

BIDEN, CONGRESS SHOULD DEFEND MISSILE SANCTIONS IMPOSED ON IRAN

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INTRODUCTION

During a March 2021 appearance before the House Committee on Foreign Affairs, Secretary of State Antony Blinken pledged not to make any concessions to Iran regarding its missile program while persuading Tehran to return to compliance with the 2015 nuclear deal, formally known as the Joint Comprehensive Plan of Action (JCPOA).¹ Less than one month later, however, State Department Spokesperson Ned Price refused to rule out missile-sanctions relief as an inducement for the regime to rejoin the deal.²

Offering Iran missile-sanctions relief without first addressing the Islamic Republic's robust missile program should be alarming to Congress. The JCPOA imposes no limits on Iran's missile development and proliferation; instead, the deal schedules UN restrictions on Iran's ballistic missiles to expire in 2023.³ During the years the United States participated in the JCPOA (2015 to 2018), Iran launched at least 27 ballistic missiles as part of tests or military operations.⁴ Last year, the clerical regime fired ballistic missiles at military bases in Iraq housing American personnel.⁵ Iran's terrorist proxies use Iranian-supplied ballistic and cruise missiles and unmanned aerial vehicles (UAVs) to target and harass U.S. forces and allies across the Middle East. Between all of this and Tehran's ambitions

1. Rachel Oswald, "Blinken tells House panel to expect firmness toward Iran, China," *MSN*, March 10, 2021. (<https://www.msn.com/en-us/news/politics/blinken-tells-house-panel-to-expect-firmness-toward-iran-china/ar-BB1esGEX>); U.S. Department of State, "Joint Comprehensive Plan of Action," accessed April 22, 2021. (<https://2009-2017.state.gov/e/eb/tfs/spi/iran/jcpoa/index.htm>)

2. Spokesman Ned Price, U.S. Department of State, "Department Press Briefing – April 7, 2021," April 7, 2021. (<https://www.state.gov/briefings/departments-press-briefing-april-7-2021/>)

3. UN Security Council, "Ballistic missile-related transfers and activities," accessed April 22, 2021. (<https://www.un.org/securitycouncil/content/2231/ballistic-missile-related-transfers-and-activities>)

4. Behnam Ben Taleblu, "Iranian Ballistic Missile Tests Since the Nuclear Deal – 2.0," *Foundation for Defense of Democracies*, January 25, 2018. (<https://s3.us-east-2.amazonaws.com/defenddemocracy/uploads/documents/IranBallisticMissileResearchMemo.pdf>); UN Security Council, "Identical letters dated 23 May 2018 from the Permanent Representative of Israel to the United Nations addressed to the Secretary-General and the President of the Security Council," S/2018/495, May 24, 2018. (<https://undocs.org/S/2018/495>); UN Security Council, "Identical letters dated 23 November 2018 from the Permanent Representative of Israel to the United Nations addressed to the Secretary-General and the President of the Security Council," S/2018/1047, November 26, 2018. (<https://undocs.org/S/2018/1047>)

5. Joseph Trevithick, "Everything New We Just Learned About The 2020 Iranian Missile Attack On U.S. Forces In Iraq," *The Drive*, March 1, 2021. (<https://www.thedrive.com/the-war-zone/39527/everything-new-we-just-learned-about-the-iranian-missile-attack-on-al-asad-air-base>)

to develop longer-range nuclear-capable ballistic missiles that could reach the United States and Europe, lifting sanctions on Iran's missile program undermines U.S. national security interests.

Congress should send a resolute and bipartisan message to the Biden administration: Regardless of where members stand on the JCPOA, an overwhelming majority of legislators agree that no missile-sanctions relief should be provided to Iran as part of rejoining the agreement. This message would align with Blinken's testimony and his 2020 campaign commitment to "continue non-nuclear sanctions as a strong hedge against Iranian misbehavior in other areas."⁶

This memorandum summarizes the threats posed by Iran's missile force; reviews the longstanding record of bipartisan support for missile sanctions on the Islamic Republic; and provides a detailed list of U.S. missile sanctions in place as of April 15, 2021.

IRAN'S MISSILE THREAT

Multiple U.S. intelligence assessments have reported that Iran has the largest ballistic missile arsenal in the Middle East.⁷ Missiles not only offer Iran a cheaper long-range strike platform compared to military aircraft – which are harder to procure, due to sanctions – but can also serve as a delivery vehicle for nuclear weapons or other weapons of mass destruction (WMD). U.S. intelligence assesses that Iran's ballistic missiles "are inherently capable of delivering WMD."⁸

Tehran's arsenal includes both short- and medium-range ballistic missiles, which use either solid or liquid propellants. Some of these missiles can travel at least 2,000 kilometers, giving the Islamic Republic the ability to strike American bases and allied nations across the region.⁹ Iran also maintains several space-launch vehicles,¹⁰ thereby "shorten[ing] the timeline" for developing a potential intercontinental ballistic missile capability, according to the U.S. intelligence community.¹¹ According to a recent report submitted to the UN Security Council, Iran has also resumed cooperation with North Korea on the development of long-range missile systems.¹² Tehran has

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6. Jacob Kornbluh, "Tony Blinken's Biden spiel," *Jewish Insider*, October 28, 2020. (<https://jewishinsider.com/2020/10/tony-blinkens-biden-spiel/>)

7. U.S. Office of the Director of National Intelligence, "Annual Threat Assessment of the US Intelligence Community," April 9, 2021, page 13. (<https://www.dni.gov/files/ODNI/documents/assessments/ATA-2021-Unclassified-Report.pdf>); Director of National Intelligence Daniel R. Coats, U.S. Office of the Director of National Intelligence, "Worldwide Threat Assessment of the US Intelligence Community," *Statement for the Record Before the Senate Select Committee on Intelligence*, January 29, 2019, page 10. (<https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf>)

8. Director of National Intelligence James R. Clapper, U.S. Office of the Director of National Intelligence, "Worldwide Threat Assessment of the US Intelligence Community," *Statement for the Record Before the Senate Select Committee on Intelligence*, January 29, 2014, page 6. (https://www.dni.gov/files/documents/Intelligence%20Reports/2014%20WWTa%20SFR_SSCI_29_Jan.pdf)

9. "Iran increases missile range according to threat types," *Mehr News Agency* (Iran), April 15, 2021. (<https://en.mehrnews.com/news/172143/Iran-increases-missile-range-according-to-threat-types>)

10. Behnam Ben Taleblu and Bradley Bowman, "Iran military satellite launch requires US action," *Al Arabiya* (UAE), April 28, 2020. (<https://english.alarabiya.net/views/news/middle-east/2020/04/28/Iran-military-satellite-launch-requires-US-action>)

11. Director of National Intelligence Daniel R. Coats, U.S. Office of the Director of National Intelligence, "Worldwide Threat Assessment of the US Intelligence Community," *Statement for the Record Before the Senate Select Committee on Intelligence*, January 29, 2019, page 10. (<https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf>)

12. "UN Report Says Iran And North Korea Resumed Missile Cooperation," *Radio Free Europe/Radio Liberty*, February 9, 2021. (<https://www.rferl.org/a/un-report-says-iran-and-north-korea-resumed-missile-cooperation/31093315.html>)

supported the missile capabilities of its partners in the region – Iraqi Shiite militias,¹³ the Assad regime in Syria,¹⁴ Lebanese Hezbollah,¹⁵ and the Houthi rebels in Yemen.¹⁶

For more than a decade, the Islamic Republic has been working to improve the quality of its sizable arsenal. This includes a drive for more accurate systems, the development of different warheads, and steps toward greater road-mobility and battlefield reliability.¹⁷ Greater missile precision could lead to potential changes in Iranian security policy and offensive missile operations.¹⁸ Furthermore, Iran has begun to employ – not just stockpile – its increasingly accurate missile force in publicized retaliatory operations, marking a stark shift in Tehran’s risk tolerance and deterrence capabilities.¹⁹

Iran’s cruise missile and UAV programs continue to advance as well. In 2017, drawing on evidence from recovered battlefield debris, the United States claimed that Iran proliferated drones to the Houthi rebels in Yemen to fire at Saudi Arabia,²⁰ a phenomenon that continues into the present.²¹ Iran has also proliferated cruise missiles to the Houthis.²² In 2019, an Iranian land-attack cruise missile and drone strike on Saudi Arabia caused significant damage to a Saudi Aramco facility, briefly disrupting 5 percent of the world’s oil supply.²³ In 2021, Iran was reportedly behind missile attacks on Israeli vessels in the Gulf of Oman and Arabian Sea.²⁴ According to media

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13. Julian E. Barnes and Eric Schmitt, “Iran Is Secretly Moving Missiles Into Iraq, U.S. Officials Say,” *The New York Times*, December 4, 2019. (<https://www.nytimes.com/2019/12/04/us/politics/iran-missiles-iraq.html>)

14. Barbara Starr, “U.S. officials: Syria using more accurate, Iranian-made missiles,” *CNN*, December 28, 2012. (<https://www.cnn.com/2012/12/28/world/meast/syria-missiles>)

15. Nicholas Blandford, “Hezbollah claims ‘pinpoint’ Iranian missiles added to its arsenal,” *The Christian Science Monitor*, November 23, 2014. (<https://www.csmonitor.com/World/Middle-East/2014/1123/Hezbollah-claims-pinpoint-Iranian-missiles-added-to-its-arsenal>)

16. Behnam Ben Taleblu, “Iran sees growing dividends from support for Yemen’s Houthis,” *Axios*, April 24, 2019. (<https://www.axios.com/iran-sees-growing-dividends-from-support-for-yemens-houthis-78687282-b38d-486a-815c-f94f709e0d08.html>)

17. On accuracy, see: سردار حاجی‌زاده: دقت موشک‌ها را مدیون تدبیر رهبر معظم انقلاب هستیم/ ناوهای هواپیمابر آمریکا برای ما یک سیل هستند [Commander Hajizadeh: We Owe the Accuracy of Missiles to the Tact of the Supreme Leader of the Revolution/American Aircraft Carriers are a Target for Us], *Jamran News* (Iran), November 22, 2018. (<https://www.jamran.news/fa/tiny/news-1059629>)

18. Bilal Y. Saab and Michael Elleman, “Precision Fire: A Strategic Assessment of Iran’s Conventional Missile Program,” *Atlantic Council*, September 2016. (https://www.atlanticcouncil.org/wp-content/uploads/2016/09/Precision_Fire_web_0907.pdf)

19. Behnam Ben Taleblu, “Iran is increasingly using missiles in its military operations — that’s a problem,” *The Hill*, January 21, 2020. (<https://thehill.com/opinion/international/479076-iran-is-increasingly-using-missiles-in-its-military-operations-thats-a>)

20. Phil Stewart, “In first, U.S. presents its evidence of Iran weaponry from Yemen,” *Reuters*, December 14, 2017. (<https://cn.reuters.com/article/instant-article/idUSKBN1E82J6>)

21. Alex Hollings, “Watch: Incredible Footage Shows Saudi F-15 Taking Out Houthi Drone,” *Sandboxx*, March 31, 2021. (<https://www.sandboxx.us/blog/watch-incredible-footage-shows-saudi-f-15-taking-out-houthi-drone/>); Jon Gambrell, “Devices found in missiles, Yemen drones link Irantoattacks,” *AssociatedPress*, February 19, 2020. ([https://apnews.com/article/4338ea6186ebefcd752c2c6e8f45d7a3#:~:text=DUBAI%2C%20United%20Arab%20Emirates%20\(AP,and%20Iraq%2C%20two%20reports%20say\)](https://apnews.com/article/4338ea6186ebefcd752c2c6e8f45d7a3#:~:text=DUBAI%2C%20United%20Arab%20Emirates%20(AP,and%20Iraq%2C%20two%20reports%20say)))

22. Behnam Ben Taleblu, “Iranian Cruise Missiles Also A Proliferation Threat,” *Foundation for Defense of Democracies*, February 22, 2018. (<https://www.fdd.org/analysis/2018/02/22/iranian-cruise-missiles-also-a-proliferation-threat/>)

23. Erin Cunningham and Rick Noack, “Iran’s strategic use of drones and missiles rattles Middle East rivals,” *The Washington Post*, September 16, 2019. (https://www.washingtonpost.com/world/irans-strategic-use-of-drones-and-missiles-rattles-middle-east-rivals/2019/09/16/64bb8894-d886-11e9-a1a5-162b8a9c9ca2_story.html)

24. Yaniv Kubovich, “Israeli Defense Officials Head to Gulf in Wake of Suspected Iran Attack on Ship,” *Haaretz* (Israel), February 28, 2021. (<https://www.haaretz.com/israel-news/.premium-israeli-defense-officials-head-to-gulf-in-wake-of-suspected-iran-attack-on-ship-1.9575088>); “Israeli-owned ship hit by missile in suspected Iranian attack -Israeli official,” *Reuters*, March 25, 2021. (<https://www.reuters.com/world/middle-east/israeli-owned-ship-hit-by-missile-arabian-sea-israeli-media-report-2021-03-25/>)

reports, Israeli security officials worry Iran could use cruise missiles or UAVs to target Israeli territory as well.²⁵ In March 2021, Israeli Prime Minister Benjamin Netanyahu hinted that Houthi strike capabilities had impeded a trip to the United Arab Emirates, which would have required traversing Saudi airspace.²⁶

CONGRESSIONAL SUPPORT FOR SANCTIONS ON IRAN'S MISSILE PROGRAMS

Prior to the JCPOA, successive administrations and Congresses reached consensus on the importance of addressing Iran's ballistic missile program.

The Iran Sanctions Act of 1996 (ISA), which President Bill Clinton signed into law, expanded sanctions on Iran for its malign activities, including its ballistic missile program. To lift sanctions imposed under ISA, the Islamic Republic must have, inter alia, "ceased its efforts to design, develop, manufacture, or acquire ... ballistic missiles and ballistic missile launch technology."²⁷

Congress imposed additional sanctions on Iran's ballistic missile capabilities when it passed the Iran, North Korea, and Syria Nonproliferation Act in 2002 and the Iran Freedom Support Act in 2006.²⁸ In 2010, Congress again specifically tied the termination of sanctions imposed under the Comprehensive Iran Sanctions, Accountability, and Divestment Act (CISADA) to Iran's ceasing "the pursuit, acquisition, and development of ... ballistic missiles and ballistic missile launch technology."²⁹ Congress later based the termination criteria for sanctions against the Central Bank of Iran and many other significant provisions on this same CISADA standard.³⁰ In 2012, President Barack Obama signed into law the Iran Threat Reduction and Syria Human Rights Act and strengthened the termination criteria in CISADA, requiring that Iran verifiably dismantle its ballistic missile programs and capabilities.³¹

In 2015, as the Obama administration pressed Congress to support the JCPOA, the White House declared that although it was lifting sanctions up front to enter the nuclear deal, "[a]uthorities will remain in place to allow the U.S. government to target Iran's development of missiles and other means to deliver weapons of mass destruction."³² In 2017, while the United States remained a participant in the JCPOA, the U.S. Senate voted 98-2 to impose sanctions on any entity that "materially contributes to: (1) Iran's ballistic missile or weapons of mass destruction programs,

25. Rina Bassist, "For Israel, Houthi threat a whole new ballgame," *Al-Monitor*, January 8, 2021. (<https://www.al-monitor.com/originals/2021/01/israel-us-iran-yemen-suez-canal-red-sea-nuclear-submarine.html>)

26. "Israeli PM avoided Saudi airspace because of Houthi missiles," *Associated Press*, March 24, 2021. (<https://apnews.com/article/israel-yemen-iran-saudi-arabia-united-arab-emirates-f8b3fea4d4963b0bbc2acfedb4bc6c48>)

27. Iran and Libya Sanctions Act of 1996, Pub. L. 104-172, 110 Stat. 1541, codified as amended at 50 U.S.C. §1701. (<https://www.congress.gov/bill/104th-congress/house-bill/3107/text>)

28. U.S. Department of State, Bureau of International Security and Nonproliferation, "Iran, North Korea, and Syria Nonproliferation Act Sanctions (INKSNA)," accessed April 22, 2021. (<https://www.state.gov/iran-north-korea-and-syria-nonproliferation-act-sanctions-inksna/>); Iran Freedom Support Act, Pub. L. 109-293, 120 Stat. 1344, codified as amended at 50 U.S.C. §1701. (<https://www.congress.gov/109/plaws/publ293/PLAW-109publ293.pdf>)

29. Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010, Pub. L. 111-195, 124 Stat. 1312, codified as amended at 22 U.S.C. Ch. 92. (<https://home.treasury.gov/system/files/126/hr2194.pdf>); see also: Behnam Ben Taleblu, "Don't Forget Iran's Ballistic Missiles," *War on the Rocks*, August 25, 2014. (<https://warontherocks.com/2014/08/dont-forget-irans-ballistic-missiles/>)

30. National Defense Authorization Act for Fiscal Year 2012, Sec. 1245, Pub. L. 112-81, 125 Stat. 1647, codified as amended at 22 U.S.C. §8513a. (https://home.treasury.gov/system/files/126/ndaa_publaw.pdf)

31. Iran Threat Reduction and Syria Human Rights Act of 2012, Pub. L. 112-158, 126 Stat. 1214, codified as amended at 22 U.S.C. §8701. (<https://www.congress.gov/bill/112th-congress/house-bill/1905>)

32. The White House, "The Iran Nuclear Deal: What You Need to Know About the JCPOA," July 14, 2015, page 23. (https://obamawhitehouse.archives.gov/sites/default/files/docs/jcpoa_what_you_need_to_know.pdf)

or (2) the sale or transfer to Iran of specified military equipment or the provision of related technical or financial assistance.” These sanctions became law as part of the Countering America’s Adversaries Through Sanctions Act (CAATSA), which passed the House and Senate nearly unanimously.³³

The State and Treasury departments typically impose missile-related sanctions on Iran pursuant to Executive Order (E.O.) 13382, which allows the president to block the assets of proliferators of weapons of mass destruction and their supporters.³⁴ Since E.O. 13382 is also typically used to impose sanctions on Iran’s nuclear program, the Biden administration may attempt to broadly lift E.O. 13382 sanctions on Iran and call them all “nuclear sanctions.” To help prevent this, the last section of this memorandum provides a list of E.O. 13382 sanctions imposed on Iran specifically for its missile-related activities.

Perhaps most importantly, Iran’s Islamic Revolutionary Guard Corps (IRGC) was designated in 2007 under E.O. 13382 for its key role in Iran’s ballistic missile and nuclear programs.³⁵ Thus, many sanctions imposed on the IRGC and its affiliates are not just terrorism sanctions but missile sanctions as well.

SECTORS OF IRAN’S ECONOMY CONNECTED TO MISSILE DEVELOPMENT³⁶

The development of ballistic missiles relies on a variety of industries to procure materials and provide expertise, including the automotive, construction, electronics and telecommunications, mining and industrial metals, and petrochemicals and energy sectors.³⁷ Providing these sectors sanctions relief of any form – including rescinding executive orders, rescinding sector designations made pursuant to executive orders, or issuing national security waivers pursuant to various Iran sanctions laws – would benefit Iran’s missile programs.

- **Automotive Sector:** Iran’s ballistic missile program needs the automotive sector to produce vehicles to carry, erect, and launch missiles.³⁸ The U.S. Treasury Department sanctioned Iran’s automotive sector pursuant to E.O. 13846 in 2018.³⁹
- **Construction Sector:** The construction sector creates testing and production facilities, above-ground and underground storage areas, and bases and launch facilities for the missile program. Over the last few years, the IRGC has unveiled several underground missile depots. Such depots insulate Iran’s most prized weapon – ballistic missiles – from discovery and destruction by enemy forces, while affording the regime an option for

33. U.S. Senate, “Roll Call Vote 115th Congress – 1st Session,” June 15, 2017. (https://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=115&session=1&vote=00147); Countering America’s Adversaries Through Sanctions Act, Pub. L. 115-44, 131 Stat. 886, codified as amended at 22 U.S.C. §9401. (<https://www.congress.gov/bill/115th-congress/house-bill/3364/text>)

34. U.S. Department of the Treasury, Office of Foreign Assets Control, “What You Need to Know About Treasury Restrictions,” September 19, 2012. (<https://home.treasury.gov/system/files/126/wmd.pdf>)

35. U.S. Department of the Treasury, Fact Sheet, “Designation of Iranian Entities and Individuals for Proliferation Activities and Support for Terrorism,” October 25, 2007. (<https://www.treasury.gov/press-center/press-releases/Pages/hp644.aspx>)

36. This section summarizes and updates analysis previously published by FDD on the linkages between Iran’s ballistic missile program and sectors of the Iranian economy. See: Saeed Ghasseminejad, “Iran’s Ballistic Missile Program and Economic Sanctions,” *Foundation for Defense of Democracies*, March 2016. (https://s3.us-east-2.amazonaws.com/defenddemocracy/uploads/documents/Ballistic_Missile_Sanctions.pdf)

37. Saeed Ghasseminejad, “Iran’s Ballistic Missile Program and Economic Sanctions,” *Foundation for Defense of Democracies*, March 2016. (https://s3.us-east-2.amazonaws.com/defenddemocracy/uploads/documents/Ballistic_Missile_Sanctions.pdf)

38. *Annex Handbook 2017* (Missile Technology Control Regime, 2017). (<https://mtcr.info/wordpress/wp-content/uploads/2017/10/MTCR-Handbook-2017-INDEXED-FINAL-Digital.pdf>)

39. Executive Order 13846, “Reimposing Certain Sanctions With Respect to Iran,” August 6, 2018. (<https://www.federalregister.gov/documents/2018/08/07/2018-17068/reimposing-certain-sanctions-with-respect-to-iran>)

a surprise attack.⁴⁰ Furthermore, Iranian media have revealed that Tehran has an operational underground missile production facility. The IRGC presence in the construction sector is significant. Khatam al-Anbia, the construction arm of the IRGC, is the sector's biggest contractor and has been involved in large construction projects both in Iran and abroad.⁴¹ The U.S. government sanctioned Iran's construction sector in 2020 pursuant to E.O. 13902.⁴²

- **Electronics and Telecommunications Sectors:** The electronics and telecommunications sectors are involved in ballistic missile testing and production and in missile-control systems.⁴³ For years, the IRGC, in partnership with the supreme leader's business empire, was the largest shareholder of Iran's biggest communications service providers, the Telecommunication Company of Iran and the Mobile Communication Company of Iran.⁴⁴ While the United States has not designated Iran's electronics and telecommunications sectors, the U.S. Treasury Department has designated entities in these sectors, such as Iran Electronics Industries, Iran Communication Industries, and Information Systems of Iran, for their roles in Iran's ballistic missile program.⁴⁵
- **Mining and Industrial Metals Sectors:** Iran's mining and industrial metals sectors supply raw and processed materials for military uses, including ballistic missile production. For example, Iran has large reserves of zinc and copper, used for treatments that reduce the visibility of missiles to prevent detection and interception.⁴⁶ Iran also produces zirconium products for its ballistic missile program.⁴⁷ The IRGC is active in the mining and industrial metals sectors. Reportedly, the IRGC has helped Iran produce aluminum powder, which can be used to develop solid propellant.⁴⁸ Similarly, the IRGC controls extraction and production of zinc as the majority

40. Natasha Turak, "Iran reveals underground 'missile city' as regional tensions rise," *CNBC*, March 16, 2021. (<https://www.cnn.com/2021/03/16/iran-reveals-underground-missile-city-as-regional-tensions-rise.html>)

41. Emanuele Ottolenghi, Saeed Ghasseminejad, and Annie Fixler, "How the Nuclear Deal Enriches Iran's Revolutionary Guard Corps," *Foundation for Defense of Democracies*, October 4, 2016. (<https://www.fdd.org/analysis/2016/10/04/how-the-nuclear-deal-enriches-irans-revolutionary-guard-corps/>); Ali Alfoneh, "EU Delisting of IRGC Construction Giant Will Boost Terror Financing," *Foundation for Defense of Democracies*, July 27, 2015. (<https://www.fdd.org/analysis/2015/07/27/eu-delisting-of-irgc-construction-giant-will-boost-terror-financing/>)

42. Executive Order 13902, "Imposing Sanctions With Respect to Additional Sectors of Iran," January 10, 2020. (<https://www.federalregister.gov/documents/2020/01/14/2020-00534/imposing-sanctions-with-respect-to-additional-sectors-of-iran>)

43. *Annex Handbook 2017* (Missile Technology Control Regime, 2017). (<https://mtcr.info/wordpress/wp-content/uploads/2017/10/MTCR-Handbook-2017-INDEXED-FINAL-Digital.pdf>)

44. Emanuele Ottolenghi, Saeed Ghasseminejad, and Annie Fixler, "How the Nuclear Deal Enriches Iran's Revolutionary Guard Corps," *Foundation for Defense of Democracies*, October 4, 2016. (<https://www.fdd.org/analysis/2016/10/04/how-the-nuclear-deal-enriches-irans-revolutionary-guard-corps/>)

45. "Iran Electronics Industries (IEI)," *Iran Watch*, February 7, 2018. (<https://www.iranwatch.org/iranian-entities/iran-electronics-industries-ie/>); "Iran Communications Industries (ICI)," *Iran Watch*, September 8, 2014. (<https://www.iranwatch.org/iranian-entities/iran-communications-industries-ici/>); "Information Systems of Iran (ISIRAN)," *Iran Watch*, August 13, 2020. (<https://www.iranwatch.org/iranian-entities/information-systems-iran-isiran/>); U.S. Department of the Treasury, Press Release, "Treasury Sanctions Procurement Network Supplying Iranian Military Firm," November 10, 2020. (<https://home.treasury.gov/news/press-releases/sm1180>)

46. *Annex Handbook 2017* (Missile Technology Control Regime, 2017). (<https://mtcr.info/wordpress/wp-content/uploads/2017/10/MTCR-Handbook-2017-INDEXED-FINAL-Digital.pdf>)

47. "Zirconium Production Plant (ZPP)," *Nuclear Threat Reduction*, August 21, 2013. (<https://www.nti.org/learn/facilities/162/>)

48. Bozorgmehr Sharafedin and Pratima Desai, "Special Report: Inside Iran's secret project to produce aluminium powder for missiles," *Reuters*, June 24, 2020. (<https://www.reuters.com/article/us-iran-missiles-programme-specialreport/special-report-inside-irans-secret-project-to-produce-aluminium-powder-for-missiles-idUSKBN23V1K1>)

shareholder of the Iran Zinc Mines Development Company.⁴⁹ Iran's mining and industrial metals sectors are subject to sanctions pursuant to E.O. 13871 and E.O. 13902.⁵⁰

- **Petrochemical and Energy Sectors:** The petrochemical and energy sectors provide the explosive systems, fuel materials, and composite materials needed for Iran's ballistic missile program.⁵¹ Iran's Ministry of Defense and Armed Forces Logistics and the IRGC, two entities that historically have been the driving forces behind the development and deployment of Iran's ballistic missiles, use companies in the petrochemical and energy sectors to produce or procure what the missile program needs.⁵² The U.S. Treasury Department has designated Iran's petrochemical and energy sectors and a vast network of firms and individuals active in these sectors.⁵³ Iran's energy sector is the most heavily sanctioned sector in the country, through the Iran Sanctions Act, Section 1245 of the National Defense Authorization Act for Fiscal Year 2012, the Iran Threat Reduction and Syria Human Rights Act, the Iran Freedom and Counterproliferation Act, and E.O. 13846.⁵⁴

MISSILE SANCTIONS AGAINST IRAN

As of April 15, 2021, more than 250 Iran-connected companies, institutions, and individuals were sanctioned for their connection to the Islamic Republic's missile program. Sanctions relief of any form that provides benefits to these entities and individuals – including removing them from the Specially Designated Nationals and Blocked Persons List, granting general licenses, or issuing national security waivers pursuant to various Iran sanctions laws – would directly undermine U.S. interests.

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49. U.S. Department of the Treasury, Press Release, "Treasury Sanctions Vast Financial Network Supporting Iranian Paramilitary Force That Recruits and Trains Child Soldiers," October 16, 2018. (<https://home.treasury.gov/news/press-releases/sm524>)

50. Executive Order 13871, "Imposing Sanctions With Respect to the Iron, Steel, Aluminum, and Copper Sectors of Iran," May 8, 2019. (<https://www.federalregister.gov/documents/2019/05/10/2019-09877/imposing-sanctions-with-respect-to-the-iron-steel-aluminum-and-copper-sectors-of-iran>); Executive Order 13902, "Imposing Sanctions With Respect to Additional Sectors of Iran," January 10, 2020. (<https://www.federalregister.gov/documents/2020/01/14/2020-00534/imposing-sanctions-with-respect-to-additional-sectors-of-iran>)

51. *Annex Handbook 2017* (Missile Technology Control Regime, 2017). ([MTCR-Handbook-2017-INDEXED-FINAL-Digital.pdf](https://www.mtcrr.org/Handbook/2017/INDEXED-FINAL-Digital.pdf))

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