
Limiting the Security Risks in Potential Negotiated Nuclear Settlements With Iran

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24 September 2009

<http://www.managingtheatom.org>

(Updated to reflect developments in the following week.)

The question on the table

What measures to constrain and monitor Iran's nuclear program should P5+1 negotiators seek to best serve the interests of U.S. and international security?

- ◆ Should think about this with a risk-based approach, considering, for each option, the probability of different outcomes and the remaining risk for each of those outcomes
- ◆ This talk focuses only on potential negotiated restraints on Iran's nuclear program, not the tactics of how to achieve them, whether an agreement should be broad or narrow, etc.

U.S. objectives

- ◆ Primary U.S. objectives:
 - Avoiding a nuclear-armed Iran
 - Maximizing the chance an Iranian move to weaponize its program would be detected
 - Less threatening Iranian international behavior
 - Maintaining a strong global nonproliferation regime
- ◆ Secondary U.S. objective
 - Maintaining a broad gap – in time, cost, observability – separating Iran from nuclear weapons capability
 - This is secondary only because so little of it is still achievable

Statecraft: ““Have clear objectives, tailor them to fit reality.”

-- *Dennis Ross*

Iranian objectives

- ◆ Iranian objectives:
 - Preserving regime, avoiding attack
 - Domestic perception of defending Iranian interests
 - Nuclear weapons option (or more?)
 - Status and prestige as leader of developing, Islamic worlds
 - Improving relations with Europe, the United States, others
 - Recognition of its regional power and role
 - Economic development
 - Civilian nuclear energy

Does the Ahmadinejad camp have an interest in maintaining an atmosphere of hostility and military threat, or would it serve their interests to be the ones who brought home a deal that eased relations with the West?

An agreement might change Iranian thinking about nuclear weapons

- ◆ If Iran is determined to get a nuclear bomb, and there is a government consensus behind that objective, negotiations will not prevent Iran from succeeding
 - They would either reject or violate measures that would seriously constrain their program
- ◆ If, however, there are differing views on how far toward the bomb to go, a negotiated agreement could have a major impact on outcomes
 - Could provide benefits that strengthen the arguments of those in favor of preserving the arrangement
 - Could reduce perceived security threats, undermining the arguments of those who want to abandon/violate the arrangement
 - The presence of non-nuclear benefits in an accord could bring in other voices to decisions (e.g., the finance minister, the oil minister) who may be less enthusiastic about nuclear ambitions, more sensitive to costs

Premises

- ◆ Military strikes would:
 - Not be able to set back Iran's program for more than a brief period
 - Greatly increase Iran's incentive to go straight to the bomb at covert sites (as occurred in Iraq post-Osiraq)
 - Provoke a range of reactions in Iran and elsewhere that would risk war and undermine U.S. security
- ◆ Iran is extremely unlikely to agree to zero enrichment as a long-term outcome
 - >8,000 centrifuges already in place
 - Regime has succeeded in framing the issue domestically as “colonial powers are trying to take away our god-given right to technology”
 - No faction supports giving up enrichment program
 - No feasible set of sanctions likely to lead Iran to accept zero
 - Zero is so unlikely it should not be the basis of policy

Premises (II)

- ◆ Continued stalemate does not serve U.S. interests
 - Iran’s capabilities will continue to grow
 - Iran’s capabilities and uncertainty about future capabilities already provoking others in the region to hedge their options
 - Pressure for U.S. military action, likelihood of Israeli military action will continue to grow
 - An atmosphere of continued hostility, sanctions, and threat of war reinforces anti-American factions in Iran, undermines reformers
- ◆ Some form of negotiated agreement, if it can be achieved, is the “least bad” option for U.S. interests – but is likely to have to include some continuing enrichment in Iran
 - The security risks of accepting such an arrangement are real
 - But if appropriately managed, these risks are lower than those of military strikes or continued stalemate (the near-certain result of insisting on zero)

Facts any policy must cope with

- ◆ Iran has >8000 centrifuges installed at Natanz
 - 4,592 enriching UF6 as of mid-August 2009 (less than in June)
 - Installation of more cascades continuing
- ◆ Iran has substantial enrichment knowledge – can't be destroyed or negotiated away
- ◆ Intense U.S.-Iranian hostility, distrust
- ◆ U.S. has many issues with Iran – Iraq, Afghanistan, terrorism, Israel, etc. – going well beyond nuclear issue. And Iran has many issues with the United States
 - Limits what can be offered for nuclear deal (e.g., diplomatic recognition, security assurances)
- ◆ Many other states – Europe, Russia, China, Israel, Gulf states, etc. – also have major interests at stake
- ◆ Iran has huge reserves of oil and gas – impossible to completely isolate, exclude from world economy

Facts any policy must cope with (II)

- ◆ Israel, Gulf states have major concerns over growing Iranian power, will push hard for their preferred outcomes
- ◆ All outcomes will have an impact on nonproliferation regime, credibility of Security Council, and more
- ◆ Iranian government is sclerotic, legitimacy-challenged, factionalized, has immense difficulty making hard choices
 - Negotiated deal would require giving Iranian advocates of compromise enough to convince Ayatollah Khamenei to say “yes”
 - No faction can afford to be seen as buckling to foreign pressure
 - Some factions do not believe compromise would bring any benefit
 - Iranian government has succeeded in framing issue as “colonial powers trying to take away our God-given right to technology” – makes compromise difficult
- ◆ U.S. government also likely to face domestic (and international) difficulties making hard choices

Facts any policy must cope with (III): Iranian noncompliance record

- ◆ 18 years of covert centrifuge development, safeguards violations, to 2003
 - Wide range of violations
 - Layers of lies to IAEA (including some after alleged “full transparency” decision in October 2003)
- ◆ Collapse of agreed suspension in 2006
 - Iran never negotiated seriously, ended its suspension as soon as doing so served its purposes (European view)
 - Europe never negotiated seriously, Iran ended its suspension when that became clear (Iranian view)
- ◆ Currently: somewhat improved safeguards arrangements at Natanz, access finally granted to Arak, but “stalemate” over investigation related to possible weaponization work

Iran was not reported to the Security Council until 2006, has suffered only modest sanctions for its noncompliance

Facts any policy must cope with (III): Iranian noncompliance record (II)

- ◆ Revelation of previously secret enrichment facility near Qom
 - Reportedly deep inside Revolutionary Guards base – suggests military connection
 - Constructed in secret in tunnels in a mountain
 - Reportedly sized for ~ 3,000 centrifuges – enough for ~ 1 bomb/yr, not enough for significant contribution to civilian program
- ◆ Deeply suspicious – but *may* not violate the version of Iran's safeguards agreement Iran has been following, if no nuclear material has been introduced
 - » Subsidiary arrangement Iran previously agreed to – and is still legally bound to comply with – would require reporting to IAEA when decision made to build
 - » Construction *may* have started while Iran still following that arrangement
 - Emphasizes the key risk of covert facilities, discussed later
- ◆ Also, MEK claim of ongoing weaponization program, at specified sites – even bigger game-changer, if true

Centrifuges at Natanz



Source: Dr. Mohammad Saeidi, Atomic Energy Organization of Iran, presentation to the World Nuclear Association, 2005

Three key risks of an agreement permitting continued enrichment

- ◆ Breakout at declared facilities:
 - Iran uses the known, monitored facilities to produce weapons material, then fabricates material into weapons
- ◆ Use of covert facilities:
 - Iran establishes covert enrichment or plutonium production facilities
 - Iran uses those facilities to produce material for weapons, then fabricates material into weapons
- ◆ Precedents and impact on other countries and institutions:
 - Impact on convincing other states in the region not to pursue nuclear weapons, to forgo enrichment, etc.
 - Impact on security balances, perceptions in the region
 - Impact on global nonproliferation efforts
 - Impact on credibility of Security Council
 - *Potential perception that Iran “got away with” defying the major powers and the Security Council in buying a weapons option*

Limiting the risk of breakout at declared facilities

- ◆ This is the lowest of the three risks:
 - Iran would be less likely to choose this option than the covert facilities approach, as:
 - » Using declared facilities would advertise their violation, provoke response
 - » Declared facilities might be destroyed before sufficient weapons material was produced
- ◆ Iran has a theoretical breakout capability today, but not a very credible breakout capability:
 - Only enough LEU to produce HEU for ~ 2 bombs
 - Weeks to months to modify Natanz and produce sufficient HEU – Natanz might well be destroyed during that period

Limiting the risk of breakout at declared facilities (II)

- ◆ Plausible negotiated measures to reduce this risk:
 - Ensuring verification measures that would rapidly detect modification, HEU production
 - » Could include 24/7 international staff, discussed later
 - International ownership, staff – increases political and managerial barriers to using facilities for weapons purposes
 - Limiting number, capability of operating centrifuges to low level
 - » How much rollback is possible?
 - » Possibility of “cold standby” for centrifuges beyond an agreed limit – no need to remove or dismantle them, but if they are not spinning, would add some weeks to get them going
 - Shipment of LEU out of the country for fabrication
 - » Making HEU from natural uranium requires ~ 4x as much enrichment work
 - Broad transparency that would increase risk to Iran of attempting to carry out clandestine effort to get ready for weaponization
 - » But real limits on how effective this could be

Limiting the risk of use of covert facilities

- ◆ This is the most likely Iranian path to the bomb – and the most difficult to address
 - Military strikes also would not resolve covert facility problem
 - Agreement on zero Iranian enrichment, even if it were achievable, would also not resolve this problem
 - This risk highlighted by revelation of covert facility near Qom
 - Increase in this risk from accepting limited continuing enrichment is modest
- ◆ Best that can be done is to reduce Iranian incentives to take this route, by:
 - Increasing costs to Iran of being caught violating (including by increasing ongoing benefits Iran would receive in a deal)
 - Increasing Iran's assessment of probability it would be caught violating, through Additional Protocol, other transparency measures (though real limits on what can be accomplished)

Limiting the risk of use of covert facilities (II)

- ◆ Plausible negotiated measures to reduce this risk
 - Additional Protocol – wide range of declarations, expanded access
 - » Still very limited potential to detect covert centrifuge facilities
 - Expanded transparency measures – such as private access to scientists, engineers for interviews
 - Expanded verification at conversion facility, monitoring of all UF6
 - » Increase probability that removal of UF6 for covert enrichment would be noticed
 - Requirement for reporting, access to all centrifuges, production, procurement

Zero is easier to verify than any other number – but agreement can focus on zero centrifuges, zero procurement of key components, outside the agreed regime

Dealing with illicit procurement

- ◆ Iranian centrifuge manufacture probably still combines components produced domestically and components and materials purchased illicitly abroad
- ◆ To build confidence in the absence of covert procurement and manufacturing, agreement should require:
 - Declaration, monitoring of all centrifuge manufacture, testing
 - Declaration of all purchases (domestic and foreign) of key centrifuge components, key materials (e.g., maraging steel)
 - Opportunities to interview key participants (designers, managers, procurement officers)
- ◆ Any undeclared manufacture or procurement would be clear evidence of a violation of the accord

Monitoring conversion to UF6

- ◆ UF6 is essential for almost all means of enriching uranium, and the plants to make it are larger and leakier than covert enrichment plants are – may help reduce the risk of covert enrichment
- ◆ Agreement should include:
 - Declaration and monitoring (with tags and seals, inspections as needed) of all UF6
 - Monitoring of all UF6 production, sufficiently detailed so that production of extra, undeclared UF6 would have a high probability of being detected
 - Broad transparency measures (especially Additional Protocol) to increase the risk that a covert conversion plant would be detected
 - Ensuring that all states with UF6 will report on any exports, or close monitoring of shipments from states that won't
 - Any UF6 outside the agreed arrangements would be clear evidence of violation

Limiting the risk of use of covert facilities (III)

- ◆ Potential contribution of international staff/ownership of key facilities
 - Centrifuge engineering is a difficult art, reliant on a small cadre of people with real experience
 - Currently centrifuge operations and testing appear to be confined to Natanz (unless covert sites are already operational)
 - A 24/7 international staff would work with, get to know the key Iranian centrifuge experts – if substantial numbers of them were disappearing for extended periods to establish a covert facility, would increase the chance this would be noticed
 - » Also provide deeper insight into technical specifics of Iranian program
- ◆ Potential risks of international staff/ownership
 - International staff would inevitably bring some increased centrifuge know-how (otherwise no reason for the Iranians to work with them)
 - Some risk of “legitimizing” the ongoing activity

Mitigating the precedent, impacts on other countries and institutions

- ◆ This is the biggest and most difficult to manage set of net additional risks from accepting limited enrichment in Iran
 - Israel and the Gulf states will be concerned over lingering potential for Iran to break out, produce a bomb
 - States in the region (and elsewhere) may be less likely to accept UAE-style deals in which they commit not to enrich or reprocess
 - Credibility of Security Council, United States could be decreased, Iran increased, by Iran having “faced down” UNSC requirements
- ◆ *But*
 - U.S. (and rest of P5+1) credibility, international support could be *increased* by finding appropriate resolution of issue short of military action
 - Nonproliferation regime could be strengthened by (a) Iran without nuclear weapons, and (b) a new example of international control of fuel-cycle facilities and far-reaching transparency

Mitigating the precedent, impacts on other countries and institutions (II)

- ◆ Plausible steps to mitigate these risks
 - Emphasize the opprobrium, sanctions Iran endured as a result of noncompliance, until it was willing to reach, and comply with, a reasonable agreement with the international community
 - Emphasize that enrichment in Iran is *only* acceptable on a limited basis under unprecedented controls
 - Emphasize this agreement as a new model of a more stringent approach to sensitive fuel cycle activities
 - Negotiate Iranian steps to come into full compliance with IAEA safeguards
 - » Full Iranian “confession” on weaponization issue may not be forthcoming, may not be needed
 - If possible, negotiating a short-term suspension of enrichment and reprocessing work would have value, as, in combination with safeguards compliance and broad transparency, it would mean Iran had complied with the Security Council resolutions
 - » But security benefit of short-term suspension is not large enough to be worth sacrificing other major elements of an agreement to get

What about plutonium production?

- ◆ Construction of Arak “research reactor” – well-suited for producing weapons plutonium – is continuing
- ◆ Option 1: seek to replace with less threatening facility
 - P5+1 offered help with small light-water research reactor – might be more interest if broader talks began to show real promise
- ◆ Option 2: international ownership/staff
- ◆ In any case:
 - Should insist on no construction of a reprocessing plant
 - Nearly identical spent fuel in Russia has been stored safely for decades
- ◆ Releases from covert reactors/reprocessing plants easier to detect than those from enrichment plants
 - Should seek Iranian agreement to accept limited number of isotope-monitoring stations toward this end

Virtues of international ownership and staff for key facilities

◆ Benefits

- Seizing facility for use in a nuclear weapons program means expropriating others' property – higher political barrier
- 24/7 staff far more likely to notice covert diversion attempts than occasional IAEA inspectors are
- 24/7 staff build relationships with the key Iranian experts, provides much greater transparency on status of Iranian program
- Unexplained absences of key experts could provide indicator of covert activities
- Illicit technology exports harder to organize without detection

◆ Risks

- International staff should be limited to personnel from countries that already possess the technology, with appropriate clearances
- Risk of leakage of information to Iran

Outline of a limited compromise

- ◆ Many possible variants – designed to give Iranian advocates of compromise a chance of convincing Khamenei
- ◆ One example:
 - P5+1 agrees to allow some operational centrifuges in Iran
 - Iran agrees to limit to 2-8 cascades (other centrifuges in place, but not operating)
 - All centrifuge operations, R&D, manufacture (also other sensitive nuclear operations) internationally owned, 24/7 int'l staff
 - Iran agrees to Additional Protocol + transparency measures
 - P5+1 implement incentives package (trade, nuclear assistance, etc.)
 - Bilateral and multilateral dialogues established to address other issues over time – recognition, end to sanctions on table if these other issues successfully addressed
 - U.S. pledges no attack, no attempt to overthrow regime as long as (a) Iran complies with nuclear obligations, (b) Iran does not commit or sponsor aggression or terrorist attacks against others

The compliance problem

- ◆ The United States should work with the rest of the P5+1 to ensure that there is real agreement that if Iran agrees to a pact with all of the P5+1, and then violates it, they will jointly support severe sanctions in response
- ◆ The P5+1 should ensure that any agreement negotiated is as clear and specific as practicable, to minimize the chances for disputes over whether or not Iran is complying
- ◆ The United States and others should be prepared, if necessary, for rapid action if Iran appears to be breaking out of the agreement at declared facilities, or at covert facilities that are detected

Ironically, Iranian progress has reduced the urgency

- ◆ Iran has already crossed all the “red lines” the world urgently wanted to prevent them crossing (except weaponization)
 - “Even one centrifuge spinning”
 - Knowledge of how to enrich uranium, operate cascades
 - Enough centrifuges spinning to make bomb material in a reasonable time
 - Enough LEU to accelerate the pace of a “breakout”
- ◆ Now, as more months go by, it is only a matter of Iran moving from an existing breakout capability to a somewhat better breakout capability
 - Breakout would be more credible if Iran had the LEU and centrifuges to make an entire arsenal (e.g., 4-10 bombs) in very few weeks

Some measures to buy time

- ◆ Shipping the LEU to Russia for fabrication into fuel
 - Iran says the LEU is for civilian power fuel – have it fulfill that purpose – no loss of face for Iran in agreeing to do what it has always said it planned to do, make this LEU into fuel
 - Iran could celebrate loading into reactor of first assembly from Iranian-enriched LEU
 - Would dramatically lengthen time for first Iranian bomb from a breakout
- ◆ Capping the number of centrifuges
 - “Freeze for freeze” is probably overtaken by events – Iran has already achieved a freeze on further sanctions
 - Iran might be willing to freeze further centrifuge deployment in return for something else

Time – and flexibility – are likely to be needed

- ◆ 30 years of intense U.S.-Iranian hostility, mistrust
- ◆ Many on each side are convinced the other is not negotiating seriously
- ◆ Iranian opening position doesn't even include discussion of Iran's nuclear program
- ◆ Neither side understands what the other's most fundamental bottom lines are
- ◆ Setting tight deadlines (such as six months) very likely a recipe for failure

Ultimately, to get Iran to address P5+1 concerns, the P5+1 must address Iran's concerns – a deal not seen as serving Iran's interests, as well as ours, will be rejected or will fail

Steps that should be taken regardless

- ◆ Insist on far-reaching inspections, transparency in Iran
- ◆ Redouble efforts to interdict black-market nuclear networks
- ◆ Establish international fuel supply and fuel take-away programs to encourage states to rely on international supply, rather than their own enrichment and reprocessing
- ◆ Intensive efforts to reassure U.S. allies in the region, convince them they do not need nuclear weapons options, prevent them from undertaking enrichment, reprocessing
 - “Proliferation cascade” is key scenario to avoid
- ◆ Major effort to repair nonproliferation regime worldwide
 - Long list of steps that need to be taken
 - To get non-nuclear-weapon states to agree to more constraints, weapon states will have to be seen as living up to their end of the bargain, accepting constraints on their own programs

Conclusions

- ◆ Ultimately, three options:
 - Acquiesce + contain
 - Negotiate a deal
 - Launch military strikes
- ◆ Zero centrifuges in Iran would be the best outcome for U.S. and international security. But the best may be the enemy of the tolerable. Insisting on zero centrifuges is likely to lead to no agreement – so unconstrained Iranian program or military strikes
- ◆ It is time to begin thinking about what the least bad non-zero options might look like – they may offer the lowest risks to U.S. security of the many bad options now available
- ◆ Kennedy: key lesson of the Cuban missile crisis is the need to give your adversary a face-saving way out