

Unsolved Problems of Iran's Nuclear Program And Prospects in the light of Role of Parties to an Entente

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1. Introduction

From past to present, Iran have been focused by international society and still have continued their enrichment activity despite of many sanctions. It is barely easy to solve this situation and to negotiate between related countries. Because there are many factors to influence this. New president of U.S. Barack Obama could be a great deal of factor for solving Iran's nuclear issue as well. From this point of view, following Iran's unsolved problems of nuclear program could be helpful to understand the situation and what the key point to solve it, and forecast the future with surrounding political and regional factors.

2. Unsolved Problems of Iran's Nuclear Programs

In this section some of Iran's unsolved problem discordant between declaration with report for their enrichment and reprocessing experience and current situation are described.

2.1 Enrichment Activities

From the IAEA reports, inspections revealed two enrichment plants at Natanz —a pilot-scale facility (planned to have 1000 centrifuges) and a commercial-scale plant under construction (planned to have 50,000 centrifuges). The pilot-scale plant (PFEP) started to operate in June 2003 only to shut down after Iran suspended enrichment activities in December 2003. Since February 2006, when Iran resumed enrichment activities, Iran has tested small cascades (10, 20, then 164 machines) with uranium hexafluoride gas (UF₆), which are all under IAEA safeguards [1]. The IAEA has reported that Iran has achieved a maximum enrichment of 4.2% at PFEP [2]. Construction on the commercial-scale plant(FEP) was also suspended in 2003. Although Iran announced plans in April 2006 to install 3,000 centrifuges in the commercial plant by the end of the year, it did not even meet a third of that goal. In February 2007, Iran was operating two cascades under vacuum, and was in the process of installing another two cascades. At the point when Iran introduces UF₆ into the FEP, nuclear material accountancy must begin. The IAEA has also told Iran it must have remote monitoring equipment installed before 500 centrifuges are operating in FEP, which Iran has resisted [3].

2.2 Plutonium-related Activities

In October 2003 Iran revealed that it had conducted plutonium reprocessing experiments in a hot cell at the Tehran Nuclear Research Center and estimated the amount separated as 200 micrograms. The IAEA calculated that more plutonium would have been produced (about 100g) and Iran admitted in May 2004 that it understated the amount. Inspections also revealed that Iran experimented between 1989 and 1993 on irradiating bismuth, which can be used to produce Polonium-210 for civilian purposes (for nuclear batteries) or in conjunction with beryllium to create a neutron initiator for a nuclear weapon.

Finally, the heavy water program also has raised questions about Iran's intentions. Iran first told the IAEA that it planned to export heavy water, then suggested that the heavy water would be used as a coolant and moderator for a planned IR-40 reactor for research and development, radioisotope production, and training. However, Iran's design information for the facility, which omitted necessary hot cell equipment for producing radioisotopes, conflicted with reported Iranian efforts to import hot cell equipment.

Construction of the IR-40 reactor has continued, despite the Board's continued calls for a halt, although Iranian officials predict that the reactor will not be operational until 2011 [1]. The heavy water production plant reportedly has been operational since 2004, and in August 2006, Iranian officials announced they would double its production.

In addition to the roofing having already been completed for the other buildings on the site, construction of the reactor building's domed containment structure has also been completed, as observed in images taken on 30 December 2008, rendering impossible the continued use of satellite imagery to monitor further construction inside the reactor building or any of the other buildings [4].

2.3 Related Negotiations to solve issues

Although the November 2004 agreement in Paris clarified the terms of the moratorium, by March 2005 Iran proposed running its pilot-scale enrichment facility, which EU-3 negotiators rejected. In April 2005, Iran said that unless negotiations progressed, it would start up its uranium conversion plant, which it did in August 2005. Iranian President Mahmoud Ahmadinejad's remarks at the September 2005 U.N. Summit, the IAEA Board voted on resolution GOV/2005/77, which found Iran in noncompliance with its safeguards agreement.

The U.N. Security Council issued a presidential statement on March 29, 2006 calling upon Iran to

reinstate its suspension of enrichment and reprocessing, reconsider construction of its heavy water reactor, ratify and implement the Additional Protocol and implement transparency measures [5]. Iran continued its enrichment activities, while claiming it was cooperating with the IAEA [6]. The IAEA reported to the U.N. Security Council (GOV/2006/27) on April 28 that it was “unable to make progress in its efforts to provide assurance about the absence of undeclared nuclear material and activities in Iran.” Its June 8 report (GOV/2006/38) reported even less progress, given a lack of new information. On June 6, 2006, the EU-3, Russia, China, and the United States (P-5+1) offered Iran a new negotiating proposal, which included incentives such as affirming Iran’s inalienable right to peaceful nuclear energy, assistance in building state-of-the-art light water reactors for Iran, fuel supply guarantees, dismissing U.N. Security Council consideration of Iran’s NPT noncompliance, WTO membership, and an end to certain U.S. sanctions to allow Iran to purchase agriculture appliances and Boeing aircraft parts. In return, Iran would suspend enrichment and reprocessing activities, resume implementation of the Additional Protocol and fully cooperate with the IAEA. Iran’s moratorium could be reviewed once several conditions had been met, including resolving all issues and restoring international confidence in the peaceful nature of Iran’s nuclear program. The proposal also outlined several measures targeted at Iran’s nuclear program should Iran not agree to cooperate: a ban on nuclear-related exports, freeze of assets, travel/visa bans, suspension of technical cooperation with the IAEA, a ban on investment in related entities, and on Iranians studying abroad in nuclear and missile-related areas.

From June 2006, the Security Council has demanded Iranian compliance and transparency, and Iran has failed to respond. The P-5 discussed sanctions through the fall, and the Security Council ultimately adopted UNSCR 1737 on December 23, 2006, which requires states to prevent the supply, sale or transfer of equipment and technology that could contribute to enrichment-, reprocessing-, heavy-water-related activities, or missile delivery systems in Iran and to freeze the funds of persons and entities involved in the nuclear and ballistic missile programs [7]. UNSCR 1737 gave Iran another 60 days to comply, which expired on February 21, 2007. On February 22, 2007, the IAEA reported its inability to make further progress and hence its inability to verify the absence of undeclared nuclear material and activities in Iran (GOV/2007/8).

2.4 Recent Situation

In August 2007, IAEA Secretariat and Iran did the advanced approach about verification plan for solving the pending issues of Iran's nuclear safeguards.

In January 2008, IAEA and Iran came to an agreement for concluding these pending problems about Iran's nuclear programs. And this agreement passed the UN resolution 1803 additionally. But Iran has not carried out the UN resolution, so far. According to the IAEA report in February 2009, Iran has continued to operating the nuclear program and has increased the LEU amount since November in 2008 [4].

3. Conclusions

There are two things when it mentioned about Iran's nuclear program activities. One is that the right to use peacefully nuclear energy is inalienable. The other is significant reduction of nuclear armaments by nuclear weapon states. These two sides continuously have done the controversy. Therefore it is very important to arbitrate from IAEA but there is nothing for it but to solve these substantial problems limitedly. IAEA and Secretariat cannot strong act for cutting off the Iran's nuclear activities because Iran can withdraw the NPT regime and spread the nuclear proliferation issue.

Considering every circumstance surrounding this issue(such as regional, political, religious), best actions for U.S. are rather to directly face with Iran than to support negotiation between Iran and P5+1 by the side and prevent Israel from taking preventive military action, at least now. To push Iran hardly could be harm for this situation; especially it could give political power to Iranian hard-liner on a presidential election this June.

Also Iran have take actions; suspending of enrichment and reprocessing-related activities, then provide assurance about the absence of undeclared nuclear material and activities, and cooperate to solve issues with the IAEA(it is essential that Iran, inter alia, provide the information and access requested by the IAEA). After every action is taken, Iran truly will exercise its right.

REFERENCES

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