



## Response to *Bulletin of the Atomic Scientists* article on Iran's short timeline to a bomb

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On January 22, the *Bulletin of the Atomic Scientists* (BAS) published an [article](#) titled “How quickly could Iran build its first nuclear weapon? Look at China.” Upon reading the article, we felt the need to respond publicly. The BAS article, which summarizes an earlier, longer report, incorrectly characterizes Iran’s nuclear weapons production readiness and does not accurately evaluate the advancements that would be needed for Iran to build even a crude nuclear weapon in short order. We have been evaluating this issue for well over a decade and find the recent article mistakenly mirror images China’s nuclear weapons program which had extensive Russian assistance and could work uninterrupted on all facets of researching, developing, testing, and producing its first nuclear weapon. Not so, Iran. As a result, the BAS article draws conclusions for Iran that are misleading. Our recent findings are summarized in [Going for the Bomb: Part I, Pathways and Timelines](#) and [Going for the Bomb: Part II, Tasks to Make a Crude Nuclear Weapon](#).

While the Institute takes issue with several elements of the piece, the author correctly identifies multiple steps that are required in the weaponization process and states correctly that many of these steps involve the preparation of non-weapon grade components that can be taken before or in parallel to weapon-grade uranium production. The author then tells the history of China’s first nuclear weapon, which was assembled within weeks after it had the required amount of weapon-grade uranium for it. The author’s longer report is more comprehensive and contains interesting details on China’s program and describes the Iranian effort largely using the Institute’s work. However, he draws the same unsupported conclusion as in the BAS article about the readiness of Iran’s nuclear weapons program.

The author mistakenly equates the Iranian and Chinese nuclear weapons programs and makes unwarranted assumptions about Iran’s program, leading to the misleading claim as stated prominently in the second paragraph of the BAS article, which reads as follows:

*“How quickly could Iran make an atomic bomb once it has acquired enough weapons-grade uranium? Some nuclear experts argue it would take Iran anywhere between several months to up to a year. But China’s experience shows that Tehran could build a bomb much faster—in as little as three to five weeks.[1]”*

The author sets the three-to-five-week timeline observed in China's unique case in direct comparison with longer estimated time spans produced specifically for Iran's case by other experts (including us) without as much as acknowledging the vastly different circumstances between the Chinese and Iranian efforts. Right here, the author fails to mention his critical assumption that three to five weeks in Iran's case mean that Iran has all nuclear weapons components, absent the WGU core, ready to be assembled, and the only step Iran would need to take is the conversion of WGU hexafluoride to metal, machining the core, and assembling all the components. No serious student of Iran's nuclear effort asserts that.

If we indeed allow Iran to get to that point of having all the non-WGU components developed, produced, and ready to go, waiting to be assembled, and professionals in the arms control community still call Iran's efforts a "de facto nuclear threshold state" instead of a nuclear weapons program in violation of the Nuclear Non-Proliferation Treaty, global nonproliferation efforts are seriously doomed. Fortunately, that dire situation has not yet been reached.

Further, the author uses findings from Iran's nuclear archive to support his claim that Iran's weaponization capabilities are sufficient to consider this case. Later, however, he references an open U.S. intelligence assessment to support the claim that sufficient weaponization capabilities did not exist before the JCPOA and instead "probably accelerated" after 2018.

Ironically, the author proceeds to use recent U.S. intelligence updates on the detection of secret weaponization activities to conclude that Iran **will** be able to build a nuclear weapon secretly. Irresponsibly, he asserts that Iran will be able to do so even "as it faces the risk of Israeli or US strikes on its nuclear facilities," playing directly into the hands of the Iranian regime, which certainly wishes this were the case. This assertion effectively hands Iran the ultimate deterrent and maximum leverage it so greatly desires, in essence a capitulation. Following this logic, it would be futile for the West to continue to resist an Iranian bomb since the deterrent is already established. In reality, this is wishful thinking on Iran's part and its nuclear program is actually quite vulnerable to attack or disruption, as is evident from past Israeli and Western sabotage actions and what is known about safeguarded facilities and secret ones from the AMAD Plan.

While we agree that Iran can build a crude nuclear weapon too quickly, in about six months, after a decision to do so, the regime risks being detected early after its decision to do so and all along its subsequent pathway to a bomb. Once it diverts safeguarded enriched uranium to make weapon-grade uranium, it will be detected within a few weeks at worst, perhaps on the day it diverts. As we discuss in our recent articles, in a worst case, where we assume that Iran can work in secret for four months on finishing the necessary nuclear weaponization steps without making any weapon-grade uranium, Iran would still need at least double the time posited in the BAS article after making sufficient weapon-grade uranium to have a finished nuclear device suitable for underground testing or crude delivery, but not missile delivery.

That time is more than sufficient for a devastating military response by Israel, hopefully supported by the United States and other allies. And a strike against Iranian nuclear facilities,

material, and equipment may only be a prelude to a far harsher strike against its economy, particularly its oil production, if Iran does not relent. Recent Israeli retaliatory actions have proved that Iran's airspace, and all its infrastructure, is vulnerable to airstrikes and can be easily penetrated with advanced weapons, and Israel is uncannily aware of activities Iran is undertaking related to nuclear weapons development. So, the Iranian regime should think carefully about deciding to build nuclear weapons, because with its existing pathways to the bomb, detection is very likely to occur in sufficient time to do irreparable damage to Iran's nuclear infrastructure and its economy in short order.