

## **Implications of Nuclear Power Programs and Nuclear Threats in the Middle East\***

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**Abstract:** The debate about the costs and benefits of nuclear power is not a new phenomenon. The concerns over the climate change and the possibility of nuclear power as a solution has renewed interest in this discussion. I will briefly examine the new demand for energy security in the oil-rich Middle East based on the economic reasoning that since oil and gas resources will eventually be depleted, these states should invest in national nuclear programs to satisfy domestic energy needs and ensure their energy security in the future. Yet there is a fear as well as promise concerning the use of nuclear energy. The advocates view nuclear power as a symbol of ground-breaking change and a promise of a fresh hope for sustainable development. The opponents fear that the increase in the number of nuclear reactors in the region would become a source of instability. First, this paper outlines the fears and hopes expressed concerning the use of nuclear power. Then, I will conclude with a discussion of policy recommendations for dealing with recurrent nuclear mayhem in the Middle East.

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\* Views expressed in this paper are of the author, without any indication or implication for the current policy positions of the Islamic Republic of Iran.

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## Introduction

There are a score of emerging nuclear powers in the Middle East due to the fact that there is a growing recognition among the region's policy-makers that the entire development plans will go down in flames because of the lack of long-term, comprehensive, and diversified energy planning to encourage and sustain economic development and growth. Nuclear power has become attractive as a necessary option for energy security.

The major suppliers of nuclear technology have not been able to resist the temptation of exporting to this new lucrative market, but they have simultaneously directed much criticism at attempts by Iran and the Arab states to invest in nuclear power programs. A range of concerns are expressed as we examine the recent studies of nuclear awakening of the Middle East. The critics feel that the chances of nuclear incidents and accidents increase. Another controversy with the nuclear reactors is the complicated issue of waste management. We have already seen the interstate repercussion of lack of safe underground repository for radioactive waste of a regional nuclear weapon state. Kabul government has accused Pakistan of dumping its nuclear waste in Afghan provinces of Helmand and Kandahar during the 1996-2001 Taliban rule. (Pakistani, 2008)

Some economists have argued that for the Middle Eastern countries nuclear power is an expensive choice, because they possess enormous fossil fuel reserves. There is a strong feeling among some critics that the world nuclear renaissance has the potential to increase the value of economic justification for developing nations to divert scarce resources to nuclear project at the expense of other socio-economic development programs. There is also the likelihood for things to run out of control, if the precarious international security system changes when the nuclear weapons aspirants gain access to sensitive dual-use technology.

Although some experts (e.g., Salama and Weber, 2006; El Hokayem and Lagrenzi, 2006) believe that the Middle Eastern states have become interested in nuclear reactors because the international community has been incapable of putting a stop to Iran's nuclear ambition, my judgment is that this is just the sort of situation in which

western commentators do not look at the large picture. Instead of concentrating on Iran's actions since 2003 as the driving force for the nuclear resurgence in the region, these analysts should look at the refusal of the nuclear weapon states to honor their NPT commitment to disarm as well as the tendency of turning a blind eye to Israel's blatant attempt to keep its nuclear monopoly for an explanation of the new developments in the Middle East. The subject of Israeli nuclear arsenal is raised here because the regional states consider it as an indication of the double standards which has made a substantial dent in the credibility of the nuclear non-proliferation regime. It could also be 'the straw that breaks the camel's back' at the 8<sup>th</sup> NPT Review Conference in 2010, given that there has been no progress since the May 2005 Review Conference which once more called for Israel along with India and Pakistan to sign the NPT as non-nuclear weapon states promptly and unreservedly.

In any discussion of nuclear power in the Middle East, it is important to analyze the implications of security threats associated with nuclear proliferation and Israel's approach to nuclear weapons acquisition, characterized with secret development, and a policy of ambiguity and deception. A wide range of questions have remained unanswered: Why do the great powers deny the destabilizing nuclear weapon capabilities of Israel, and only focus on Iran's nuclear enrichment program? Why have the Arab leaders and the great powers shown contradictory attitudes toward the region's nuclear programs? What is the rationale behind the opposition to the use of nuclear power in the region?

It is high time for the western governments to acknowledge that the leaders of the developing world are capable of thinking for themselves and act independently and purposefully. In the second half of the 20<sup>th</sup> century, the ability of the OPEC members to act out of reason and based on their national interest might have created obstacles in the way of the great power competition to exploit the world's oil resources for their own development. Beyond a shadow of a doubt, Iran played the major role in the wave of oil nationalization in the Middle East. Prominent Iranian political elites believe that Iran is now at the forefront of the developing countries' struggle with the

West to gain access to nuclear technology for peaceful purposes. Because of this worthy cause, referring Iran's dossier to the Security Council and imposition of sanctions have not dampened its enthusiasm for the expansion of Iranian nuclear reactor program.

Instead of portraying Iran as the one and only architect of the Middle Eastern race to construct nuclear power plants (hereafter abbreviated as NPP), we should pay attention to at least three sets of issues which continue to have tremendous impact on the nuclearization of the region: First, most Middle Easterners are unhappy with the policies of the UK and the US as the two major powers militarily involved in the region. The Bush Administration has brought the US nuclear capable forces to the Middle East, and its nuclear targeting policies as well as its insistence on an enhanced nuclear deterrence have a significant impact on the region's militarization. (Lotfian, 2007b)

The former U.S. secretary of defense and one-time director of the CIA, James Schlesinger argues that the existence of nuclear weapons has had a great impact on post WWII history. He presents a well-known argument that "Had nuclear weapons not existed, or had President Truman been unwilling to demonstrate their use at Hiroshima and Nagasaki, the Japanese war would have continued, perhaps for a long time... America would have been far more bloodied; its combat losses would have been substantial." Accurately, he identifies nuclear weapons as instruments of power for the U.S. foreign policy makers: "America's willingness and ability to play so large an international role, particularly on the Eurasian continent, reflected the confidence that came from its exclusive possession of nuclear weapons." (Schlesinger, 1993: 7) It is not surprising that the other power contenders followed in the footsteps of the U.S. by gradually joining the privileged nuclear club. Instead of working toward nuclear disarmament, the nuclear weapon states have decided to keep their nuclear arsenals, and even in some cases have plans to expand and modernize their nuclear forces. It is time for the "civilized" world to end this nuclear madness. Many arms control experts believe that the nuclear-armed countries are doing nothing to devalue nuclear weapons. Second, the existence of the "secret" Israel's

nuclear arsenal is viewed as destabilizing by the other regional states. The subsequent concern is that the undeclared existence of a nuclear state might increase the danger of nuclear proliferation and arms races. The most worrisome aspect of the status quo is that as long as Israel holds on to its nuclear bombs, there is the danger that a conventional conflict might escalate into a nuclear war. Finally, the third set of factors is related to the determination of regional states to invest in nuclear power reactors for economic reasons. We have to realize that a large majority of regional advocates of nuclear power have no ulterior motive, and are not in favor of military use of nuclear technology.

### **Nuclear Power Reactors in the Developing World**

There is only one nuclear reactor in operation in Israel which is not offered to IAEA safeguards, and another one under construction in the Bushehr province of Iran. Turkey and Egypt have undertaken to revive their old NPP construction plans dating back to the 1960s and 1970s. This period was the nuclear power golden days when larger developing countries had become convinced that nuclear energy was their key to the industrialized world. Saudi Arabia and the UAE are among the regional states which are studying the viability of proposed NPP. Looking at the actual and projected nuclear power's share of electricity in countries around the world, we observe that the Middle East trails behind both developed and developing regions. Given the abundant oil and gas resources in the region and the fear of proliferation risks associated with nuclear activities, it is easy to understand the reason for the scant attention paid to nuclear energy.

As of 31 December 2006, there were 435 nuclear power reactors in operation and 29 reactors under construction in the world. (IAEA, 2007) In May 2008, the *World Nuclear Association* reported that the number of world operable nuclear reactors was 439, while there were 36 nuclear reactors under construction, 93 were planned, and 218 were proposed. (WNA, 2008) According to the IAEA's Power Reactor Information System (PRIS), the Group of Eight member states are at the top of the list of countries with nuclear reactors. With 104 reactors

in 2008, the U.S has almost 24% of the world operational nuclear reactors. It is followed by France with 59 operational reactors, Japan with 55 reactors, Russia with 31 reactors, UK with 19 reactors, Canada with 18 reactors, and Germany with 17 reactors. In the developing world, South Korea with 20 reactors in operation, India with 17 reactors, Ukraine with 15 reactors, Slovakia with 5 reactors made up the group of countries with nuclear power production capacity. Argentina, Brazil, Bulgaria, Mexico, Pakistan, South Africa each had 2 reactor units in operation as of May 2008. Armenia, Lithuania and Slovenia individually possess one operational nuclear plant. (IAEA, 2008a)

Of 30 countries relying on nuclear power for electricity generation, 14 were developing countries. These states with their nuclear share of electricity generations shown in the parentheses include Argentina (6.93%), Armenia (41.95%), Bulgaria (54.43%), Brazil (3.31%), India (2.62%), Lithuania (72.30%), Mexico (4.86%), Pakistan (2.74%), Slovakia (57.16%), Slovenia (40.26%), South Africa (4.41%), South Korea (38.64%), and Ukraine (47.53%). (IAEA, 2007) With a total of 361.39 TW(e).h nuclear electricity supplied (NES), the 14 developing countries accounted for only 13.6% of the world's total NES which was 2660.86 TW(e).h in 2006. About 86% of NES belonged to 16 industrial countries. (IAEA, 2008b)

In 2006, nuclear power reactors produced about 18.76% of the world's energy. (IAEA, 2007) Seventeen countries (i.e., France, Lithuania, Slovakia, Belgium, Ukraine, Sweden, Armenia, Slovenia, Switzerland, Hungary, South Korea, Bulgaria, Czech Republic, Finland, Japan, Germany, and U.S.) depended on nuclear power for at least 20% of their electricity generation in 2007. For Lithuania and France, nuclear shares in electricity generation were respectively about 76% and 65%. Nuclear power plants in 2007 represented 19.4% of the U.S. electricity generation capacity. (IAEA, 2008b) President Bush is an advocate of nuclear energy, and has called on Congress to promote research into the next generations of nuclear reactors and encourage investment in existing NPP.

Perhaps this is one the reason why the Atomic Energy Organization of Iran (AEOI) has announced that Iran plans to get 20%

of its electricity from nuclear power. (Ghorashi, 2007) If it makes sense for the U.S. as a major economic power with its significant oil resources to rely on nuclear energy to supply at least one-fifth of its total electricity, it should be wise for Iran to maintain the reliability of its electric power systems by doing the same. The Iranian government maintains that as many as 30 developing and developed countries are using nuclear power, and it is within Iran's rights to embark on peaceful use of nuclear energy. It is also a matter of pride for Iranians not to fall behind regional powers such as Argentina, Brazil, Mexico, India, Pakistan, South Africa and South Korea. (Lotfian, 2007b) With a population size of well over 65 million in 2007, Iran ranks 20<sup>th</sup> in the world; and 3<sup>rd</sup> in the Middle East after Egypt (with over 80 million) and Turkey (with about 71 million). Iran's total area of 1,648,000 sq km gives it a ranking of 17<sup>th</sup> in the world, and a rank of 4<sup>th</sup> in the Middle East after Algeria, Saudi Arabia and Libya. Iranian parliament has called for Iran with its large land mass and growing population to ensure its power position in the region and the world by attaining energy security.

### **Iran's Pursuit of Nuclear Power**

After the WW II, Iranians became interested in nationalization of Iran's oil industry which was controlled by foreign oil companies. It was not until 1951, when Prime Minister Mossadegh nationalized Anglo-Iranian Oil Company or as was later called British Petroleum. The price of this courageous act was the 1953 CIA and British intelligence planned coup d'état leading to the demise of his democratically elected government. Iran is the first Middle Eastern country which declared the nationalization of its oil industry; and thus became one of the first targets of the CIA covert operations in the region. In the minds of Iranian leaders, their insistence to have a self-reliant nuclear industry is similar to the resource nationalism of the 1950s. To them, the Iranians should continue to make determined efforts towards the achievement of the goal of reaping the economic benefits of peaceful application of nuclear energy. In 2007, Iran designated April 8 as the "national day of nuclear technology" in the

same manner that March 19 has been called the “national day of oil nationalization”.

Iran's government has promoted educational and research activities in science and technology and allocated significant resources to research on advanced technologies such as stem cell, information technology, nanotechnology, and biotechnology. It is ironic that U.S. President Bush influenced by the Christian Right declared war on science, and restricted federal funding for embryonic stem cell research. He restricted the U.S. National Institutes of Health funding for stem-cell research in February 2001, in an attempt to overturn the Democratic President Clinton's support for such research which is believed to be needed for treatment of many diseases including osteoarthritis and rheumatoid arthritis, burns, heart disease, Parkinson's and Alzheimer's diseases, spinal cord injury and other human illness. In a misleading statement in August 2001, Bush argued that “Embryonic stem cell research is at the leading edge of a series of moral hazards. The initial stem cell researcher was at first reluctant to begin his research, fearing it might be used for human cloning. Scientists have already cloned a sheep. Researchers are telling us the next step could be to clone human beings to create individual designer stem cells, essentially to grow another you, to be available in case you need another heart or lung or liver.” (The White House, 2001)

To satisfy his religious constituency who “helped put a Bible-believer in the White House”, Bush twice (in July 2006 and June 2007) used his veto power against a bill that would have allowed federally funded embryonic stem-cell research. The far-right evangelical Christian fundamentalists, *Do No Harm*: The coalition of Americans for Research Ethics; anti-abortionist Right-to-Life groups, and other conservative Christians oppose public funds being used for research on human embryo. Senator Hillary Clinton, the wife of the former President criticized Bush's decision to set aside science for political reasons by saying: “This is just one example of how the president puts ideology before science, politics before the needs of our families, just one more example of how out of touch with reality he and his party have become.” (Riechmann, 2007) The American public strongly

support this research which could become a political issue in the 2008 presidential election.

In contrast, the conservative Iranian authorities have permitted research centers to engage in molecular and genetic studies, cloning and animal reproduction research and the production of embryonic human stem cell. In September 1996, the biotechnologists in the Royan Institute's Esfahan campus announced the birth of the second cloned sheep in the country. (Royan Institute, 2008) The director of the International Affairs Department of the Institute, Reza Omani Samani said that "Iran is the only Middle Eastern state that has been able to clone a lamb." About the role of the Iranian religious authorities, he added that "We owe our stem cell development to the discernment of Supreme Leader Ayatollah Seyyed Ali Khamenei and Iran's ulema." (Leader's Insight, 2006)

A renewed source of pride for Iranians is their scientific achievements. The Academy of Sciences of I. R. Iran (*Farhangestan Oloom*) was established in 1988 with the goal of attaining scientific and cultural independence and promoting science and technology. Iranian Academy of Medical Sciences started its activities in 1990. Average Iranian families take pride in sending their sons and daughters to universities to become doctors and engineers. In 2003-2004 academic year, the number of students enrolled in Iranian public and private universities were 1,945,931, of which 1,000,101 (or 51.4 %) were female. About 50.1% of students were studying medicine, science and engineering. (I. R. Iran, Ministry of Science, 2004) The Iranian students frequently win awards and honors in International Science Olympiads in physics, mathematics, biology and other fields.

Iranian government wants to become the first country in the Middle East with an expanded nuclear power program, and has created a pool of talented scientists and technicians who are working in its nuclear facilities. Oil and gas resources are not only *economic* instruments of national power, but they could also be used as *political* tools to achieve foreign policy objectives. There is a strong sentiment among the Iranian leadership that they need to move fast on achieving their development plans, because it is only a matter of time before their oil production will be used up by domestic energy needs

of Iranian households, factories, office buildings and cars. Indeed for many years, Iran has been concerned with its rising domestic energy consumption and the decreasing oil exports.

Using ads on billboards and TV broadcast, the Iranian government has initiated a public awareness campaign aimed at promoting energy efficiency and conservation of scarce resources such as water, electricity and gasoline. In addition to the rationing of gasoline for the motorists and daily blackouts imposed on the households and industries during the summer months, there is a discussion of providing financial incentives to encourage less consumption of electricity. Increase in demand for petroleum products and need for more imports of gasoline have led to an assessment of the relative role of oil, natural gas, nuclear energy and renewable sources in Iran.

The antagonistic U.S. policy has created obstacles in the way of developing Iran's energy infrastructure, most notably its refining capacity and oil/gas pipelines. Although the anti-Iran sanctions were imposed in the 1990s, the Bush administration became more vulnerable to neoconservative hardliners opposed to making any concessions to Iran and even advocated military option. The recent problems with gasoline supply and shortages of electricity which will possibly lead to a degree of economic slowdown, has made the goal of achieving energy self-sufficiency more imperative. In the minds of certain Iranian leaders, if they abandon Iran's nuclear fuel cycle, it would be like cutting their own throats. With its skilled labor force, they argue, Iran will have the self-reliant capability to manage and operate its NPP, and even produce fissile material for civilian purposes.

The argument made in favor of the expansion of a civilian nuclear industry is that Iran is the 4<sup>th</sup> largest crude oil exporter, but it does not have enough oil refining capability on its soil. As a result, Iran has to import 40% of the 70 million liters of gasoline it needs for domestic consumption. Its world ranking is the second, following the U.S. as the largest importer of gasoline. The import of gasoline increased 4.7 times during 2000-2005 period. There are plans to develop new refineries to lower reliance on imported gasoline and jet

fuel for domestic consumption. (Ministry of Energy, 2008: 16) Importing gasoline is costly because the government subsidizes fuel.

Iran's nuclear reactor program has passed through many difficult twists and turns; and its nuclear industry is in its infancy, fragile and still dependent on foreign technology. The program started in the 1950s, and a small 5 megawatt research reactor was built in Tehran with the technical assistance of the United States in 1967. With the help of the rise in oil revenues in the early 1970s, the Shah was able to allow investment in costly reactor construction. By establishing the Atomic Energy Organization of Iran (AEOI), he tried to realize an ambitious goal to generate 23,000MW(e) from NPP. (Lotfian, 2007a) Iran signed a contract with West Germany's Kraftwerk Union for the construction of the first NPP in the Persian Gulf port city of Bushehr in 1974. After the overthrow of the monarchy in 1979, Iran's nuclear program was brought to a halt for five years.

The great powers were even distrustful of the nuclear aspirations of the pro-western Iranian monarch. The western intelligence organizations assumed that he had a secret plan to embark on a nuclear weapon program. The Iranian revolutionaries who overthrow the Shah's regime in 1979 were highly critical of his grandiose military modernization program. Immediately after the Revolution, they stopped the Bushehr reactor project. During the war with Iran, the Iraqi forces repeatedly bombarded the site with the goal of destroying the reactor. In 1995, Iran signed a contract with Russia to rebuild the Bushehr reactor and to provide Iran with nuclear technology and expertise. Since then, U.S. and Israel have been at the forefront of the campaign to draw attention to the possibility of Iran's access to Russian nuclear technology and its capability to develop a clandestine nuclear weapons program. In reaction to these accusations, the Iranian government officials have been emphasizing the fact that Iran has signed major international arms control and disarmament treaties (as shown in table 1), whereas Israel has not even signed the nuclear Non-Proliferation Treaty (NPT). (Lotfian, 2007a)

Table 1- Iran and Major Multilateral Arms Regulation and Disarmament Agreements and International Arms Control Treaties, as of March 2007

Treaty	Signature	Deposit
<b>Outer Space</b>	27 January 1967	
<b>BWC</b>	10 April 1972	22 August 1973
<b>NPT</b>	1 July 1968	2 February 1970
<b>Partial Test Ban</b>	8 August 1963	5 May 1964
<b>ENMOD*</b>	18 May 1977	--
<b>Sea-Bed</b>	11 February 1971	6 September 1971
<b>CTBT</b>	24 September 1996	--
<b>1925 Geneva Protocol</b>		5 November 1929
<b>CWC</b>	13 January 1993	3 November 1997

Sources and Notes: The IAEA (2008) and Nenne Bodell (2006). \* ENMOD is the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques.

The rationale behind Iran's nuclear program is to provide 20% of electric supply to Iran's power grid with low environmental cost. According to the Ministry of Energy, Iran's electric power production, by the year 2015, will reach 93,800 MW, of which 12,370 MW is from hydro power, 120 MW from wind stations, 26500 MW from steam plants, 1000 MW from nuclear power (and if possible the nuclear share will be increased to 5000 MW), and the rest from natural gas-fired power plants. (Iran's Ministry of Energy, 2008)

Iran has made significant progress in utilizing wind and solar energy. According to Executive Director of the Renewable Energy Organization of Iran Yusef Armudeli, Iran is the only Middle Eastern country that produces wind turbines. He said that Iran's wind power plants particularly in Manjil and Binalud produce 180 million KW/H annually, but it is possible to generate 10,000 megawatts of electricity from wind turbines. (Iran, Middle East, 2008) The Ministry of Energy

installed 92 wind turbines in northern parts of the country, and announced plans to create wind farms in rural areas in north-western and north-eastern provinces of Khorassan and East Azerbaijan. At the moment, 45 wind sites in 26 regions with a generating capacity of about 6500 MW are in operation. (Ministry of Energy, 2008: 38)

To deal with the financial demands of the electricity industry, the government has encouraged private sector's partnership. In 2005, South Isfahan Power Plant with 834 MW capacity started its operation as the first private power plant on build-operate-transfer (BOT) basis. (Ministry of Energy, 2008) In July 2008, Iran's Deputy Energy Minister for strategic and Integrated Planning, Davud Manzur announced the privatization of more power plants. To this end, the Ministry of Energy has issued "permits for building 46 power plants with a total capacity of 31,164 MW in build-operate-ownership (BOO) scheme and 5 other power plants with total capacity of 4,267 MW in build-operate-transfer (BOT) scheme." He added that the private sector has been issued "permits for building power plants with total capacity of 607 MW from renewable resources." (Energy Ministry, 2008)

On 19 July 2008, Iran's Energy Minister, Parviz Fattah announced that Bushehr nuclear power plant will be operational in a year. In a pointed reference to this summer's daily blackouts all over the country, he stated, "Had the nuclear plant been launched, we could have reduced the level of the electricity shortage we faced in Iran this year by nearly 50%." (Iran's 1<sup>st</sup> N. Plant, 2008) It was recently announced that the government has signed contracts with six Iranian companies to locate suitable sites for building new NPP. Iran is divided into eight regions, which will be analyzed in terms of such factors as "international standards for water resources, vulnerability to earthquakes, demography, topography, geology, meteorology, ecology, the environment, power transmission lines and access to roads." (Locating Sites, 2008)

Iran has an ambitious energy policy which necessitates significant investment in technology and infrastructure development. It is understood that an energy policy whose components do not fit together has questionable value. Given the reluctance of the great powers to make advanced technology available to all countries, there

is a long road ahead before a good energy mix can be found. Despite this major stumbling block in the way of dynamic energy policy making, Iranian experts are hopeful because a) Iran has a long history in hydro power generation with well-developed water resource management and dam construction capability, b) Iran has been exploring its potential for relying on sun-powered plants for electricity generation, water heating, street and traffic lights illumination, c) Iran had made significant progress in wind energy, d) Iran has already started other projects to use renewable sources such as biomass, biogas and geothermal energy.

### **International Attitudes toward Iran's Nuclear Program**

The western governments-- in tandem with clandestinely nuclear-capable Israel which is not in a position to pass judgment on others' nuclear plans-- have accused Iran of wanting to secretly acquire nuclear weapons. To my knowledge, the need to have a nuclear arsenal has never been raised in public statements of the Iranian government officials. Quite the opposite, the Iranians have been insisting that such weapons are inhumane, and will make Iran more vulnerable.

In a reference to the *fatwa* against the use of nuclear weapons, on 9 November 2007, Tehran's substitute Friday prayer leader Ayatollah Mohammad Emami Kashani said Iran's Supreme Leader, Ayatollah Khamenei has openly forbidden production and use of such weapons. Since the killing of innocent people is unlawful in Islam, the "production of nuclear bomb or even having it in mind is forbidden by Islamic *Sharia* (law)," (Thought of Making Nuclear, 2007)

An April 2008 *World Public Opinion* survey conducted in partnership with *Search for Common Ground* and *Knowledge Networks* examined Iranian opinion on the morality of nuclear weapons, asking, "Is it your opinion that producing nuclear weapons is or is not against the principles of Islam?" Majority of those polled (58%) replied, "it is against the principle of Islam," only 23% replied "it is not against the principles of Islam." One interviewee said, "We do not want nuclear weapons because we are Muslim and pursuit of nuclear weapons is

prohibited in Islam.” Another respondent stated, “We are an Islamic country and that is why we will never pursue nuclear weapons, even if we are attacked by one.” (World Public Opinion, April 2008)

The U.S. and Israel governments do not believe these declarations. But is not this what one should expect in an environment of uncertainty and mutual mistrust? Numerous factors have contributed to the current nuclear wrangling, but a crucial factor is the political power struggle in the Middle East. Because of Iran’s policy of supporting the Palestinian groups, Israel with the help of the American neoconservatives has created concerns and suspicions about Iranian nuclear activities. In the minds of Iranian government, anti-Iran forces have been exaggerating the threat posed by Iran’s growing influence in the region in order to persuade the US Congress to continue funding the war in Iraq and Afghanistan, and to permit the transfer of advanced military equipment to Israel. By portraying Iran as a regional power hostile to U.S. and its allies, the hardliners in Washington and Israel are advocating military attacks against Iranian territory. Before their battle cry gains more political momentum, concerted diplomatic efforts are required to defuse the crisis peacefully.

Norman Podhoretz, the editor of the neoconservative journal – *Commentary* – is an example of American promoters of such imprudent action. With the goal of agitating anti-Iran sentiment in the region, he wrote that “Ahmadinejad’s ambitions are not confined to the destruction of Israel. He also wishes to dominate the greater Middle East, and thereby to control the oilfields of the region and the flow of oil out of it through the Persian Gulf. If he acquired a nuclear capability, he would not even have to use it in order to put all this within his reach. Intimidation and blackmail by themselves would do the trick.” (Podhoretz, 2007) Intimidation is a word which in fact describes the actions of the Bush White House in the region, where thousands of military forces are deployed to “ensure the free flow of oil” to the West, and maintain the U.S. influence in the Greater Middle East. Nuclear blackmail is a proper word to explain the foreign policies of the dogmatic Likudists, who hope to maintain Israel’s nuclear monopoly to force the U.S. and the other major powers, who

are interested in averting nuclear confrontations, to accept their anti-peace expansionist settlement agenda. These are not proper words to describe the foreign policy of Iranian government, which has *ad infinitum* declared that it is opposed to proliferation of nuclear weapons, but supports access to peaceful nuclear energy for all states. Iran is committed to the NPT and the relevant international treaties for banning proliferation of weapons of mass destruction, and has advocated the creation of nuclear weapon free zones.

Iran has condemned the nuclear policies of the UK and the US because of the apparent double standard. While the nuclear powers are accusing Iran of provoking the nuclear arms race in the Middle East, they do not take their own responsibility of nuclear disarmament seriously. By insisting on keeping their nuclear arsenals, they are undermining the nuclear non-proliferation regime. They have even disregarded the commitments of the nuclear weapon states under the NPT which bans them from assisting any country with military nuclear programs. The three nuclear capable states (India, Israel and Pakistan) which have not signed the NPT benefit from some sort of nuclear cooperation with the P5. Iranian officials argue that the nuclear states which continue to hold on to their own nuclear bombs, should not object to Iran's uranium enrichment activities. Iran as a signatory of the NPT has the legitimate right to engage in civilian nuclear activities. A large majority of Iranians (81%) feel that "it is very important for Iran to have a full-fuel-cycle nuclear program." 9% think that it is somewhat important;" and only 4% believe that "it is not very important or not important at all." (World Public Opinion, April 2008)

During his 20 August 2005 Friday Prayer sermons, Ayatollah Khamenei reiterated Iran's official position on nuclear bombs by emphasizing that "I've said it repeatedly that we are not seeking nuclear weapons." About the controversial uranium enrichment activities, he said that "We want to enrich our own uranium explored from our own mines with equipment and technology that belongs to ourselves developed by our young scientists to produce fuel for our nuclear power plants." He rejected the European offer by stressing

that "They (Europeans) say purchase it (nuclear fuel) from us. That means dependency." (Dareini, 2005)

Iranian President talked about being "suspicious about the good will of the West, because we have already once suspended not only our uranium enrichment, but also the activities at our research centers, suffering billions of dollars of losses, but we observed no positive reaction from the West." (Good Will, 2007) President Ahmadinejad has said that Iran will not accept the supply of nuclear fuel from other countries. Iran must have uranium enrichment facilities on its own soil. Consequently, the issue of suspension of Iran's nuclear enrichment program is non-negotiable. The disagreement with the Russia on the issue of the nuclear fuel supply and the payment for the return of the spent fuel has made the Iranians more determined to reduce their external dependency; even though Russia ultimately decided to send the needed fuel to Iran and to complete the construction of the Bushehr reactor. Iran received the last shipment of nuclear fuel from Russia at the end of January 2008.

Iranian officials have rejected any proposal calling for terminating the country's uranium enrichment activities on the legal ground that enrichment is the indispensable right of all NPT signatories including Iran. On 5 August 2007, just before a deadline for Iran to respond to a package of incentives aimed at persuading the Iranian government to freeze its uranium enrichment program, Iran's Supreme Leader, Ayatollah Khamenei emphatically declared:

Taking one step back against arrogant (powers) will lead them to take one step forward. The idea that any retreat or backing down from righteous positions would change the policies of arrogant world powers is completely wrong and baseless... Today it is time for the Iranian nation to move ahead with awareness and add to its knowledge and capabilities. The horizon is bright for us and we know what we are doing and where we are going... the way to reach that peak is not to stand but to go. (Leader Reiterates, 2007)

Iranian officials have indicated a preference for negotiated settlement of the nuclear crisis. Despite having spoken emphatically about Iran's "non-negotiable" uranium enrichment activities, The President of Iran has shown specific interest in negotiated settlements of the nuclear crisis. He recently announced that "Iran has always welcomed just negotiations." In a reply to a question about the participation of a U.S. representative at the talks between Iran and the 5+1 group (the five permanent members of the UN plus Germany), he said that "We never invite or reject anybody's presence in the talks." (Ahmadinejad:Iran,2008) Earlier he had stated that Iranian government is ready to hold unconditional talks with anyone who would negotiate in good faith. Given that post-revolution Iran has not recognized the legitimacy of the Jewish state due to its occupation of Palestinian lands, his offer does not include the Israeli government who is labeled the *Quds* occupier by the Iranian officials.

In August 2008, Iran announced its rejection of the "freeze for freeze" proposal and insisted on its right to continue its Uranium enrichment program. In considering any sort of compromise, the 5+1 group must understand that any proposal which is viewed as an insult to Iranian national pride will be certainly rejected. Up to now, they have offered Iran the following two choices: 1) Permanent suspension of the more controversial part of its civilian nuclear program in exchange for specific concessions; and 2) Temporary suspension of Iran's uranium enrichment center in Natanz and the closure of the Arak facility for certain benefits. The details of the offers have never been made quite clear.

Iranian government has announced specific plans to "generate 20,000 MW electricity from 20 nuclear power plants "within the next 20 years. (Iran Needs, 2008) In the short term, the fuel for Iran's first reactor unit in Bushehr will be supplied by Russia. In the medium term, Iranian government has plans to run its nuclear reactors with domestic uranium as well as enter into any regional or international fuel cycle arrangements which might develop. (Iran Ready for Nuclear, 2007) In the long run, Iran will need to have access to international nuclear fuel trade for its expanded nuclear energy program.

Iran's preferred option is to be able to move ahead with its uranium enrichment activities while expanding slowly but resolutely its nuclear reactor program under the watchful eyes of the IAEA inspectors. Its least favored option in the event of the failure of nuclear negotiations is to be forced to reduce the level of its cooperation with the IAEA, and even withdraw from the NPT as proposed by a few radical political commentators. With the IAEA inspectors on the ground to verify that Iran has fully complied with its NPT commitments, there should be no cause for concerns on the part of Iran's friends and foes.

### **Public Perspectives about Iranian Nuclear Program**

Arab public opinions concerning Iran's nuclear program have remained continually sympathetic over time, while the views of the Arab governments have been highly volatile. The attitudes of Middle Eastern experts and key decision makers toward Iran's nuclear program have changed from somewhat negative, cautious to positive, supportive.

A March 2008 Arab public opinion poll conducted in six Arab states by Zogby International with Shibley Telhami as its principal investigator indicated that attitudes towards Iran's nuclear program have varied across nations and over time. When asked, "Do you believe Iran is trying to develop nuclear weapons?" 39% replied "yes," and 46% replied that "Iran is merely conducting research for peaceful purposes." The margin of error was ! 1.6%. The pollsters asked, "If Iran acquires nuclear weapons, which of the following outcome is likely for the Middle East." The results were:

Country	EGY	JOR	LEB	MOR	KSA	UAE	Total
<b>Outcome</b>							
The outcome would be more positive	43%	18%	29%	37%	73%	51%	44%
The outcome would be more negative	28%	25%	20%	35%	26%	42%	29%
It would not matter	11%	32%	32%	13%	1%	2%	12%

Notes: EGY- Egypt, JOR-Jordan, LEB- Lebanon, Mor- Morocco, KSA- Saudi Arabia, and UAE- United Arab Emirates.

A key finding of this annual survey administered to a random sample of 4,046 respondents in six key Arab countries in the Middle East is that "in contrast with the fears of many Arab governments, the Arab public does not appear to see Iran as a major threat. Most believe that Iran has the right to its nuclear program and do not support international pressure to force it to curtail its program." (Zogby International, 2008)

In recent weeks, there have been more supportive declarations and endorsements for Iranian civilian nuclear program by the authorities in the region. Arab League Secretary General, Amr Musa attending the July 2008 NAM Foreign Ministers meeting in Tehran expressed his views that "None of the reports released by International Atomic Energy Agency's (IAEA) have shown diversion of Iran's nuclear activities to military purposes; so, it should be said that Iran's nuclear program is peaceful and can by no means be considered a threat." (Amr Moussa, 2008)

In a 9 August 2008 interview, Kuwaiti Deputy Prime Minister and Foreign Minister, Sheikh Al-Sabah said: "Kuwait reiterated time and again its unequivocal support for Iran's right to peaceful nuclear energy." He added that "Iran, the [Persian] Gulf Cooperation Council (PGCC) members and any country in the world have the right to peaceful nuclear energy as long as they meet the controls and safeguards of the International Atomic Energy Agency (IAEA)." (Iran has to be tuned, 2008)

Kaye and Wehrey in talking to officials in Oman and the UAE found that the smaller Persian Gulf states are concerned that Saudi Arabia may use Iran's nuclear program as an excuse to expand its own influence in the PGCC. In view of one Omani government official, Washington's "diplomatic efforts would be better spent curtailing Riyadh's revisionist border designs than focusing on Iran's legitimate right to self defense." The official then added that "Saudi Salafism was the real nuclear bomb of the Arabian Peninsula." (Kaye and Wehrey, 2007) These researchers point out that smaller PGCC states are actually "one-bomb targets", but many people in the region "do not perceive a direct nuclear attack from Iran to be the greatest threat." (Kaye and Wehrsey, 2007: 111) Another western analyst claims that "one nuclear tipped Iranian missile could decimate the government, ruling families and societies of the smaller PGCC states that in some respects have more in common with ancient city-states than modern nation-states." (Russell, 2004: 18)

The question to raise here is: Why do the nuclear-armed Israelis and Americans fear Iran, and view it as a great threat to their security? Why are not the public in the militarily weak regional states alarmed about Iran's nuclear program? The answer is that the people in the region know that Iran has no intention to invade their countries. Iran will never use nuclear weapons against their cities, even if it acquires such capability. Bombing Dubai for Iran is like bombing Bandar Abbas or any other Iranian city. Thousands of Iranians will be killed, and the environmental damages will be as costly for Iran as for the Arab states. Unlike Israel and the U.S. government which have not given a formal guarantee against the use or the threat of the use of nuclear weapons, Tehran has clearly stated that it will never be an initiator of wars. Iran has called these weapons inhumane and unusable in the battlefields.

The Arab attitudes toward Iran remain relatively consistent, but their views toward the U.S. changed dramatically following the 9/11 terrorist acts and the Iraq invasion. (US Image Worsens, 2008) The 2008 Zogby International and the University of Maryland survey indicate that "83% of the [Arab] public has an unfavorable view of the

US and 70% express no confidence in the U.S.” (Zogby International, 2008)

Public opinion can be manipulated in all societies. An incumbent government will pursue its own interests at the expense of their rivals. The Americans are generally not well-informed about international politics. The average Americans have acquired a set of political attitude towards Iran through the mainly one-sided reporting in the mainstream media. This might be the reason for clear partisan difference of opinions over options to deal with Iran’s nuclear program. A May 2006 national survey of 1001 Adult Americans conducted by the Pew Research Center for the People & the Press indicated that more Republicans (46%) are in favor of bombing military targets in Iranian territory than Democrats (24%) or Independents (25%). (PEW, May 2006)

A poll released on 7 February 2007 found that U.S. public opinion on Iran is shifting. A national survey among 1502 Americans showed that American public concern over Iran’s nuclear program had increased significantly since March 1990. The respondents were asked, “What Country Represents the Greatest Danger to the U.S.?” The Results were:

Date	Marc 1992	Feb 1992	Sep 1993	Aug 2001	Oct 2005	Feb 2006
Country						
Iran	6%	4%	7%	5%	9%	27%
China	8	8	11	32	16	20
Iraq	-	12	18	16	18	17
N. Korea	-	-	1	1	13	11
U.S. itself	4	3	-	2	7	5
terrorists	-	-	-	-	2	4
Russia/USSR	32	13	8	9	2	3
Japan	8	31	11	3	1	1

In February 2006, 27% of Americans introduced Iran as the greatest source of threat to their country. Whereas in February 1992,

just 4% of the respondents introduced Iran as the greatest danger to the U.S. (PEW, 6 February 2006)

An April 2008 Gallup poll released by *USA Today* provides us with similar findings related to the same question. 25% of American respondents consider Iran as the U.S. greatest enemy, followed by Iraq (22%) and China (14%). (*Americans See Iran, April 2008*) The national surveys over the last 15 or so years show how American public opinion changed over time and became more negative towards Iran, particularly since George Bush's 2002 *Axis of Evil* speech. Yet, the Americans are increasingly reluctant to go to war again even if their neoconservative leaders argue that Iran is more of a threat than Saddam's Iraq was. The reason for this feeling is that an attack on Iran might destabilize the entire region from Afghanistan and nuclear Pakistan to Lebanon and nuclear Israel.

Iran had replaced Russia as a threatening foreign country in the eyes of the American public. In 1992, over one-third of them considered USSR/Russia as the greatest threat. In the Post-Cold War era, only 2 to 3 percent feel threatened by Russia. It remains to be seen if Moscow's new adventurism in the Caucasus will change the U.S. public opinion in a way that would become noticeably anti-Russia.

The recent polls show the loss of respect and good will towards the U.S. in the Middle East. Americans do not know or do not care about the reversal of the Middle Easterners' attitudes towards their country as a consequence of the military adventurism of the Bush Administration in Iraq and Afghanistan, and its failure to bring an end to the Palestinian-Israeli conflict.

The multi-billion dollar budget of Pentagon for patrolling the Persian Gulf waters for the expressed purpose of securing "the flow of oil", could be better spent on developing improved technology for alternative energy sources for the benefits of Americans and the other inhabitants of our endangered World.

### **Arab Nuclear Ambitions**

Conventional wisdom would suggest that Iran will not be the only Middle Eastern state or OPEC member who will invest in civilian

nuclear energy program. Indeed, other oil-rich states have announced plans to follow Iran's energy policy. There are already indications that 11 out of 12 members of the OPEC (with the exception of its newest member, Angola) have plans to use their oil wealth to create a more secure future when their oil and gas runs out. A nuclear OPEC (or shall we call it ONEEC for the Organization of Nuclear Energy Exporting Countries) may well be in the making. The rise in crude oil prices has become a strong incentive for developing new energy sources. (Lotfian, 2007b)

Even the largest oil producers like Russia and the U.S. have looked for a way to diversify their energy sources. By the same token, the oil-rich Middle Eastern states will have more oil and gas resources for export if they utilize nuclear energy for rapidly rising domestic energy consumption. It is a straw man argument that this region's oil producing states should not seek to generate electricity from NPP. This is the same as saying that Russia has ample oil and gas resources, and should not use nuclear power. Russia has 31 operating nuclear reactors which account for approximately 16% of the country's total power-generating capacity. In July 2008, Sergei Kiriyyenko, head of the state-owned nuclear energy company *Rosatom* announced that Russia intends to build 40 new reactors in the next 25 years. Moreover, Russia plans to construct 60 reactors in other countries. (Eller, 2008) The continued supply of inexpensive and abundant energy will empower the oil and gas exporting countries to maintain their relative power position in the international energy market, and will be their license to join the industrialized world.

Arab states from North Africa to the Persian Gulf, have announced their intention to pursue peaceful nuclear energy program. (Israel on Guard, 2007) Egypt decided in 2006 to resume its nuclear energy program, (Sid-Ahmad, 2004) and has concluded preliminary scientific cooperation agreements with China, Russia and South Korea. In March 2006, the 22-member Arab League, led by its Egyptian Secretary-General Amr Moussa, considered the nuclear power initiative. There are news accounts that Algeria, Jordan, Libya, Morocco, and Tunisia have plans to develop nuclear power "primarily for water desalination," and electricity generation. ([Persian] Gulf

Arabs, 2006) Jordan's king Abdullah II said in an interview with an Israeli newspaper that "Egyptians are looking for a nuclear program. The [P]GCC are looking at one...the rules have changed on the nuclear subject throughout the whole region." (Jordan to Go, 2007)

The goal of investing in a nuclear power program by six southern Persian Gulf states was announced in 2006 during the summit meeting of the Persian Gulf Cooperation Council. It was said in a statement that "the states of the region have a right to possess nuclear energy technology for peaceful purposes ... within the context of the pertinent international agreements." (Plan to Discuss, 2007) The economic rationale given for their interest in the development of such program was that nuclear energy is needed to "supplement the vast amounts of oil and gas needed for desalination, turning sea water into drinking water." ([Persian] Gulf Goes Ahead, 2007) Since the IAEA has given the green light to the PGCC to start a nuclear program, the suppliers in France, China and UK are in competition with the US and Russia to sell nuclear reactors to these regional states, Persian Gulf Arab states would possess their own nuclear power reactors within a decade.

In the southern Persian Gulf states, important decisions are made by small, but powerful groups of elites who have accumulated great wealth and world business connections through their political activities. They enact and implement policies that serve their own interest. In spite of this remarkable relative freedom in national decision making, the decisions on resource allocations to their nuclear program depend on a number of factors: the political elite's perceptions of nuclear power as a status symbol, access to nuclear technology, Western governments' attitudes toward the region's nuclear programs, and the magnitude of oil revenues. If there are substantial oil incomes, the oil-rich countries might be able to finance their nuclear reactor projects without compromising other economic projects. One of the key requirements is the ability to pay the high capital costs. This trend could turn into some kind of nuclear technology-for-oil swaps along the line of the oil-for-arms deals of the 1980s and 1990s.

The neighboring Arab leaders, who had expressed their fear of Bushehr NNP, are now planning to build their own nuclear reactors near the coastal area. They had claimed that in case of an accident, if the Persian Gulf as the only source of water for Bahrain, Qatar, Kuwait, UAE were contaminated, those countries will be left with no drinking water. At a May 2006 [P]GCC consultative summit, UAE Foreign Minister Sheikh Abdullah Ibn Zayed had said, "We appreciate Iran's efforts to reassure the region over its program. . . . But for the sake of stability and to avoid any environmental disaster, there needs to be more Iranian guarantees, and we are trying to ensure this." (Khaitous, 2008) Iran tried to alleviate these environmental concerns. (Iran Assures, 2006) and invited the regional experts to visit these facilities. Abdul Rahman Al Awadi, the head of the Regional Organization for the Protection of the Marine Environment (ROPME), and the man in charge of disaster planning in the event of a nuclear accident in the Persian Gulf visited the Bushehr reactor accompanied by a regional delegation made up of two experts from each of the six [P]GCC member countries. After the visit, he identified "The increase of shipping traffic in the narrow Persian Gulf as greater threats to the region than Iran's nuclear ambitions." (Summers, 2006)

No more than two years after their chorus of disapproval of Iranian Bushehr NPP, the UAE experts are searching for appropriate sites for three NPP. One possible location is the "sparsely-populated coastline between Abu Dhabi and Ruwais" for the construction of two plants 50 km apart; and one in Fujairah. The estimated costs of the reactors are \$ 21 billion at current prices. (Exelby, 2008) In a country that has invested billions of dollars to build artificial palm-tree-shaped islands on the Dubai side of the Persian Gulf coast, it is not surprising to hear talk of a "floating" nuclear power plant. However, most of the owners and residents of the four artificial islands are foreigners who would not be happy to hear of the construction of one or two "floating" nuclear reactors near their properties. It is clear that the environmentally conscious westerners will think twice before they invest in a home with a nuclear facility in its neighborhood. Developers and investors like Donald Trump and his daughter Ivanka

may not be so willing to rush to Dubai and Abu Dhabi for their share of the UAE property markets.

Intriguingly, Iranian President announced that "Iran is ready to give its valuable experiences and achievements in peaceful nuclear technology to the countries of the region." The reason Iran has welcomed the PGCC's plans to invest in peaceful application of nuclear technology, (Iran Offers, 2006) is that this move will lessen regional pressure on Iran to halt its own nuclear program. This is being recognized by the Western analysts as a serious effort by the Arab states to obtain the same capability as Iran which has already invested greatly in a nuclear reactor program. The Iranian government, acknowledging the rights of all regional states to peaceful use of nuclear power, perceives this move as a trend which might help the removal of the Arab objections to Iran's Bushehr reactor. Not only the start of nuclear reactor programs in the Middle East will take heat off Tehran by reliving some of the regional bickering, it might also provide an opportunity for regional cooperation and partnership in development of nuclear energy.

Developing countries with similar concerns and interest have tried to pool their resources to act collectively. It is easier to get the big powers to listen to a group of states than to a single country. Such a valuable group is the Non-Aligned Movement (NAM) established in 1955 as an international organization by the states which were not part of any major power bloc, and has an impressive number of 118 member states. In their 15th Ministerial Conference held in Tehran from 27 to 30 July 2008, the participating delegates discussed the West's threats against Iran and issued a supporting document in favor of Iran's peaceful nuclear program. (NAM, 2008) This document was distributed among the IAEA Member States as Information Circular/733 on 11 August 2008. In their statement, the NAM "reaffirmed the States' choices and decisions, including those of the Islamic Republic of Iran, in the field of peaceful uses of nuclear technology and its fuel policies must be respected." (IAEA, 2008b)

There is hope that regional countries might act collectively to clear the way for the acquisition of nuclear technology needed for sustainable development. However, each country must decide how

and to what extent nuclear technology should be employed in their development plans. It is important to understand the limitations of nuclear power so that other sources of energy are not under-utilized. What is good economically and politically for Iran might not be appropriate for Jordan and so on. It is estimated that "nuclear power cost more than wind, is about the same price as hydroelectric power and cogeneration with gasified wood, and cheaper than solar energy using photovoltaic (PV) cells." (Oko Institute, 1997 cited in NRS/WISE, 2005) For smaller PGCC states the high maintenance and labor costs and the safety risks of national NPP far exceeds its potential benefits. Strategic development of energy sources should not be done by *ad hoc* and not carefully planned projects promoted by the self-serving government bureaucracies and profit-oriented foreign private companies. In addition to the issue of economic viability, other crucial factors are the scarcity of proper sites for nuclear facilities in a safe distant from populated cities, the risks of accidents, terrorism and illegal trade of nuclear material.

### **Implications of Israel's Approach to Nuclear Weapons**

No one in the Middle East believes Israel's repeated assertions that it does not have nuclear bombs. With their nuclear and advanced conventional weapons, the Israeli leaders continue threatening their neighbors. Israel's approach to nuclear capability is worth studying in order to understand its suspicious attitude toward the Middle Eastern countries which pursue nuclear programs. Initially, Israelis tried to deceive the American governments about Israel's nuclear weapon program. It was France which helped Israel to build the foundation of its nuclear "bomb in the basement" more than fifty years ago. In 1956, France supplied Israel with a 24 megawatt reactor. Prime Minister Ben-Gurion declared that the function of the reactor was to transform the Negev Desert into "agricultural paradise by desalinating a billion cubic gallons of seawater annually." (Thomas, 1999: 94)

At the request of the Eisenhower administration on 31 December 1960, the U.S. ambassador in Tel Aviv, Ogden Reid questioned the Israeli government about its nuclear ambitions. In

answer to the question of “whether Israel was prepared to declare that it had no plans to produce atomic bombs,” David Ben-Gurion as Israel’s prime minister reportedly replied: “What I announced in the Knesset still stands... I spoke plainly, and you must accept my words as they were spoken.” He was referring to his speech on 21<sup>st</sup> of December 1960 when he had unveiled the plan to build the Dimona reactor and claimed the nature of Israeli nuclear program was “peaceful”. (Karpin, 2006: 178-9) At the time, the Israeli nuclear arsenal was only a dream. According to a former deputy head of Israeli military intelligence Colonel Yuval Neeman, Ben-Gurion in mid 1950s had told him that “he wants a nuclear option”. (Karpin, 2006: 76) Clearly, Ben-Gurion lied to the American officials when he denied Israel’s nuclear aspirations.

Paul C. Warnke, deputy assistant secretary of defense in the administration of President Johnson and director of the Arms Control and Disarmament Agency in the President Carter administration believed that “I do not think that the U.S. had the feeling that it could physically stop Israel from developing nuclear weapon. That would be a mistake, Israel was a friend. There were foreign countries, unfriendly countries that had nuclear power.” (Karpin, 2006: 181-2) In Karpin’s view no official of the Eisenhower administration would have talked so tolerably about Israel’s nuclear aspirations. If the Americans had become aware of Israel’s nuclear weapon program at that time, the Eisenhower White House would have compelled Tel Aviv to terminate its plan of building Dimona reactor, in the manner similar to early 1957’s decision of the U.S. government to threaten Israeli leaders with sanctions in order to force them to withdraw from Sinai, which was captured by the Israeli military in October 1956. (Karpin, 2006: 182) The Israeli writer claims that “if the United States had not wanted Israel to have the nuclear option, it is doubtful that Israel would have been able to do so. Every president from John Kennedy on made it possible for Israel’s nuclear program to progress, as did most of the senior legislators in Congress... Israel for its part tried hard to help the American politicians who supported the program.” (Karpin, 2006: 341) The U.S. intelligence community had “estimated early in the 1970s that Israel had already made at least one

bomb.” (Karpin, 2006: 344) At the time of the Arab-Israeli 1973 war, the Jewish state had nuclear weapons and was contemplating to use them.

According to U.S. ambassador Warnke, Washington had made the transfer of offensive weapons to Israel contingent on Tel Aviv’s steering clear of nuclear tests. Apparently, the American government had insisted on Israel’s adoption of its nuclear ambiguity policy. Warnke said that: “I think we preferred the fact that Israel was not declaring that it had targeted some potential enemy with nuclear weapons.” If Israel conducts a nuclear test, Washington might refuse the supply of offensive armaments, and might even ask for the return of its previously-supplied weapons. (Karpin, 2006: 343)

Israel’s most secret Dimona nuclear facility is not under the IAEA safeguard. According to Israeli scientists such as Uzi Eben who had been involved in Israel’s nuclear program, the Dimona reactor in the Negev Desert is an accident waiting to happen. These experts have said that aged nuclear facilities as old as Dimona (which began operation in 1960) are shut down in other countries because of the health risks involved. Since Dimona is not under the IAEA safeguards, its continued operation could have radiation-related health effects for the people who live in the immediate areas surrounding Dimona. It could also be a second Chernobyl causing catastrophic harm to people and the environment. Despite the fact that this reactor is known to be unstable, no action is taken for a public investigation of its safety. (Sunday Times, 2000)

Despite the revelation of the Dimona technician Mordechai Vanunu in 1986, the international community does not know certain aspects of Israel’s nuclear military program. However, it was evident that the Dimona reactor had the “capacity to produce 10 nuclear weapons a year that are significantly smaller, light and more efficient than the first types of weapons developed by Russia, America, Britain, France, or China.” (Karpin, 2006: 344) Twenty two years after the Vanunu’s disclosure, one can assume that Israel has added at least 210 bombs to its nuclear arsenal. Recently, the spotlight has fallen on Israel’s nuclear capability with President Carter’s comments on this open secret. In a press briefing, he said that “The US has more than

12,000 nuclear weapons; the Soviet Union (sic) has about the same; Great Britain and France have several hundred, and Israel has 150 or more." (Israel Attack on Iran, 2008)

Today, Israel is widely known as a nuclear weapon state, though it has neither acknowledged nor denied having a nuclear arsenal. In spite of Israel's claim that "it will not be the first to introduce nuclear weapons into the Middle East", its nuclear capability has had an adverse impact on regional security. Abdul Rahman Al Attiyah, secretary-general of the PGCC urged the international community to press for sanctions on Israel for its nuclear program. His comments followed what appeared to be a disclosure in December 2006 by Israel's Prime Minister Ehud Olmert about Israeli nuclear arsenal. ([Persian] Gulf States, 2006)

Israel feels that it has to do something to cut its losses, since the era of the World's ignoring and tolerating its policy of nuclear opacity is numbered. Tel Aviv has three choices: 1- Revealing its nuclear arsenal and paying the heavy cost of losing the U.S. support; 2- Maintaining the status quo of never publicly admitting it is a nuclear state, and occasionally reminding the rest of the world that it has a nuclear capability by leaks to the press or hints in the officials' statements; 3- Disarming and signing the NPT as a non-nuclear weapon state.

Since the purpose of Israel's nuclear bombs is to deter attacks against the Jewish state, there have been periodic hints and disclosures to inform Israel's adversaries that Tel Aviv possesses a number of nuclear weapons and will employ them if necessary. The effectiveness of Israel's nuclear deterrence strategy depends on its enemies' perceptions of Israel's capabilities and intention. Israel's policies as a factor in shaping Arab public opinion should not be overlooked. In fact, the Muslim Brotherhood of Egypt views Iran's nuclear option as a counter balance to Israeli nuclear arsenal, and calls on Cairo government to acquire nuclear capability not to defend Arabs against Islamic Iran, but as a weapon to neutralize Israeli nuclear monopoly. (Khaitous, 2007) The Grand Sheikh of al-Azhar, Sheikh Muhammed Sayed Tantawi supported Iran's nuclear energy program and declared that: "Islamic countries should maintain their

combat readiness and remain vigilant in dealing with threats of the enemies." (Sheikh, 2008)

Israel works hard to prevent Iran and the Arab states from gaining military power parity with the IDF. If any other regional country acquires a nuclear option, it could then change the regional balance of power to its own advantage. Assassination has been practiced by Israeli intelligence agencies since the 1950s, and the so-called "targeted killings" of technical experts and scientists working on the military production program of their adversaries has been carried out extensively. The Mossad's operations included sending letter bombs and assailants to German scientists who were working on the Egyptian missile project. (Eisenberg, and others, 1978: 168-169)

To neutralize Iran as their major rival following the removal of Saddam Hussein, the Israeli leaders have been trying to portray Iran as the greatest threat to regional and international security. They view Iran's potential nuclear capability as the most serious issue facing their nation and even an existential threat. The Israeli politicians have even threatened Iran that they will destroy Iran's nuclear reactor similar to the 1981 attack on Iraqi Osirak reactor. In June 2008, Shaul Mofaz, the transportation minister and candidate for the post of Prime Minister of Israel, had told the *Yediot Aharonot* newspaper that "Other options are disappearing. The sanctions are not effective. There will be no alternative but to attack Iran in order to stop the Iranian nuclear program." (Mofaz: Israel, 2008)

His comments were widely quoted because as a deputy prime minister, he is involved in security planning in Olmert's cabinet. As the liaison for U.S.- Israel ties, he is also responsible for contacts with the U.S. State Department. The Iranian-born Mofaz who has repeatedly given warnings of an Israeli military attack against Iranian nuclear facilities, in a speech in Washington also claimed that "As soon as 2010, (Iran) will have the option to reach (uranium production) at military levels." He added that "The red line should be that there is no uranium enrichment on Iranian soil." (Williams and Cornwell, 2008) Mofaz traveled to Washington in August presumably to try to get the approval of the White House for the Israeli military option. He had submitted a list of Israeli proposals for additional

sanctions to the Bush administration to be imposed on Iran. These punitive measures including banning international flights to Iran and a naval blockade would "affect Iranian leaders and other individuals of influence, as well as the general populace." (Williams and Cornwell, 2008)

In reaction to these threats, a series of strong statements and warnings were issued by the top military commanders of the Iranian armed forces, particularly after the staging of a major Israeli exercise over the eastern Mediterranean Sea and Greece, which was reportedly part of the preparation for a military strike against Iranian nuclear facilities. Deputy Commander of the IRGC, Brigadier General Mohammad Hejazi issued a warning to the effect that "although Iran is not seeking to wage any war or create any tension in the region, it would make enemies regret their moves if they put Iranians' national security and prosperity in danger." (Enemies will Regret, 2008) The commander of the IRGC's missile division, General Mahmoud Chaharbaghi announced that "Iran has identified all enemy positions and was prepared to respond in less than a minute to any possible attack." He added that "Enemy bases and positions have been identified..... The Guards ground force will fire 11,000 rockets into identified enemy positions within the first minute of any aggression against the Iranian territory." (Iran Says it Can Fire, 2007)

There are indications of military preparations on both sides, as each country reacts to the words and actions of its adversary. The Iranian side has announced that they are prepared for a long and deadly campaign even in the event of the outbreak of a war with the U.S. The American armed forces have to deal with "unending" retaliatory attacks, with little knowledge of where the Iranians might strike. This uncertainty is the major reason that might have stopped a military attack against Iran.

### **Conclusion**

It would be a serious mistake to divide the regional states into two camps of those who should be trusted with nuclear technology because of their loyalty to the west; and those who should be denied

such technology because they are challenging the status quo. Note that this has been the mistake of the Bush's White House to divide the world into two groups of "us versus them", or "evil versus good". There can be only one world, one human civilization, one international community working against nuclear annihilation. To make our world safe, the process of expeditious nuclear disarmament must continue until the desired number of zero nuclear weapon is reached.

The anti-proliferation efforts might collapse in the absence of progress in bringing a just and lasting peace to the Middle East. It is nonsensical to accept Israeli insistence that denuclearization should be left for the last phase of the peace talks after peace agreements have been reached between Israel and all the other Middle Eastern states. The two sides must sit at the table as equals, and this condition cannot be satisfied until the Israeli side gives up its nuclear bargaining chip. Denuclearization is a goal in itself; and should not be linked to the achievement of other noble goals. More pressure should be exerted on Israel to consent to the establishment of a nuclear weapon free zone in the Middle East.

The next step would be to apply the same criteria to all nuclear power programs found in the world. For the supplier of nuclear technology to the Arab states whose future political fate is yet to be decided, some careful thinking and planning early is always better than late regrets. It is important to recognize that in smaller economies investing heavily in a nuclear reactor program is not appropriate. The wealthy PGCC states have the financial resources to develop a national nuclear program with the help of foreigners, but they will have to confront major obstacles in moving along this path. Among the major challenges are safety regulations, waste management, uninterrupted access to nuclear fuel and accidents prevention. For PGCC states with small land mass, finding a suitable site also poses a challenge. The solution is shared nuclear facilities operated multilaterally. Since the region's nuclear reactors will become an easy target in the event of a military confrontation, there is a need for a negotiated agreement to ban military attacks against nuclear installations.

The progress achieved in nuclear arms control sphere since the end of the Cold War might be halted if a new Cold War sets in as a result of the Russia's conflict with the NATO-backed Georgia over its breakaway republics. In spite of this, the election of a new president in place of the essentially anti-disarmament George Bush will raise hope of renewed movement toward total elimination of nuclear weapons. Hence not only is it important to observe the economic factors, it is also crucial to explain the political factors. If we know why some states feel insecure, we can have a better understanding of the driving political factors for arms buildup. The outlook for tension-reduction remains uncertain, but the recent moves toward diplomatic contacts between the 5+1 group and Iran are encouraging.

Meanwhile, the scientists engaged in nuclear R&D efforts in the Middle East receive high priority in the allocation of resources as regional states try to ensure their competitiveness in the international energy markets even if their oil and gas resources run out. Iranians aspire to lead these endeavors despite the U.S. sanctions.

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