



## Iran's Missile Development Amidst the Nuclear Deal

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Reports of Iran pursuing nuclear weapons program first emerged in the year 2002 when an Iranian opposition group revealed that Tehran was pursuing clandestine nuclear activity, including a uranium enrichment plant at Natanz and a heavy-water reactor at Arak. Though Iran maintained that the nuclear program was meant solely for peaceful purpose, the IAEA was unable to confirm so owing to the clandestine nature of the activities. There was immediately an overdrive to curb Iran's nuclear program. Over the years, this has resulted in hundreds of man-days of IAEA inspections and several UN Security Council Resolutions to get Iran to give up its enrichment activities.

Under the leadership of President Mahmoud Ahmadinejad from 2005 onwards, Iran maintained a rigid stand and showed no inclination for talks regarding its nuclear program. Consequently, strict sanctions were imposed on Iran which by 2013 had started to cripple Iran's economy, though not its determination to continue with its nuclear program. However, from 2013, with President Hassan Rouhani in power, Iran expressed a greater willingness to negotiate a nuclear deal. But amidst such a positive development taking place, there are reports that Iran continues to develop its nuclear capable ballistic missile arsenals. This has been believed by some to have a detrimental affect on the nuclear deal, while others believe that the issue of ballistic missiles should be kept separate from the nuclear deal.

### **The P5+1 Nuclear Deal**

The P5+1 nuclear deal was signed in November 2013 in Geneva between Iran and the P5 (China, France, Germany, Russia, the United Kingdom and the United States). This P5+1 nuclear deal is a temporary deal which is expected to "halt Iran's sensitive nuclear activities" and "increase international monitoring of its nuclear program in exchange for some relief from sanctions" that aggravated Iran's economy.<sup>1</sup> According to President Obama, the deal was to provide "time and space" for negotiating on a comprehensive deal which was expected to cut the level to 20% uranium enrichment to prevent Tehran from developing nuclear weapons. Under the P5+1 nuclear deal, Iran agreed "not to commission or fuel the Arak reactor; halt the production and additional testing of fuel for the facility; not to install any additional reactor components there; not to transfer fuel and heavy water reactor site; and not to construct a reprocessing facility, preventing the separation of plutonium from spent fuel."<sup>2</sup> Reports have confirmed that Iran had curbed its purchase of those materials which could enable it to develop nuclear weapons. While the Federation of American Scientists states that Iran possesses at present gas centrifuge uranium enrichment program to produce low enriched uranium and is also developing heavy water moderated nuclear reactor, it also mentions that Tehran lacks a reprocessing facility for developing plutonium weapons. However, Iran has been resisting any cuts

in uranium enrichment capacity since it claims that nuclear power would be a necessity for electricity production.

In March 2014 President Rouhani had confirmed that Tehran would not acquire nuclear weapons "out of principle" not just because it was bound by treaties but also because Rouhani wanted "diplomacy" to prevail when dealing with foreign threats. In May 2014, while on one hand, Tehran confirmed that it would ship its low enriched uranium to countries like Turkey and Brazil, on the other hand, it also maintained that there would be no measures taken to halt further enrichment of uranium, that is enrich uranium to higher levels. Iran has been assertive about continuing to perform research and development in the field of nuclear technology and that "none of the nuclear achievements of the country can be given up."<sup>3</sup> In July 2014, however, IAEA reports have confirmed that Iran has already "diluted" its 20% enriched uranium.

The P5+1 countries are trying all means to prevent Iran from trying to acquire nuclear weapons at any cost. The P5+1 demanded that Iran cuts its centrifuges from 19000 to 4000 while Tehran demanded that they would need more centrifuges for the growing demand for nuclear energy. Amidst such demands, the P5 countries are apprehensive of this peaceful nuclear program claimed by Iran which could have "possible military dimensions" which could include "work on detonator devices that could be used in a nuclear weapon and fit in a ballistic missile warhead."<sup>4</sup>

### Iran's Ballistic Missile Developments

While Iran has been assuring the West that it is curbing its nuclear program, reports have confirmed that Tehran has gone forward with its missile and space program. With assistance from China and North Korea, Iran is reported to possess a diverse and active ballistic missile program in the Middle East. At present, according to Iranian officials, Iran purchases various parts from China and Russia and assembles them in their territory.<sup>5</sup> Iran's ballistic missiles are being developed in a

way that they are capable of delivering nuclear warheads, should Tehran develop the same. However, Iran maintains that the ballistic missile program is "solely for scientific, surveillance and defence purposes."<sup>6</sup>

Tehran's ballistic missile capabilities include short range ballistic missiles like the Tondar and the Nazeat with a range of 150 kms, FatehA-110 ranging up to 200 kms and 300 kms for advanced version, the Chinese M-11 with a range of 290 kms, the Shahab1 with a range of 300 kms and Shahab2 with a range 500 kms and the Qiam1 with a range of 750 kms; medium range ballistic missiles like the Ashura with a range of 1800 kms and Shahab 3 and their advanced versions with ranges of 1300 kms, 1500-1800 kms, and 2000-2500 kms and Ghadr missiles which are more maneuverable than the Shahab3s; and intermediate range ballistic missiles like 2500-4000 kms Musudan.

Iran's venture into satellite launch vehicles has given it the capability to develop ICBM and it is already working on boosters for the missiles. This ICBM is expected to be developed by 2015. These missiles are reported to be capable of carrying nuclear warheads. Iran is also working on means to make these missiles capable of evading ballistic missile defence system by developing MRVs for these missiles. Iran has also been reported to be working on sub-munitions as payload for their missiles. This would not only enhance the area of destructive power but also enable the missile to evade missile defence systems. All these missiles are reportedly mobile systems and hence, their chances of survivability if more. Iran not only possesses liquid propelled ballistic missiles, but also solid propelled ballistic missiles which further enhance their chances of survivability. Pentagon reports confirm that Iran is continuing to improve the accuracy and "killing power" of its ballistic missiles, both long range and short range ones.<sup>7</sup>

### Iran's Need for Ballistic Missiles

There is no doubt that a conventionally weaker Iran feels the need to depend on ballistic missiles as a deterrent against the United States. These missiles

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are believed to give Iran an “upper hand”<sup>8</sup> in a conflict in Middle East. If nuclear capable, these missiles act as an important tool for national power. According to Michael Elleman, an analyst with the International Institute of Strategic Studies, ballistic missiles “represent one of Iran’s few capabilities to deter attack, intimidate regional rivals, and boost military morale and national pride.”<sup>9</sup> Even though Iranian ballistic missiles lack accuracy and hence, the military utility of these missiles is little when armed with conventional warheads, these missiles could be used as a “political and psychological weapon to terrorise an adversary’s cities and pressure its government.”<sup>10</sup>

Moreover, with Saudi Arabia and Israel pursuing ballistic missile development program, Iran’s missiles act as a perfect deterrent against them. Iranian Defence Minister, Brig Gen Hussein Dehqan had stated that the missile capability of Tehran is a “needed response to the “Zionist’s regime’s” threat to the region.”<sup>11</sup>

### Concerns

One of the major concerns for the P5+1 countries is that they feel that Iranian ballistic missile program is a violation of the UNSC Resolution. The United Nations Resolution 2010 required that Tehran will “not undertake any activity related to ballistic missile capable of delivering nuclear weapons” and that the members of the Congress in the United States have also suggested blocking the nuclear deal if no progress of curbing the ballistic missiles is made.<sup>12</sup> In the meanwhile, the UN panel of experts has confirmed that apart from putting a brake on the test firing one type of rocket, Iran had shown no signs of halting its missile development program. Tehran also is in no mood to discuss the issue of ballistic missiles in the nuclear deal talks. In fact, Ayotollah Khamnei went to the extent of describing the Western expectations of curbing Iranian ballistic missiles as “stupid and idiotic.” In May 2014, Iranian Defence Minister, Brig Gen Hussein Dehqan states, “Iran’s missile capability is defensive” and is meant for conventional purpose and as a “deterrent” and is hence, “not up for negotiations.”

Iran’s ballistic missile development can hence, lead to proliferation issues. For example, Iran proliferated missiles to Syria and Hezbollah in the

past. In January 2014, under the Project 702, it was reported that Tehran was developing ballistic missiles intended to be used by Hezbollah which would also include improved version of the Khaybar missile and modification of the liquid propelled missiles to solid ones.<sup>13</sup> In 2014, the M-302 Syrian missiles that were caught by Israel from a boat in Iran to be transported to Gaza Strip, are believed to be based on Iranian technology. Further, unlike Iran’s nuclear program which is now transparent under the IAEA safeguard since Tehran provides information on about its Exploding Bridge Wire detonators,<sup>14</sup> the same is not the case with its ballistic missile program. Moreover, Iran’s progress on space launch vehicles which is expected to improve its capability of developing intercontinental ballistic missiles leads to ambiguity for the West.<sup>15</sup> However, as reports suggest, “with the exception of several launches, periodic displays of hardware and one recent revelation of a new ballistic launch facility, the program is opaque and not subject to the same level of transparency that Iran’s nuclear activities are under IAEA safeguards.”<sup>16</sup> Tehran also denies access to the IAEA to the Parchin military base where it is suspected to be conducting nuclear tests which can make verification process difficult.

### International Response to Iran’s Ballistic Missile Development

There are mixed reactions regarding Iran’s ballistic missile development program. While there is a belief that the ballistic missile development could adversely affect the nuclear deal, some believe that curbing the nuclear program would automatically halt Iran’s nuclear capable ballistic missile program.

According to Israeli Prime Minister, Benjamin Netanyahu, development of ballistic missiles by Iran confirms its “insincerity” regarding the nuclear negotiations. While Israel has continued to oppose the nuclear program in Iran, the United States presently maintains a softer stance. Washington is working on the level of enrichment that would need to continue in Iran. Simultaneously, utmost effort is being taken to prevent Iran which the United States claims as “foremost terrorist state” in the present times, to acquire nuclear weapons. While Iran claims that such missiles can be used for delivering conventional warheads, there is a fear

that Iran's ballistic missiles lack accuracy and are hence, not suited to deliver conventional warheads. Thus, they feel that Iran could likely use nuclear warheads on these missiles. In fact, Wendy Sherman, the US Senate Foreign Relations Committee, Undersecretary of State had stated that if a nuclear deal is struck with Iran, then the ballistic missiles would become "almost," "not entirely" "but almost "irrelevant."<sup>17</sup>

However, as Greg Thielmann from Arms Control Association puts it, "the ban on missile activity was never permanent; it was a means to an end-achieving resolution of compliance and transparency issues."<sup>18</sup> He also further states that neither the nuclear Non Proliferation Treaty to which Iran is a party nor the Joint Plan of Action to which Tehran recently agreed contain any prohibitions on ballistic missiles. Moreover, there is "no universally accepted definition of nuclear capable missiles."<sup>19</sup> As Iran protests that the issue of ballistic missiles should not be raised in the nuclear deal talks, such a stance is being well supported by Russia, one of the P5 countries.

### The Future

If deeply viewed, such moves by Tehran to develop ballistic missiles should not become a hindrance in the nuclear talks between Iran and the West. While nuclear talks between the West and Iran are continuing in a positive direction, the pace is "slow and difficult." Many analysts have felt that curbing ballistic missile developments as a prerequisite for the nuclear deal negotiations to take place successfully, could undermine the nuclear deal completely. Especially at a time when Iran is reported by the IAEA to be cutting half of its stock of 20% enriched uranium down to 5% purity, thereby standing by its international commitments, any issue pertaining to ballistic missile could adversely affect the deal.

It is also justified that if Israel and Saudi Arabia have the sovereign right to develop missiles for the defence of their nations, Tehran too has the right to develop the same. However, as Iran

commits not to develop nuclear weapons, it must take measures to make the West believe that the missiles would not be used to deliver nuclear warheads and the best way to do so is to modify such missiles especially the long range ones so that they are only capable of delivering conventional warheads. Moreover, it must be noted that as Israel continues to be the lone nuclear weapon state in the Middle East (as a dormant nuclear weapon state), Iran's nuclear capable ballistic missiles could strengthen stability and deterrence in the region.

Greg Thielmann, further states, "a regional ban on testing and deployment of ballistic missiles with ranges greater than 3000kms could be as beneficial in Tehran as well as in the capitals of the nuclear weapons states outside the region."<sup>20</sup> Tehran possesses several medium range and short range ballistic missiles in

their arsenal and these missiles are crucial to their survival and deterrence. Trying to curb ballistic missile developments of Iran along with the nuclear program could make Tehran believe that the United States wants to curb its military capabilities as a whole and not just its nuclear program. At the same time, limits on such missiles can never be under the purview of the nuclear deal and would need a separate framework which could also be a regional framework that could put a check on the missile development program of Saudi Arabia, Turkey, Israel and Syria.

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### Notes

<sup>1</sup> Kelsey Davenport, "Iran, P5+1 Sign Nuclear Agreement," *Arms Control Association*, December 2013, at [https://www.armscontrol.org/act/2013\\_12/Iran-P5-1-Sign-Nuclear-Agreement](https://www.armscontrol.org/act/2013_12/Iran-P5-1-Sign-Nuclear-Agreement)

<sup>2</sup> "Q&A: Iran 's nuclear crisis," *BBC News*, January 20, 2014, at <http://www.bbc.com/news/world-middle-east-11709428>

<sup>3</sup> Simon Tisdall quotes Khamenei, "Hassan Rouhani faces growing criticism in Iran over nuclear talks," *The Guardian*, May 4, 2014, <http://www.theguardian.com/world/2014/may/04/hassan-rouhani-iran-nuclear-talks>

<sup>4</sup> Patrick Goodenough, "Troubles Dog Iran Nuclear Talks as Deadline for Deal Draws Nearer," *CNS News*, May 26, 2014, at <http://cnsnews.com/news/article/patrick-12> Greg



goodenough/troubles-dog-iran-nuclear-talks-deadline-deal-draws-nearer

<sup>5</sup> "UN Report Challenges Iran on ballistic missile program," *Y Net news*, May 16, 2014, at <http://www.ynetnews.com/articles/0,7340,L-4520455,00.html>

<sup>6</sup> "Iran 's arsenals of missiles," *BBC News*, May 20, 2009, at [http://news.bbc.co.uk/2/hi/middle\\_east/7499601.stm](http://news.bbc.co.uk/2/hi/middle_east/7499601.stm)

<sup>7</sup> Tonu Capaccio, "Iran 's Ballistic Missiles Improving, Pentagon Finds," *Bloomberg*, July 11, 2012, at <http://www.bloomberg.com/news/2012-07-10/iran-improves-ballistics-missiles-to-target-ships.html>

<sup>8</sup> Dennis Lynch, "Confidential U.N. Report Says Iran Is Pursuing Ballistic Missiles Against Sanctions," *IB Times*, May 15, 2014.

<sup>9</sup> Fredrik Dahl, "Iran 's ballistic missiles may become hurdle in nuclear talks," *Reuters*, April 8, 2014, at <http://www.reuters.com/article/2014/04/08/us-iran-nuclear-missiles-idUSBREA370TB20140408>

<sup>10</sup> Michael Elleman, "Iran 's Ballistic Missile Program," *United States Institute of Peace*, at <http://iranprimer.usip.org/resource/irans-ballistic-missile-program>

<sup>11</sup> Patrick Goodenough, "Troubles Dog Iran Nuclear Talks as Deadline for Deal Draws Nearer," *CNS News*, May 26,

2014, at <http://cnsnews.com/news/article/patrick-goodenough/troubles-dog-iran-nuclear-talks-deadline-deal-draws-nearer>

<sup>12</sup> Greg Thielmann, "Leave Ballistic Missiles Out of the Iran Nuclear Talks," *Defense One*, May 20, 2014.

<sup>13</sup> Avi Issacharoff, "Bypassing Sanctions and with the help from Iran, Syria steps up missile production," *The Times of Israel*, January 28, 2014, at <http://www.timesofisrael.com/syria-accelerates-missile-production-despite-sanctions/>

<sup>14</sup> These detonators can have a dual application, that is being used for both civil and military application and also for developing nuclear weapons.

<sup>15</sup> "Iran providing greater transparency over nuclear program: IAEA," *The Nation*, June 2, 2014, at <http://www.nation.com.pk/national/02-Jun-2014/iran-providing-greater-transparency-over-nuclear-program-iaea>

<sup>16</sup> "UN: Iran advancing ballistic missile work," *The Times of Israel*, May 16, 2014, at <http://www.timesofisrael.com/un-iran-advancing-ballistic-missile-work/>

<sup>17</sup> Quoted by Patrick Goodenough, "U.S. Nuclear Negotiator: If Iran Can't Get the Bomb, Its Ballistic Missiles Will Be Almost Irrelevant," *CNS News*, February 5, 2014, at <http://www.cnsnews.com/news/article/patrick-goodenough/us-nuclear-negotiator-if-iran-can-t-get-bomb-its-ballistic-missiles>

<sup>18</sup> n.12

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.



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