Order Code RS22270
Updated December 5, 2005

The International Space Station and the Iran Nonproliferation Act (INA): The Bush Administration's Proposed INA Amendment

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Summary

The Iran Nonproliferation Act (P.L. 106-178), as originally enacted, prohibited the National Aeronautics and Space Administration (NASA) from purchasing Russian goods and services for the U.S.-led International Space Station (ISS) unless the President certified that Russia was not proliferating certain technologies to Iran. On July 12, 2005, the Bush Administration submitted to Congress an amendment to allow NASA to purchase goods and services from Russia to support the ISS. That presented a classic policy dilemma. Without access to Russian spacecraft, the U.S. use of the ISS could be extremely limited. Yet Russian entities were continuing proliferation activities relating to missile proliferation according to the Department of State. This report explains the Bush Administration proposal and resulting congressional action. CRS Issue Brief IB93017 discusses the ISS program; CRS Report RS22072 discusses the origins of the Iran Nonproliferation Act (INA) and its relationship to the ISS program. Congress passed and the President signed into law (S. 1713, P.L.109-112) a version that is different from the proposal, but allows ISS-related goods and services to be purchased from and delivered by Russia through January 1, 2012. This is the final edition of this report.

Background

The United States has passed laws and used sanctions to deter Russia and other countries from providing technologies related to nuclear, chemical, and biological weapons, ballistic missiles, and advanced conventional weapons to Iran (see CRS Report RL32048, *Iran: U.S. Concerns and Policy Responses*.) The 2000 Iran Nonproliferation Act (P.L. 106-178) widened some of the sanctions, and, in Section 6, contained a ban on U.S. government payments to Russia in connection with the U.S.-led International Space Station (ISS), unless the President determines that Russia is taking steps to prevent proliferation of weapons of mass destruction (WMD), and ballistic and cruise missiles to Iran. For more information on the origins and nonproliferation aspects of the INA, see CRS Report RS22072, *The Iran Nonproliferation Act and the International Space Station: Issues and Options*.

The ISS is a multinational research laboratory under construction in Earth orbit. Russia, Canada, Japan, and 11 European countries are partners with the United States in the effort. ISS segments are taken into orbit, primarily on the U.S. space shuttle, and assembled there. The ISS program began in 1993, replacing an earlier effort begun in 1984 (for more on the history of the space station program, see CRS Issue Brief IB93017, *Space Stations*). Bush Administration decisions that led to a delay in development of a U.S. "crew return vehicle" for the ISS, ongoing uncertainty associated with the space shuttle launch schedule (see CRS Report RS21408, *NASA's Space Shuttle Program: The Columbia Tragedy, the Discovery Mission, and the Future of the Shuttle*), and a 2004 announcement of a new Vision for Space Exploration by President Bush that includes retiring the space shuttle in 2010 (see CRS Report RS21720, *Space Exploration: Issues Concerning the "Vision for Space Exploration"*), all would increase NASA's reliance on Russia if U.S. astronauts are to continue to live and work aboard the ISS. On July 12, 2005, NASA, on behalf of the Bush Administration, submitted to Congress a proposed amendment to the INA to allow it to purchase goods and services from Russia without regard to Russia's proliferating behavior with Iran. Congress passed a modified version of that amendment and it became law (P.L. 109-112) on November 22, 2005 (see below).

ISS and the INA

The United States invited Russia to join the ISS partnership in 1993 in part to encourage its adherence to the Missile Technology Control Regime (MTCR) to stop sales of ballistic missile technology.[1] By the end of the decade, however, it appeared that Russian entities were violating the MTCR, including some of those under the jurisdiction of the Russian space agency. Concerns also were rising about Russia selling certain technologies to Iran. On July 29, 1999, during markup of the Iran Nonproliferation Act by the House Science Committee's Subcommittee on Space and Aeronautics, Science Committee Chairman James Sensenbrenner explained that "Earlier this year, there were publications of the fact that entities of the Russian Space Agency were violating the MTCR. That's why there is Section 6 in this bill."[2]

Section 6 of the original INA prohibited the U.S. Government from making "extraordinary payments" in connection with ISS (and possibly other human space flight activities) to the Russian space agency, organizations or entities under its control, or any other element of the Russian government, after January 1, 1999, unless the President determined that it was Russia's policy to oppose proliferation to Iran, that Russia was demonstrating a sustained commitment to seek out and prevent the transfer of WMD and missile systems to Iran, and that neither the Russian space agency nor any entity reporting to it had made such transfers for at least one year prior to such determination. The President had to notify Congress five days in advance of making such a determination, and provide a written justification. Exceptions included payments needed to prevent imminent loss of life by or grievous injury to individuals aboard ISS (the "crew safety" exception); payments to construct, test, prepare, deliver, launch, or maintain Russia's

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[1] House Committee on Science, Space, and Technology. Subcommittee on Space. U.S.-Russian Cooperation in the Space Station Program: Parts I and II. Hearing. October 6, 14, 1993. p. 45.

[2] House Committee on Science. Markups of H.R. 356, H.R. 1883, H.R. 2607, and H.R. 2767. July 29, September 9, and November 3, 1999. p. 44

Zvezda Service Module; and $14 million for certain Russian docking hardware already under consideration before the INA was enacted. The President had to provide reports or notifications to Congress within specified time limits if the exceptions were used. The term "extraordinary payments" was defined in Section 7(1) of the act (see below). President Clinton provided the required notification for the $14 million for Russian docking hardware on June 29, 2000, but there were no other determinations or notifications. NASA wanted to purchase other Russian goods and services in 2000, and considered them permissible under the agency's interpretation of the meaning of "imminent" in the crew safety exception, but terminated those efforts after strong criticism at an October 12, 2000 House International Relations Committee hearing.

Impact of the INA on NASA's Use of the ISS: the 2006 and 2010 Deadlines. Prior to the 2003 space shuttle *Columbia* tragedy, NASA planned to complete assembly of the ISS in 2006, followed by at least 10 years of operations. ISS crews were to be transported to and from the ISS either using the U.S. space shuttle, or Russian Soyuz spacecraft. However, President Bush announced a new "Vision for Space Exploration" in 2004 that directs NASA, inter alia, to terminate the space shuttle program in 2010 and build a new spacecraft — the Crew Exploration Vehicle (CEV) — by 2014. NASA hopes to accelerate the CEV schedule to 2012, but it is not clear if that can be achieved. Once the shuttle program is terminated, NASA will not be able to transport astronauts to and from the space station until the CEV is ready. During the "gap" between the end of the shuttle and the CEV's availability, NASA will have to rely on Russia to take U.S. crew members to and from the ISS.

In addition to routine transportation, ISS crew members also need access to a "crew return" capability — essentially a lifeboat so crews can evacuate the ISS in an emergency. Under the international agreements that govern the ISS program, Russia is obligated to provide crew return for three crew members throughout the lifetime of the ISS. It does so now using Soyuz spacecraft, which remain docked at the ISS after delivering a new crew. They are replaced every six months when crews are rotated. NASA is obligated to provide a crew return capability for four additional crew members once assembly of the ISS is completed. NASA currently plans to use the CEV as its crew return vehicle. Until the CEV is available, Russia's Soyuz is the only option for crew return. If Russia does not provide access to its Soyuz spacecraft for crew return, U.S. astronauts could only be aboard the ISS when the shuttle is docked there, so they could evacuate using the shuttle.

Since the 2003 *Columbia* accident, Russia has been providing both crew transportation and crew return services to NASA at no cost under a 1996 U.S.-Russian "Balance Agreement." That agreement obligates Russia to provide 11 Soyuz spacecraft for crew rotation and crew return of U.S. crews in exchange for services that NASA was providing to Russia. The last of those 11 Soyuzes was launched in October 2005; it is scheduled to return to Earth in April 2006. After that, Russia no longer must allocate any of the seats on its Soyuzes for U.S. astronauts. Russian space officials have repeatedly said that they will not continue to provide these services to NASA at no cost.

Thus, two deadlines were facing NASA: April 2006, after which U.S. astronauts would have access to the ISS only when the shuttle is there because Russia no longer must provide crew return services for U.S. astronauts; and 2010, after which U.S. astronauts would have no access to the ISS until the new CEV is available unless they can use Russia's Soyuz spacecraft. Under the original version of the INA, NASA also would not

be able to pay for use of Russia's Progress spacecraft, which take cargo to the ISS, beyond what Russia agreed to provide in the international agreements. NASA hopes that U.S. companies will develop capabilities to take cargo to ISS. The original version of INA prevented NASA from buying such services, however, if any of the funds would go to Russia. For example, NASA could not purchase commercial launch services for ISS using Lockheed Martin's Atlas V launch vehicle because it uses Russian rocket engines.

Bush Administration Proposed Amendment to the INA

The original version of the INA was enacted following reports in the mid- and late-1990s that Russia was assisting Iran in building the Bushehr nuclear power reactor, and providing ballistic missile assistance to Iran. There are differing views on the effectiveness of the INA in changing Russia's behavior (see below and CRS Report RS22072). The INA's potential effect on the ISS was more clear-cut, and on July 12, 2005, the Bush Administration submitted a proposal to Congress to amend the INA to allow NASA to purchase Russian goods and services for the ISS by changing the definition of "extraordinary payments." Section 7(1) of the original INA defined this as:

> The term "extraordinary payments in connection with the International Space Station" means payments in cash or in kind made or to be made by the United States Government —
> (A) for work on the International Space Station which the Russian Government pledged at any time to provide at its expense; or
> (B) for work on the International Space Station, or goods or services relating to human space flight, that are not required to be made under the terms of a contract or other agreement that was in effect on January 1, 1999, as those terms were in effect on such date.

The Bush Administration's proposed amendment would have deleted subsection (B). Thus the prohibition would have applied only to payments for work Russia previously agreed to provide at its own expense, which would not include the use of Soyuz (or any successor vehicle) by U.S. astronauts beyond those covered by the Balance Agreement.

The justification provided to Congress on July 12, 2005 by NASA Administrator Griffin stated that the proposed amendment would "maintain key existing U.S. nonproliferation tools." It specified that the proposed amendment left the first five sections of the INA intact (those that established reporting requirements to Congress), particularly a ban on U.S. payments in connection with the ISS to any persons (including entities) subject to sanctions under the INA or Executive Order 12938.

The proposed amendment would have affected future contracts with the Russian space agency, leaving other aspects of the INA in place. In its September 1999 report on the INA (H.Rept. 106-315, Pt. 1), the House International Relations Committee recognized the impact of Section 6 on future contracts, but believed it was "warranted by the magnitude of the threat to international peace and security posed by continued proliferation of weapons technology to Iran from Russia." Further, the committee hoped that "that this section will give the Russian Space Agency more incentive than it has had in the past to seek to prevent transfers to Iran...."

In August 2005, the State Department reported: "While some progress has been made, Russian entities continued ... to supply sensitive missile-applicable items, technology, and expertise to missile programs in India, Iran, and China ...."[3]

Issues

Several issues arose as Congress debated amending the INA. A first order question was whether Section 6 of the INA was serving its nonproliferation purpose. While some Members such as Mr. Rohrabacher concluded that it had not worked (see below), others supported the INA as a whole and did not wish to see it weakened. Several bills in the 109th Congress that would tighten sanctions on Iran attracted broad support, suggesting little sentiment in Congress to unwind any U.S. sanctions on Iran. H.R. 282, for example, which promotes a policy of regime change for Iran and closes some loopholes in the Iran-Libya Sanctions Act, had more than 300 co-sponsors. Some could have argued that if the Russians had, in fact, "completed their contributions" to Iran's nuclear program, as Mr. Rohrabacher stated (see below), then the President should make the determinations required by the law, and amending the act was unnecessary.

A second set of questions dealt with the impact of the INA on U.S. utilization of the ISS. Debate is ongoing about what NASA should do on the ISS. It was designed as a research laboratory in space, and a broadly based research agenda was planned, but President Bush directed NASA to limit its research to only that which is needed to implement his Vision. However, some in Congress want to restore the broadly based program planned prior to the Vision. The answer to what research should be conducted on the ISS was an element of determining whether it was critical for NASA to have its astronauts on the ISS for long duration missions between 2006 and 2010, or to have any astronauts there after 2010. Another consideration was potential damage to U.S. international standing if the United States failed to meet its commitments to ISS partners, or intentionally suspended its ability to launch astronauts into space for several years.

Congress had a number of options available in considering the Bush Administration's proposed INA amendment. The Administration proposal would have allowed maximum flexibility in meeting NASA's needs, including those for transporting both crews and cargo to and from the ISS. The primary limit would have been how much funding NASA had available for purchases, and how much Russia charged. From 1994-1998 (pre-INA), NASA paid Russia approximately $800 million through several contracts for space station-related activities. One option was to place limits on what could be purchased, how much could be spent, what Russian entities could receive the money, or the length of time the restrictions would be lifted. There was some concern, for example, that Russia might charge exorbitant prices if it was the only source for the needed services. Russian space officials routinely complain that the Russian space program is underfunded, and are actively seeking funds to build a replacement for the Soyuz (called Kliper). Others worried that NASA or its supporters might lose some of the drive to build the new CEV expeditiously if they knew Russian spacecraft could be used instead.

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[3] U.S. Department of State. Adherence to and Compliance with Arms Control, Nonproliferation and Disarmament Agreements and Commitments. August 30, 2005. p. 107. Available at [http://www.state.gov/documents/organization/52113.pdf].

Another concern was that buying services from Russia could undercut U.S. companies interested in developing commercial services to support the ISS.

Another option was to limit payments only to crew-related flights, not cargo. Alternatively, crew-related purchases could be limited only to time periods when NASA is unable to launch its own crews because the shuttle is grounded and the CEV is not available. Or the number of missions per year, or in total, could be limited. Imposing such limits could be costly in terms of negotiating with the Russians. For example, a block buy of a dozen flights could be less expensive than buying one or two at a time.

Another option was to lift restrictions only for a certain number of years. That was the approach ultimately taken by Congress in passing S. 1713 (P.L. 109-112).

Congressional Action: Enactment of P.L. 109-112

On May 20, 2005, the House passed the FY2006 Department of Defense authorization bill including a sense of Congress statement that the INA has been a "critical tool in preventing the spread of weapons of mass destruction and their associated delivery systems to Iran" and it "should not be weakened by creating exceptions to requirements of such Act to serve lesser policy priorities" (H.R. 1815, Sec. 1211). Some interpreted that latter phrase as a reference to the ISS program.

By contrast, Representative Dana Rohrabacher, who helped draft Section 6 of the INA, stated at a June 28, 2005 House Science Committee hearing that the strategy embodied in the INA "has not worked." During markup of the FY2006-2007 NASA authorization act (H.R. 3070) by the House Science Committee on July 14, 2005, Mr. Rohrabacher offered and withdrew an amendment similar to that proposed by the Administration. He argued that the Clinton and Bush Administrations had not properly implemented the INA because they offered just the stick, and not "a carrot approach to the Russians to get them to cease their cooperation with the Iranians. Unfortunately, that cooperation on that nuclear power project is over now and the Russians have completed their contribution" (H.Rept. 109-173, p. 182).

On September 21, 2005, the Senate passed S. 1713 (Lugar), to allow NASA to make payments in cash or in kind to Russia to meet U.S. obligations under the ISS international agreements until January 1, 2012, and adding reporting requirements. Questions arose as to whether the bill meant only that payments had to be made by January 1, 2012, or if the goods or services also had to be delivered by that date. On October 26, the House passed an amended version that clarified that the goods or services had to be delivered, as well as paid for, by that date. (The House made other changes — such as adding Syria to the act and renaming it the Iran and Syria Nonproliferation Act — which are outside the scope of this report to discuss.) The Senate adopted the House version on November 9, 2005, and the bill became law on November 22, 2005 (P.L. 109-112). NASA now may purchase Russian goods and services for the ISS program, such as flights on Soyuz spacecraft, through January 1, 2012, but the flights must take place by that date. The President must report to Congress on the identity of each Russian entity or person receiving the payments, the purpose of each payment, and the assessment of the President that the payment is not prejudicial to achieving U.S. nonproliferation goals further defined in the act.