Backgrounder

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Iran's Energy Sector: A Target Vulnerable to Sanctions

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Abstract: *Iran's theocratic Shia regime has used its oil revenues to export the Islamic revolution and to fund an extensive nuclear weapons program. Yet Iran's energy sector is also its greatest vulnerability, particularly its need to import gasoline to meet domestic demand. The most recent round of U.N. Security Council sanctions and unilateral sanctions by the European Union, Japan, and other countries offer some hope of stopping Iran's nuclear program. The U.S. needs to aggressively enforce its own sanctions and lead efforts to persuade other countries to enforce existing sanctions and to impose their own sanctions.*

Iran's Islamist regime has exploited Iran's huge energy resources to fuel a military buildup, develop an extensive nuclear weapons program, maintain itself in power, and export its Shia Islamic revolution. Thus, the Iranian regime has become a major threat to international security and stability.

Yet the future of Iran's energy sector is threatened by economic mismanagement, corruption, inadequate levels of technology, insufficient investment, and rising domestic demand. The regime distorts the domestic energy markets with heavy subsidies of gasoline, natural gas, and other products. In recent years, Iran's oil exports have gradually declined, and sanctions could accelerate this decline. To remain a major energy exporter, Tehran needs massive influxes of oil and gas technology, expertise, and foreign investment. Without these inputs, Iran's oil exports will inexorably fall, further weakening its faltering economy and

Talking Points

- Iran's Islamist regime has exploited Iran's huge energy resources to fuel a military buildup, build an extensive nuclear weapons program, maintain its power, and export its Shia Islamic revolution.
- Iran's energy sector is threatened by economic mismanagement, corruption, inadequate levels of technology, insufficient investment, and rising domestic demand. Iran's energy sector is its greatest vulnerability.
- The U.S. should persuade its allies and other countries to develop and strictly enforce unilateral sanctions regimes that target Iran's energy sector, Iran's Islamic Revolutionary Guard Corps leadership, and its associates.
- The U.S. should encourage China to diversify its energy imports away from Iran. Washington should appeal to Iran's neighbors, particularly Turkey, to assist in containing Iran's nuclear ambitions by strictly enforcing sanctions.
- The U.S. should support the Turkmenistan–Afghanistan–Pakistan–India (TAPI) gas pipeline over the Iran–Pakistan–India (IPI) gas pipeline because IPI would give Iran an economic lifeline and increase its influence in South Asia.

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undermining the unpopular regime's ability to buy off the population with subsidies.

To increase the pressure on Iran to stop developing nuclear weapons and their delivery systems and to open existing nuclear programs to International Atomic Energy Agency (IAEA) inspectors, the U.S. should:

- Persuade its allies and other countries to develop and strictly enforce unilateral sanctions regimes that target Iran's energy sector;
- Press Beijing to prevent Chinese companies from undercutting sanctions by replacing companies that pull out of Iran;
- Encourage China to diversify its energy imports away from Iran;
- Prioritize sanctions against the Iranian institutions that are controlled by the Islamic Revolutionary Guard Corps (IRGC) leadership and its associates;
- Appeal to Iran's neighbors, particularly Turkey, to assist in containing Iran's nuclear ambitions by enforcing the strongest possible sanctions against Iran; and
- Support the Turkmenistan–Afghanistan–Pakistan–India (TAPI) gas pipeline over the Iran–Pakistan–India (IPI) gas pipeline because IPI would give Iran an economic lifeline and increase its leverage and influence in South Asia.

Resource Nationalism Meets Islamist Ideology

Iran has been a major oil producer since oil was first discovered in 1908 and is a founding member of the Organization of Petroleum Exporting Countries (OPEC). It has consistently taken an anti-market, radical position at the cartel's meetings, demanding production cuts to increase prices as high as possible. However, despite its demands in the cartel, Iran often cheats on its OPEC production quota. For example, in 2009, Iran made only half its promised production cuts in an effort to boost its own oil revenues.[1]

The regime exploits Iran's oil and gas revenues to enrich itself, maintain its power, and advance its revolutionary Islamist goals, rather than to benefit the Iranian people.

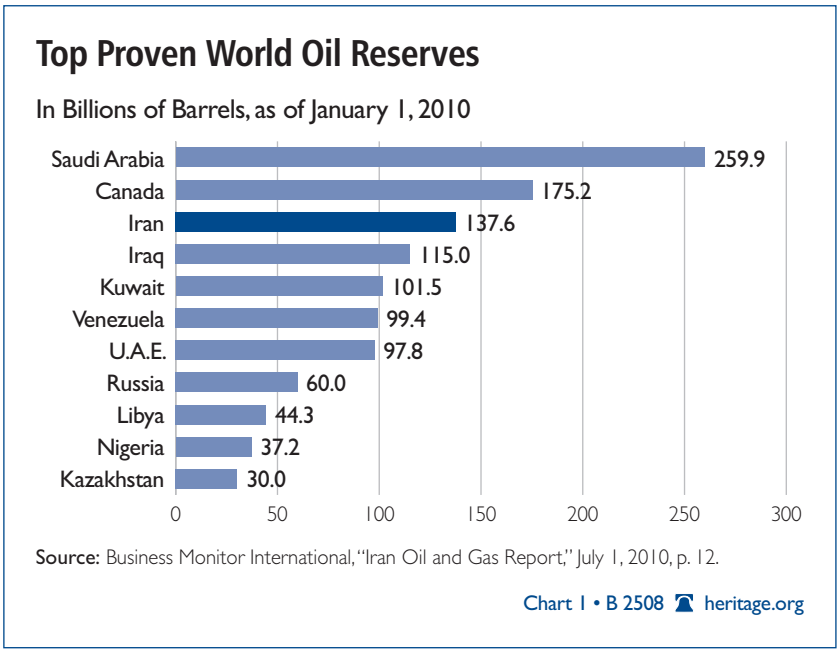
Iran's revolutionary leadership has embraced a radical form of resource nationalism. As the self-proclaimed leader of the Iranian nation and the global Islamic *ummah* (community), the theocratic regime believes that it alone has the God-given right to decide how to use the oil revenue. Therefore, the regime exploits Iran's oil and gas revenues to enrich itself, maintain its power, and advance its revolutionary Islamist goals, rather than to benefit the Iranian people.[2] This statist economic approach requires an authoritarian control system. Iran is a lower middle-income country, so massive subsidization of the nuclear program would have been impossible without the central control of oil revenues.[3]

Oil: The Islamic Republic's Lifeblood

Iran has an estimated 137.6 billion barrels of oil, about 10 percent of the world's total proven reserves. It ranks third in proven oil reserves after Saudi Arabia and Canada.[4] (See Chart 1.) Iran is the fourth largest exporter of crude oil with 40 oil fields, including 27 onshore, that produce more than 3.68 million barrels per day (bpd) of crude a year.[5]

To fund its nuclear program, support terrorism, and sustain huge economic subsidies, Iran must sell large quantities of oil and gas. Conse-

1. Steven Mufson, "OPEC to Maintain Oil Output, Urges Nations to Meet Quotas," *The Washington Post*, March 16, 2009, at *http://www.washingtonpost.com/wp-dyn/content/article/2009/03/15/AR2009031500401.html* (September 7, 2010).
2. Matthew Levitt, "Why the Iran Sanctions Matter," *Foreign Policy*, June 11, 2010, at *http://www.washingtoninstitute.org/templateC06.php?CID=1476* (Sept. 13, 2010).
3. The World Bank, Data by Country: Iran, at *http://data.worldbank.org/country/iran-islamic-republic* (September 7, 2010).
4. U.S. Energy Information Administration, "Iran," *Country Analysis Brief*, January 2010, at *http://www.eia.doe.gov/emeu/cabs/Iran/Oil.html* (August 17, 2010).
5. Business Monitor International, "Iran Oil and Gas Report," July 1, 2010, p. 12.



quently, Tehran has continuously violated OPEC quotas, causing serious concerns after oil prices dropped in July 2008.[6]

However, the country's energy sector is woefully mismanaged. It has not returned to even pre-1979 oil production levels. Production from its onshore oil fields is declining by approximately 8 percent annually, and production from offshore fields is declining by 11 percent annually. These depletion rates could reach 13 percent.[7] Thus, Iran is losing 400,000 bpd to 700,000 bpd annually due to reserve depletion alone. If these trends continue, oil production could drop by 25 percent by 2015. A National Academy of Sciences report suggests that Iranian oil exports could disappear entirely by 2015.[8] These prognoses may explain why the Iranian leadership seems to be prioritizing and intensifying its nuclear program. In coming years, they simply may run out of money.

Natural Gas: Iran's Strategic Energy Reserve

Iran's gas reserves are estimated at more than 29,610 billion cubic meters (bcm), which places Iran second in proven gas reserves after Russia.[9] However, Iran lacks the infrastructure to efficiently extract gas from two-thirds of its natural gas fields and must rely on a complicated system of gas imports and exports.[10] In 2009, Iran produced an estimated 121.0 bcm of natural gas.[11] It plans to increase production by seeking foreign direct investment (FDI) in its natural gas fields.[12]

However, foreign investment in Iranian gas has encountered growing problems because of international sanctions and the leadership's failure to structure the gas sector in a business-friendly way. Western companies are shunning Iranian gas reserves, preferring to work with Russia and Qatar and, of late, to develop shale gas reserves in North America.[13]

6. Omar Hasan, "OPEC's Gulf Arab Members Seen to Seek Quota Compliance," *The China Post*, March 16, 2010, at *http://www.chinapost.com.tw/commentary/afp/2010/03/16/248487/OPECs-Gulf.htm* (November 16, 2010).
7. U.S. Energy Information Administration, "Iran."
8. "Iran Crisis: Aging Oil Infrastructure Could Cripple Its Economy," *World Tribune*, December 12, 2008, at *http://www.worldtribune.com/worldtribune/WTARC/2008/me_oil0785_12_12.asp* (August 4, 2010), and Roger Stern, "The Iranian Petroleum Crisis and United States National Security," *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 104, No. 1 (January 2, 2007), pp. 377–382, at *http://www.pnas.org/cgi/reprint/0603903104v1* (August 18, 2010).
9. Business Monitor International, "Iran Oil and Gas Report," p. 39.
10. Robert E. Ebel, "Geopolitics of the Iranian Nuclear Energy Program: But Oil and Gas Still Matter," Center for Strategic and International Studies, March 2010, p. 41, at *http://csis.org/publication/geopolitics-iranian-nuclear-energy-program* (August 9, 2010).
11. Business Monitor International, "Iran Oil and Gas Report," p. 26.
12. U.S. Energy Information Administration, "Iran."

Iran's principal trade partners are the EU, China, Japan, India, South Korea, United Arab Emirates, and Russia.[14] Except for Russia, these countries are important markets for Iran's energy exports, but development of Iran's natural gas resources has been severely hamstrung by sanctions, prickly relations with most foreign energy enterprises, and a lack of Iranian expertise and technology.

Iranian gas fields are located primarily in the south, but demand is concentrated in northern and central cities, including Tehran. Because Iran lacks an adequate pipeline network, the country relies on gas imports from its neighbors to fill some of its needs. Thus, Turkmenistan provides 5 percent of Iran's natural gas consumption (about 8 bcm to 9 bcm per year).

Iran also signed an agreement with Azerbaijan, which will supply 0.5 bcm per year beginning in 2010.[15] Iranian government-controlled entities, including Naftiran Intertrade Company (NICO), are major partners in energy projects in Azerbaijan, including in the consortium developing Azerbaijan's Shakh-Deniz gas field.[16] The Iranian Oil Company, a subsidiary of NICO, is an equal partner with BP in the Rhum natural gas project off the coast of Scotland. These commercial ventures give Iran influence over foreign energy resources and potential access to technology and expertise otherwise blocked by U.S. and EU sanctions.[17]

Iran's domestic consumption of natural gas is expected to grow by 7 percent annually for the next decade, so its dependence on imports from Turkmenistan and others will likely increase.[18] At the same time Iran is planning to boost its gas exports by pipeline and as liquefied natural gas (LNG).[19] It sells gas to Turkey via the Eastern Anatolia pipeline, which stretches 926 miles from Doğubayazıt to Ankara through Erzurum, Sivas, and Kayseri.[20] Iran is planning giant LNG developments of the North Pars, South Pars, and other fields in partnership with China. Tehran is also negotiating construction of an Iran–Pakistan–India gas pipeline, which would increase Iran's leverage and influence in South Asia.[21]

Iran's Market-Averse Hydrocarbon Sector

Gross statist mismanagement severely hampered the business environment in Iran by imposing price controls and rationing, breeding corruption, and enforcing excessive regulations. Government-affiliated charities and high-ranking members of the Islamic Revolutionary Guard Corps control vast swathes of the economy, including the energy sector.[22] This control is corrupt and inefficient. Iran's oil and gas industries are an energy economist's nightmare.

Despite his campaign promises to stop corruption and improve the business climate, President Mahmoud Ahmadinejad has helped to increase the politicization and corruption of Iran's hydrocarbon

13. Amy Myers Jaffe, "Shale Gas Will Rock the World," *The Wall Street Journal*, May 10, 2010, at *http://online.wsj.com/article/SB10001424052702303491304575187880596301668.html* (September 9, 2010).
14. European Commission, "Iran: EU Bilateral Trade and Trade with the World," September 15, 2010, at *http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113392.pdf* (December 1, 2010).
15. Business Monitor International, "Iran Oil and Gas Report," p. 42.
16. The consortium includes Statoil (Norway), BP (U.K.), Lukoil (Russia), Total (France), the State Oil Company of Azerbaijan, and National Oil and Gas Company (Turkey).
17. Mark Dubowitz, "Will Obama Follow Through on Iran Sanctions?" *The Weekly Standard*, October 4, 2010, at *http://www.weeklystandard.com/blogs/will-obama-follow-through-iran-sanctions* (November 16, 2010).
18. U.S. Energy Information Administration, "Iran."
19. Mark Dubowitz and Benjamin Weinthal, "Iran's European Helpers," *The Wall Street Journal*, September 29, 2010, at *http://online.wsj.com/article/SB10001424052748704116004575522090774268372.html* (October 21, 2010).
20. ILF Consulting Engineers, "Caspian/Iraq Export Pipelines," *Middle East Economic Survey*, Vol. 69, No 52 (December 25, 2006), at *http://www.mees.com/postedarticles/oped/v49n52-5OD02.htm* (Sept. 13, 2010).
21. Ariel Cohen, Lisa Curtis, and Owen Graham, "The Proposed Iran–Pakistan–India Gas Pipeline: An Unacceptable Risk to Regional Security," Heritage Foundation *Backgrounder* No. 2139, May 30, 2008, at *http://www.heritage.org/research/reports/2008/05/the-proposed-iran-pakistan-india-gas-pipeline-an-unacceptable-risk-to-regional-security.*
22. Economist Intelligence Unit, "Country Report Iran," April 2010, p. 8.

sector. He replaced many skilled technocrats with regime loyalists with little experience.[23] This has made a bad situation worse, much like what Venezuelan President Hugo Chávez has done to PdVSA, Venezuela's previously reasonably managed state-owned oil company.[24] During the first four years of Ahmadinejad's term in office, annual FDI in the energy sector has declined by 64 percent, from $4.2 billion to $1.5 billion—far below what Iran's energy sector needs.[25]

Gross statist mismanagement severely hampered the business environment in Iran by imposing price controls and rationing, breeding corruption, and enforcing excessive regulations.

According to official statements, the country will require at least $500 billion in investments in its oil and gas sector over the next 15 years ($33 billion per year), much of which must be FDI.[26] This would be 20 times current investment rates. In today's environment of heightened political risk, corruption, and economic mismanagement, such amounts are simply unrealistic.

The "brain drain" of competent technocrats who have found employment outside of Iran has exacerbated the lack of technical and management skills in the energy industry. It calls into question Iran's future as an oil and gas exporter. Modern technologies are essential to reverse declining production in Iran's older fields and to realize their full potential. Iran's economy, missile and nuclear program, exorbitant military expenditures, and subsidies depend on oil revenue, which accounts for 70 percent of total government revenues.[27]

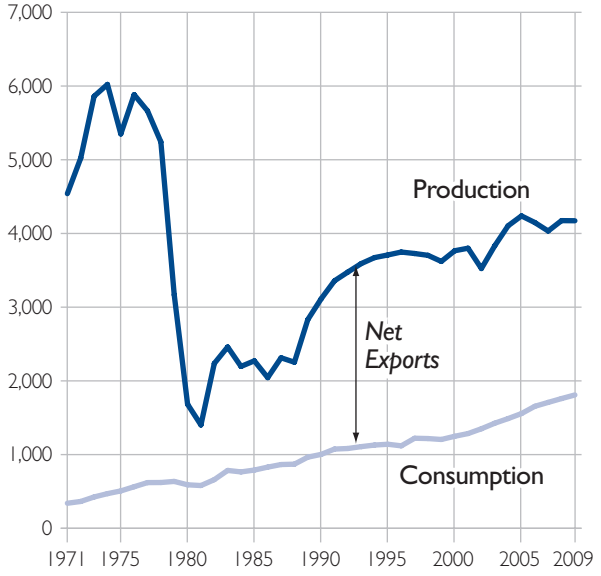
In August 2010, crude oil prices slid below $80 per barrel, reducing Iran's projected oil revenues, depressing Iran's economic prospects, and exacerbating political tensions within Iranian society and inside the fractious government itself.[28] This is to be expected because the current budget is balanced only when oil is above $80 per barrel.[29]

Mismanaged Domestic Energy Sector. Domestic demand for petroleum has risen steadily. (See Chart 2.) Rising demand is partly due to domestic subsidies that artificially suppress prices. Iran spends $35 billion to $45 billion on fuel subsidies each year, buying regime loyalty with cheap gasoline.[30] Iran imported an estimated 160,000 bpd of gasoline in 2009 because Iran's domestic refining capacity (less than 1.5 million bpd per year) cannot meet domestic demand.[31] As much as one-third of gasoline imports come from Chinese companies.[32]

23. Ali Sheikholeslami and Ladane Nasseri, "Iran's Mir-Kazemi Wins Parliamentary Approval as Oil Minister," Bloomberg, September 3, 2009, at *http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aJcm407bVrpU* (August 10, 2010); Economist Intelligence Unit, "Country Report Iran," p. 7; Mark Dubowitz and Laura Grossman, "Iran's Energy Partners: Companies Requiring Investigation Under U.S. Sanctions Law," Foundation for the Defense of Democracies, August 2010, p. 4, at *http://www.iranenergyproject.org/documents/1323.pdf* (August 9, 2010); and Daniel Brumberg and Ariel I. Ahram, "The National Iranian Oil Company in Iranian Politics," Rice University, James A. Baker III Institute for Public Policy, March 2007, at *http://www.rice.edu/energy/publications/docs/NOCs/Papers/NOC_NIOC_Brumberg-Ahram.pdf* (August 10, 2010).
24. Gustavo Coronel, "Corruption, Mismanagement, and Abuse of Power in Hugo Chávez's Venezuela," Cato Institute *Development Policy Analysis* No. 2, November 27, 2010, at *http://www.cato.org/pubs/dpa/dpa2.pdf* (September 7, 2010).
25. Mark Dubowitz, "Beyond Gasoline: Slamming the Door on the Iranian Regime's Access to Energy Expertise," Atlantic Council, July 6, 2010, at *http://www.acus.org/new_atlanticist/beyond-gasoline-slamming-door-iranian-regimes-access-energy-expertise* (September 9, 2010).
26. Economist Intelligent Unit, "Country Report Iran," p. 12.
27. U.S. Energy Information Administration, "Iran."
28. Jerry DiColo, "Oil Futures: Crude Falls Below $80/Bbl Ahead of Fed Meeting," *The Wall Street Journal*, August 10, 2010.
29. Lesley Wroughton, "Sanctions Hurting Iran Economic Activity, Says IMF," Reuters, August 15, 2008, at *http://www.reuters.com/article/idUSN1444053420080815* (September 7, 2010).
30. Roshanak Taghavi, "Why Iran's Ahmadinejad Is Pushing to Cut Popular Government Subsidies," *The Christian Science Monitor*, April 30, 2010, *at http://www.csmonitor.com/World/Middle-East/2010/0430/Why-Iran-s-Ahmadinejad-is-pushing-to-cut-popular-government-subsidies* (August 9, 2010).

Iranian Oil Production and Consumption

In Millions of Barrels per Day



Source: U.S. Energy Information Administration, "Iran," *Country Analysis Brief*, January 2010, at *http://www.eia.doe.gov/emeu/cabs/Iran/Oil.html* (August 9, 2010).

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The most recent round of U.S. and EU sanctions are designed to exploit Iran's dependency on gasoline imports. The U.S. Congress led the way by passing the Comprehensive Iran Accountability, Sanctions and Divestment Act[33] in June 2010, which authorized the Administration to impose sanctions on firms that sell gasoline to Iran. The EU followed suit in July by banning new investment in Iran's energy sector, especially in refining oil into gasoline.[34] Although gasoline imports dropped to 60,000 bpd in June—a 50 percent drop compared to May—the overall effect of sanctions is yet to be determined.[35] There are signs that Iran has embarked on a crash course to eliminate its dependence on gasoline imports. If successful, it will make gasoline sanctions futile. Many experts question Iran's claims that it has reached gasoline self-sufficiency or can do so in the near future. They doubt that Tehran can attract the capital and technology to eliminate its dependence. Recent government plans to eliminate subsidies on gasoline have been repeatedly delayed because the regime fears the potential for significant inflation to further inflame domestic discontent.

While Iran has many sources of resource wealth, the highly corrupt, inefficient, and technologically backward oil and gas sector does not support rapid economic growth. As a result, Iran suffers from widespread unemployment. The official unemployment rate is 14.6 percent, with the unemployment rate among young people between age 15 and 24 approaching 24 percent. However, the real unemployment rate is suspected to be much higher.[36]

The regime's mismanagement of Iran's economy and its proposed sharp reduction in energy subsidies could lead to immense popular pressure for government reform or even regime replacement. Moscow and Beijing, the theocracy's principal allies, are unlikely to welcome such a development.

Iran's Principal Trading Partners

Iran depends on China, Japan, India, Russia, and the European Union for trade and foreign invest-

31. Ebel, "Geopolitics of the Iranian Nuclear Energy Program," p. 39.
32. Joseph A. Christoff, "Iran Sanctions: Firms Reported to Have Commercial Activity in the Iranian Energy Sector and U.S. Government Contracts," testimony before the Committee on Homeland Security and Governmental Affairs Committee, U.S. Senate, May 12, 2010, at *http://www.gao.gov/new.items/d10721t.pdf* (August 9, 2010).
33. Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010, Public Law 111–195.
34. Stephen Castle, "Europe Imposes New Sanctions on Iran," *The New York Times*, July 26, 2010, at *http://www.nytimes.com/2010/07/27/world/middleeast/27iran.html* (November 16, 2010).
35. Ali Sheikholeslami, Anthony DiPaola, and Alaric Nightingale, "Iran Sanctions Leave China, Russia as Winners in Trade," Bloomberg, August 9, 2010, at *http://www.bloomberg.com/news/2010-08-08/china-embracing-iran-raises-reliance-ship-costs-as-un-sanctions-take-toll.html* (September 9, 2010).
36. Mehr News Agency, "Unemployment Rate Hits 14.6% in Iran," August 9, 2010, at *http://www.mehrnews.com/en/NewsDetail.aspx?NewsID=1130987* (August 9, 2010), and "Are Iran's Leaders Hiding a Severe Economic Downturn," *Time*, March 3, 2010, at *http://www.time.com/time/world/article/0,8599,1969390,00.html* (August 4, 2010).

ment to keep its oil and gas production afloat. In particular, it relies on China, Japan, India, and the EU for oil and gas exports, gasoline imports, and infrastructural development. It relies on Russia for nuclear technology, weapons, natural gas investment, and gasoline, at least until Lukoil recently committed to stop selling Iran gasoline.

Japan. Japan has been a leading importer of Iranian oil. In 2009, Japan imported 421,000 bpd from Iran, but 2010 imports will mark a 17-year low in Iranian–Japanese energy trade, particularly because of Japan's active support of the new sanctions against Iran.[37] With its heightened sensitivity to nuclear proliferation issues, Japan is understandably concerned about the Iranian military-focused nuclear program. Reportedly, Japan is considering further unilateral sanctions against Iran.[38] Japan's decision to impose sanctions could particularly influence Iran's policies because Japan maintains a cordial economic and soft-power relationship with Iran.

China. China provides Iran with arms, political support, and much-needed investment and is emerging as Iran's chief trade partner. This support is critical to the regime's security and weakens efforts to isolate the regime.[39] Iran's energy resources are important in diversifying China's energy imports, and Chinese demand for oil and gas is expected to increase in the coming years. Iran also provides China with a unique opportunity to lock in energy supplies in an environment of minimal international competition. As a result, Iran is the fourth-largest recipient of Chinese non-bond investment, trailing only Australia, the U.S., and fellow energy provider Kazakhstan.[40]

Beijing does have concerns about political risk. This is evident in commitments to Iran, which largely take the form of non-binding memoranda of understanding (MOUs). Such MOUs total nearly $80 billion, but only a fraction will likely be realized if Chinese companies fear that these investments could provoke sanctions under U.S. law or if the companies are forced to choose between energy projects in Iran and energy projects in the U.S.[41]

Iran supplied China with more than 23 million metric tons of crude oil in 2009, making it the third-largest supplier of crude oil to China, after Saudi Arabia and Angola and ahead of the Russian Federation. However, import growth fell during 2009, even though the Chinese economy was strengthening. Imports fell by more than 30 percent in the first half of 2010, making Iran the only country to experience declining oil exports to China in 2010.[42] Nevertheless, in July, China and Iran's Oil Ministry announced a $40 billion deal to revamp Iran's petroleum refining industry. The agreement reportedly includes financing construction of a gasoline refinery in southern Iran and overhaul of Iran's Abadan refining facility. China is also negotiating to build a $2 billion railway linking Tehran with the cities of Arak, Malayer, Hamedan, Kermanshah, and Khosravi.[43]

37. Amena Bakr, "Japan to Decide on Reducing Iran Oil Imports," Yahoo Maktoob, August 10, 2010, at *http://www.business.maktoob.com/20090000505868/Japan_to_decide_on_reducing_Iran_oil_imports/Article.htm* (August 18, 2010); Reuters, "Japan's 2010 Iran Crude Imports Set to Hit 17-yr Low," March 30, 2010, at *http://in.reuters.com/article/idINTOE62P01E20100330* (August 18, 2010); and Agence France-Presse, "Japan Approves UN Sanctions on Iran," *Hindustan Times*, August 3, 2010, at *http://www.hindustantimes.com/Japan-approves-UN-sanctions-on-Iran/Article1-581649.aspx* (August 18, 2010).
38. TradingCharts.com, "Japan to Slap Extra Sanctions on Iran over Nuke Development," August 3, 2010.
39. John Keefer Douglas, Matthew B. Nelson, and Kevin Schwartz, "Fueling the Dragon's Flame: How China's Energy Demands Affect Its Relationships in the Middle East," U.S.–China Economic and Security Review Commission, September 14, 2006, p. 10, at *http://www.uscc.gov/researchpapers/2006/China_ME_FINAL.pdf* (August 11, 2010).
40. Derek Scissors, "China Global Investment Tracker: 2010," Heritage Foundation *White Paper*, updated July 7, 2010, at *http://www.heritage.org/research/reports/2010/02/china-global-investment-tracker-2010*.
41. Erica Downs, in "China and the Persian Gulf," panel discussion, video file, Woodrow Wilson International Center for Scholars, July 12, 2010, at *http://www.wilsoncenter.org/index.cfm?topic_id=1426&fuseaction=topics.event_summary&event_id=609102* (August 12, 2010).
42. "China Invests $40bn in Iran Oil and Gas Sector," *Gulf Daily News*, August 1, 2010, at *http://www.gulf-daily-news.com/NewsDetails.aspx?storyid=283696* (August 12, 2010).

Iran was by far the largest source of liquefied petroleum gas (LPG) imports for China in 2009, with imports soaring by more than 150 percent over the previous year and accounting for more than one-fourth of Chinese total LPG imports. Yet LPG shipments plummeted 70 percent in the first half of 2010, relegating Iran to third among Chinese suppliers.

Washington should encourage any drift by Beijing away from Iran toward other energy suppliers, such as Saudi Arabia. Chinese imports of Saudi oil are projected to rise by 19 percent in 2010, and Beijing has already surpassed the U.S. as Saudi Arabia's largest buyer of oil.[44] However, the U.S. government should not hesitate to censure Chinese companies that violate ISA-mandated sanctions.

Russia. Moscow is Tehran's long-standing partner, although a formal alliance has not been consummated. It has provided the regime with sophisticated weapons and nuclear energy technology and expertise. In August, Russian technicians began loading fuel into Bushehr, Iran's first nuclear power plant, violating the spirit of the U.N. sanctions less than two months after the U.N. Security Council passed them.[45]

This is no surprise given that Moscow has long worked to block or dilute sanctions against Iran. Moscow also ensured that its oil, gas, and weapons business ties were excluded from the latest U.N. sanctions, despite President Obama's "reset" policy of cooperation with Moscow. Only a month after the Washington summit between Obama and President Dmitry Medvedev, Russian Energy Minister Sergei Shmatko and his Iranian counterpart established a roadmap for increased Russian–Iranian energy cooperation.[46]

By developing massive oil and gas projects in Iran, Russia hopes to preempt the West and China in gaining access to Iran's huge hydrocarbon reserves, enhance its energy superpower status, and control gas projects and pipelines in Eurasia.[47] Gazprom, Russia's gas giant, announced in June 2008 that it would invest more than $200 million in building an Iranian–Armenian pipeline. In early August 2010, Moscow restarted gasoline exports to Iran with a shipment of 250,000 barrels.[48] On the plus side, Lukoil has publicly committed to stop selling gasoline to Iran.

Moscow has long worked to block or dilute sanctions against Iran.

President Medvedev's decree canceling the sale of the S-300 surface-to-air missile system to Iran is a positive development, provided a third party, such as Venezuela, is not allowed to act as a proxy to acquire the missile system for Iran. Moscow has often used the S-300 as a bargaining chip in its relations with the United States and Israel to extract concessions and to obtain military technology sales from Israel.

Russia and China are two of the weakest links in the Iran energy sanctions regime. Persuading Moscow and Beijing to join in applying economic pressure on Tehran will require U.S. leadership by example, support of European allies, skillful applica-

43. Ilan Berman, "The Chinese Moment in Iran," *Forbes*, September 16, 2010, at *http://blogs.forbes.com/ilanberman/2010/09/16/the-chinese-moment-in-iran* (September 17, 2010).
44. Glen Carey, "Chinese Imports of Saudi Oil Will Rise 19% This Year to 50 Million Tons," Bloomberg, September 29, 2010, at *http://www.bloomberg.com/news/print/2010-09-29/chinese-imports-of-saudi-oil-will-rise-19-this-year-to-50-million-tons.html* (October 20, 2010).
45. Ariel Cohen, "Fueling Bushehr: Did Russia Light Iran's Nuclear Fuse?" The Foundry, August 17, 2010, at *http://blog.heritage.org/2010/08/17/fueling-bushehr-did-russia-light-iran%E2%80%99s-nuclear-fuse* (August 18, 2010).
46. Alexei Danichev, "Iran and Russia to Discuss Road Map for Energy Cooperation," RIA Novosti, December 7, 2010, at *http://en.rian.ru/business/20100712/159773157.html* (August 18, 2010).
47. Ariel Cohen, "Russia's Iran Policy: A Curveball for Obama," Heritage Foundation *Backgrounder* No. 2359, January 15, 2010, at *http://www.heritage.org/Research/Reports/2010/01/Russias-Iran-Policy-A-Curveball-for-Obama.*
48. Luke Pachymuthu and Vladimir Soldatkin, "Russia's LUKOIL Resumes Gasoline Supply to Iran—Trade," *Reuters*, August 11, 2010, at *http://af.reuters.com/article/energyOilNews/idAFLDE67A17G20100811* (August 18, 2010).

tion of diplomatic pressure from the U.S. and the EU, and a combination of carrots and sticks.

The European Union. In 2009, the EU was Iran's most important trading partner, accounting for 20.8 percent of Iran's foreign trade. The EU's major trading partner is the United States, which accounts for 15.9 percent of total EU trade. Iran ranks 27th, accounting for only 0.8 percent of EU trade.[49] This gives the United States significant leverage to compel the EU to follow the U.S. approach to sanctions by targeting oil and gas, related technologies, and financial sectors.

Energy and mining products comprise more than 90 percent of EU imports from Iran. In exchange, the EU exports machinery and transportation equipment.[50] Italy, Spain, and Greece have been major recipients of Iranian oil.[51] However, under international pressure from the fourth round of Security Council sanctions and the U.S. and EU energy sanctions, major European companies—including Glencore, Vitol, Royal Dutch Shell, BP, Eni, and Total—have announced that they will not expand their businesses in Iran and will fulfill only obligations stemming from past contracts.[52] In October, the EU imposed restrictions on the sale of technology and equipment to Iran's oil and gas industries and prohibited investment in those sectors.[53] This unified front is an important step forward in applying economic pressure on the Iranian nuclear program, but much more will need to be done.

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India. India is the third largest importer of Iranian oil after Japan and China, but Reliance Industries, its largest private oil company, recently decided to stop importing Iranian oil (about 90,000 bpd per year) and halted exports of refined products (e.g., gasoline) to Iran because of new U.S. sanctions.[54] This suggests that India is hedging its bets on Iranian oil and is growing more cautious about relying on Iran to meet its future energy needs.

India's energy consumption and its dependence on oil and gas imports are expected to skyrocket by 2025.[55] India views anti-Iranian sanctions as an obstacle to meeting its future energy requirements[56] and thus has been reluctant to endorse U.N. sanctions on Iran.[57] Under U.S. pressure, however, India voted against Iran at IAEA meetings in 2005 and 2006.[58] India has also backed away from plans for an energy partnership with Pakistan and Iran to build the proposed Iran–Pakistan–India pipeline system, primarily because of uncertain relations with Pakistan.

49. European Commission, "Iran," July 19, 2010.
50. *Ibid.*
51. U.S. Energy Information Administration, "Iran."
52. Stanley Carvalho, "Western Oil Firms Stop Business with Iran," Reuters, June 28, 2010, at *http://uk.reuters.com/article/idUKDAH85080620100628* (August 18, 2010).
53. Thomas Erdbrink and Glenn Kessler, "E.U. Rules Let Iran Import, Export Oil, Gas," *The Washington Post*, October 28, 2010, at *http://www.washingtonpost.com/wp-dyn/content/article/2010/10/27/AR2010102707782.html* (November 9, 2010).
54. "Iran's Oil Export Drops by 378,000 Barrels a Day," *Khabar Online*, April 15, 2010, at *http://www.khabaronline.ir/news-55090.aspx* (August 13, 2010).
55. Kari Lipschutz, "Global Insider: Iran–India Energy Relations," *World Politics Review*, June 8, 2010.
56. Sandeep Dikshit, "Unilateral Sanctions on Iran Will Hurt India: Nirupama Rao," *The Hindu*, July 2006, at *http://www.thehindu.com/news/article501752.ece* (September 13, 2010).
57. Jayanth Jacob, "India Against Iran Sanctions," *Hindustan Times*, April 12, 2010, at *http://www.hindustantimes.com/India-against-Iran-sanctions/Article1-530143.aspx* (Sept. 13, 2010).
58. Lisa Curtis, "Building a Strategic Partnership: U.S.–India Relations in the Wake of Mumbai," testimony before the Subcommittee on the Middle East and South Asia, Committee on Foreign Affairs, U.S. House of Representatives, February 26, 2009, at *http://foreignaffairs.house.gov/111/cur022609.pdf* (November 16, 2010).

The United States and India have long differed in their approaches to Iran, given India's interest in cooperating with Iran in Afghanistan, its desire to drive a wedge between Tehran and Islamabad, and its long-term energy requirements. Yet as U.S.–Indian ties deepen and as Iran becomes more isolated internationally, New Delhi may slightly recalibrate its relations with Tehran. India will constantly balance U.S. pressure to isolate Iran with its own regional security interests, which will likely involve maintaining cordial relations with Iran to hedge against Pakistan and China, India's long-time regional rivals.

If the EU, India, and Japan scale down their involvement in Iran's energy markets, that would increase pressure on the theocratic regime. It would serve Western interests well if Europe and the United States were to find the political will to enforce their unilateral, stringent sanctions regimes and to encourage India and Japan to do the same.

Sanctions Regimes

Sanctions have been the international community's most important tool in disrupting the Iranian nuclear weapons program. According to some reports, the mere threat of additional sanctions has caused investors to shy away from Iran.[59] The U.S. State Department estimates that sanctions have contributed to the termination of $50 billion to $60 billion in upstream energy investments; a 90 percent drop in gasoline sales between August 2010 and August 2011; suspensions of billion-dollar LNG projects; and scores of energy companies, gasoline traders, insurance companies, shipping companies, and banks cutting their ties to Iran or committing to do so.[60]

U.S. Sanctions. In August 1996, Congress enacted the Iran–Libya Sanctions Act to punish Iran and Libya for supporting terrorism and attempting to build weapons of mass destruction (WMDs). The law gave the executive branch authority to impose sanctions on foreign entities that invested in Iran's oil and gas sectors. After Libya renounced terrorism and abandoned its WMD programs, the law was renamed the Iran Sanctions Act (ISA). The ISA remains a key U.S. tool for reducing Iran's ability to fund WMD development and to support international terrorism.

The law gives the President the authority to impose sanctions on any company, organization, or person that invests $20 million or more in one year in Iran's energy sector or sells WMD technology or "destabilizing numbers and types" of advanced conventional weapons to Iran. Construction of energy transit routes, such as pipelines or terminals for oil or LNG, is also subject to these sanctions.

In 2010, Congress passed the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA).[61] It requires the President to investigate and make determinations on investments in Iran's energy sector, and it increased the penalties for making such investments in violation of U.S. law. It imposed penalties on companies that provide refined petroleum products to Iran and mandates that companies seeking U.S. government contracts must certify that they are not engaging in sanctionable activities. CISADA also supports divestment from companies investing in the Iranian energy sector, penalizes Iranian officials that abuse human rights, and codifies and expands the ban on imports from Iran. The legislation prohibits licensing exports of nuclear goods, services, or technology to countries helping Iran acquire a nuclear weapons capability. It also prohibits U.S. contracts with companies providing the Iranian regime with sensitive communications technology to suppress freedom of speech.

Additionally, the U.S. Treasury Department is taking various targeted financial measures to track financial flows in an effort to target proliferation and Iran's support for terrorist networks and to discourage investment in Iran's energy sector and other projects in Iran.[62]

59. Dubowitz and Grossman, "Iran's Energy Partners," p. 4.
60. Mark Dubowitz and Laura Grossman, "Iran's Chinese Energy Partners: Companies Eligible for Investigation Under U.S. Sanctions Law," Foundation for Defense of Democracies, September 2010, p. 3, at *http://www.iranenergyproject.org/documents/1674.pdf* (October 19, 2010).
61. "Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010," The Library of Congress, Thomas, CRS Summary, at *http://thomas.loc.gov/cgi-bin/bdquery/z?d111:HR02194:@@@D&summ2=m&* (January 10, 2010).

The State Department and the Treasury Department are working together to target and isolate the IRGC,[63] which forms the security backbone of the regime. It has amassed growing political, military, and economic power, and its affiliates have gained control over vast swathes of the economy, particularly since the rise of Ahmadinejad, a former IRGC member.[64]

However, U.S. enforcement problems remain unaddressed. For example, previous Administrations never used the 1996 Iran–Libya Sanctions Act to punish companies that collaborated with those regimes. Its successor, the Iran Sanctions Act, has been triggered only once, when the State Department announced on September 30 that it was imposing sanctions on the Switzerland-based Naftiran Intertrade Company for its involvement in Iran's energy sector. However, a March 2010 report from the Government Accountability Office (GAO) found that 41 firms engaged in commercial activity in Iran's energy sector between 2005 and 2009.[65] A recent GAO study identified 16 firms that sold petroleum products to Iran between January 1, 2009, and June 30, 2010. Five of these firms showed no signs of curbing their sales to Iran: Three are based in China, one is in Singapore, and one is in the United Arab Emirates.[66] These firms seem obvious candidates for CISADA sanctions, but the State Department appears to be in no hurry to enforce this law.

The U.S. Congress remains a leader in passing Iran sanctions legislation, but the executive branch has not always followed Congress's lead and too often has shirked its enforcement duties.[67] It is time for the executive branch to fully implement the stringent sanctions imposed by CISADA.

U.N. Sanctions: Small Steps in the Right Direction. Iran has failed to fulfill its obligations under its nuclear safeguards agreement with the IAEA. Accordingly, the IAEA referred the matter to the Security Council in February 2006,[68] which imposed sanctions on Iran in December 2006.[69] The Security Council augmented the sanctions in March 2007 and again in March 2008.[70] On June 9, 2010, the Security Council adopted Resolution 1929, which broadened the previous restrictions and imposed additional restrictions on Iran. It added to the list of banned technologies related to ballistic missiles and WMDs, established a new inspection regime for suspicious cargoes bound for Iran, restricted the operations of Iran's shipping and air cargo carriers, prohibited transactions with Iranian banks that facilitated proliferation activities, added

62. Kenneth Katzman, "Iran Sanctions," Congressional Research Service *Report for Congress*, December 13, 2010, pp. 32–33, at *http://www.fas.org/sgp/crs/mideast/RS20871.pdf* (August 18, 2010).
63. Press release, "Treasury Targets Iran's Islamic Revolutionary Guard Corps," U.S. Department of the Treasury, February 10, 2010, at *http://www.ustreas.gov/press/releases/tg539.htm* (September 9, 2010).
64. Jim Dexter, "CNN Fact Check: Iran's Revolutionary Guard," CNN, February 15, 2010, at *http://articles.cnn.com/2010-02-15/world/fact.check.iran.guard_1_irgc-iranian-president-mahmoud-ahmadinejad-rand-corporation* (September 9, 2010).
65. Joseph A. Christoff, "Firms Reported in Open Sources as Having Commercial Activity in Iran's Oil, Gas, and Petrochemical Sectors," U.S. Government Accountability Office, March 23, 2010, at *http://www.gao.gov/new.items/d10515r.pdf* (November 16, 2010).
66. Joseph A. Christoff, "Firms Reported in Open Sources to Have Sold Iran Refined Petroleum Products Between January 1, 2009, and June 30, 2010," U.S. Government Accountability Office, September 3, 2010, at *http://www.foreignpolicy.com/files/fp_uploaded_documents/101005_d10967R.pdf* (November 16, 2010).
67. Katzman, "Iran Sanctions," pp. 5–6.
68. International Atomic Energy Agency, "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran," February 4, 2006, at *http://www.iaea.org/Publications/Documents/Board/2006/gov2006-14.pdf* (August 10, 2010).
69. Press release, "Security Council Imposes Sanctions on Iran for Failure to Halt Uranium Enrichment, Unanimously Adopting Resolution 1737 (2006)," U.N. Department of Public Information, December 23, 2006, at *http://www.un.org/News/Press/docs/2006/sc8928.doc.htm* (August 10, 2010).
70. U.N. Security Council, "Resolution 1747 (2007)," S/RES/1747, March 24, 2007, at *http://www.iaea.org/NewsCenter/Focus/IaeaIran/unsc_res1747-2007.pdf* (August 10, 2010), and "Resolution 1803 (2008)," S/RES/1803, March 3, 2008, at *http://www.iaea.org/NewsCenter/Focus/IaeaIran/unsc_res1803-2008.pdf* (August 10, 2010).

to the list of Iranian officials and companies subject to asset freezes and travel bans, and targeted the IRGC and its affiliated companies for asset freezes.

Resolution 1929 established for the first time the nexus between Iran's energy sector and petrochemical industry and its proliferation activities.

However, Russia and China took the lead in watering down the sanctions. The sanctions do not target "defensive" weapons sales, such as S-300 anti-aircraft missiles; financial transactions; or energy-sector dealings, such as the nuclear power reactor in Bushehr. Thus, experts question the effectiveness of U.N. sanctions.[71]

Despite these weaknesses, Resolution 1929 established for the first time the nexus between Iran's energy sector and petrochemical industry and its proliferation activities. This provided an international justification for individual countries to impose energy sanctions, which the U.S., the 27 EU members, Canada, Australia, Japan, and South Korea have since done.

EU Sanctions. The EU has been a vital partner of the Iranian economy and regime, and European countries have pressed the U.S. government to issue sanctions waivers for their companies on multiple occasions. However, the EU has gradually hardened its attitude toward Iran's nuclear proliferation activities, and in July, it imposed new punitive measures that exceeded the U.N. sanctions. The most important are a ban on new investments in Iran's oil and gas industry; prohibitions against the transfer of energy technology and technical expertise, including critical LNG technology; restrictions on dealings with the IRGC; limitations on the financial sector; and prohibitions against insuring Iranian shipping.

Reducing Dependence on Iranian Oil Exports

The EU, India, Japan, and China will be reluctant to reduce their imports of Iranian oil unless they have satisfactory alternative sources of oil and gas. As a world leader, the United States should help them find alternative sources of oil and gas for their energy-hungry economies. For example, Washington can use its clout with the Arab oil-exporting states of the Persian Gulf, which fear Iran's rising power, to provide additional oil exports to Iran's principal oil consumers so that they can wean themselves away from Iran's oil exports.

India and China may be persuaded to buy more oil from more economically reliable and politically amenable trading partners, such as Saudi Arabia and other Gulf states. China's increased oil imports from Saudi Arabia are a welcome development in this regard. Asian countries—including China, Japan, India, and South Korea—already buy 50 percent of Saudi oil exports.[72] In the meantime, EU members have expanded their energy trade with Russia and the Caspian Basin countries. Civilian nuclear energy programs, particularly in India, could also reduce their dependence on Iranian oil.[73]

Protecting America's Allies and Expanding Sanctions

To compel Iran to stop developing nuclear weapons and the associated delivery systems and to fully open the nuclear program to IAEA inspectors, the United States needs to lead a broad international coalition to ratchet up targeted sanctions against Iran's oil and gas sector and key Iranian institutions involved in controlling, financing, and procuring technology and materials for the nuclear program. The U.S. should pursue a multilayered strategy to deter foreign companies from investing in Iran's

71. James Phillips, "Iran Economic Sanctions at the U.N. Security Council: The Incredible Shrinking Resolution," Heritage Foundation *WebMemo* No. 2853, April 2, 2010, at *http://www.heritage.org/research/reports/2010/04/iran-economic-sanctions-at-the-un-security-council-the-incredible-shrinking-resolution*. Russia unilaterally cancelled the S-300 sale and returned the downpayment to Iran.
72. U.S. Energy Information Administration, "Saudi Arabia," *Country Analysis Brief*, updated November 2009, p. 6, at *http://www.eia.doe.gov/emeu/cabs/Saudi_Arabia/pdf.pdf* (September 13, 2010).
73. Ashley Tellis, "U.S.–India Civil Nuclear Accord: An 'Epochal' Agreement," interview by Bernard Gwertzman, Council on Foreign Relations, October 10, 2008, at *http://www.cfr.org/publication/17498/usindia_civil_nuclear_accord.html* (September 13, 2010).

hydrocarbon and related sectors; engage and coordinate measures to reduce Iran's oil and gas exports; block imports of refined product; disrupt imports of oil and gas extraction and transportation technologies; and pressure Iran directly using the full set of U.S. financial tools.

Specifically, the U.S. should:

- **Persuade U.S. allies and other countries to develop unilateral sanctions regimes that target Iran's energy sector.** The EU, Canada, Japan, South Korea, and Australia have already taken steps in this direction, but other countries, especially in the Persian Gulf and South and East Asia could do much more to penalize Iran. The U.S. State Department and Treasury Department should intervene with U.S. partners in the Persian Gulf, Japan, China, India, and Pakistan to prohibit new investments in Iran's energy sector and to block the transfer of key technology, including refinery equipment, to Iran's energy sector until Iran fully complies with its IAEA obligations. Washington should also discourage energy-importing states from buying oil or natural gas from Iran and instead encourage them to purchase from other producers with excess capacity, such as Saudi Arabia, Kazakhstan, and Azerbaijan.
- **Strictly enforce all sanctions.** In part to avoid friction with allies, the executive branch has failed to use its full authority to penalize foreign companies involved in Iran's energy sector. The executive branch, including the White House, the State Department, the Justice Department, and the intelligence community should be more aggressive in enforcing the existing sanctions. If the Obama Administration does not act with due diligence, Congress should demand a full explanation from Administration officials.
- **Press Beijing to prevent Chinese companies from undercutting sanctions.** In recent years, Chinese companies have developed extensive commercial ties with Iran. In particular, Chinese oil companies have assumed a growing share of foreign investment in Iran's energy sector. The Obama Administration should press Beijing to rein in these companies and warn that Washington will impose sanctions on these companies under CISADA unless those companies rule out any new commitments in Iran. If Chinese companies replace companies that move out, they will largely nullify any effect from the sanctions. The U.S. should also encourage Beijing to diversify its energy imports away from Iran.
- **Prioritize sanctions against the Iranian institutions that are controlled by the IRGC leadership and its associates.** The U.S. Treasury Department has had substantial success in pressing foreign banking institutions to break ties with Iranian banks involved in financing Iran's proliferation and terrorist activities. The Obama Administration should continue these efforts to drive up the regime's costs for its illicit activities. The Administration should also press foreign banks and capital markets to break ties with the many enterprises and front companies owned by the Revolutionary Guards and its affiliates. In particular, the U.S. should press the Iraqi government to rule out contracts with Khatam al-Anbiya, the IRGC's construction enterprise, and other IRGC-tied companies inside Iraq.
- **Appeal to Iran's neighbors, particularly Turkey, to assist in containing Iran's nuclear ambitions by enforcing the strongest possible sanctions against Iran.** Turkey played a particularly disruptive role when it voted against the Security Council sanctions. Prime Minister Erdogan has announced that Turkey will triple trade with Iran[74] and facilitate gasoline sales to the Islamic Republic.[75] Turkish companies are also exporting Iranian natural gas through Turkey's pipelines for sale in European markets. Washington should stress that Turkey's role in

74. Joe Parkinson, "Turkey Aims to Triple Iran Trade, Despite International Sanctions," *The Wall Street Journal*, September 17, 2010, at *http://online.wsj.com/article/SB10001424052748703440604575496031866586468.html* (November 16, 2010).
75. Bloomberg, "Turkish Gasoline Sales to Iran Soared Amid New Sanctions," *Hurriyet Daily News and Economic Review*, August 11, 2010, at *http://www.hurriyetdailynews.com/n.php?n=turkish-gasoline-sales-to-iran-soared-amid-new-un-sanctions-2010-08-11* (September 17, 2010).

attempting to derail U.N. sanctions gave unwarranted assistance to Iran's repressive regime and is contrary to Turkey's long-term interests in preventing the emergence of a nuclear-armed Iran.

- **Use international broadcasting, the Internet, social media, and public diplomacy to explain to the Iranian people that sanctions are targeted at the regime, not them.** The U.S. and other countries need to help the Iranians understand that the regime's hostile policies triggered the sanctions and that they will be lifted if the regime changes its policies. Washington should explain to the Iranian public that the U.S. and its allies are willing to remove sanctions promptly if the regime complies with its nuclear nonproliferation commitments, halts its support of terrorism, and acts in the interests of its own people rather than exporting its violent revolution.
- **Support the TAPI gas pipeline** to boost the energy security of India and Pakistan, reduce Russia's leverage over Europe, and strengthen the political independence of Turkmenistan. Washington should engage in intensive diplomacy to encourage the Turkmen, Afghan, Pakistani, and Indian governments to build this pipeline instead of the IPI, which would give Iran an economic lifeline and increase its leverage and influence in South Asia. The U.S. also needs to appoint an ambassador to Turkmenistan.

Conclusion

Although the latest round of international sanctions are beginning to bite, experts generally agree that sanctions alone are unlikely to stop Iran's nuclear weapons program.[76] Sanctions take time to work, but Iran is rapidly nearing a nuclear weapons capability. CIA Director Leon Panetta noted on June 27: "We think [the Iranians] have enough low-enriched uranium right now for two weapons. They do have to enrich it, fully, in order to get there."

The latest round of U.N., U.S., and EU sanctions have yielded some visible achievements. Several of Iran's foreign partners—including Total, Glencore, and Royal Dutch Shell—have stopped sales of gasoline to Iran. Sanctions induced Vitol and Trafigura of Switzerland to terminate their participation in some of the significant modernization projects in Iran's energy sector.[77] Four major insurance companies have announced that they will stop or reduce underwriting of Iran's gasoline trade.[78]

However, given that sanctions alone may not work, a credible threat of the use of force is needed as well as efforts to support opposition and civil society in Iran. The Iranian nuclear program can only be stopped if the U.S. implements a comprehensive policy supported by allies. The U.S. government has a limited timeframe to disrupt Iran's nuclear program with sanctions before it must consider military options. Iran's mismanagement of energy assets, the need to import gasoline, and its dependence on FDI for infrastructure development are vulnerabilitiess of the theocratic regime. The Obama Administration needs to fully exploit these weaknesses, and Congress should encourage the Administration to do so.

These structural weaknesses and the popular discontent that may result from the sanctions might force the current government to change its nuclear policy or lead to an overthrow of the regime. Such an outcome could lead a successor regime to dismantle Iran's nuclear weapons program to escape from the debilitating sanctions. While this outcome is not likely yet, a robust, disciplined, and broad international sanctions regime, if successful, may allay the need for military action.

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76. Katzman, "Iran Sanctions," p. 47.
77. *Ibid.*, p. 13.
78. Dubowitz and Grossman, "Iran's Energy Partners," p. 5.