

Conceptualizing the Energy-Military Security Connection: Implications for Pakistan

Muhammad Afzal Baig*

Abstract: Security is a prime concern of every nation state. But, the concept of security is quite complex as it is difficult to determine its nature. The concept is debated as the security from whom? From states, groups, individuals, non-state actors or nature itself? A holistic concept of security, incorporates an infinite variety of securities: ranging from human security, non-military security and military security, non-traditional security, gender security, economic security, environmental security, food security, and of course, energy security, which is the main focus of this paper. Though, there is no agreed definition of energy security available in the literature, a somewhat acceptable definition of energy security is that 'its availability must be uninterrupted, in abundance and affordable.' An ideal energy security posture is a country's self-sufficiency in it. In spite of this ideal posture, it is argued that no country in the world can ensure its energy security without exercising its military security. Military force has always been used in the world to ensure uninterrupted, sufficient and affordable access of energy by the energy importers and also by the energy exporters to secure their sovereignty and protect their energy assets against any perceived threat. That is why there is a very close connection between the two concepts. Pakistan is struggling to meet its energy needs and also forced to employ its security forces to ensure the security of its energy installations, gas pipelines and the CPEC ventures, including a number of energy projects under its umbrella.

Keywords: Security, Energy, Energy Security, Military Security, Terrorism.

Introduction

The importance of energy security cannot be over-emphasized as it requires for human growth and development, which ultimately contributes to the economic progress of a country. Dilemma is that energy is available in limited quantity, but its demand is growing with the growth of human population. A country can be termed as energy secured, if it is energy rich (having self-sufficiency in hydrocarbons, nuclear or any other commodity required for power generation) either or can afford to ensure abundance and uninterrupted inflow of it from abroad. But, at the same time to ensure the uninterrupted availability of energy, the use of military or security forces has been in vogue since the World War I to date. The element of terrorism, piracy and the ferocity of the non-state actors in any form has enhanced the use of security forces in the realm of energy security manifold. Pakistan is energy starved that is why it is struggling hard to meet its minimum energy needs by importing oil,

* Col Muhammad Afzal Baig is a PhD scholar at the Department of Peace and Conflict Studies, National Defence University, Islamabad.

gas (in the form of LNG) and even coal by expanding huge sums of its hard-earned forex. In this scenario, this paper tries to elaborate the concept of energy security. It also determines whether energy security can be ensured without using military force or otherwise.

What is Security?

Security has always been a prime concern and the central issue in international politics. 'Each national government perceives its country as reasonably secure in the world community'.¹ Traditionally, 'it meant security of a state under attack from another state, which could result in war'², and consequently, would engage the armies of the two states against each other. Barry Buzan, defines security as a pursuit to get rid of the threat from outside and suggests that states and societies should muster up their strength from within, against the perceived forces of hostility. According to Buzan, "security is taken to be about the pursuit of freedom from threat and ability of states and societies to maintain their independent identity and their functional integrity against forces of change, which they see as hostile."³

Pragmatically, with the ever-increasing lethality of conventional weapons along with gradual induction of the Weapons of Mass Destruction (WMD) to military arsenals and introduction of new military doctrines, since the end of the cold war, security has become a serious concern among nation states. Moreover, it has become a contested concept. Security for whom; states, groups or individuals? Security from whom; states, non-state actors or nature itself? As the debate continues, there is an increasing acceptance of a broad, holistic understanding of the term that incorporates what is variously called comprehensive security, human security, non-military security, non-traditional security and so on. It is, thus, perfectly legitimate to speak of gender security, economic security, environmental security, food security, and of course, energy security.⁴

Connotation of Energy and Energy Security

Energy is required to fuel economic growth and human progress. Here, energy means hydrocarbons (oil, gas, coal), nuclear, renewables (hydel, solar, wind) and all other 'known sources' of power generation, which could help running the households as well as growing and expanding the economies of the world. But, once it is talked about the term 'energy security', there is not an agreed, single or a concrete definition available in the literature. According to Bernard D. Cole,⁵ Energy security is a simple phrase that describes complex issues. A widely accepted definition is 'the availability of energy at all times in various forms, in sufficient quantities and at affordable prices'. The phrase may be usefully broken down to encompass two lesser, but still, broad definitions of security. The first definition is most conveniently

verbalized as ‘military security’: protection or defence against attack by overt military means, sabotage or other media of physically constraining the availability and affordability of energy supplies encompassing piracy and terrorism.⁶ A second definition is more complex and difficult to appreciate: maintaining the availability and affordability of energy supplies. These two definitions are, respectively, the military and economic facets of a discussion of energy security. The security of energy resources has been a primary concern of mankind since fire first began to be used.⁷

The connotation of energy security, however, could vary from nation to nation and region to region. It could be different for energy rich nations and for energy starved nations or regions, or energy consuming/ demanding/importing countries and energy producing/supplying/exporting countries or regions. For instance, Saudi Arabia as an energy superpower or the Middle East as an energy-supplying region will view energy security entirely differently as compared to an energy-demanding nation, such as, China, India or Pakistan, or an energy-demanding region like South Asia.

Self-Sufficiency and Embargo as Security Threats

For a country, “the ideal energy security posture may be self-sufficiency in fossil energy, but it is possible that one country’s self-sufficient nuclear program may be another’s security threat.”⁸ The Indo-US Civilian Nuclear Deal can be quoted as a classic example here, which is viewed as a serious threat to its security by Pakistan. However, “an importing country is primarily concerned with the security of its energy supplies; each importing country may view foreign energy supplies as more or less vulnerable to interruption.”⁹ Hence, for an energy importing country, energy security may be defined as “availability of uninterrupted, abundant and cheap energy supplies.”¹⁰ But, all these three aspects of energy security (its uninterrupted flow, its abundance, and its affordable price) given in this definition could seriously be threatened in case an energy embargo is imposed on a consumer country by a single supplier country or a group of suppliers, such as, the Organization of Petroleum Exporting Countries (OPEC). Embargo not only can interrupt or reduce abundance of supply, but can also increase the prices of energy. The Arab oil embargo on the US and against other supporters of the Israeli cause in 1973-74, as a result of the Arab-Israel conflict, is the most apposite example in this regard. Similarly, in the wake of the Indo-US Civilian Nuclear Deal of July 2006, India has to rely on the US for supply of uranium, which could be stopped or hindered by any politically motivated nuclear fuel supply interruptions.

Energy Security as National Sovereignty

An energy exporting country, on the other hand, may view energy security as 'national sovereignty over its energy resources'.¹¹ Here, national sovereignty has two dimensions: security against military intervention to deprive a nation of control over its energy resources; and freedom from external interference in national decision-making regarding exploitation of those resources.¹² As far as, the first dimension is concerned, Iraqi invasion of Kuwait on August 2, 1990, can be referred as a suitable case here. The goal was not only conquest of a sovereign state, but also the capture of its riches.¹³ The fear of deprivation of a nation's energy resources, once again, proved true, when "the US-led invasion of Iraq in March 2003, not only disrupted international oil supplies, but created price and market fluctuations that continue to have a deep impact on the global economy and to pose particular challenges for world's energy producers."¹⁴

For explaining the second dimension, let us take the example of Mexico; at 26.9 billion barrels, Mexico's proven oil reserves are the third largest in the Western hemisphere after Venezuela (77.7 billion) and the USA (30.4 billion).¹⁵ About the US interference in Mexico's decision-making regarding its oil production, a Mexican, Dr Jose Alberro, at the University of California says, "the USA wants Mexico to increase oil production to decrease its Middle East exposure".¹⁶ Moreover, according to Alberro, the US, under its own interest, pressured Mexico that "opening the energy sector to foreign investment was in Mexico's self-interest."¹⁷ It is, as a matter of fact, contrary to the Mexican constitution, which "blocks ownership participation in oil and gas fields by foreign entities and Mexico's oil workers unions are heavily set against any foreign participation."¹⁸ Hence, "the recognition and observance of national sovereignty over natural resources seem to be necessary security conditions for every country."¹⁹

Demand Security vs Supply Security

An exporter's security will also depend on the extent of its energy resource base²⁰, and yet, most importantly a guaranteed access to foreign markets' and 'security of demand.'²¹ The same, in case of Iraq, for instance, was denied by the UN in the 1990s, when the "sanctions were imposed on Iraqi exports after the Gulf War. Oil production was limited to 0.5-0.6 mbpd (million barrels per day) for internal consumption only",²² which, as a matter of fact, "averaged about 2.4 mbpd in the 1980s."²³ The fact, therefore, cannot be denied that importance of demand of security to an energy exporting country carries the same weightage as providing (supply) security to an energy-importing country. This fact can possibly create mutually beneficial energy security equilibrium between the importers and the exporters. For instance, Pakistan, India and Iran, all three stake holders of the

proposed Iran-Pakistan-India (IPI) Gas Pipeline (had it not been shelved) could have been equal beneficiary of the proposed project as they had successfully concluded an agreement, based on the overlapping areas of demand-security and supply-security. In terms of demand and supply, energy security, or security of supply, is “the ability to supply energy to meet demand at a price that protects economic growth.”²⁴ Hence, the centrepiece of the debate is that the consumers view energy security as ‘security of supply’, and the producers as ‘security of demand’. The answer, of course, is that energy security is both with stability and reliability as common denominators in a world that is more interconnected than it has been ever before. Both producers and consumers alike want stability in prices, and both want reliability, consumers on the supply side, and producers on the market side. In fact, “balancing the needs of producers and consumers is at the heart of global energy security, and it is one of the great challenges of the time.”²⁵

Use of Force to Ensure Energy Security as a Legitimate Option

The concept of energy security, contrary to other non-military concepts of security, has had the most direct connection with the narrow, military concept of security.²⁶ Throughout the history of mankind, the foundations of civilizations have rested heavily on their energy supplies. Ancient Egypt under the Pharaohs, Athenian Greece under democracy, and the American South before the Civil War depended on human slaves as a primary energy resource.²⁷ Dependence on energy supply, therefore, is not a novel idea. It has, however, taken a new phenomenal shape ever since the mankind kicked off the industrial revolution.²⁸ The Industrial Revolution of the seventeenth and eighteenth centuries, which initially took place in Europe and America, was powered with supplies of coal, and subsequently, with discoveries of hydrocarbons as new sources of energy, such as, oil, gas and other petroleum products in the nineteenth and twentieth centuries. But, pragmatically, each source of energy is limited, therefore, human society’s mounting demand for energy supplies, on one hand, gradually diversified the sources of energy varying from coal, oil, and gas to hydroelectricity, nuclear, solar, wave, wind power, etc. (Energy from alcohol, gaseous wastes, and most importantly, the power of hydrogen might become the sources of energy supplies to mankind in the 21st century).²⁹

The fear or concern that how to ensure the continuous supplies of the desired quantities and categories of energy for energy consumers, on the other hand, often led to the use of the military force. This aspect of the energy security concept brings it closer to the military concept of security. That is why, when the British Royal Navy, a symbol of Britain’s Imperial Power, started replacing coal with oil in 1913, it had “to depend on distant and insecure oil supplies from Persia, as Iran was then known.”³⁰ Churchill, the then British Admiral, decided that Britain would have to

base its naval supremacy on oil and, thereupon, committed himself with all his driving energy and enthusiasm to achieve that objective.³¹ In the same context, it is significant to learn that the former French Prime Minister Clemenceau once stated, “a drop of oil is equal to a drop of our soldier’s blood.”³² It proves that the use of force was considered as a legitimate option and the world community had recognized the importance of energy security even in those years.³³

During the WWI, the supremacy of oil was clearly established as an ‘element of power’ in the battlefields, especially when, the internal combustion machine overtook the horse and the coal powered locomotive.³⁴ Throughout the course of the WWII, oil played, not only the central, but also an enhanced and decisive role as far as the outcomes of war were concerned, both in the Far East as well as in the European Theatres. Japanese attacked the Pearl Harbour to protect their flank as they grabbed for the petroleum resources of the East Indies. Among Hitler’s most important strategic objectives in the invasion of Soviet Union, was the capture of the oilfields in the Caucasus.³⁵

The Conservation Theory

Despite the fact that America’s predominance on oil, proved decisiveness at the end of the WWI in the US, the fear about the adequacy of its own oil reserves,³⁶ and during the WWII, the belief that the US might run out of oil,³⁷ resulted in the so-called Conservation Theory. According to which, the US would need to acquire and develop sources of oil outside the country in order to conserve the nation’s domestic reserves for the future, possibly for a future war.³⁸ In pursuance of the same theory, in December 1943, the Petroleum Industry War Council, a broad based advisory group, which linked US government’s war time Petroleum Administration to the oil industry, recommended that the national policy of the US should aim at securing for American nationals access to world’s oil resources.³⁹ Subsequently, in February 1945, shortly after the Yalta Conference, President Roosevelt met with King Abdul Aziz Ibn Saud on a US warship in the Suez Canal, and it is generally believed that he offered him military support to put down any external attack or internal challenge to King’s rule, in return for privileged access to the Kingdom’s vast oil resources.⁴⁰ The Suez Crisis of 1956, which emerged as a result of Israeli attack (backed by France and England) of October 29 on Egypt, was as much about oil as anything else.⁴¹

Carter Doctrine and Creation of US Central Command (CENTCOM)

The Carter Doctrine was enunciated as a declaration in the wake of the two ‘oil shocks’ of 1973 (when Saudi-led OPEC imposed oil embargo due to overt American support to Israel against the Arabs) and of 1979 (caused by the Islamic Revolution of Iran that resulted in unprecedented oil price rise up to US\$80 per barrel followed by

the interruption of oil supplies due to outbreak of the Iran-Iraq War in October 1980). On 23 January 1980, in his annual State of the Union address, Carter announced that any “attempt by any outside force to gain control of the Persian Gulf Region will be regarded as an assault on the vital interests of the United States of America, and such an assault will be repelled by any means necessary, including military force.”⁴² The declaration was backed by the creation of an ‘110,000-strong, fast-moving, hard-hitting Rapid Reaction Force’ based in the US, but on high alert for any necessary military intervention in the Gulf. George W Bush’s Iraq War, as a matter of fact, is the culmination of the Carter Doctrine to ensure perpetual domination of the Persian Gulf and its prolific oil fields.⁴³

Significantly, the Carter Doctrine stretches far beyond the Persian Gulf. It is the blueprint for the extension of US military power to the world’s other oil-producing regions. Just as existing US policy calls for the use of military force to protect the flow of oil from the Persian Gulf, an extended Carter Doctrine now justifies similar action in the Caspian Sea region, Latin America, and the West coast of Africa. Slowly, but surely, the US military is being converted into a global oil-protection service.⁴⁴ It will be interesting to note that the implementation of this doctrine was accelerated in 1983, when Reagan transformed the joint task force into the US Central Command (CENTCOM), giving it the status of a major unified combat force like the US European Command, the Pacific Command, and the Southern Command. CENTCOM’s principal mission is to protect the flow of oil from the Persian Gulf to the US and American allies around the world.⁴⁵

In addition to protect the flow and transportation of oil from the Persian Gulf, the CENTCOM forces have also been given the responsibility for the protection of energy supplies in Central Asia and the Caspian region.⁴⁶ Not only this, the forces from the European Command are helping to protect oil pipelines in the Republic of Georgia and oil-rich waters off the coast of Africa. Forces from the Pacific Command guard the oil lanes of the South China Sea, and troops from the Southern Command are helping to protect pipelines in Colombia.⁴⁷ Particularly, US relentless drive to secure energy by the use of military force in the Central Asian region is termed as the New Great Game.⁴⁸ All these endeavours and the US projection of power and its extensive military presence around the global energy rich regions to secure energy supplies by military means demonstrate the energy-military nexus in the security field.⁴⁹

Piracy and Terrorism Factors

It is hard to debate that pirates, terrorist outfits, insurgents and other non-state actors are involved in sabotaging and destroying the energy-related targets. Mostly,

pirates make the cargo and energy laden ship their chief targets for ransom, while these ships pass through the narrow or choke points of the sea lanes of Pacific and Indian oceans. Significantly, the Indian and Pacific oceans are the world's main medium for the transportation of energy, primarily, oil and gas from the resource periphery comprising the Middle East and parts of Africa to the 'demand heartland' comprising mainly India, China, Japan and South Korea.⁵⁰ It will be interesting to note that more than 100,000 commercial vessels transit through the Indian Ocean Region (IOR) each year, and crude oil is the biggest single cargo in terms of volume through these sea lanes of communication (SOLCs), which are viewed by energy-dependent states as their very lifelines.

At its narrowest point, the Strait of Hormuz is only 21 miles (33.7 kilometres) wide. The Strait of Malacca is only 1.6 miles (2.7 kilometres) wide in the Phillips Channel, creating a natural bottleneck as well as potential for collusion, grounding or oil spills,⁵¹ thus, making the ships most vulnerable to the pirate's attack, because at this choke point, the ships pass through at a very slow speed to avoid any sort of accidents. As a matter of fact, the Indian and Pacific oceans waterways, in particular, a whole range of security threats to energy and trade flows from maritime terrorism, piracy, arms and drugs trafficking to conflict within energy exporting states and instability in fragile states.⁵² Therefore, the blockage of a choke point, even temporarily, can lead to substantial increases in total energy-prices as well as to severe energy crisis.⁵³ Pirate activities have become extremely active off the African coast since the early 2000s. Vessels of many countries including China have been frequently attacked by pirates on high seas. In 2008 alone, more than 100 ships were attacked by Somali pirates and over 240 sailors were held for ransom.⁵⁴

A Chinese vessel carrying coal and 25 crew was hijacked by Somali pirates in October 2009, and was held for over two months before being released with a reported ransom payment from China. In December 2008, China sent two warships to the Gulf of Aden and waters of the Somali coast to counter piracy and defend China's commercial ships passing through the region. The US welcomed China's move and expressed its interest to cooperate with China. Admiral Timothy Keating, head of the US Pacific Command, held out hopes for a revival in military exchanges: "I hope the Chinese do send ships to the Gulf of Aden and we will work closely with them."⁵⁵

Keeping in view the growing instability and increased terrorist activities in the Middle East, Mr Ali Larijani, the Speaker of Iranian Parliament (*Majlis*) has rightly pointed out that the factor of extremism is a great and common concern for both, the energy exporting as well as energy importing countries. According to Ali Larijani, "Energy importers and exporters are concerned about their future due to the

fact that the security crisis in the Middle East has never been this severe since the end of Second World War."⁵⁶ Emphasizing the growing threat of extremism, he asserted, "Security issues have overshadowed energy resources, energy production and the energy industry in the region."⁵⁷

In the given environment, being conduits of energy, the gas pipelines have assumed a critical role in international security affairs. American soldiers are now helping to defend such conduits against attacks in Iraq, Colombia and Georgia. President George W. Bush had authorized the deployment of US military personnel in Georgia to help train the Georgian Troops that could be responsible for protecting the Baku – Tbilisi–Ceyhan (BTC) and the Baku–Tbilisi–Erzurum (BTC) lines.⁵⁸ On the other hand, pipeline protection has become a major concern for Saudi Arabia, Sudan, Algeria, Nigeria, Burma and other strife-torn producers. In the Middle East, Qatar is also struggling hard to protect its energy installation. Located roughly 80 kilometres North of Doha, Ras Laffan in Qatar is heavily guarded industrial city producing liquefied gas and gas to liquids.⁵⁹ The Qatar authorities taking all possible measures against unexpected sabotage activities.

Against the contextual of turmoil, during the Arab Spring in 2011, Saudi Arabia began to deploy a 35,000-strong specialized protection force to guard crude processing plants Oil fields and pipelines.⁶⁰ In Nigeria, over 200 incidences of crude oil and gas pipeline vandalism were recorded in six months till February 2015, according to the Nigerian Federal Government. Until the Arab spring, Israel was a buyer of Egyptian gas through a spur connected to the Arab gas pipeline via the Sinai. The pipeline was deeply unpopular in Egypt. After the overthrow of the Hosni Mubarak government, the infrastructure was repeatedly attacked, cutting the flows both to Israel and to Jordan, another recipient of the Egyptian gas. In Jan 2013, militants raided Algeria's Amenas gas field, sparking a crisis that ended with deaths of at least 37 hostages.⁶¹ The Islamic State of Iraq and Syria (ISIS) is in control of gas fields in the central Syria, and has left the gas stranded. It is reported to have blown up a gas pipeline from Eastern Syria to the suburbs of Damascus that generated electricity and provided heating in homes. The instances quoted here do not include all the acts in all parts of the world that have happened. They are only examples of the trend and expanse of the phenomenon.

The Indian government went a step ahead, and while, adopting legal steps, the Indian parliament has passed the Petroleum and Minerals Pipelines (Acquisition of Right of User in Land) Amendment Bill 2010, that provides for a minimum of 10-year rigorous imprisonment for acts of terrorism, and makes such activities punishable by even death sentence. Moreover, the Gas Authority of India Limited (GAIL) has decided to deploy drones to guard pipelines to raise safety standards

after a major explosion in a gas pipelines.⁶² What is extremely alarming is the cyber-attacks on the computer networks of gas pipeline systems in the US. The US Congress passed the Cyber Security Act in February 2012 specifying threats of interruption to the life-sustaining services, including energy, water, transportation, emergency services or food. It asked for annual reports from the Department of Homeland Security, summarizing major cyber incidents and aggregate statistics on the number of breaches of networks of executive agencies.⁶³

Implications for Pakistan

Pakistan is a country facing acute shortage of energy as well as an energy importing country. An ideal energy security posture, as already discussed, could be self-sufficiency in hydrocarbons, nuclear and other renewable energy resources. But, unfortunately, Pakistan is not self-sufficient in any form of energy resources rather extremely dependent on imported energy, and this dependency is growing with the increasing demand of energy. The current energy scenario does not show a rosy picture of Pakistan as it is struggling hard to overcome its huge demand-supply gaps of electricity, gas, oil, high quality coal and other power generating resources. Predominantly, electricity supply-demand gap (which remains at an average shortage of 4000-MW throughout the year)⁶⁴ has touched the highest 7000-MW in May 2017.⁶⁵ However, with advent of CPEC energy projects, load-shedding has been gradually reduced and government officials believe that Pakistan shall be able to get rid of long hour's power outages by the mid-2018, with the accomplishment of the priority energy projects under the CPEC, which will add around 10400-MW electricity by then.⁶⁶ On the whole, energy shortage has adversely affected all sectors of the economy resulting in an annual loss of up to three per cent of the Gross Domestic Product (GDP).⁶⁷ Import of 1000-MW of electricity from the Central Asia South Asia (CASA) project is still a dream and will take time to come true.

Pakistan's indigenous energy resources are limited. The existing oil and gas producing fields are on continuous depletion and the new discoveries are not making any significant addition to domestic production.⁶⁸ Pakistan's indigenous crude oil production is meeting just 15% of daily requirement, rest 85% of crude oil and petroleum products are imported at a cost of US\$12 billion per annum.⁶⁹ The situation has become even critical as the most awaited Iran-Pakistan (IP), and Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipelines are not likely to be materialized in near future due to international politics, financial constraints and turmoil in the region. To lessen the gas demand-supply gap, Pakistan is importing Liquefied Natural Gas (LNG). According to Shahid Khaqan Abbasi, ex-Minister for Petroleum and Natural Resources, the country's current natural gas production is around 4.0 billion cubic feet per day (bcf/day), while the demand has already

crossed 8.0 bcf/day mark.⁷⁰ Pakistan will be importing a cumulative of 3.0 billion cubic feet per day of LNG by 2018 to bridge the demand supply gap.⁷¹ It is important to note that the LNG import bill was US\$ 579 million in 2015-16. In the first 10 months of 2015-16, LNG imports were worth US\$443 million. They doubled to US\$965 million in the same period of the current fiscal year, which suggests the annual import bill may touch US\$ 1 billion.⁷² Hence, the current energy scenario reveals that Pakistan is mainly dependent on imported energy.

It is true that Pakistan is energy hungry, but not an energy giant, means it does not have a large appetite for energy consumption. Pakistan's total energy supplies (TES) are just over 70-mtoe (million tons of oil equivalent)⁷³ in the year 2014-15, as compared to those of India 775-mtoe and China's 3000-mtoe in the year 2015-16.⁷⁴ Therefore, at first place, for Pakistan's energy transportations or shipments, being small and can, conveniently, be managed. Secondly, these shipments do not have to traverse the long sea-lanes as its major suppliers are Saudi Arabia for oil and Qatar for LNG. Rest of the oil is imported from Iran and Kuwait. All four countries are located in the vicinity just across the Arabian Sea/Persian Gulf. But, significantly, Pakistan does have the sensitive and vast energy-related installations and infrastructures, which can be enumerated as under:

- Nuclear power installations: KANUPP (137 MW), Chashma-I (C-1), Chashma-2(C-2), 325-MW each; Chashma-3 (C-3) and Chashma-4 (C-4), 340-MW each, and in Karachi K-2 and K-3 of 1100-MW each, are also in progress being managed by the Atomic Energy Commission of Pakistan.⁷⁵
- Oil fields and natural gas installations: Well laid out and a vast pipeline infrastructure, gas wells, compressor plants, distribution units being managed by OGDCL, PPI (Pakistan Petroleum Ltd), Sui Southern and Sui Northern Companies.
- WAPDA installations and high-power transmission lines.
- Gwadar Port, CPEC and the energy plans are completed and operational, and in progress under the CPEC including hydel, coal, solar and wind energy projects.

At the same time, Pakistan is one of the top most terrorist affected countries of the world. According to the Global Terrorism Index report in 2015, Pakistan was ranked fourth among countries most affected by terrorism.⁷⁶ In 2016, Pakistan, along with Afghanistan and Syria, is among the top five countries most hit by terrorism.⁷⁷ Since most of the energy related installations and infrastructures are located in Balochistan, and then in Sind, it is extremely alarming to know that, in 2016 alone, in Balochistan, the terrorists launched 151 attacks in which 412 persons got killed and 702 injured including people working on CPEC

projects. In Sui area of District Dera Bugti, Balochistan, according to a senior security official in 2010, five wells of gas were blown up by the miscreants. In terms of money, the loss of one well costs worth 2 billion Rupees, and rupturing of one gas pipeline costs 30 million Rupees to the public exchequer. Table given below shows the number of terrorist attacks launched to rupture the transmission gas pipelines of 18”/12” in Sind and Balochistan.

Table 1: Transmission Gas Pipeline Rupture Cases of Pipeline (2010 till date)

Year	Shikarpur (Incidents)	Quetta (Incidents)	Sibi (Incidents)	Total (Incidents)
2010-11	3	1	2	6
2011-12		2		2
2012-13	2			2
2013-14		2	4	6
2014-15				
2015-16		2	2	4
2016-17		1		1
G. Total				21

Source: Sui Southern Gas Company

The data shows that 21 attacks were launched to rupture the gas transmission pipelines, thus, hindering the uninterrupted supply of gas to the consumers. Security forces employed to guard energy related installations/pipelines, include the armed personnel of Frontier Corps (FC), Defence Services Guards (DSG) and Rangers. ‘The government has deployed 15,000 military personnel, as part of the Special Security Division (SSD), and Maritime Security Force (MSF) to protect projects under the umbrella of the CPEC. Both forces will work under the Interior Ministry, in coordination with the safety of locals and foreigners working on CPEC projects.’⁷⁸

The SSD had been deployed in six zones from Gwadar to Gilgit-Baltistan, including all four provinces and Azad Jammu and Kashmir (AJK). The SSD is responsible for the security of the area within a 5-kms radius of CPEC-related projects, while the MSF safeguards the Gwadar Port and other coastal areas of the country.⁷⁹ Both the SSD and MSF were formed in view of possible threat to the CPEC and the foreign nationals, presently, engaged in infrastructure and power generation projects being commissioned under its umbrella. Both forces are equipped with state-of-the art weapons, equipment and vehicles.⁸⁰ All these developments further strengthen the argument that in case of Pakistan too, there is a very close connection between energy-military security.

Conclusion

This article mainly tried to explain and analyze the relation between the concept of energy security and military security. It has been learnt that the concern how to ensure the continuous supplies of the desired quantities and categories for every energy consumer and every energy producer undoubtedly remains the biggest concern. It has also been observed that in order to meet the energy security, the use of military force has always been considered as a legitimate option, especially by big powers, such as, British and the US. The development of the Conservation theory and the application of the Carter Doctrine remained instrumental in permanently dominating the Persian Gulf and its productive oil fields and even beyond that.

By applying the realist approach to protect the continuous flow and facilitate the transportation of oil from the Persian Gulf to Central Asia and the Caspian region, the US CENTCOM force was assigned the responsibility for the protection of energy supplies. The oil rich countries of the Middle East have been using their military force to protect their assets from the eminent threat of terrorists. China, however, behaved like a smart power and carried out successful operations against the Somali pirates to secure its energy flow through Indian Ocean sea lanes. Pakistan has a small appetite for energy vis-à-vis its giant neighbors, but is forced to use its security apparatus against terrorist activities to ensure the continuous supplies of gas and protect its high-power transmission lines, particularly in Sind and Balochistan. Moreover, Pakistan has employed a full-fledged Special Security Division and Maritime Security Force to ensure the security of CPEC projects and its associated energy projects. It is, therefore, established that energy security is hard to ensure without military security.

Endnotes

¹ Mason Willrich, *Energy and World Politics*, (New York: The Free Press, 1978), 65.

² Dietl, Gulshan. "New Threats to Oil and Gas in West Asia: Issues in India's Energy Security", *Strategic Analysis* 28, no.3 (Jul-Sep 2004), 373.

³ Barry Buzan, "New Patterns of Global Security in the Twenty-First Century", *International Affairs* 67, no. 3 (Jul., 1991): 431, doi: 10.2307/2621945.

⁴ *Ibid.*, 373-374.

⁵ Bernard D. Cole (Captain US navy retired) is professor of International History at the International War College in Washington D. C., where he concentrates on the Chinese military and Asian energy issues.

⁶ Bernard D. Cole, *Sea Lanes and Pipelines: Energy Security in Asia* (New Delhi: Pentagon Press, 2008), 3.

⁷ Ibid.

⁸ Mason Willrich, *Energy and World Politics*, 66.

⁹ Ibid.

¹⁰ Douglass R Bohi and Milton Russel, *US Energy policy: Alternatives for Security*, (Baltimore: The John Hopkins University Press, 1975), 5-6.

¹¹ Willrich, *Energy and World Politics*, 66.

¹² Ibid., 95.

¹³ Daniel Yergin, *The Prize: The Epic Quest for Oil, Money and Power*, (New York: Simon & Schuster, 1992), 12.

¹⁴ *Gulf Oil in the Aftermath of the Iraq War: Strategies and Policies*, (Abu Dhabi: The Emirates Center for Strategic Studies and Research, 2005), xvii.

¹⁵ Ian Rutledge, *Addicted to Oil: America's Relentless Drive for Energy Security*, (New York: I. B. Taurus, 2005), 98.

¹⁶ Jose Alberro, *The Politics of Petroleum: Outline of Remarks by Jose Alberro*, Center for Latin American Studies, University of California, Berkeley, September 2002, <http://clasarchive.berkeley.edu/Events/fall2002/09-12-02-Alberroetal/alberreroremarks.html>, accessed May 17, 2017.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Willrich, *Energy and World Politics*, 95.

²⁰ Ibid.

²¹ Ibid.

²² *Gulf Oil in the Aftermath of the Iraq War*, 92.

²³ Ibid.

²⁴ Willrich, *Energy and World Politics*, 1.

²⁵ Ibid.

²⁶ See Dietl, Gulshan. "New Threats to Oil and Gas in West Asia: Issues in India's Energy Security", 374

²⁷ Willrich, *Energy and World Politics*, 1.

²⁸ See Speech of General Xiong Guangkai, Chairman China Institute for International Strategic Studies (CIIS), at the international Symposium held in Beijing, under the theme of "Energy Security: China and the World" on May 24th, 2006, published in *International Strategic Studies* 3 (2006): 1.

²⁹ Ibid., 1.

³⁰ Daniel Yergin, *The Prize: The Epic Quest for Oil, Money and Power*, 12.

³¹ Ibid.

³² Speech of General Xiong Guangkai, 1.

³³ Ibid.

³⁴ Daniel Yergin, 13.

³⁵ Ibid.

³⁶ Ian Rutledge, 36.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid., 30-31.

⁴¹ Daniel Yergin, 14.

⁴² See Jimmy Carter, "The State of the Union Address Delivered Before a Joint Session of the Congress", January 23rd, 1980, Public Papers of the President, American Presidency Project, available at <http://www.presidency.uscb.edu/ws/index.php?pid=33079&st>, last accessed on 21 August, 2017.

⁴³ See Michael T. Kiare, "The Carter Doctrine Goes Global: Persian Gulf Oil Policy", published in "The Progress Magazine", December 2004, available at <http://www.thirdworldtraveller.com/index.html>, accessed August 14, 2017.

⁴⁴ See Lutz Kleveman, "Oil and the New Great Game", published in "The Nation Magazine", February 2004, available at http://www.thirdworldtraveller.com/Oilwatch/Oil_New_Great_Game.html, accessed July 17, 2007.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ See for details at <http://www.geocities.com/americanpresidency.net/1980.htm>, accessed July 12, 2017.

⁵⁰ Mohan Malik, ed., *Maritime Security in the Indo-Pacific: Perspectives from China, India and the United States*, (London: Rowman and Littlefield, 2014), 3.

⁵¹ Ibid.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Zhiqun Zhu, *China's New Diplomacy: Rationale, strategies and Significance*, 2nd ed., (Farnham: Ashgate Publishing Company, 2013), 41.

⁵⁵ Ibid., 42.

⁵⁶ Ali Larijani, "Terrorism Jeopardizing Energy Security", *Financial Tribune* Oct 22, 2015 at <https://financialtribune.com/articles/national/28601/terrorism-jeopardizes-energy-security>, accessed August 30, 2017.

⁵⁷ Ibid.

⁵⁸ Gulshan Dietl, *India and the Global Game of Gas Pipelines*, (New York: Routledge, 2017), 48.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ *Dawn* Karachi April 3, 2016.

⁶⁵ *Dawn* Karachi May 8, 2016.

⁶⁶ <http://www.cpecinfo.com/energy-generation>, accessed July 7, 2017.

⁶⁷ Pakistan's 11th Five Year Plan (2013-18), 203.

⁶⁸ *Monitoring and Evaluation Report* (July 2013 – March 2017), published by Government of Pakistan Ministry of Petroleum and Natural Resources.

⁶⁹ *Pakistan Energy Year Book 20015*, 1.

⁷⁰ *The News*, Karachi October 25, 2016

⁷¹ Ibid.

⁷² *Dawn*, Karachi June 4, 2017.

⁷³ *Pakistan Energy Year Book* 2016.

⁷⁴ *World Energy Outlook*, 2016.

⁷⁵ <http://www.paec.gov.pk/NuclearPower/>, accessed August 25, 2017.

⁷⁶ Institute of Economics and Peace, "Global Terrorism Index 2016: Measuring and understanding the impact of terrorism," <http://economicsandpeace.org/wp-content/uploads/2016/11/Global-Terrorism-Index2016.2.pdf>, accessed, June 25, 2017.

⁷⁷ <https://tribune.com.pk/story/1233046/pakistan-among-top-five-countries-hit-terrorism-report/>, accessed June 25, 2017.

⁷⁸ *Dawn*, Karachi February 21, 2017.

⁷⁹ *Ibid.*

⁸⁰ *Ibid.*