliently.’²⁴

In view of such Summit discussions, the ongoing global debates over the impact of sources and usage of energy on climate change, the call for de-hydrocarbonisation of energy systems, the search for new renewable energy sources, and the need for new

technologies to balance between challenges of energy security and environmental protection, three projects are discussed here. One is ongoing, the second possesses immense possibilities for the future, while the third presents a complex scenario, as the environmental vulnerability of the situation demands international cooperation, overcoming the current clamour for geopolitical leverage.

The first such venture is cooperation among competing nations for the advancement of scientific-technological knowledge for determining the future global energy strategy through the International Thermonuclear Experimental Reactor (ITER)²⁵—the project to produce electricity through nuclear fusion. Significantly, it was conceptualised in 1985 at the Geneva Summit (as proposed by President Gorbachev of the then USSR) and was born through a treaty among the USSR, the USA, the EU (through EURATOM) and Japan. It was a move towards energy cooperation as a significant step to break away from the Cold War bloc mentality, a move to bring about a change for a new beginning in US–Soviet relations, and so it deserves a special mention in this discussion. China and South Korea joined the project in 2003 and India in 2005. Located in south France, the project is funded and run by the seven members—the EU provides nearly 45 per cent of the cost, while the others equally share the rest. The main aim was to search for a new source of energy that would not harm the Earth's environment through adding more greenhouse gases. Nuclear fusion is the process in which the Sun and the stars produce energy by fusing light nuclei of hydrogen. ITER will produce at least 10 times more energy than the energy required to operate it—it is designed to produce 500 MW of power, while requiring only 50 MW to generate it. The project is scheduled to start its final fusion experiments in 2027. It is an ambitious, yet visionary project, with many roadblocks ahead but the project's success could be monumental. And two points are extremely crucial about this project. First, it is safe, as fusion energy is called 'evergreen atomic energy'—because unlike with fission technology, the chances of nuclear explosion in this process of power generation are comparatively minimal. More importantly, an unprecedented international scientific and technological collaboration is involved in the project to recreate the fusion process of the Sun to produce energy for commercial use on Earth—it is a rare show of global cooperation to search for a safer, greener, more energy-secure future for humankind.

There is another grouping in the making, over alternative environment-friendly energy resources: the grouping of Sunshine Countries.²⁶ An initiative by the Indian Prime Minister Narendra Modi, the conclave of 121 Sunshine Countries, i.e., countries with high solar power potential, situated between the Tropic of Cancer and Tropic of Capricorn, was inaugurated in Paris, alongside the global Climate Change Summit in November 2015, to institutionalise the group's potential under the International Agency for Solar Policy and Application (INSPA). The headquarters of this grouping is to be located in India, as the foundation was jointly laid by PM Modi and the French President François Hollande in Gurgaon in 2016. The vision of this International Solar Alliance (ISA) is 'to provide a platform for cooperation among solar resource rich countries' where bilateral and multilateral organisations, corporations, industry and stakeholders can make a 'positive contribution to the common goals of increasing utilisation of solar energy in meeting energy needs of ISA member countries in a safe, convenient, affordable, equitable and sustainable manner'.²⁷ It is remarkable that energy security concerns have become an undeniable uniting force to bring together so many countries to look forward to a safer, cleaner and more secure energy future for their citizens.

The Arctic region, with its virgin energy potentials and a fragile maritime environment, presents a unique scenario, where geopolitical interests get a new unexplored theatre in which to play, but where, at the same time, international cooperation is absolutely necessary for any energy project to succeed, without compromising the susceptible nature of the Arctic environment. The Arctic represents the ‘final frontier of conventional hydrocarbon development’²⁸ as it is estimated (according to US Geological Survey data) to possess about 13 per cent of global unexplored oil and 30 per cent of global gas potential. But there are a number of hard challenges to exploring and extracting the resources—disputed claims of legal sovereignty in the Arctic maritime zone, rough weather, the fragile ecosystem, the traditional lifestyle of the indigenous population, the need for advanced technological support for extraction and emergency response in case of a disaster like an oil spill, and commercial viability of the resources to become marketable commodities in far-flung markets. So here cooperation among the Arctic Council members (the USA, Canada, Russia, Norway, Sweden, Denmark (including Greenland), Finland and Iceland) and observer states (the UK, France, Germany, the Netherlands, Italy, Spain, Poland, India, Japan, China, South Korea, Singapore) is needed to integrate ‘climate change, sustainable development and security’.²⁹ Seeds of cooperation on a bilateral basis are already visible: in 2010, Russia and Norway agreed on a mutual delimitation line in the Barents Sea to end the 40-year-old border dispute and in 2012, Rosneft (Russia) and Statoil (Norway) signed a cooperation agreement to jointly explore frontline offshore areas of both countries in the Arctic region.³⁰ In April 2013, Shell (Anglo-Dutch) and Gazprom (Russia) signed a memorandum of cooperation in offshore projects in the Russian Arctic.³¹ In May 2014, ONGC-Videsh (India) and Rosneft signed a Memorandum of Understanding to pave ‘the way for the companies’ cooperation in subsurface surveys, exploration and appraisal activities and hydrocarbons production in Russia’s offshore Arctic’.³² The High North dimension of the EU–Russia energy dialogue also has some potential for collaborative ventures in the Arctic. These are all small steps, but the biggest challenge for cooperation remains the strained Russia–West relations, particularly the economic sanctions on Russia, in the aftermath of the Ukrainian crisis, preventing even technological collaboration in the region. There are challenges on many fronts, but so there are also possibilities to collaborate and cooperate to overcome these challenges. It may be a futuristic agenda, but it is not an impossible or inconceivable one, especially when one thinks of the significance of the Arctic for the whole world in the energy/environment calculus. If present realities are the only criteria for making strategic planning for the future, then the hope behind the establishment of the European Coal and Steel Community (ECSC) in 1951, against the background of post-World War II Europe, might also be considered as a far-fetched one, during the time in which the ideas to establish the organisation were thought of. A collective approach is the need of the hour to provide a suitable solution to the Arctic challenge, not only in the energy sector but in a much more comprehensive way, as S. Chaturvedi commented that the Arctic region, along with the Antarctic, ‘deserve to be perceived as “global knowledge commons” and demand international cooperation’.³³

Conclusion

The use of energy only as a means of extracting economic as well as political leverage promotes the basic presumption of the Zero-Sum Game concept: a win for one

invariably means a loss for the other. In a way, the fittest, i.e., the country with better investment potentials, better technological knowhow, and, most importantly, with more international political clout, survives. But the question remains, will the human civilisation survive in such a scenario? Competition, in this scenario, focuses on tactical, short-term advantages. Cooperation, on the other hand, envisages long-term strategic gains. Notably, while proposing the idea of a Eurasian (involving North-East Asia and Central Asia) energy union and the prospective role of the Shanghai Cooperation Organisation (SCO) Energy Club in such a venture, N. Swanstrom commented that, 'Multilateral energy cooperation could create permanent relations of mutual engagement and cooperative interdependence, thus mitigating the potential of violent conflict in Eurasia.'³⁴ Going against the prevailing environment of 'zero-sum games' and lack of trust among different actors, he called for 'political commitment and strong economic incentives for the regional economies and non-state economic actors to integrate'.

Global security, during the Cold War era (before the introduction of the NMD or National Missile Defence strategy in 2000), rested on the concept of MAD or Mutually Assured Destruction, a concept that works on the assumption that among the contestant parties, each has a clear conception of the other's nuclear capability to inflict unacceptable destruction on it and this mutually recognised fact assures the security among them. The concept of energy security rests on a different assumption that the interlinked dependency quotient among all the stakeholders—the producer states, the transit states and the market states—is the guarantor of the effective functioning and sustainability of the energy chain. While competition is the key motivating factor in the first scenario, mutual dependence becomes the chief vector in the other one. In the process, energy security ensures economic security of a country, a region and, ultimately, the world. It may not be construed, thus, as an overambitious claim to deduce that energy security as a concept is based on another interpretation of the original MAD concept: Mutually Assured Dependence.

As no country is self-sufficient in meeting its own energy needs, mutual dependence becomes the key component for the energy strategy of any country to succeed on a long-term basis. Energy is so vital a commodity that it has both been used as a weapon to gain politico-economic leverage and also become one of the chief links for interdependence and cooperation between countries and regions, between allies and competitors. The growing trends towards energy cooperation, in different forms and at various levels, are evidence of different challenges, such as energy poverty, resource nationalism, balancing economic development with environmental sustainability, changing the nature of the global energy mix with a larger share for renewable energy resources, developing innovative technologies, e.g., commercially viable Carbon Capture and Storage (CCS) and Clean Coal Technology (CCT), and promoting energy efficiency, that the world is facing today and will face tomorrow. Global security, in its broadest sense, cannot afford to remain a victim of energy-insecurity and needs the assurance of mutual cooperative interdependence. In the post-Cold War context, the realisation of using energy as a strategic asset, not as a weapon, is not a choice, but becomes a necessity to provide the human civilisation with a new hope for survival. Significantly, the UN document *Our Common Future* has asserted that:

A safe, environmentally sound, and economically viable energy pathway that will sustain human progress into the distant future is clearly imperative. It is also possible. But it will require new dimensions of political will and institutional cooperation to achieve it.³⁵

Disclosure statement

No potential conflict of interest was reported by the author(s).

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