

The China-Iran Nuclear Pipeline: How to Shut it Down

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President Barack Obama has said that the final nuclear deal with Iran will “cut off every pathway that Iran could take to develop a nuclear weapon.” U.S. Secretary of State John Kerry has likewise said that the deal “shuts off the four principal pathways to a bomb for Iran”—the Natanz uranium facility, the Fordow uranium facility, the Arak plutonium facility, and covert Iranian attempts to produce fissile material.

The Natanz, Fordow, and Arak pathways would involve Iran building a bomb mostly through work at known locations, with technology and materials that it already possesses. So long as the deal is in place, keeping these three pathways closed will depend largely on the vigor with which the United States and the International Atomic Energy Agency (IAEA) monitor known locations and respond to readily detectable violations.

The fourth pathway, in contrast, would include Iran creating a secret, parallel new nuclear program with technology and materials covertly procured from foreign suppliers. Even with the nuclear deal’s managed access arrangements and dedicated procurement channels, both the United States and the IAEA will have limited capacity to detect either secret nuclear facilities within Iran or the covert receipt by Iran of nuclear-related materials. It is therefore critical to be able to deter or prevent foreign suppliers from sending nuclear-related materials to Iran.

Despite this, little attention has been paid to the longtime leading suppliers of Iran’s nuclear program: ostensibly private brokers based in China. Foremost among them appear to be Karl Lee (also known as Li Fangwei) and Sihai Cheng, who, according to U.S. federal and state prosecutors, have shipped vast quantities of key nuclear materials to Iran. Even at the peak of international sanctions against Iran, China has reportedly made little to no effort to stop these or other such brokers.

Although China claims otherwise, it seems likely that the Chinese government uses these so-called private brokers as proxies to assist Iran’s nuclear program. In that way, Beijing can both benefit from the illicit transactions with Iran and appear an adherent of various nonproliferation agreements. The massive scale of Iran’s nuclear and missile program procurement from China in recent years, and the United States’ remarkable inability to halt it, even with stringent UN Security Council sanctions in place, is a sign that China serves as a potentially pivotal back door source of nuclear materials for Iran. If a nuclear deal is to succeed, its implementation will require both intense monitoring of Iran and also much more cooperation from Beijing than it has provided thus far.

Iran currently lacks the capacity to produce several key items for its nuclear and missile programs. Tehran has therefore sought to acquire them from overseas. For example, Iran’s nuclear program still depends on the import of specialized materials and

technology necessary to build and maintain gas centrifuge facilities for enriching uranium. The June 2014 report of the UN Panel of Experts on implementing sanctions against Iran noted that Iran “continues to seek key items abroad, preferably from established, high-quality suppliers.” Pressure transducers are crucial to the operation of a gas centrifuge plant. Since Iran has been unable to manufacture them domestically, it has had to acquire them overseas. The transducers have a lifespan of only about three years, so Iran needs to continually find suppliers.

Even under the relatively stringent sanctions placed on Iran prior to the nuclear negotiations, Tehran’s illicit procurement efforts have met with considerable success. This is largely due to China. One recent analysis by experts closely tied to the U.K. Defense Ministry concluded, “China continues to be the key source of goods and technology for the prohibited nuclear and missile programs of Iran and North Korea, with some officials estimating that China is used as a transit route for up to 90 percent of goods destined for those programs.”

In fact, within the last few years, Cheng shipped from China to Iran over 1,000 pressure transducers manufactured in the United States by MKS, a Massachusetts-based company, according to the U.S. Justice Department. The transfer to Iran of U.S.-origin pressure transducers violated U.S. export control laws. Publicly available photographs of then-President Mahmoud Ahmadinejad at the Natanz Nuclear Facility show numerous U.S.-origin MKS transducers attached to Iran’s gas centrifuge cascades.

While Cheng was eventually arrested (when he entered the United Kingdom from China to attend a soccer tournament) and is now in U.S. custody, he is not the only Chinese broker who has diverted U.S.-origin pressure transducers to Iran. According to a recent study by the Institute for Science and International Security, “it appears that Chinese authorities took no enforcement action in this [Cheng] case or against illicit exporters of pressure transducers more generally that have been operating from its territory in recent years.”

In contrast with Cheng, Lee has been more careful about his foreign travel and is still facilitating exports from China to Iran’s nuclear program. According to indictments filed by the Manhattan District Attorney in 2009 and the U.S. Justice Department in 2014, Lee has, over the last decade, supplied Iran with repeated shipments of tens of thousands of kilograms of specialized materials suitable for producing gas centrifuge components and also nuclear-capable ballistic missiles. In announcing his 2009 indictment of Lee, the Manhattan D.A. referred to him as “perhaps the largest supplier of weapons of mass destruction to the Iranian government.” In the 2014 indictment, the U.S. Justice Department stated that Lee has sold “to Iranian entities various metallurgical goods and related components that are banned for transfer to Iran by, among others, the United Nations because the items are controlled by the Nuclear Suppliers Group.”

A nuclear deal with Tehran, including a lifting of most sanctions, will result in a significantly increased volume of overall Iranian trade with the rest of the world. The current difficulties in preventing illicit Iranian procurement of nuclear-related items will

be far greater once general trade increases and it becomes legal for Iran to procure some items for its known nuclear facilities.

There is considerable risk that Tehran could covertly procure nuclear materials from Chinese brokers and circumvent a nuclear deal by secretly creating a new parallel nuclear program. According to a Federation of American Scientists [task force](#), Iran could “enrich uranium to weapons grade, manufacture nuclear weapon components, or even assemble complete bombs, in small, covert facilities, even while abiding by an agreement’s restrictions on known facilities such as Natanz, Fordow, and Arak.”

In order to reduce this risk, the nuclear deal seeks to put in place a [requirement](#) that “the supply, sale, or transfer to Iran of certain nuclear-related and dual-use materials and technology,” for what would be a newly legal nuclear program, must take place through a “dedicated procurement channel.” However, according to a recent [report](#) on nuclear monitoring by the U.S. Department of Defense Science Board, the U.S. government’s tools are “either inadequate, or more often, do not exist” for detecting either the covert procurement of nuclear materials or small, covert facilities designed to produce small numbers of nuclear weapons. This means that the U.S. government may be unable to detect either Iranian acquisitions outside of the procurement channel or Iranian deployment of such acquisitions in a small, covert parallel nuclear program.

Given that China has failed to discourage its brokers from violating international law and supplying Iran’s pre-agreement nuclear program, it is foolhardy to expect that these brokers will comply, of their own accord, with post-agreement restrictions on supplying Iran. If Iran is to be stopped from circumventing a nuclear deal with illicit procurements from Chinese brokers, it will therefore be essential for the Chinese government to launch an unprecedented crackdown on them. There is no sign that Beijing will do so.

The export of proliferation-sensitive items from China to Iran persists despite a Chinese government commitment to U.S. President Bill Clinton in 1997 to halt such trade. Clinton [told](#) Congress that “China has provided clear and unequivocal assurances to the United States that it is not assisting and will not assist any non-nuclear weapon state, either directly or indirectly, in acquiring nuclear explosive devices or the material and components for such devices.”

In [exchange](#) for China’s commitment, Clinton agreed to implement the first-ever U.S.–China agreement for peaceful nuclear cooperation. That deal expires at the end of 2015. Its replacement, which does not appear to involve a more rigorous or even a similar level of Chinese commitment applicable to the activities of brokers such as Karl Lee, is currently undergoing congressional review and will automatically enter into force unless Congress passes legislation by July 20 that places additional conditions or blocks it.

This year, at a May 12 Senate hearing to discuss the pending agreement, Thomas Countryman, the Assistant Secretary of State for International Security and Nonproliferation, called Lee a “primary procurement agent for Iran’s nuclear ballistic missile program.” Countryman said that the United States and China are engaged in “a

longstanding dialogue about Karl Lee” and told the senators, “I will be happy to come back when it produces some meaningful results.” This dialogue has been going on, without meaningful results, since at least 2004, when Washington first publicly imposed sanctions on Lee.

Despite China’s persistent failure to crack down on its nuclear brokers, the U.S. government has thus far failed to either halt nuclear exports to China or designate China as a “destination of diversion concern.” Both these steps are required by U.S. law.

Section 102(a) of the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA) prohibits the issuance of nuclear export licenses and other authorizations to any country with “primary jurisdiction over” an individual that the U.S. President has identified as supplying Iran with goods that would “contribute materially” to the development of nuclear weapons or nuclear-capable missiles.

Section 303 of CISADA states that “the President shall designate a country as a Destination of Diversion Concern if the President determines that the government of the country allows substantial diversion” to Iran of proliferation-sensitive items. The items diverted from China to Iran by Sihai Cheng and Karl Lee certainly qualify. Further, “allow” is defined as: “The government of the country knows or has reason to know that the territory of the country is being used for such diversion.” After 11 years of U.S. complaints, the Chinese government clearly “knows” about the nature of Lee’s activities.

In discussing China’s failure to stop China-based brokers such as Lee from supplying materials to Iran’s nuclear program, Countryman explained at the hearing, “The Chinese government simply does not have, currently, the bureaucratic enforcement capability, and does not yet have all the legislation it ought to have in order to adequately control dual-use exports.” It seems highly unlikely that China lacks the capacity to shut down Lee and other such brokers. Indeed, Senator Edward Markey (D-MA) rebutted, “it’s preposterous to conclude that the Chinese government is incapable of shutting this down.” Even though “the Chinese government says they...can’t figure out how to shut [Karl Lee] down or guys like him,” he continued, somehow China “figured out how to jail 44 journalists last year” and “how to put 27,000 Muslim minorities in the Uighur region in prison.” Markey added, “Maybe China has just subcontracted this out to the private sector...Maybe China has done this in order to protect the guilty—you know, the Chinese government... so their fingers aren’t on it, but yet they can do the favors for Iran, Pakistan, other countries.”

China benefits in several ways from using brokers as proxies to assist the Iranian nuclear program. Because the Chinese government’s own fingers aren’t on the exports, China’s economy benefits from its continued ability to import high technology nuclear-related goods that the United States and its allies typically export only to countries whose governments adhere to nonproliferation obligations.

In addition, by remaining on relatively good terms with Iran and being willing to let its companies do business with a country that most others won’t touch, China has vastly increased its share of the Iranian market for more general as well as proliferation-

sensitive trade. Thus, by 2010, China had become by far the largest foreign investor in Iran's energy sector. Energy-starved China, for which oil imports are a strategic necessity, has also become Iran's largest oil customer.

According to Michael Singh, former Senior Director for Middle East Affairs at the National Security Council, "China sees Iran as a potential partner in countering U.S. power." Thus, said Singh, "rather than using its clout as one of Iran's largest energy customers and vendors-of-last-resort to secure Iranian compliance with UN Security Council and nonproliferation norms, Beijing appears to fuel the very behavior that is most provocative to the United States and its allies—behavior that could destabilize the Middle East."

Closing off Iran's ability to circumvent a nuclear deal through illicit procurements will, of course, depend in part on the deal's content and implementation. Iranian disclosure of past sources and methods of such contraband would make it easier for the United States and its allies to deter, detect, and interdict future purchases by Iran. A rigorously constructed and implemented "dedicated procurement channel for Iran's nuclear program" will make it easier to distinguish between licit and illicit Iranian procurements. In addition, robust International Atomic Energy Agency (IAEA) access to suspect Iranian sites, equipment, and persons would both deter illicit Iranian imports, and also enable the IAEA to act in response to credible intelligence that such imports have occurred.

However, none of this may be sufficient absent Chinese cooperation in closing down their end of the China to Iran nuclear pipeline. The pending U.S.–Chinese nuclear agreement provides a particularly appropriate, and timely, opportunity to remind both China and Iran that there are consequences for failing to comply with nuclear commitments made to the United States.

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