



5. The Biggest Challenge After the US–Iran War: The Future of Iran’s Enriched Uranium and the Limits of Nuclear Diplomacy

Ashis Kumar Sinha

Research Scholar

Abstract

The cessation of direct hostilities between the United States and Iran has reduced immediate geopolitical tensions in West Asia and revived hopes for diplomatic engagement. However, the most contentious issue underpinning the conflict remains unresolved: the fate of Iran’s stockpile of highly enriched uranium. While recent understandings between Washington and Tehran have focused on de-escalation and confidence-building measures, they have deliberately deferred the question of existing uranium reserves. This paper examines the strategic, legal, technical, and political dimensions of Iran’s enriched uranium stockpile, evaluating competing policy options and their implications for regional security, nuclear non-proliferation, and the future of US-Iran relations. It argues that the handling of Iran’s enriched uranium will ultimately determine whether the present diplomatic thaw matures into a durable peace or merely postpones another nuclear confrontation.

Keywords: *Iran, United States, Enriched Uranium, Nuclear Diplomacy, IAEA, Non-Proliferation, West Asia*

Introduction

The announcement of a ceasefire and subsequent peace understanding between the United States and Iran has been widely interpreted as a significant diplomatic breakthrough. The agreement has temporarily eased fears of a broader regional conflict, stabilized global energy markets, and reopened diplomatic channels that had remained largely frozen for years.

Yet beneath this optimistic development lies a complex strategic challenge that neither side has resolved—the future of Iran’s highly enriched uranium.

Military confrontations can be halted through political agreements, but nuclear capability represents a far more enduring source of strategic uncertainty. While battlefield tensions may diminish, the existence of large quantities of enriched uranium continues to shape perceptions of national security, deterrence, and international trust. Consequently, the unresolved nuclear question remains central to any lasting settlement between Tehran and Washington.

Iran's Enriched Uranium: Why It Matters

One of the principal concerns of the international community is Iran's accumulation of uranium enriched to approximately 60 percent purity. According to the International Atomic Energy Agency (IAEA), Iran possesses more than 400 kilograms of uranium enriched at this level—a concentration significantly exceeding the requirements for civilian nuclear energy production.

Although 60 percent enrichment does not constitute weapons-grade uranium, it substantially shortens the technical process required to reach the approximately 90 percent enrichment generally associated with nuclear weapons. This has intensified concerns among Western governments that Iran possesses what nuclear experts describe as a "threshold capability," allowing it to produce weapons-grade material within a relatively short timeframe if political decisions were to change.

For Tehran, however, uranium enrichment is viewed as an expression of technological sovereignty and national scientific achievement rather than an indication of military intent. Iranian leaders continue to argue that their nuclear programme serves peaceful purposes, including electricity generation, medical research, and scientific advancement.

This divergence in interpretation lies at the heart of the ongoing diplomatic impasse.

The Peace Agreement and Its Deliberate Ambiguity

Although the recent US-Iran understanding has succeeded in reducing immediate military tensions, available reports suggest that negotiators intentionally excluded the issue of existing enriched uranium from the preliminary framework.

Instead, both governments appear to have agreed to continue discussions through subsequent rounds of negotiations. This approach reflects a familiar strategy in international diplomacy: resolving immediate security concerns while postponing the most politically sensitive issues.

From a negotiation perspective, such sequencing prevented the collapse of talks over an issue where neither side was prepared to compromise. However, it also means that the most consequential element of the nuclear dispute remains unresolved.

The peace agreement, therefore, should be understood as an interim diplomatic arrangement rather than a comprehensive settlement.

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Divergent Strategic Objectives

The United States' Position

Successive American administrations have consistently maintained that Iran should not retain the capability to rapidly produce nuclear weapons.

Washington's preferred outcomes generally include:

- Removal of highly enriched uranium from Iranian territory;
- Destruction or irreversible dilution of existing uranium stockpiles;
- Strict international verification through the IAEA;
- Long-term limitations on uranium enrichment activities; and
- Expanded monitoring of Iran's nuclear infrastructure.

American policymakers argue that these measures are essential to prevent future nuclear proliferation and reassure regional allies, particularly Israel and Gulf Cooperation Council states.

Iran's Position

Iran approaches the issue from an entirely different strategic perspective.

Tehran argues that uranium enrichment is explicitly permitted under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), provided nuclear activities remain under international safeguards and are dedicated to peaceful purposes.

Iranian officials have repeatedly rejected demands to transfer enriched uranium abroad, considering such proposals incompatible with national sovereignty and scientific independence.

For Iranian policymakers, relinquishing enriched uranium would represent both a strategic concession and a symbolic loss of technological achievement accumulated over decades despite international sanctions and external pressure.

The Central Role of the IAEA

The International Atomic Energy Agency occupies a uniquely important position in the evolving negotiations.

Unlike political actors, the IAEA functions as an independent technical institution responsible for verifying compliance with nuclear safeguards.

Its principal objectives include:

- establishing an accurate inventory of Iran's enriched uranium;
- verifying the condition of nuclear facilities;

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- ensuring uninterrupted inspection access; and
- confirming that nuclear materials are not diverted toward military applications.

Without comprehensive IAEA verification, any political agreement would likely face significant credibility challenges within the international community.

Consequently, technical transparency has become almost as important as political negotiation.

Possible Policy Options

Several policy alternatives continue to be discussed within diplomatic and strategic circles.

1. Complete Removal

One proposal involves transferring Iran's enriched uranium to a third country under international supervision.

Although this option would significantly reduce proliferation risks, it remains politically unacceptable to Tehran.

2. Destruction of Existing Stockpiles

Another possibility involves permanently disposing of the enriched uranium.

While attractive from a non-proliferation perspective, Iran views this as incompatible with its sovereign rights under international law.

3. Dilution Under International Monitoring

Perhaps the most realistic compromise would involve converting the 60-percent enriched uranium into lower-enriched material suitable for civilian nuclear reactors while retaining it inside Iran under continuous IAEA inspection.

This approach attempts to reconcile Iranian demands for sovereignty with international concerns regarding rapid weapons breakout capability.

4. Long-Term Storage Under International Control

Another frequently discussed option would allow the uranium to remain within Iran but under internationally supervised storage arrangements with stringent monitoring mechanisms.

Although technically feasible, this solution would require an unprecedented level of mutual trust.

Challenges Beyond Technology

The dispute over enriched uranium extends well beyond nuclear science.

It encompasses multiple interconnected issues, including:

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- regional power competition;
- strategic deterrence;
- domestic political legitimacy;
- international sanctions;
- energy security; and
- global non-proliferation norms.

Each of these dimensions influences negotiating positions, making technical solutions insufficient unless accompanied by broader political accommodation.

Implications for Regional and Global Security

The eventual resolution of the uranium issue will have consequences extending far beyond Iran and the United States.

A successful agreement could:

- strengthen the global nuclear non-proliferation regime;
- reduce the likelihood of military escalation in West Asia;
- improve international energy market stability;
- encourage renewed diplomatic engagement; and
- reinforce the authority of multilateral institutions such as the IAEA.

Conversely, failure to resolve the issue could trigger renewed sanctions, regional arms competition, and the possibility of future military confrontation.

Conclusion

The cessation of hostilities between the United States and Iran represents an important diplomatic achievement, but it should not be mistaken for a comprehensive peace settlement.

The central question remains unresolved: what should be done with Iran's existing stockpile of highly enriched uranium?

This issue encapsulates the broader tensions between national sovereignty and international security, technological rights and non-proliferation obligations, and regional power politics and global governance.

The future of US-Iran relations will therefore depend less on the ceasefire itself than on the political courage and diplomatic flexibility required to resolve the uranium question. Whether through removal, dilution, monitored storage, or another negotiated arrangement, the eventual solution must balance

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Iran's legitimate civilian nuclear aspirations with the international community's legitimate concerns regarding nuclear proliferation.

In this sense, the enriched uranium stockpile is not merely a technical problem; it is the defining test of whether contemporary nuclear diplomacy can transform temporary de-escalation into sustainable peace.

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