



Iran's Latest Advanced Centrifuge Deployment

By David Albright, Sarah Burkhard, and Spencer Faragasso

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Iran just announced that it has recently installed or plans to install in the near term almost 1570 new advanced centrifuges. This represents a 70 percent increase from the number of advanced centrifuges installed as of last May. Iran's announcement, if fully implemented, puts it well on its way to achieving about 4450 installed advanced centrifuges at all three enrichment plants by the end of 2022.

Some of the just announced growth is in line with Iran's long-standing plans about the IR-6 centrifuge and its 2020 nuclear law. However, this announcement, particularly that concerning the six IR-2m centrifuge cascades, may also be part of a scare tactic to affect the renewed Joint Comprehensive Plan of Action (JCPOA) negotiations, agreed to by an accommodating European Commission and held conveniently two days after Iran's announcement.

On August 2, 2022, Iran announced this advanced centrifuge growth to the International Atomic Energy Agency (IAEA), which promptly reported it to its member states. Iran informed the IAEA that it had "started running" three newly installed IR-6 cascades at the Natanz Fuel Enrichment Plant (FEP).¹ The three new cascades bring Iran's total number of IR-6 from about 500 to over 1000 machines.

Surprisingly, the announcement included that Iran intends to "install an additional six IR-2m cascades at FEP" which translates to another approximately 1000 advanced IR-2m centrifuges. Are these additional planned machines coming from storage? Or are they newly built machines? In the former case, they may have been stored in secret under the JCPOA. If the latter, it would indicate that Iran has overcome its difficulties in procuring or making maraging steel components.² However, as Iran may be making IR-6 centrifuges with maraging steel parts as well, it could also be another indication that the IR-6, contrary to Iran's statements, is not more efficient than the IR-2m and that Iran is not giving up on its earlier, more trusted model.³ Whatever the case, Iran intends to shock with this announcement and reality may see far fewer centrifuges deployed or they do not work as well as expected, as is the case with the IR-6 centrifuge.

¹ IAEA Director General, *Verification and Monitoring in the Islamic Republic of Iran in light of United Nations Security Council Resolution 2231 (2015)*, GOV/INF/2022/17, August 3, 2022.

² David Albright and Sarah Burkhard, "Further Indications of Iran's Renewed Interest in Maraging Steel for its Nuclear Enrichment Program," *Institute for Science and International Security*, July 14, 2022, <https://isis-online.org/isis-reports/detail/further-indications-of-irans-renewed-interest-in-maraging-steel>.

³ Albright and Burkhard, "The IR-6 Centrifuge Needs Further Development," *Institute for Science and International Security*, July 14, 2022, <https://isis-online.org/isis-reports/detail/the-ir-6-centrifuge-needs-further-development>.