



Iran Nuclear Tracker: February 2025 Quarterly Update

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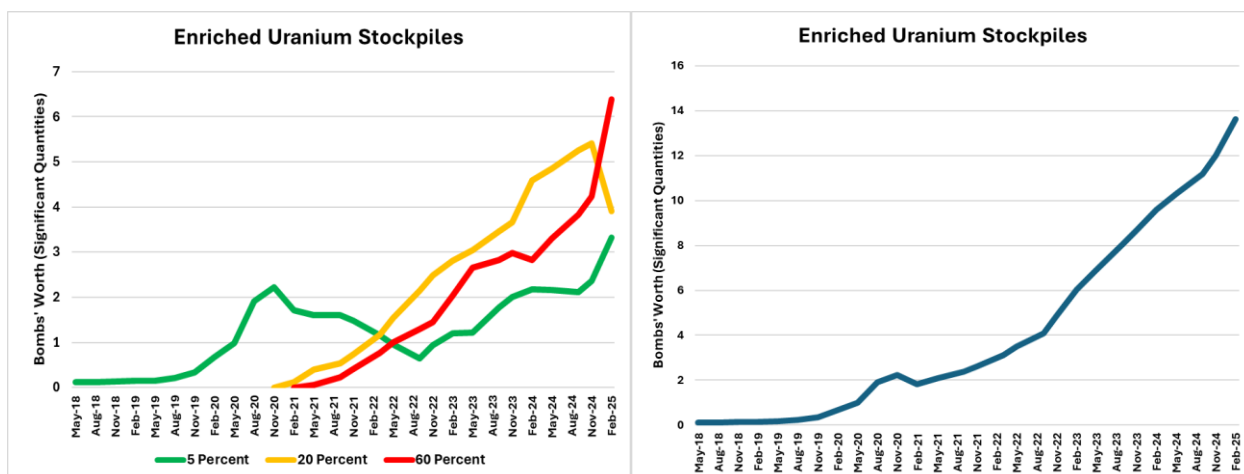
JINSA recently updated its [Iran Nuclear Tracker](#), which presents analysis and data on Iran's nuclear weapons program, including enrichment capacity, uranium stockpiles, and breakout estimates. Data is drawn from the International Atomic Energy Agency's (IAEA) February [quarterly report](#) on Iran's nuclear-related activities. Since the last IAEA report in November 2024, Iran has made unprecedentedly aggressive moves that enhance, all at once, its "breakout" capacity to produce multiple bombs' worth of fissile material in a heartbeat, its "sneakout" capacity to do so undetected, and its longer-term capacity to churn out such material at a sustained high rate.

1. Major Developments and Takeaways

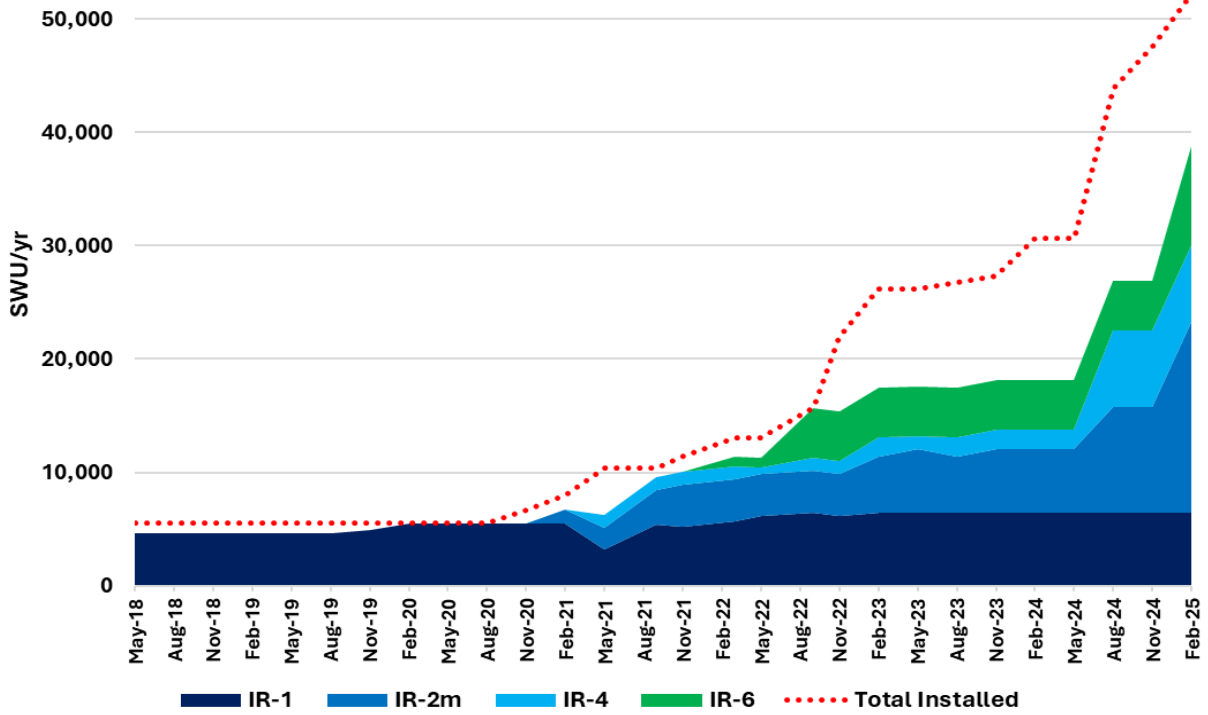
- Iran undertook both its largest-ever enrichment capacity expansion and quintupled its production of 60 percent enriched uranium (U), from six to more than 30 kilograms per month, in retaliation for the [IAEA censuring](#) it last November.
 - » Based on this censure resolution, the IAEA will issue a comprehensive report assessing Iran's [\(non-\)compliance](#) with its nuclear safeguards [obligations](#) – the first such document since 2011 – the findings of which likely will trigger U.S.-supported "snapback" measures by its "E3" partners (Britain, France, Germany) before this option expires in October.
- Iran's 60 percent enriched U stockpile grew by 93 kilograms from November 2024 to February 2025 – a roughly 50 percent overall increase, and equal to its entire growth of this stockpile over the preceding 21 months combined.
 - » Iran now has six bombs' worth of this stockpile, which is particularly [alarming](#) since it is the only non-nuclear-weapon state enriching to this level, and because this level is equal to 95 percent of the effort to achieve the requisite purity for use in a warhead.
 - At such purity, Iran needs only one week to convert to 90 percent enriched U using its current method, and with far smaller quantities than if it started from a lower purity.
 - » Iran's obstruction of IAEA inspectors hinders their ability to account fully for these [stockpiles](#), which is particularly concerning in light of recent reports that Iran is exploring how to quickly build a [crude nuclear device](#) utilizing its existing 60 percent enriched U stocks.
- To accomplish this increase of its 60 percent enriched U stocks, Iran used its most advanced (IR-6) centrifuges at its deepest-buried Fordo facility.
 - » It accomplished this by cannibalizing its 20 percent enriched U stocks which, while also easily-convertible to 90 percent enriched U, can be upgraded to 60 percent enriched U much more rapidly and easily than the 5 percent enriched U it used previously.
 - » By cannibalizing its remaining 20 percent enriched U stocks in this way, Iran could grow its now-enlarged 60 percent enriched U stockpile by at least another four bombs' worth over 4-5 months.

- Interestingly, Iran opted to use only pre-existing infrastructure to ramp up 60 percent enriched U output, while devoting the entirety of its largest-ever enrichment capacity expansion – a nearly one-third increase – to make 5 percent enriched U at an unprecedented clip.
 - » Iran has begun inputting unenriched and depleted uranium feedstock into an additional 17 operational cascades since November 2024. Of these newly operational cascades, 12 consist of IR-2m centrifuges and 5 consist of IR-6 centrifuges.
 - » This massive expansion will allow Iran to ramp up its production of 5 percent enriched U, which in turn it can convert directly into even more 60 percent enriched U.
 - » Iran also installed, but has yet to activate, additional enrichment capacity since November 2024 that, once operational, could boost its 5 percent enriched U production further.
 - Since November, Iran installed eight cascades – two consisting of IR-2m centrifuges, and six consisting of IR-4 centrifuges – at its underground Natanz plant. Since November, it also announced it would install 12 additional IR-4 cascades at that site.
- Iran’s specific choices suggest an intent to amass [diplomatic leverage](#) for potential [nuclear talks](#), and in the same stroke immunize these activities from looming threats of [military action](#).
 - » Its “breakout capacity” is now such that it can produce enough 90 percent enriched U for a nuclear weapon almost overnight and keep on making more: 10 bombs’ worth in just one month and four more in the following two months.
 - » Perhaps even more importantly, it will be able to grow its breakout capacity at much higher rates going forward, thanks to its massive expansion of enrichment capacity that positions it well to produce much higher volumes of 5 percent and, in turn, 60 percent enriched U.
 - Notably, Iran did so at both of its main enrichment plants (Natanz and Fordo) and with multiple advanced centrifuge types (its most efficient IR-6 machines, and also its more plentiful IR-2m machines), thus boosting the flexibility and redundancy of its infrastructure and giving it invaluable experience enriching uranium to high purity and at scale.

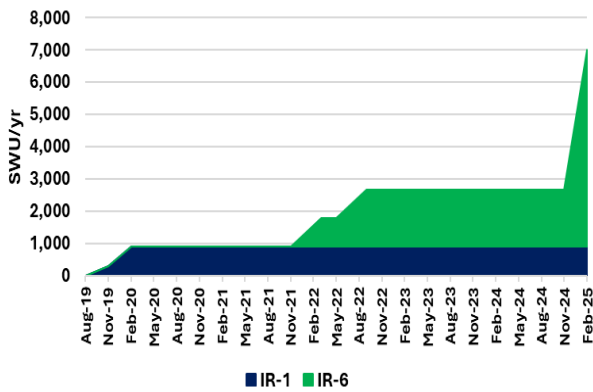
2. Charts and Infographics



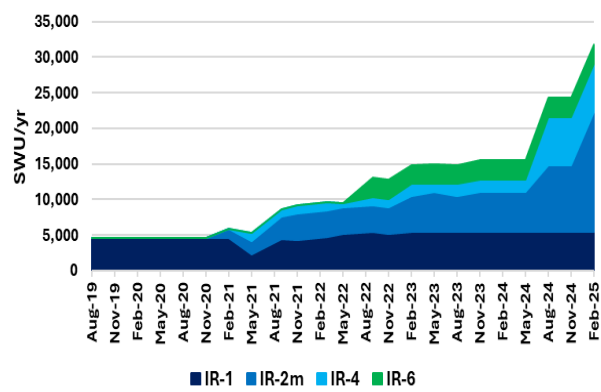
Operating Enrichment Capacity

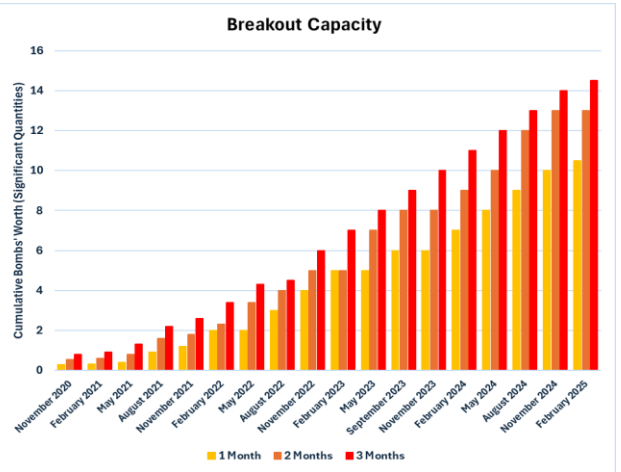
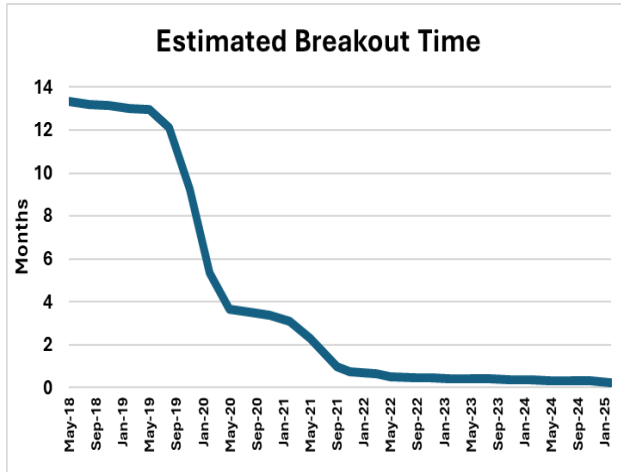


Fordoo Operating Enrichment Capacity



Natanz FEP Operating Enrichment Capacity





Mapping Iran's Uranium Path to the Bomb



- Uranium Mining Facility
- Uranium Milling Facility
- Uranium Conversion Facility
- Centrifuge Assembly Facility
- Uranium Enrichment Facility
- Suspected Weaponization Facility

