

III. THE MILITARY OPTION

“Our goal is neither to confirm nor contradict perceptions and prejudices about the nature of Iran’s nuclear policies, program, or rights, nor to debate the morality, legality, or practicality of the strikes. It is to provide policymakers, the media, and the public, especially the American, Israeli, and Iranian people, with an objective estimate of the risks and costs of military strikes against Iran’s nuclear sites.”

Ahmadinejad’s alleged threats to annihilate Israel have raised fears about Iran’s nuclear program, policies, and intentions. Israeli Prime Minister Benjamin Netanyahu has made the Iranian threat a cornerstone of Israel’s foreign policy and a test of the United States’ commitment to the security of Israel.

Speaking at AIPAC on March 5th, the Prime Minister warned that responsible leaders cannot base the security of their nations on “the belief that the world’s most dangerous regimes won’t use the world’s most dangerous weapons.” He left no doubt about his perception that the Islamic Republic was a terrorist regime that had to be stopped.

“Iran calls for Israel’s destruction, and they work for its destruction—each day, every day. This is how Iran behaves today, without nuclear weapons. Think of how they will behave tomorrow, with nuclear weapons. Iran will be even more reckless and a lot more dangerous. There’s been plenty of talk recently about the costs of stopping Iran. I think it’s time we started talking about the costs of not stopping Iran.”²⁰



Figure 4: Benjamin Netanyahu (Photo: Associated Press)

On Iran, Netanyahu’s message has been clear and consistent. In a speech before the General Assembly of the Jewish Federations of

North America in New Orleans on November 8, 2010, Netanyahu delivered the same message.

“The simple paradox is this: If the international community, led by the United States, hopes to stop Iran’s nuclear program without resorting to military action, it will have to convince Iran that it is prepared to take such action. Containment will not work against Iran. It won’t work with a brazen and erratic regime that accuses the United States of bombing its own cities on 9/11, that calls for the annihilation of Israel, and is the world’s leading sponsor of terrorism. The bottom line is this: Iran’s nuclear program must be stopped. Iran’s nuclear program is the greatest threat we face.”²¹

Netanyahu is not alone. There is considerable support in some corners of Congress for the use of military force against Iran should no peaceful solution be found. A day before Netanyahu’s May 24 speech, the U.S. House of Representatives referred House Resolution 271 expressing “support for Israel’s right to use all means necessary to confront and eliminate threats posed by Iran, defend Israeli sovereignty, and protect the lives and safety of the Israeli people, including the use of military force if no other peaceful solution can be found within a reasonable time.”²²

The military option also has strong advocates in the U.S. Senate. In a speech on “U.S. Power in the Middle East” delivered at the Council on Foreign Relations, Sen. Joseph Lieberman, chairman of the Homeland Security and Governmental Affairs Committee, warned that “if a nuclear Iran is as unacceptable as we say it is, we must be prepared to do whatever is necessary to prevent the unacceptable.”²³

21 “Prime Minister Netanyahu’s speech at the General Assembly of the Jewish Federations of North America in New Orleans,” press release from the Prime Minister’s Office, 8 November 2010, <<http://www.pmo.gov.il/PMOEng/Communication/PMSpeaks/speechga081110.htm>>.

22 House Resolution 271: Expressing Support for the State of Israel’s Right to Defend Israeli Sovereignty,” <<http://www.govtrack.us/congress/bill.xpd?bill=hr112-271>>.

23 “Sen. Lieberman Addresses U.S. Power in the Middle East,” Council on Foreign Relations, 29 September 2010, <http://www.cfr.org/publication/23056/senLieberman_addresses_us_poweUn_middle_east.html>.

20 “Excerpts from PM’s AIPAC speech,” *The Jerusalem Post* online, 3 July 2012, <<http://www.jpost.com/LandedPages/PrintArticle.aspx?id=260779>>.

As with Iraq, perceptions about the nature of the threat posed by Iran’s nuclear intentions, program, and policies are pivotal to shaping U.S. policy in the Middle East. The specter of an Iranian bomb fuels fears about a shift in the balance of power in the Middle East. In this perspective, an increase in the power of revolutionary Iran poses a grave threat to the stability and security of the region, particularly to Israel, Saudi Arabia, the conservative sheikhdoms of the Persian Gulf, Iraq, and Lebanon. More broadly, Iran is viewed as a strategic threat to a postwar international and regional order dominated by the United States.

With the prospects of Iran filling the vacuum created by American withdrawal from Iraq and Afghanistan, the question of the balance of power between Iran and the United States has assumed greater urgency. The fear of Iran as a hostile power with questionable regional intentions has exacerbated concerns about Iran’s emergence as a nuclear power capable of projecting military power on its weaker neighbors.

Against this background, Senator Lieberman and others said that it was time for the United States to reestablish its credibility by considering a military strike against Iran:

“It is time for us to take steps that make clear that if diplomatic and economic strategies continue to fail to change Iran’s nuclear policies, a military strike is not just a remote possibility in the abstract, but a real and credible alternative policy that we and our allies are ready to exercise if necessary.”

His meaning was clear. The United States had to send a message to its friends and enemies that Iran would not be allowed to cross the nuclear red line:

“We will prevent Iran from acquiring a nuclear weapons capability, period—by peaceful means if we possibly can, but with military force if we absolutely must,” Senator Lieberman said. “A military strike against Iran’s nuclear facilities entails risks and costs—I know that—but I am convinced that the risks and costs of allowing Iran to obtain nuclear weapons capability are far greater.”²⁴

The Obama administration is also inching towards the military option. In his speech before AIPAC, President Obama ruled out containment as an option. “My policy here is not going to be one of containment. My policy is prevention of Iran obtaining nuclear weapons.”²⁵ He added, “When I say all options are on the table, I mean it.”²⁶

Appearing before members of a House Appropriations Subcommittee, February 16, 2012, Defense Secretary Leon E. Panetta, made it clear that the U.S. was keeping all options on the table in case “red lines” are crossed. He added that while intelligence reports indicate that Iran was continuing with enrichment activities, “intelligence does not show they’ve made a decision to proceed with developing a nuclear weapon.”²⁷ On March 8, 2012, Panetta went further. He told the *National Journal* that the Pentagon is preparing an array of military options for striking Iran if sanctions fail to persuade the Iranian regime. Panetta said such planning has been underway “for

a long time,” and added that a U.S. strike would be much more grave than an Israeli one. “If they (Israel) decide to do it, there’s no question that it would have an impact, but I think it’s also clear that if the United States did it, we could have a hell of a bigger impact,” he said.²⁸

SUPPORT FOR MILITARY OPERATION

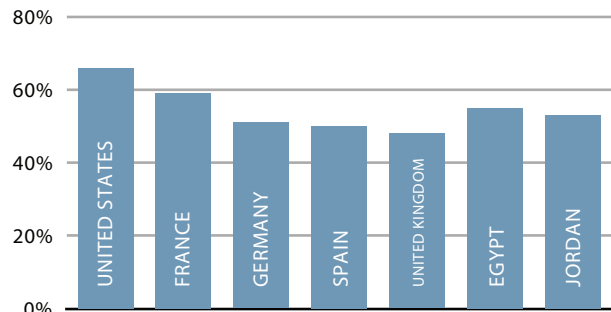


Figure 5: Support for Military Option

A poll by Pew Research Center’s Global Attitudes Project found that “while support for military action against Iran is less widespread than support for tougher economic sanctions, majorities or pluralities of those who oppose a nuclear-armed Iran in 16 out of 22 countries surveyed are willing to consider the use of military force to prevent Iran from developing nuclear weapons.”²⁹ The poll also found that “Americans are the most supportive of a military option to deal with Iran; 66% of those who oppose a nuclear-armed Iran would consider the use of force,” followed by 59% in France, 51% in Germany, 50% in Spain, 48% in Britain, 55% in Egypt, and 53% in Jordan.³⁰(Figure 5)

The exception is Israel. The Israeli public is the least enthusiastic about a war with Iran. In a poll conducted Feb. 22-26, 2012, by Shibley Telhami, Brookings nonresident senior fellow and the Anwar Sadat Professor for Peace and Development at the University of Maryland, only 19% of Israelis supported an attack against Iran without the backing of the United States. According to Telhami, “the Israeli public is neither enthusiastic about the prospect of war with Iran nor swayed by the seeming embrace of Israel by our presidential candidates.”³¹

Israeli fears of an Iran war notwithstanding, when it comes to evaluating the plausibility of strikes against Iran, there is the lure of the Osirak precedent.³² As early as 2005, Joseph Cirincione and others were writing eloquently about why “bombs won’t solve Iran,” but without convincing Iran hawks. As recently as September 2010, Jeffrey Goldberg argued that military strikes against nuclear facilities have worked against Iraq and Syria. So what would be different in the case of Iran? As he put it:

“Israel has twice before successfully attacked and destroyed an

24 Ibid.

25 “Obama Presses Netanyahu to Resist Strikes on Iran,” Mark Landler, *New York Times*, 6 March 2012.

26 Ibid.

27 Elaine Sanchez, “Panetta Cites ‘Red Lines’ Iran Should Avoid,” *American Forces Press Service*, 16 February 2012, <<http://www.defense.gov/News/NewsArticle.aspx?ID=67230>>.

28 Yochi Dreazen, “Panetta: U.S. Has Potential Military Plans for Iran,” *National Journal*, 8 March 2012.

29 “Obama More Popular at Home than Abroad,” *Pew Research Center Global Attitudes Survey Report*, 17 June 2010, <<http://pewglobal.org/Files/pdf/Pew-Global-Attitudes-Spring-2010-Report.pdf>>.

30 Ibid.

31 “19% of Israelis Support Non-US-Backed Iran Strike,” *Jerusalem Post*, 29 February 2012.

32 Joseph Cirincione, “Bombs Won’t Solve Iran,” *The Washington Post*, 11 May 2005.

enemy's nuclear program. In 1981, Israeli warplanes bombed the Iraqi reactor at Osirak, halting—forever, as it turned out—Saddam Hussein's nuclear ambitions; and in 2007, Israeli planes destroyed a North Korean-built reactor in Syria. An attack on Iran, then, would be unprecedented only in scope and complexity.³³

Concerns about Iran's nuclear program and faith in the efficacy of military strikes are not limited to the United States and Israel. Although they have not been as vocal in their support for strikes, America's Arab allies were instrumental in financing Saddam Hussein's war against Iran. The fall of Saddam, the fear of American withdrawal and the prospects of a nuclear Iran acting as regional hegemon have created considerable unease in Saudi Arabia and the Gulf states. According to Wikileaks, in an April 2008 cable, Adel A. al-Jubeir, Saudi Arabia's ambassador to the United States, talked about the Saudi King Abdullah's frequent exhortations for the United States to "cut off the head of the snake" while there was time.³⁴ The Saudis have also threatened to develop their own nuclear weapons to counter an Iranian bomb. As late as June 29, 2011, Prince Turki al-Faisal, the former Saudi intelligence chief and ambassador to Washington, was warning that "if Iran develops nuclear weapons, that will be unacceptable to us, and we will have to follow suit."³⁵

Comparisons of Iran to Nazi Germany have not been restricted to American and Israeli politicians. In a July 2009 memo, Prince Mohammed bin Ziyad, the Defense minister of the United Arab Emirates, warned that "Ahmadinejad is Hitler" and called on the United States not to "appease Iran."³⁶ In a November 2009 cable, King Hamad of Bahrain stated that Iran's nuclear program must be stopped and "the dangers of letting it go are greater than the dangers of stopping it." According to *The New York Times*, Iran "has unified Israel and many longtime Arab adversaries—notably the Saudis—in a common cause. Publicly, these Arab states held their tongues, for fear of a domestic uproar and the retributions of a powerful neighbor. Privately, they clamored for strong action—by someone else."³⁷ With Saddam Hussein and the Iraqi army unable to do their bidding, it appears that the rich Arab states wish to wage a proxy war against the Islamic Republic by having the United States and Israel step into the vacuum created by the fall of Saddam Hussein.

Threatening Iran with use of military force has not been confined to the realm of political rhetoric. As Dan Shapiro, the U.S. ambassador to Israel put it, the military option was not only available, it was ready. The Iran plan exists as a concrete military plan. There exist a number of detailed studies on the military requirements to destroy Iran's nuclear facilities, most notably "A Study on a Possible Israeli

Strike on Iran's Nuclear Development Facilities."³⁸ There have also been a number of war games and simulated military strikes by the Brookings Institution and others.³⁹ In 2007, the Swedish Defense Agency concluded an extensive strategic review titled "Consequences of Military Action," which also examined the environmental and legal dimensions of attacks. Yet, by their very nature, the primary focus of these studies is on the military challenges of destroying Iran's nuclear program and the strategic and political ramifications.⁴⁰ With the exception of one study by Physicians for Social Responsibility, there are virtually no comprehensive or detailed studies on the impact of military strikes against Iran's nuclear sites on the Iranian people.⁴¹

Ironically, despite the very public nature of the rhetoric and posturing over Iran's nuclear program, politicians on both sides of the nuclear divide have failed to consider the costs of nuclear brinkmanship. There is no political incentive for disclosing the full risks and costs of military attacks on nuclear sites.

The starting point of this study is the end point of most other studies, namely to fill in the gaps about the military option. The risks and costs to the Iranian people must be factored into strategic and military equations focused on the destruction of Iran's nuclear facilities. Doing so not only clarifies the diplomatic stakes by providing parameters for understanding the risks and costs of such strikes, but also provides a constructive basis for involving the public and the media—civil society inside Iran, the United States and beyond—as active participants in finding an amicable and practical solution to the dispute over Iran's nuclear program.



Figure 6: Iran-Iraq War: Victim of Chemical Warfare (Photo: www.iranvision.com)

Our goal is neither to confirm nor to contradict perceptions and prejudices about the nature of Iran's nuclear policies, program or

33 Jeffrey Goldberg, "Point of No Return," *Atlantic Monthly*, September 2010.

34 Muhammad Sahimi, "Using Wikileaks to Advance the Narrative of War on Iran," *Tehran Bureau*, 5 December 2010.

35 Jason Burke, "Riyadh will build nuclear weapons if Iran gets them, Saudi prince warns," *The Guardian*, 29 June 2011, <<http://www.guardian.co.uk/world/2011/jun/29/saudi-build-nuclear-weapons-iran>>.

36 Muhammad Sahimi, "Using Wikileaks to Advance the Narrative of War on Iran," *Tehran Bureau*, 5 December 2010.

37 Jo Becker, James Glanz and David E. Sanger, "Around the World, Distress over Iran," *The New York Times*, 28 November 2010.

38 Anthony Cordesman and Abdullah Toukan, "Study on a Possible Israeli Strike on Iran's Nuclear Development Facilities," Center for Strategic and International Studies Report, 14 March 2009, <<http://csis.org/publication/study-possible-israeli-strike-irans-nuclear-development-facilities>>.

39 James Fallows, "Will Iran be Next?" *The Atlantic Magazine*, December 2004, <<http://www.theatlantic.com/magazine/archive/2004/12/will-iran-be-next/3599/>>.

40 Bengt Bergstrand et al., "Consequences of Military Action Against Iran," Swedish Defense Research Agency (FOI) Report, March 2008, <http://www.humansecuritygateway.com/documents/FOI_Iran_ConsequencesMilitaryActionAgainst.pdf>.

41 Martin Butcher, "War Is Not the Answer: The Medical and Public Health Consequences of Attacking Iran," Physicians for Social Responsibility, March 2007, <<http://action.psr.org/site/DocServer/WarIsNotTheAnswer.pdf?docID=2181>>.

POTENTIAL WEAPONIZATION

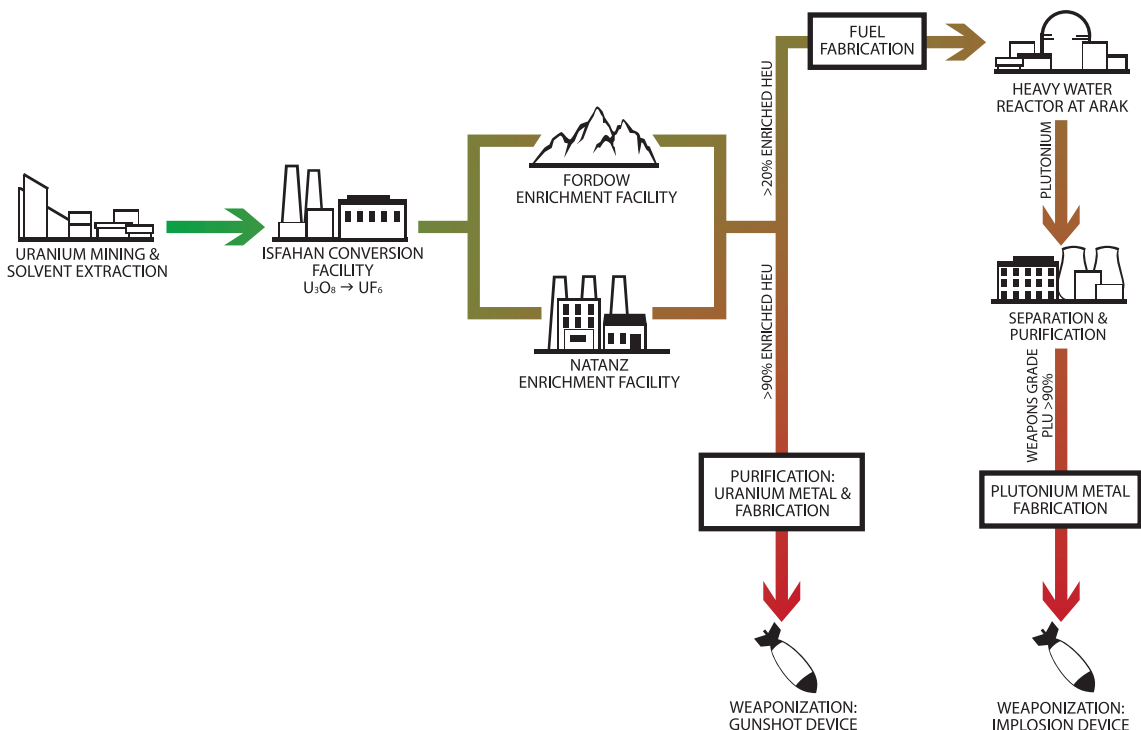


Figure 7: Weaponization Chart

rights, nor to debate the morality, legality, or practicality of the strikes. It is to provide the policymakers, the media, and others, including American, Israeli, and Iranian people, with an objective estimate of the risks and costs of military strikes against Iran’s nuclear sites: the risks and costs to the Iranian people, particularly innocent scientists, civilians and soldiers working at or living in the vicinity of targeted nuclear facilities. The questions that need to be asked to quantify the damage from such strikes are simple, even if the Ayatollah’s gamble with Iranian life promises to play itself out on a scale that exceeds the limits of the imagination.

THE TARGET OF STRIKES: KEY FACILITIES

In “A Study on a Possible Israeli Strike on Iran’s Nuclear Development Facilities,” Abdullah Toukan and Anthony H. Cordesman defined Iran’s Nuclear Target Set as the main facilities that are critical nodes in Iran’s nuclear infrastructure—those that can stop or at least delay the program.⁴² For the purpose of this study, we have limited our analysis to the facilities at Isfahan, Natanz, Arak and Bushehr.

The uranium conversion facility (UCF) at Isfahan and the enrichment facility near Natanz are likely the top two targets. The Arak heavy water reactor, though not yet operational, is the next likely target. Among the four potential targets studied, the Bushehr nuclear

power plant is the least likely to be attacked. The Fordow enrichment facility near Qom is a research and development facility as well as an enrichment operation for producing 20 % enriched U-235. This underground facility is protected by more than 80 meters of earth and rocks. It would be an important military target but one which is difficult to destroy. We have not included it in our study.

Beyond the four primary targets, there are dozens of other probable targets, which include:

Very probable targets: Air defense systems, centrifuge workshops, secret nuclear sites known only to Western intelligence, missile facilities.

Probable targets: Parchin military base (where some suspect weaponization testing has taken place).

Possible Targets: Uranium mines and mills, leadership targets.

It is important to note that strikes against some of these facilities, such as centrifuge workshops, which are reportedly located in downtown Tehran, would result in significant casualties.

Finally, we have paid special attention to the consequences of military strikes on the city of Isfahan. Isfahan, the capital of Iran’s Safavid Dynasty, is the crown jewel of Iranian cities. Its architecture alone makes it one of the world’s most beautiful cities, comparable to Kyoto or Florence. The center of the city, designated as a UNESCO world heritage site, is only 15 km (9.3 miles) from the Isfahan Uranium Conversion Facility.

42 Anthony Cordesman and Abdullah Toukan, “Study on a Possible Israeli Strike on Iran’s Nuclear Development Facilities,” Center for Strategic and International Studies Report, 14 March 2009, <<http://csis.org/publication/study-possible-israeli-strike-irans-nuclear-development-facilities>>.

THE NATURE OF THE STRIKES: THE CONVENTIONAL OPTION

Any military strike against Iran would have as its objective the total destruction of Iran's hardened nuclear sites. Retired Air Force Col. Sam Gardiner, an expert on targeting, outlined a five-day operation that would require 400 "aim points" at nuclear facilities, at least 75 of which would require "penetrating weapons" as well as "two chemical production plants."⁴³ Gardiner also states that an attack would resemble the 1967 war against Egypt. Besides air strikes from the Hammers in the Israeli Air Force's 69 squadron, the plan would include "Shaldag commando teams, possibly some version of sea-launched missiles and even explosive-carrying dogs that would penetrate the underground facilities."⁴⁴

The Swedish Defense Agency considered two options, a "Go Big" plan engaging both the uranium and plutonium paths that would require strikes against up to 20 nuclear site targets with 600 air sorties and 200 cruise missiles over 48 to 60 hours, and a "Go Fast" plan that would entail fewer and more focused strikes, but which would take out critical nodes such as Natanz over 6 to 12 hours.⁴⁵ Another leading expert, Joseph Cirincione, at the time the director for non-proliferation at the Carnegie Endowment for International Peace, has said that "a more likely target would be Isfahan."⁴⁶

Although some have argued for the use of tactical nuclear weapons, opponents have pointed out that the Pentagon has a number of conventional weapons that can destroy hardened targets, including the GBU-28 that was developed and deployed in the Gulf War. It destroyed one of Saddam's most heavily protected bunkers north of Baghdad, a site fortified by "more than 30 feet of earth, concrete and hardened steel."⁴⁷ Although Israel's request for bunker-busters was denied by the Bush administration in 2005, according to *Newsweek*, the Obama administration sold Israel 55 GBU-28 Hard Target Penetrators—potentially to be used against Iran—in early 2009, shortly after taking office.⁴⁸

As Michael Levi pointed out following speculation about the use of tactical nuclear weapons, Natanz could be destroyed with conventional weapons through repeated bombing over a longer period of time:

"The United States could repeatedly bomb the plant if it wished, drilling down until it reaches the underground chambers. Even if that took days it would set back the Iranian program just as decisively as a nuclear attack."⁴⁹

43 Col. Sam Gardiner, "The End of the Summer of Diplomacy: Assessing U.S. Military Options on Iran," The Century Foundation, 2006, <<http://tcf.org/publications/2006/9/pb578>>.

44 Ibid.

45 Bengt Bergstrand, et al., "Consequences of Military Action Against Iran," Swedish Defense Research Agency (FOI) Report, March 2008, <http://www.humansecuritygateway.com/documents/FOI_Iran_ConsequencesMilitaryActionAgainst.pdf>.

46 Peter Baker, Dafna Linzer and Thomas E. Ricks, "US Is Studying Military Strike Options on Iran," *The Washington Post*, 9 April 2006.

47 Ibid.

48 Eli Lake, "Obama Sold Israel Bunker-Buster Bombs," *Newsweek*, 23 September 2011.

49 Michael A. Levi, "Iran's Sitting Duck: A Nuclear Attack on Natanz Would Make No Sense," *The New York Times*, 18 April 2006.

The Toukan and Cordesman study echoed Levi. They made the case that a military strike with powerful conventional bunker-busters could ensure the destruction of Iran's nuclear facilities and proposed a sequenced strike against the hardened facility at Natanz. More recently, in March 2012, Air Force deputy chief of staff for operations, Lieutenant General Herbert Carlisle, said that the U.S. had developed a massive 30,000-pound (13,600 kg) bunker buster bomb that could smash through some 200 feet (65) of concrete before exploding. He described the massive ordnance penetrator as a "great weapon" that could be used against Iran.⁵⁰

Isfahan: 5 GBU-27

To destroy the conversion facility at Isfahan, Toukan and Cordesman assumed a conventional attack with five F-16s each carrying one GBU-27 PG bomb capable of generating a 5-psi blast.⁵¹ The GBU-27 is a BLU-I09 2000-pound class penetrating warhead. It can pierce 1.8 to 2.4 meters (7.68 ft) of concrete/hard targets, depending on the angle of attack. It carries 550 pounds of high explosives and can blast through more than 6 feet of reinforced concrete.⁵²

Natanz: 47-50 GBU-28

To destroy the facility at Natanz, Toukan and Cordesman calculated that the more powerful GBU-28 Blu-224 5,000-pound class penetrating warhead would be more appropriate, since it could penetrate at least 6 meters (20 feet) of reinforced concrete and 30 meters (100 feet) of earth. They estimated that two properly sequenced GBUs would certainly pierce the 20 meters (64 feet) of earth and 6 meters (20 feet) of concrete. They found that 22 GBU-28 would cover the underground facilities of 585,000 square feet (assuming 90% coverage) and assuming a 50% penetration for each GBU-28 pair, they concluded that 44 GBU-28 would be required to cover the underground facilities and another three GBU-28 to cover the Uranium Separation Building.⁵³

Arak: 4 GBU-10

For the heavy water nuclear reactor at Arak, a production plant of some 55,000 square feet, they estimated the use of four GBU-10s would be required.⁵⁴

Bushehr: GBU-10/GBU-28

The nuclear reactor at Bushehr was not identified as a target in the Cordesman study, although Cordesman did point out that the environmental consequences of an attack on the Bushehr reactor, once

50 David Alexander, "Clash with Iran could see use of huge, new U.S. bomb," *Thompson Reuters*, 9 March 2012.

51 Anthony Cordesman and Abdullah Toukan, "Study on a Possible Israeli Strike on Iran's Nuclear Development Facilities," Center for Strategic and International Studies Report, 14 March 2009, <<http://csis.org/publication/study-possible-israeli-strike-irans-nuclear-development-facilities>>.

52 Ibid.

53 Ibid.

54 Ibid.

IRAN'S FOUR NUCLEAR SITES: MILITARY CONSIDERATIONS				
Plant Location	Isfahan	Natanz	Arak	Bushehr
Site Description	Uranium Conversion Facility & Fuel Manufacturing Facility	Enrichment Plant	Heavy Water Production Plant (D ₂ O) & Heavy Water Reactor	Nuclear Power Plant
Construction	Active	Active	D ₂ O Production: Active Heavy Water Reactor due: 3-Qtr 2013	Reactor operating at 75% capacity
Surface Area	100,000 sq.ft.	646,000 sq. ft.	55,000 sq.ft.	187,000 sq. ft
Strike Force ⁵⁵	5 F-16 Aircraft 5 GBU-27 (240 kg warhead)	25-15 F-15 E 50 GBU-28 (306 kg warhead)	4-8 F-16 4-8GBU 10 (428 kg warhead)	Not specified
Physical Blast	5-10 PSI	5-10 PSI	5-10 PSI	Not specified
Main Toxins & Fission Products Released	Fluorine Compounds including (HF, UF ₆ , UO ₂ F ₂)	Fluorine Compounds including (HF, UF ₆ , UO ₂ F ₂)	Fission Products Including Iodine-131 Strontium-90 Caesium-137 (Once Reactor becomes operational)	Fission Products including Iodine-131 Strontium-90 Caesium-137

Table 1: Projected chemical and radiological releases at Iran's four major nuclear facilities

operational, could lead to hundreds of thousands of deaths. Bushehr would presumably be targeted by the more powerful GBU-10 or GBU-28 due to the heavily fortified reactor dome.

TIMING OF THE STRIKES: 2011-2015

Timelines for a unilateral strike against Iran are not set in stone. Perceptions of the Iranian threat shift, not only as a function of intelligence assessments about when Iran will cross the nuclear threshold, but also as a function of the domestic and international context in which policy is being formulated. Iran's 2009 presidential election protests, the Arab Spring of 2011, the war in Libya, protests in Syria, the United States' decision to pull troops out of Iraq and Afghanistan, and growing rifts within Iran's revolutionary establishment all

impact the timelines for military strikes. Yet, in the aftermath of the failure of the latest round of diplomatic talks in Istanbul, Baghdad and Moscow, the threat of a military strike in 2012-2013 is no longer a matter of speculation. It is real.

As with the Iraq war, perceptions about Iranian nuclear intentions—rather than actual capabilities—can trump reality, legality and facts. The timelines assume the legality of strikes, a rather dubious proposition premised on the notion that once intelligence agencies estimate that Iran has crossed the nuclear threshold, the United States and Israel can assert the doctrine of self-defense to engage in pre-emptive unilateral or coordinated military strikes to eliminate the Iranian threat by attacking Iran's nuclear sites. From a strictly legal perspective, the targeting of nuclear power plants such as Bushehr—and the potential death of countless civilians—raises serious concerns in terms of international law, both in terms of humanitarian law and in terms of the doctrine of proportionality. Even in war, such strikes are expressly forbidden under Additional Protocol to the Geneva Conventions of 1977 which states that: "nuclear electrical generating

55 Anthony Cordesman and Abdullah Toukan, "Study on a Possible Israeli Strike on Iran's Nuclear Development Facilities," Center for Strategic and International Studies, 14 March 2009.

stations shall not be made the object of attack, even where these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population” (Protocol I, Article 56, and Protocol II, Article 15).⁵⁶

Since the timelines assume both the existence of an imminent threat from Iran’s nuclear program and the legality of strikes as acts of self-defense, the time horizons they provide serve as a reliable guide for gauging the pressure for strikes.

Although there is some difference of opinion between policymakers and intelligence agencies about how long it would take Iran to produce enough fissile material to make a nuclear weapon, based on the 2007 National Intelligence Estimate, the timeline in which Iran is likely to produce enough HEU for a weapon has ranged from 2010 to 2015. The estimates for producing enough plutonium for a weapon are 2015 and beyond.⁵⁷

AMOUNT OF FISSILE MATERIAL NEEDED TO BUILD A NUCLEAR BOMB

HEU Enriched to 90% U-235	Simple gun-type nuclear weapons	90 to 100 lbs (40 to 50 kg)
	Simple implosion weapons	33 lbs (15kg)
	Sophisticated implosion weapons	20 to 26 lbs (9 to 12 kg)
Plutonium	Simple implosion weapons	14 lbs (6 kg)
	Sophisticated implosion weapons	4.5 to 9 lbs (2 to 4 kg)

Table 2: Source: Fact sheet, Union of Concerned Scientists, April 2004.

Discussing Israel’s timetable for strikes in the September 2010 issue of *The Atlantic*, Jeffrey Goldberg wrote that, based on his conversation with Israeli decision makers, “this period of forbearance in which Netanyahu waits to see if the West’s nonmilitary methods can stop Iran will come to an end this December.”⁵⁸

The *New York Times* reported on August 19, 2010, that the Obama administration had convinced Israel that it would take Iran at least a year, not months as Israelis had claimed, to convert its stock of low enriched uranium into weapons-grade material.⁵⁹

Nevertheless, the tighter Israeli timeline had considerable support in Congress. In an interview with *The Financial Times*, Howard

Berman, then Democratic chairman of the House of Representatives Foreign Affairs Committee, said that the administration had “months, not years” to make sanctions work and that “military action was preferable to accepting an Iran with nuclear weapons capability.”⁶⁰ In a speech on November 8, 2010, following the Republican sweep of Congress, Israeli Prime Minister Benjamin Netanyahu ratcheted up the pressure on the United States and the international community. He said that the United States faced a simple paradox: “If the international community, led by the U.S., wants to stop Iran without resorting to military action, it will have to convince Iran that it is prepared to take such action.” Then U.S. Defense Secretary Robert Gates countered that sanctions against the Islamic Republic were “biting more deeply than they anticipated.” Speaking to a convention of Jewish groups, Vice President Joseph Biden told the Israeli leader that “we are absolutely committed to preventing Iran from acquiring nuclear weapons.”⁶¹

In a June 6, 2011, *New Yorker* article titled “Iran and the Bomb: How Real Is the Nuclear Threat,” Seymour Hersh reported that the U.S. National Intelligence Estimate of 2011 reaffirmed its 2007 NIE report that “with high confidence” there is “no conclusive evidence that Iran has made any efforts to build the bomb since 2003.”⁶² Yet Hersh warned that “there is a large body of evidence, however, including some of America’s most highly classified intelligence assessments, suggesting that the United States could be in danger of repeating a mistake similar to the one made with Saddam Hussein’s Iraq nine years ago—allowing anxieties about the policies of a tyrannical regime to distort our estimations of the state’s military capacities and intentions.”⁶³

Picking up on Hersh’s report, Roger Cohen points to the shifting estimates about Iran as “the Godot of nuclear threats, the country always on the verge of producing a nuclear weapon or acquiring ‘breakout capacity’ to make one, but never, despite the dire warning of Israeli leaders dating back to 1990, doing either.”⁶⁴ Recalling forecasts of a bomb dating back to 1999 (Shimon Peres), 2004 (Ehud Barak) or July 2011 (Jeffrey Goldberg), Cohen notes that Meir Dagan, former head of Israel’s Mossad spy agency, had dismissed an Israeli attack on Iran as a “stupid idea” and that Dagan was less worried about Iran than “Netanyahu’s susceptibility to ‘dangerous adventure.’”⁶⁵ Sabotage has also muddied timetables and shifted U.S. and Israeli estimates. In January 2011, after attacks using the Stuxnet computer worm and the destruction of up to one-fifth of Iran’s centrifuges, U.S. Secretary of State Hillary Clinton and Meir Dagan, the retiring head of Mossad, separately announced that they believed Iran’s efforts had

56 Note: For a discussion of international law and military strikes against Iran’s nuclear facilities, consult chapter 10 of: Bengt Bergstrand, et al., “Consequences of Military Action Against Iran,” Swedish Defense Research Agency (FOI) Report, March 2008, <http://www.humansecuritygateway.com/documents/FOI_Iran_ConsequencesMilitaryActionAgainst.pdf>.

57 “Iran: Nuclear Intentions and Capabilities,” a study from the Office of The Directors of National Intelligence, <www.dni.gov/press_releases/20071203_release.pdf>.

58 Jeffrey Goldberg, “The Point of No Return,” *The Atlantic*, September 2010.

59 Mark Mazzetti and David Sanger, “US Persuades Israel that Iran Threat Is Not Imminent,” *The New York Times*, 19 August 2010.

60 Daniel Dombey, “Obama Faces Pressure Over Iran Policy,” *Financial Times*, 29 September 2010.

61 Gwyn Ackerman and Johnathan Ferziger, “Netanyahu Says U.S. Must Show a Military Strike Against Iran is Possible,” *Bloomberg News Online*, 8 November 2010, <<http://www.bloomberg.com/news/2010-11-08/netanyahu-says-u-s-must-show-a-military-strike-against-iran-is-possible.html>>.

62 Seymour M. Hersh, “Iran and the Bomb: How Real Is the Nuclear Threat?” *The New Yorker*, 6 June 2011.

63 Ibid.

64 Roger Cohen, “Iran Without Nukes,” *The New York Times*, 13 June 2011.

65 Ibid.

been “set back by several years.”⁶⁶ *The New York Times* reported that in “a sharp reversal from Israel’s long-held argument that Iran was on the cusp of success,” Dagan had told the Israeli Knesset that Iran had run into “technical difficulties” that could delay a bomb until 2015.⁶⁷ Prior to Stuxnet, statements by Netanyahu and Obama had led some analysts to predict an Israeli strike after December 2010, with the timeline for an American military strike in 2011. If the Obama administration’s diplomacy and sanctions fail to provide a solution to the nuclear issue, which is likely, especially after Moscow, one can assume that the gap between the Israeli and American timelines will only narrow with the passage of time. Assuming that the United States and Israel would bargain over establishing a date for targeting Iran, it is almost certain that the timelines for a possible coordinated strike against Iran will overlap if not by the end of 2012, then certainly sometime between 2013-2015 (Figure 8). However, it is also possible that the timelines do not converge, in which case Israel may opt for a unilateral strike without U.S. support.

IRAN NUCLEAR WEAPON TIMELINE



Figure 8: U.S. estimates based on 2007 National Intelligence Estimates (NIEs) produced for the director of National Intelligence

As Senator Lieberman has indicated, Israel may prefer to wait for a later strike based on an American timeline, if one assumes that Israel would not risk antagonizing the United States to attack Iran. Despite the Israeli attacks on Iraqi and Syrian nuclear facilities, a potentially dangerous and ineffective unilateral strike against multiple targets in Iran without an American security blanket would expose Israel to grave regional and international repercussion. An American strike would have a higher chance of military success and lower political risks for Israel. As Lieberman put it:

“It would be a failure of U.S. leadership if this situation reaches a point where the Israeli government decides to attempt a unilateral strike on Iran. If military action is absolutely necessary to stop Iran from gaining nuclear weapons capacity, then the United States is clearly in the strongest position to confront Iran and manage the regional consequences. This is not a responsibility we should outsource.”⁶⁸

66 William J. Broad, John Markoff and David E. Sanger, “Israeli Test on Worm Called Crucial in Iran Nuclear Delay,” *The New York Times*, 15 January 2011.

67 Ibid.

68 “Lieberman Delivers Address on the Future of American Power in the Middle East,” 29 September 2010, <<http://lieberman.senate.gov/index.cfm/news-events/speeches-op-eds/2010/9/lieberman-delivers-address-on-the-future-of-american-power-in-the-middle-east>>.