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BACKGROUNDER

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Navigating the Rough Terrain of a U.S.–Saudi Arabia Nuclear Energy Cooperation Agreement

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Abstract

The United States has a unique opportunity to shape and engage with Saudi Arabia at the outset of its nuclear energy program. A nuclear trade agreement between the U.S. and another nation, known as a "123 Agreement," establishes a stabilizing and long-term commitment to shared nonproliferation objectives and a potential commercial trade relationship that underscores those objectives. However, a 123 Agreement between the U.S. and Saudi Arabia has become controversial amongst some American allies, politicians, and nonproliferation advocacy groups, who are demanding that Saudi Arabia foreswear enrichment and reprocessing as a condition of trading with the U.S. This condition was part of the U.S.–United Arab Emirates 123 Agreement from 2009 and has become known as the "gold standard." By fixating on this standard, advocates are ignoring the major gains that could be made by engaging with Saudi Arabia's nuclear program through a 123 Agreement. The U.S. should promptly negotiate and finalize a 123 Agreement with Saudi Arabia and thus contribute to Saudi Arabia's efforts to modernize its economy and society.

In his May 2017 visit to the Kingdom of Saudi Arabia, President Trump committed with King Salman Bin Abdulaziz Al-Saud to a "renewed path toward a peaceful Middle East where economic development, trade, and diplomacy are hallmarks of regional and global engagement."[1] That meeting and the subsequent visit to the U.S. by Crown Prince Mohammad bin Salman in March 2018 mark "a historic alteration in the nature of economic relations between Washington and Riyadh."[2] The negotiation of a 123 Agreement—a civil nuclear trade agreement, deriving its name from the defining section of the Atomic Energy Act of 1954—is an imminent test of that commitment.

Key Points

- Saudi Arabia is seeking to build its first two nuclear power reactors. A 123 Agreement must be signed in order for U.S. companies to compete.
- The so-called gold standard for 123 Agreements is misleading and often counterproductive in achieving nonproliferation objectives.
- A 123 Agreement would secure valuable, long-term nonproliferation commitments from Saudi Arabia, and enable American companies to help inform and compete in their nuclear energy sector.
- A U.S.–Saudi Arabia 123 Agreement should be viewed in light of what the U.S. can do to encourage Saudi Arabia's efforts to modernize its economy and society.
- Contributing to economic growth can be another powerful and persuasive rejoinder to extremism, as it offers opportunity, greater freedom, education and jobs, social mobility, alleviation of poverty, stability, and a dynamic, innovative future. A 123 Agreement is an important piece of that transformation.

This paper, in its entirety, can be found at **http://report.heritage.org/bg3304**

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The U.S. has been committed to advancing free and peaceful society in the Middle East and Saudi Arabia for the past 70 years. A 123 Agreement between the U.S. and Saudi Arabia offers long-term strategic and commercial benefits for partnership with Saudi Arabia in modernizing its economy and encouraging its further participation in democratic international institutions.

Nevertheless, a U.S.–Saudi Arabia 123 Agreement has become controversial amongst some American allies, politicians, and nonproliferation advocacy groups. They argue that a 123 agreement must include the so-called gold standard, which binds the agreeing nation to foreswear enrichment and reprocessing technologies as a condition of trading with the U.S. Although a standard 123 Agreement already forbids military use of civil nuclear technology, the objectors argue that a "gold standard" is critical to prevent further proliferation in the Middle East and acceleration of Iran's nuclear weapons program.

Such conditions are misguided and Saudi Arabia will likely find them unacceptable. Forfeiting or overly confining a 123 Agreement with Saudi Arabia neither advances the potential collaboration with Saudi Arabia's energy economy nor accomplishes America's nonproliferation goals. The U.S. has a unique opportunity to engage with and help guide the peaceful introduction of commercial nuclear power to Saudi Arabia. A 123 Agreement is the doorway to this cooperation. The U.S. should encourage and contribute to responsible use of nuclear power technology by promptly completing negotiations with Saudi Arabia.

Saudi Arabia's Civilian Nuclear Energy Program

Saudi Arabia does not have an established civilian nuclear power sector. However, in the past fifteen years, the Saudi Arabian government has set ambitious goals for a domestic nuclear energy program. In the winter of 2006–2007, it began work with the Gulf Cooperation Council and the International Atomic Energy Agency (IAEA) to study the feasibility of the use of nuclear power in the Middle East. The government subsequently announced intentions to pursue civilian nuclear energy, envisioning 16 nuclear reactors to supply 20 percent of the nation's electricity demand and desalination needs. Since 1991, electricity consumption annually has grown an average of 7 percent, demand which has been met almost entirely by oil- and natural-gas-fired electricity.[3]

The government has since underscored its intentions to develop a commercial nuclear program in its Vision 2030 aimed at "reducing its reliance on oil, diversifying its economy, and develop[ing] public service sectors such as health, education, infrastructure, recreation, and tourism."[4] Saudi Arabia is now actively considering large power reactors, small module reactors (SMRs), high-temperature gas-cooled reactors, and nuclear applications for the desalination, medicine, agriculture, and petrochemical industries.

Saudi Arabia has partnered with countries around the world to develop the regulatory and commercial foundations of such a commercial nuclear sector.[5] To date, Saudi Arabia has:

- Worked with Finland, France, and South Korea to develop safety standards and a nuclear regulatory body, which was created in 2014 as the Atomic Regulatory Authority.
- Formed cooperation agreements—almost continuously since 2010—with established nuclear companies and organizations from Australia, China, Fin-

1. The White House, "Joint Statement Between the Kingdom of Saudi Arabia and the United States of America," May 23, 2017, https://www.whitehouse.gov/briefings-statements/joint-statement-kingdom-saudi-arabia-united-states-america/ (accessed March 14, 2018).
2. Shehab Al-Makahleh, "Denotations of Saudi Crown Prince's Visit to the US," *Al Arabiya*, March 13, 2018, https://english.alarabiya.net/en/views/news/middle-east/2018/03/13/Denotations-of-Saudi-Crown-Prince-s-visit-to-the-US.html (accessed March 14, 2018).
3. International Energy Agency, "Saudi Arabia: Electricity and Heat for 2015," https://www.iea.org/statistics/statisticssearch/report/?country=SAUDIARABI&product=electricityandheat&year=2015 (accessed March 14, 2018).
4. Rashad Abuaish, *Saudi National Atomic Energy Project*, p. 4, K.A. CARE (King Abdullah City for Atomic and Renewable Energy), https://gnssn.iaea.org/NSNI/SMRP/Shared%20Documents/Workshop%2012-15%20December%202017/Saudi%20National%20Atomic%20Energy%20Project.pdf (accessed March 14, 2018).
5. World Nuclear Association, "Nuclear Power in Saudi Arabia," October 2017, http://www.world-nuclear.org/information-library/country-profiles/countries-o-s/saudi-arabia.aspx (accessed March 14, 2018), and John P. Banks and Charles K. Ebinger, eds., *Business and Nonproliferation: Industry's Role in Safeguarding a Nuclear Renaissance* (Washington, DC: Brookings Institution Press, 2011), pp. 85–88.

land, France, Jordan, Russia, and South Korea to explore the feasibility of siting and building reactors, fuel fabrication services, waste management, and decommissioning.

- Collaborated with China to explore domestic uranium supplies and signed a cooperation agreement with Kazakhstan, the world's largest supplier of uranium.

- Invited further participation of the IAEA in its May 2017 program with a Country Programme Framework spanning 2017–2021 to provide technical guidance as Saudi Arabia develops its nuclear energy program.[6]

These efforts have culminated most recently in a request for information and proposals for two initial reactors by companies in China, France, Russia, South Korea, and the U.S.[7]

By all appearances, Saudi Arabia is pursuing a legitimate, peaceful, and robust nuclear power industry that is matched by its continued participation in international nonproliferation treaties. Saudi Arabia is a signatory of the Non-Proliferation Treaty as of 1988 and concluded a comprehensive safeguards agreement in 2009, giving the IAEA access into its nuclear program and facilities.[8] Moreover, Saudi Arabia is party to the Global Initiative to Combat Nuclear Terrorism and the Proliferation Security Initiative, agreements focused on monitoring the transportation of radioactive material, information sharing between countries, and detection and prevention of trafficking nuclear weapons.[9]

The Gold Standard Red Herring

For the U.S. to fully participate in Saudi Arabia's nuclear power sector, a nuclear trade agreement must be signed. 123 Agreements establish nonproliferation conditions for the nuclear industry and academia in the U.S. to engage in civil nuclear trade with partnering countries and set conditions for any country using U.S.-based technology and fuel. The agreement is negotiated by the President, and Congress has 90 days to review, after which it will enter into force unless Congress passes a joint resolution of disapproval.[10] Once an agreement is finalized, civil nuclear activities are regulated by the Departments of Commerce, Energy, and State.[11] The U.S. has entered into 123 Agreements with 48 countries and the IAEA.

Some have argued that an essential piece to a 123 Agreement with Saudi Arabia is the so-called gold standard, which requires a ban on enrichment and reprocessing technologies as a condition of trading with the U.S.[12] Representative Ileana Ros-Lehtinen recently introduced legislation (H.R. 5357) enshrin-

6. International Atomic Energy Agency, "Saudi Arabia Signs its First Country Programme Framework (CPF) for 2017–2021," May 31, 2017, https://www.iaea.org/newscenter/news/saudi-arabia-signs-its-first-country-programme-framework-cpf-for-2017-2021 (accessed March 14, 2018), and International Atomic Energy Agency, "Country Programme Frameworks," https://www.iaea.org/technicalcooperation/programme/Prog-Man/CPFs.html (accessed March 14, 2018).
7. "Saudi Arabia Takes Frist Step towards Nuclear Plant Tender: Sources," Reuters, October 31, 2017, https://www.reuters.com/article/us-saudi-nuclearpower/saudi-arabia-takes-first-step-towards-nuclear-plant-tender-sources-idUSKBN1D02KH (accessed March 15, 2018), and "Saudi Arabia Aims to Prequalify Firms by April or May for First Nuclear Plant," Reuters, January 15, 2018, https://www.reuters.com/article/us-saudi-nuclear/saudi-arabia-aims-to-prequalify-firms-by-april-or-may-for-first-nuclear-plant-idUSKBN1F4187 (accessed March 14, 2018).
8. International Atomic Energy Agency, *Agreement between the Kingdom of Saudi Arabia and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, INFCIRC/746, February 16, 2018, https://www.iaea.org/publications/documents/infcircs/agreement-between-kingdom-saudi-arabia-and-international-atomic-energy-agency-application-safeguards-connection-treaty-non-proliferation-nuclear-weapons (accessed March 14, 2018). See also, International Atomic Energy Agency, "Factsheet: IAEA Safeguards Overview," https://www.iaea.org/publications/factsheets/iaea-safeguards-overview (accessed March 14, 2018).
9. U.S. Department of State, "Proliferation Security Initiative," https://www.state.gov/t/isn/c10390.htm (accessed March 14, 2018), and Nuclear Threat Initiative, "Global Initiative to Combat Nuclear Terrorism (GICNT)," November 29, 2017, http://www.nti.org/learn/treaties-and-regimes/global-initiative-combat-nuclear-terrorism-gicnt/ (accessed March 14, 2018).
10. Paul Kerr and Mary Beth Nikitin, "Nuclear Cooperation with Other Countries: A Primer," Congressional Research Service *Report for Congress* No. 22937, December 27, 2016, p. 3, https://fas.org/sgp/crs/nuke/RS22937.pdf (accessed March 14, 2018).
11. U.S. Department of Commerce, International Trade Administration, "Civil Nuclear Guide to Exporting," February 8, 2017, https://2016.export.gov/civilnuclear/index.asp (accessed March 14, 2018).
12. See for example, Victor Gilinksy and Henry Sokolski, "Reactors for Saudi Arabia Are Bad Business and Dangerous Diplomacy," *The Hill*, January 7, 2018, http://thehill.com/opinion/national-security/367838-reactors-for-saudi-arabia-are-bad-business-and-dangerous-diplomacy (accessed March 30, 2018).

ing the "gold standard" as a minimum requirement for 123 Agreements.[13] The ban on enrichment and reprocessing has its roots in the 123 Agreement made with the United Arab Emirates (UAE) in 2009, and prior to that in the expressed intentions of the Saudis in a memorandum of understanding with the U.S. in 2008. In the latter, the Bush Administration committed to "assist the Kingdom of Saudi Arabia to develop civilian nuclear energy for use in medicine, industry, and power generation...in accordance with evolving International Atomic Energy Agency guidance and standards."[14] Saudi Arabia clarified its intention "to rely on international markets for nuclear fuel and to not pursue sensitive nuclear technologies."

Advocates of the "gold standard" argue that eliciting a ban on enrichment and reprocessing from Saudi Arabia is critical to preventing further proliferation of nuclear weapons in the Middle East and acceleration of Iran's nuclear weapons program.[15] Without it, the argument runs, a 123 Agreement, at best, sets up the U.S. for a diplomatic quandary come future 123 agreements in the Middle East, having denied its ally the UAE the right to enrich and reprocess; at worst, the agreement is to Saudi Arabia what the Obama Administration's Joint Comprehensive Plan of Action (JCPOA) was to Iran: the enabling and legitimizing of nuclear weapons technology.[16]

It has been the laudable and long-standing policy commitment of the U.S. to uphold the Non-Proliferation Treaty and prevent the further proliferation of nuclear weapons technology and activities. However, the "gold standard" approach to achieving those ends poses numerous problems. Principally:

1. The Sovereign's Right to Enrich and Reprocess. Regardless of its intent to engage in these activities, Saudi Arabia is very likely to maintain a sovereign right to consider enrichment and reprocessing.[17] The Non-Proliferation Treaty preserves this privilege as a legitimate aspect of a peaceful nuclear energy program, barring any diversion to nuclear weapons production. Turning a practical negotiation into a theoretical question about sovereignty distracts from the main purpose of the agreements—to achieve the highest level of nonproliferation commitments possible through commercial nuclear cooperation.

In fact, a ban on enrichment simply forbids something that Saudi Arabia has no economic case to pursue without attracting considerable undesirable international attention and concern. Saudi Arabia has yet to build a nuclear power plant, let alone the sixteen it envisions such that there *could* be a plausible economic case for needing enrichment capabilities to supply its nuclear industry with fuel. The international market has no shortage of enrichment services or diversity of suppliers.[18] For example, all five countries of the U.N. Security Council offer enrichment services and the International Uranium Enrichment Centre offers storage and reserve services to IAEA member countries.[19]

Furthermore, a "gold standard" makes an issue of reprocessing—for which Saudi Arabia also currently has no economic case—and oversimplifies reprocessing as a technology that separates weapons-grade plutonium from spent fuel. Should Saudi Arabia build all sixteen reactors as envisioned, it

13. H.R. 5357, introduced March 21, 2018, https://www.congress.gov/bill/115th-congress/house-bill/5357/text (accessed April 3, 2018).
14. U.S. Department of State, "U.S.–Saudi Arabia Memorandum of Understanding on Nuclear Energy Cooperation," May 16, 2008, https://2001-2009.state.gov/r/pa/prs/ps/2008/may/104961.htm (accessed March 14, 2018).
15. Senator Benjamin Cardin (D–MD) stated that: "[I]f we don't draw a line in the Middle East it's going to be all-out proliferation." See Kingston Reif, "U.S.-Saudi Nuke Pact to Begin," Arms Control Association, January/February 2018, https://www.armscontrol.org/act/2018-01/news/us-saudi-nuke-pact-talks-begin (accessed March 14, 2018).
16. Senator Dianne Feinstein (D–CA) stated that: "I see no reason for us to support the spread of nuclear weapons, we should be doing exactly the opposite." See Ari Natter, "Netanyahu Warns U.S. Lawmakers About Saudi Nuclear Power Deal," *Bloomberg*, March 7, 2018, https://www.bloomberg.com/news/articles/2018-03-07/netanyahu-warns-u-s-lawmakers-about-saudi-nuclear-power-deal (accessed March 14, 2018).
17. Rania El Gamal and Katie Paul, "Saudi Arabia Should not Forfeit 'Sovereign' Right to Enrich Uranium: Senior Prince," Reuters, December 21, 2017, https://www.reuters.com/article/us-saudi-nuclear-turki/saudi-arabia-should-not-forfeit-sovereign-right-to-enrich-uranium-senior-prince-idUSKBN1EF287 (accessed March 15, 2018).
18. World Nuclear Association, "Uranium Enrichment," May 2017, http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/conversion-enrichment-and-fabrication/uranium-enrichment.aspx (accessed March 15, 2018).
19. International Atomic Energy Agency, "International Uranium Enrichment Centre," https://www.iaea.org/topics/international-uranium-enrichment-centre (accessed March 15, 2018).

may find it economically beneficial to process and treat spent fuel in a legitimate program monitored by the IAEA to extract more usable energy and reduce the volume of waste. For example, South Korea, in partnership with the U.S., is developing technology to process spent fuel in such a way as to be proliferation resistant. Some advanced nuclear reactor technologies are being designed to run on components of existing nuclear waste.[20] Further, no country has built nuclear weapons from waste material recovered from running civil nuclear power plants normally.[21]

In fixating on the commitment to foreswear enrichment and reprocessing, "gold standard" advocates are foregoing the major gains to be made by engaging with Saudi Arabia's nuclear program through a 123 Agreement and strengthening Saudi Arabia's participation in the Non-Proliferation Treaty.

2. The Fallacy of a Slippery Slope. Some have argued that if the U.S. does not insist on a "gold standard" in its negotiations with Saudi Arabia, the resulting agreement could create a precedent in the Middle East from which the U.S. would not be able to diverge and which could lead to an uncontrolled regional race for enrichment and reprocessing technology. Jay Solomon of the Washington Institute reports that allowing Saudi Arabia to consider enrichment in a 123 agreement may risk

> setting a precedent that other regional states could follow, including Turkey, Jordan, Egypt, and the United Arab Emirates—all of which have announced their intentions to develop nuclear power in recent years. "It's hard to tell one ally 'yes' and the others 'no,'" said one senior Asian executive involved in negotiations with the Saudi government. "You could see these technologies quickly and dangerously spread."[22]

Yet a 123 Agreement with Saudi Arabia cannot be considered in isolation of recent U.S. nuclear trade policy in the Middle East. The U.S. has already sent mixed signals in the Middle East—it has said "yes" to Iran, its adversary, and "no" to the UAE, its ally. Whatever policy the May 2008 memorandum of understanding may have set for Saudi Arabia and the greater Middle East is now complicated at best. Consequently, there is no slope on which to slide—U.S. policy on commercial nuclear trade is more like a rugged terrain to negotiate.

More importantly, U.S. presidents of both political parties have consistently defended a case-by-case approach in 123 Agreement negotiations in order to achieve the highest nonproliferation standards possible in light of unique relationships and circumstances.[23] Maintaining this flexible approach is a defensible position from which to engage in future 123 agreements in the Middle East.

3. The Unfounded Guilt by Association. Saudi Arabia is not Iran. Iran remains a threat to the U.S. and its allies, continues to be the world's foremost state sponsor of terrorism, and was caught red-handed cheating on its nuclear nonproliferation commitments before signing the JCPOA, which it also is likely to violate when it suits its interests. The U.S. should not unnecessarily restrict Saudi Arabia in a misplaced attempt to correct the unfounded liberties it awarded Iran in the JCPOA.[24]

In contrast, Saudi Arabia has invited and cooperated with the IAEA to engage in its nuclear energy program from the start. Saudi Arabia has sought the expertise of mature nuclear energy programs in countries of good standing to develop an economically coherent domestic commercial nuclear energy sector. The Nuclear Threat Initiative concludes that "there is no credible evidence that Saudi Arabia has ever seriously pursued a nuclear weapons

20. Josh Freed, Samuel Brinton, Erin Burns, Amber Robson, "Advanced Nuclear 101," Third Way, December 1, 2015, https://www.thirdway.org/report/advanced-nuclear-101 (accessed March 15, 2018).
21. "Safeguards to Prevent Nuclear Proliferation," World Nuclear Association, March 2017, http://www.world-nuclear.org/information-library/safety-and-security/non-proliferation/safeguards-to-prevent-nuclear-proliferation.aspx (accessed March 30, 2018).
22. Jay Solomon, "Saudi Nuclear Talks: Risks and Limitations," The Washington Institute, *Policywatch* 2923, January 31, 2018, http://www.washingtoninstitute.org/policy-analysis/view/saudi-nuclear-talks-risks-and-limitations (accessed March 15, 2018).
23. See, for example, Daniel Poneman, "The Case for American Nuclear Leadership," Pulitzer Center, *Bulletin of the Atomic Scientists*, January 4, 2017, https://pulitzercenter.org/reporting/case-american-nuclear-leadership (accessed March 16, 2018).
24. Jim Phillips, "Time to End or Mend the Iran Nuclear Agreement," Heritage Foundation *Issue Brief* No. 4807, January 8, 2018, https://www.heritage.org/global-politics/report/time-end-or-mend-the-iran-nuclear-agreement.

program."[25] Rather, the Saudis have been allies on many regional issues and recently became an important partner in battling terrorism.

4. The Misleading Implication of a "Gold" Standard. A "gold" standard implies that anything else is deficient or ineffectual. A standard 123 Agreement as defined by the Atomic Energy Act already secures strong commitments from a partner nation regarding any facilities, material, or technology constructed, produced, or transferred by means of the 123 Agreement. Congress delineates these expectations in nine nonproliferation terms that must be met in a 123 Agreement. In brief, a partnering country must:

- Maintain indefinitely safeguards on all nuclear material and equipment transferred or produced through trade under the 123 Agreement;
- Be under IAEA safeguards;
- Not use nuclear material, equipment, or technology for research, development, or deployment in an explosive or other military application;
- Not transfer information, material, or technology outside of its jurisdiction without prior U.S. consent;
- Guarantee the physical security of nuclear material and facilities;
- Not enrich or reprocess any U.S. originating material or any material produced from U.S.-based technology without prior approval from the U.S.; and
- Not store plutonium or highly enriched uranium originating from U.S. material or technology without prior approval from the U.S.

Furthermore:

- The U.S. retains the right to retract all nuclear material and equipment transferred through trade under the 123 Agreement if the partnering nation rebuffs IAEA safeguards or detonates a bomb; and
- The 123 Agreement covers all facilities, material, and technology transferred.[26]

123 Agreements are powerful tools to advance American nonproliferation objectives irrespective of a "gold standard," which itself may be a detriment to advancing America's nonproliferation goals if it causes potential partnering nations to minimize or reject trade with the U.S.

5. Mistaking the Part for the Whole. A 123 Agreement is one among a variety of options available to the U.S. government for advancing nonproliferation objectives.[27] Congress has implemented a variety of restrictions on foreign aid binding the executive branch and thresholds for sanctions in the Arms Control Act, Atomic Energy Act, Export Administration Act, Export-Import Bank Act, Foreign Assistance Act, International Emergency Economic Powers Act, Nuclear Non-Proliferation Act, and various appropriations acts.[28] Two such examples are the Symington and Glenn amendments to the International Security Assistance and Arms Export Control Act, passed in 1977. These laws prohibit economic assistance; government credit and loans; foreign military sales, training, or guarantees; and other assistance and aid to countries that accept or export enrichment or reprocessing equipment, materials, or technology which are not under IAEA safeguards.[29] In other laws, Congress obli-

25. Nuclear Threat Initiative, "Saudi Arabia," July 2017, http://www.nti.org/learn/countries/saudi-arabia/ (accessed March 15, 2018). See also, Sarah Burkhard, Erica Wenig, David Alright, and Andrea Stricker, "Saudi Arabia's Nuclear Ambitions and Proliferation Risks," Institute for Science and International Security, March 30, 2017, http://isis-online.org/uploads/isis-reports/documents/SaudiArabiaProliferationRisks_30Mar2017_Final.pdf (accessed March 15, 2018).
26. See Atomic Energy Act of 1954, § 123(a). See also, Kerr and Nikitin, "Nuclear Cooperation with Other Countries," pp. 1–2.
27. Thomas Countryman, former Assistant Secretary of State for International Security and Nonproliferation in the Obama Administration, went so far as to say that 123 Agreements are "only one, and I would say not the most important, means of addressing our concerns." Daniel Horner, "Officials Spell out Nuclear Trade Policy," Arms Control Association, March 2, 2012, https://www.armscontrol.org/act/2012_03/Officials_Spell_Out_Nuclear_Trade_Policy (accessed March 21, 2018).
28. Dianne E. Rennack, "Nuclear, Biological, Chemical, and Missile Proliferation Sanctions: Selected Current Law," Congressional Research Service *Report for Congress* No. 31502, November 30, 2010, https://fas.org/sgp/crs/nuke/RL31502.pdf (accessed March 21, 2018).
29. Ibid. See also, The Clinton Administration, "Fact Sheet: The Glenn Amendment," https://clintonwhitehouse4.archives.gov/textonly/WH/New/SouthAsia/fact_sheets/india3.html (accessed March 28, 2018).

gates U.S. representatives to international financial institutions to oppose approval of loans and other assistance.

These options offer important leverage points, as Saudi Arabia has received military training, munitions, and equipment worth hundreds of billions of dollars from America for decades.[30] A U.S.–Saudi Arabia 123 Agreement should not be debated in isolation of these and other vehicles to achieve nonproliferation objectives and further dissuade the diversion of peaceful nuclear technology to military ends.

The Case *for* a U.S.–Saudi Arabia 123 Agreement

The U.S. has a unique opportunity to engage with Saudi Arabia at the outset of its nuclear energy program. Nuclear trade agreements are not casual, transient arrangements. They establish a long-term commitment to shared nonproliferation objectives and a potential commercial trade relationship that underscores those objectives. Given that 123 agreements usually span decades, and that a nuclear power plant can easily operate for half a century, a 123 Agreement would further strengthen and stabilize America's long partnership with the Saudis, accomplishing particular nonproliferation gains, contributing to a secure Saudi Arabian nuclear energy sector from the commercial nuclear trade, and advancing Saudi Arabia's efforts to liberalize its economy and modernize its society.

Nonproliferation Gains. A 123 Agreement secures a level of agreement on nonproliferation goals and can help further integrate nonproliferation objectives, institutions, and modes of operation at the outset of Saudi Arabia's nuclear energy program. If successful, this relationship can only serve to further stabilize the Middle East and provide an alternative to extremism. Further, while no nonproliferation regime is an unassailable guarantee, a 123 Agreement and improvements in Saudi Arabia's participation in the IAEA will provide valuable and timely information about the nature of Saudi Arabia's nuclear energy program and facilities.

Saudi Arabia's participation in nonproliferation oversight could be strengthened, something the United States should encourage in its negotiations with Saudi Arabia. Currently, the IAEA's access to the Saudi program is moderately limited due to the small quantities protocol to which Saudi Arabia agreed with the IAEA in 2005. However, small quantities protocols were designed for countries with little to no nuclear program,[31] so the expansion of a nuclear energy program would require updating that agreement.

Saudi Arabia has also not signed the Additional Protocol as part of its safeguards agreement with the IAEA. Doing so increases the IAEA's access throughout the full fuel cycle and increases information gathering in a country's research and development, imports and exports, and importantly any potential undeclared nuclear activities. It also empowers the IAEA to use more thorough surveillance and detection technologies.[32] The U.S. has 123 Agreements with 48 countries, of which only three (Argentina, Brazil, and Egypt) have not yet agreed to the Additional Protocol.[33] Saudi Arabia should move expeditiously to adopt the Additional Protocol and withdraw from its small quantities protocol. Doing so is far more worthwhile than a promise not to enrich and reprocess.

A Secure Saudi Arabian Nuclear Energy Sector and Its Economic Benefits. Completing a 123 Agreement would also enable the U.S. to help inform and establish a secure nuclear energy sector in Saudi Arabia and reap economic benefits from commercial nuclear trade. The U.S. still boasts some of the best nuclear energy university programs, pro-

30. Christopher Blanchard, "Saudi Arabia: Background and U.S. Relations," Congressional Research Service *Report for Congress* No. 33533, November 22, 2017, https://fas.org/sgp/crs/mideast/RL33533.pdf (accessed March 15, 2018).

31. International Atomic Energy Agency, "More on Safeguards Agreements," https://www.iaea.org/topics/safeguards-legal-framework/more-on-safeguards-agreements (accessed March 15, 2018), and International Atomic Energy Agency, "Status of Small Quantities Protocols," https://www.iaea.org/topics/safeguards-legal-framework/status-small-quantities-protocols (accessed March 15, 2018).

32. International Atomic Energy Agency, "IAEA Safeguards Overview," https://www.iaea.org/publications/factsheets/iaea-safeguards-overview (accessed March 15, 2018).

33. International Atomic Energy Agency, "Status of the Additional Protocol," December 4, 2017, https://www.iaea.org/topics/additional-protocol/status (accessed March 15, 2018), and National Nuclear Security Administration, "123 Agreements for Peaceful Cooperation," https://nnsa.energy.gov/aboutus/ourprograms/nonproliferation/treatiesagreements/123agreementsforpeacefulcooperation (accessed March 15, 2018).

fessional training, and regulatory structure in the world, in addition to its leadership on nonproliferation and a long-standing relationship with the Saudis. Among the most important nuclear exports the U.S. can offer are its regulatory, safety, and operations standards.[34] American companies and individuals also offer valuable knowledge and experience in approaching challenges like cybersecurity, physical and material security, and communication of threat information between the public and private sectors as it relates to the nuclear industry. 123 Agreements are an opportunity to introduce and help facilitate those goods through trade. This is all the more important at the outset of a new program like Saudi Arabia's.

Even where an American company fails to win a bid to build a reactor, U.S. companies can often compete as valuable parts of a nuclear power plant's extensive supply chain. For example, although South Korea won the contract to build the first nuclear reactors in the UAE, American companies have contributed goods and services worth roughly $2 billion thanks to a 123 Agreement completed in 2009.[35] A 123 Agreement is the initial step to allow the U.S. industry to compete in Saudi Arabia and to work with other allies, such as the South Koreans, which have a long shared history of nonproliferation values and peaceful, productive use of nuclear technology.

Broader Reforms to Saudi Arabian Economy and Society. A 123 Agreement should be viewed in light of broader reforms being made in Saudi Arabia. In recent months, Saudi Arabia has slowly begun to liberalize its economy by decreasing government spending, reducing subsidies, and diversifying beyond an oil economy which it is partially privatizing. It has taken cautious steps to modernize and extend freedoms to people formerly restricted from fully participating in Saudi society. The government's Vision 2030 was a clear statement that it is easing its historic resistance to foreign investment—words thus far supported by actions.[36] However, Saudi Arabia has a considerable amount of work left to do, currently ranking 98th in the world and 9th out of 14 in the Middle East for economic freedom and its contributing principles of rule of law, business freedom, and fiscal health.[37]

The U.S. has dedicated billions of dollars to Saudi Arabia in the form of aid and weapons deals, which have helped dissuade Saudi Arabia from extremism, support its shared commitment to quell terrorism, and defend it against a rogue Iran.[38] Contributing to economic growth can be another powerful and persuasive answer to extremism by offering opportunity, greater freedom, education and jobs, social mobility, alleviation of poverty, stability, and a dynamic, innovative future. A 123 Agreement is an important element of that answer, both in the sense of the long-term commitment it communicates to Saudi Arabia and in the economic opportunity it can enable. Affordable, reliable energy is a key ingredient in nearly every good and service and essential to economic growth. Engaging with Saudi Arabia's new nuclear power industry through a proper 123 Agreement can help transform Saudi Arabia.

Recommendations

In order to negotiate a successful 123 Agreement with Saudi Arabia, the U.S. should:

- **Make good faith efforts to communicate America's desire for cooperation until a 123 Agreement can be reached.** This will allow U.S. companies to continue in the bidding process, in addition to U.S. allies in the bidding process which could be bound by the non-transfer conditions of their own 123 Agreements (namely, South Korea).

- **Reject the "gold standard" as a non-negotiable condition of an agreement.** Saudi Arabia may very well maintain its right to enrich and reprocess as part of its sovereign right and

34. Jack Spencer, "U.S. Nuclear Policy After Fukushima: Trust But Modify," Heritage Foundation *Backgrounder* No. 2557, May 18, 2011, https://www.heritage.org/environment/report/us-nuclear-policy-after-fukushima-trust-modify.
35. Mark Holt, "U.S. and South Korean Cooperation in the World Nuclear Energy Market: Major Policy Considerations," Congressional Research Service *Report for Congress* No. 41032, June 25, 2013, https://fas.org/sgp/crs/row/R41032.pdf (accessed March 15, 2018).
36. Terry Miller, Anthony B. Kim, and James Roberts, *2018 Index of Economic Freedom* (Washington, DC: The Heritage Foundation and Dow Jones & Company, Inc., 2018), pp. 358–359, https://www.heritage.org/index/country/saudiarabia.
37. Ibid.
38. Blanchard, "Saudi Arabia: Background and U.S. Relations."

as preserved by the Non-Proliferation Treaty as a legitimate aspect of a peaceful nuclear energy program, barring any diversion to nuclear weapons production. The so-called "gold standard" implies that anything other than it is deficient or ineffectual, when in fact it may itself be a detriment to advancing America's nonproliferation goals if it causes potential partnering nations to minimize or reject trade with the U.S. Fixating on a Saudi commitment to foreswear enrichment and reprocessing risks missing the major gains that could be made by engaging with its nuclear program through a 123 Agreement and strengthening Saudi Arabia's participation in the Non-Proliferation Treaty.

- **Maintain a case-by-case approach that secures the best nonproliferation commitments possible.** Saudi Arabia should be treated uniquely from past policy decisions in the UAE and Iran. Presidents of both political parties have consistently defended a case-by-case approach in negotiating 123 Agreements so as to achieve the highest nonproliferation standards possible given the unique relationships and circumstances of each case. Maintaining this flexible approach is a defensible position from which to engage in future 123 Agreements in the Middle East.

- **Encourage Saudi Arabia to increase participation in nonproliferation safeguards.** Saudi Arabia's participation in nonproliferation oversight should be strengthened. Saudi Arabia should move expeditiously to adopt the Additional Protocol and withdraw from its small quantities protocol. Doing so is far more worthwhile than a promise not to enrich and reprocess. The U.S. has 123 agreements with 48 countries, only three of which have not yet agreed to the Additional Protocol (Argentina, Brazil, and Egypt). The U.S. should further reaffirm that, through the Symington Amendment and related laws, U.S. support for Saudi Arabia is contingent on Saudi Arabia's commitment to the Non-Proliferation Treaty.

- **Maintain a firm position on Iran.** The Trump Administration and Congress need to address the serious inherent problems with the Joint Comprehensive Plan of Action.[39] A consistent approach to engaging with Iran is a worthy end in itself, but Saudi Arabia will also be less incentivized to pursue its own self-defense by diverting commercial nuclear technology to military ends if a firm course with Iran can be struck.

Conclusion

A 123 Agreement is a long-term commitment that further clarifies the U.S.'s commitment to Saudi Arabia in a partnership for solutions to regional instability. Completing an agreement is a unique opportunity to secure valuable nonproliferation commitments and to help guide the peaceful introduction of commercial nuclear power to Saudi Arabia. The peaceful and productive introduction of nuclear power will incentivize economic growth and increase jobs, while also contributing to a diversified economy, improved education, innovations in technology, and capital investment to Saudi Arabia.

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39. Phillips, "Time to End or Mend the Iran Nuclear Agreement."