6

Iran and nuclear safeguards: establishing the facts and seeking compliance

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International concern regarding Iran's nuclear ambitions has increased markedly over the past two years due to significant revelations about previously undeclared activities, including extensive work on uranium enrichment and plutonium separation—the two routes to producing nuclear weapons-grade material.[1] The revelations have demonstrated that, for a number of years, Iran has systematically contravened both the letter and the spirit of its safeguards agreement with the International Atomic Energy Agency (IAEA). As a direct consequence, Iran's future status as a non-nuclear weapon state under the 1968 Nuclear Non-Proliferation Treaty (NPT) has been cast into doubt. Tehran's strategy of obfuscation and the contradictory claims that it has made in response to investigations carried out by the IAEA in 2003–04 have exacerbated concerns about its nuclear intentions. Indeed, a resolution adopted by the IAEA Board of Governors on 18 June 2004 deplored the fact that 'Iran's cooperation has not been as full, timely and proactive as it should have been'.[2]

This chapter examines the disturbing revelations that have emerged about Iran's previously concealed nuclear activities since mid-2002. It considers the outcomes of the IAEA investigations that have occurred over the past couple of years, the various disclosures made by the Iranian government in light of these investigations and the issues that have yet to be resolved. Attention is also paid to the actions taken by the IAEA Board of Governors during this period to secure Iran's compliance with its safeguards obligations. In the process, the chapter assesses the diverging approaches of the United States and the European Union (EU)-3 (France, Germany and the United Kingdom) and the various responses of Tehran. To begin with, though, it is necessary to review Iran's official position on nuclear energy and nonproliferation.

Iran, nuclear energy and nonproliferation

Iran's official aim in the nuclear field is to produce 7,000 megawatts (MW) of nuclear energy by 2020 in order to meet future energy demands. This will require at least seven nuclear power plants, including the 1,000 MW Bushehr plant, which is being built with Russian assistance and is close to completion.[3] According to Iranian officials, their programme requires the presence of all elements of the nuclear fuel cycle. In this respect, the IAEA has noted that Iran possesses 'a practically complete front end', including uranium mining and milling, conversion, enrichment, fuel fabrication, heavy water production and associated research and development facilities, as well as a light water reactor and a heavy water research reactor.[4]

Despite having the second largest proven natural gas reserves in the world and around seven per cent of the planet's oil reserves,[5] Iran has provided several official reasons for not relying on its fossil fuels to meet future energy demands. First, it argues that it will eventually become a net importer of crude oil and some of its by-products if it continues to consume energy in the present form and at the same rate. Second, there is concern that local use of fossil fuels will 'drastically affect Iran's foreign exchange earnings' derived from the export of crude oil and natural gas. Third, the assertion is advanced that greater added value is generated by utilizing fossil fuels in Iran's petrochemical and other processing industries. The fourth reason is that increased reliance on fossil fuels will have a negative impact on the environment.[6]

The existence of significant Iranian deposits of fossil fuels has reinforced long-held suspicions, particularly on the part of the US, that Iran's nuclear ambitions are not benign and encompass the development of nuclear weapons. Indeed, the administration of US President George W. Bush has accused Iran of using its civil nuclear activities as a cover for a nuclear weapons programme. In response to unfolding revelations about Iran's nuclear programme in late 2003, US Under Secretary of State for Arms Control John Bolton said that it was 'simply impossible to believe' that Iran was not developing nuclear weapons.[7] In June 2004 Bolton testified to the US House of Representatives that: 'The costly infrastructure to perform all of these activities goes well beyond any conceivable peaceful nuclear programme. No comparable oil-rich nation has ever engaged, or would be engaged, in this set of activities—or would pursue them for nearly two decades behind a continuing

cloud of secrecy and lies to IAEA inspectors and the international community—unless it was dead set on building nuclear weapons'.[8] Such suspicions have been dismissed by Iranian officials from across the political spectrum, including hard line conservatives and moderate reformists. The Secretary of Iran's Supreme National Security Council, Hassan Rowhani, has claimed that nuclear weapons and other WMD 'are not important' to the country's 'defence doctrine'.[9] Indeed, the official Iranian position is that the possession of WMD would make the country more vulnerable. Moreover, it is contended that Iran is committed to the goal of a WMD-free region and the government emphasizes that it is a party to the NPT, the 1993 Chemical Weapons Convention and the 1972 Biological Weapons Convention, and is a signatory of the 1996 Comprehensive Nuclear Test Ban Treaty.[10]

An important aspect of Iran's commitment to employ nuclear technology purely for peaceful purposes is its full-scope safeguards agreement with the IAEA, which entered into force in 1974. The accord commits Iran to accepting safeguards on: 'all source or special fissionable material in all peaceful nuclear activities within its territory, under its jurisdiction or carried out under its control anywhere'.[11] The IAEA is responsible for ensuring that states fulfil the terms of their safeguards agreements, which cover nuclear materials and activities. Safeguards are designed to serve as 'a confidence-building measure, an early warning mechanism, and the trigger that sets in motion other responses by the international community if and when the need arises'.[12]

Establishing the elusive facts

IAEA investigations conducted in 2003–04 have revealed that Iran has actively sought to conceal significant and sensitive nuclear activities over the past two decades, including uranium enrichment and plutonium separation. In addition, when asked by the agency to provide a complete assessment of its nuclear programme, Iran has made contradictory claims and has provided information incrementally only when confronted with evidence related to specific materials, activities and facilities. Not surprisingly, Iran's concealment efforts have added to international concern that more activities could well remain hidden from the IAEA. They have also fuelled suspicions in Europe, the US and beyond that Iran is pursuing a clandestine nuclear weapons programme.

Below is a summary of the key findings of the IAEA investigations carried out in 2003–04, as well as associated Iranian revelations. The objective is to offer a snapshot of Iran's concealment efforts, including its contradictory responses to questions posed by the IAEA designed to clarify the true nature and extent of its nuclear programme.

Enrichment

In mid-2002 an Iranian opposition group, the National Council of Resistance of Iran (NCRI), revealed the presence of a large gas centrifuge enrichment facility at Natanz, including both pilot and commercial-scale plants. Subsequent IAEA investigations resulted in Iran admitting for the first time that it had been pursuing a uranium enrichment programme for 18 years,[13] encompassing extensive work on the gas centrifuge process and laser isotope separation.

Although Iran only 'officially' introduced uranium hexafluoride (UF_6) at the pilot plant in Natanz for testing purposes in June 2003, environmental tests performed by the IAEA prior to this identified particles of high enriched uranium (HEU). The Iranian authorities claimed that this was the result of importing contaminated centrifuge components. This explanation, though, contradicted an earlier assertion that the centrifuges had been produced indigenously. Moreover, Iran maintains that it has not enriched uranium to over 1.2 per cent uranium-235 (U_{235}) using centrifuges.[14] It has been estimated that the pilot plant will eventually be capable of producing annually up to ten kilograms of weapons-grade (90 per cent enriched) uranium, while the commercial-scale centrifuge plant, which has a scheduled start-up date of early 2005, could eventually produce 500 kilograms of weapons-grade uranium annually.[15]

In response to media reports, Iran also confirmed that the Kalaye Electric Company in Tehran had been used to manufacture centrifuge components and machines. Environmental samples collected by the IAEA in August 2003 again revealed the presence of HEU particles, as well as low enriched uranium (LEU), despite Iran's initial claim that nuclear material was not present at Kalaye.[16] The authorities subsequently admitted, however, in October, that 'a limited number of tests, using small quantities' of UF_6 were conducted there in 1999 and 2002. According to Iran, the tests used 1.9 kilograms of UF_6 that had been acquired from

overseas, contradicting its initial explanation that the material had been lost as a consequence of 'leaking valves on cylinders containing the gas'.[17]

The IAEA reported in February 2004 that tests carried out on centrifuge components manufactured in Iran had revealed contamination with a different type of enriched uranium to that picked up on the imported centrifuge components. The samples taken at the Kalaye Electric Company and at Farayand Technique indicated the presence of 36 per cent enriched uranium—material that had not been declared to the IAEA and which was unlikely to have come from imported components.[18]

A focus of the IAEA investigations has been to establish the sources of all traces of enriched uranium found at sites in Iran. The government has consistently asserted that all such traces are a direct result of acquiring equipment from abroad via the nuclear black market.

In addition to Iran's work on the P-1 design centrifuge procured from Pakistan and which is being installed at Natanz, the authorities admitted in January 2004 to carrying out research into and developing a more advanced type of centrifuge based on a design known as the P-2, utilizing maraging steel and composite rotors.[19] Information on the P-2 programme should have been inserted in Iran's October 2003 declaration to the IAEA on the full scope of its nuclear activities, including centrifuge research and development. Iran claimed that it failed to incorporate the information on the P-2 due to time constraints. Along with the contamination of centrifuge components, the nature and extent of its work on the P-2 have become key elements of the IAEA's investigations.

At first the Iranian government contended that all P-2 components in the country had been produced domestically, based on drawings obtained from overseas suppliers, namely Pakistan. In 1999 or 2000 the Atomic Energy Organization of Iran reportedly concluded contracts with a private company in Tehran to develop P-2 centrifuges. All centrifuge equipment associated with the P-2 programme was allegedly moved to the Pars Trash Company in 2003.[20] Iran has since admitted to acquiring magnets for P-2 centrifuges from suppliers in Asia. The Deputy Director General of the IAEA, Pierre Goldschmidt, said in June 2004 that the agency has 'indications' that Iran 'had shown interest in acquiring up to 100,000' additional magnets from abroad. This calls into question Iran's claims that the P-2 programme

was for research and development purposes. Iran has also declared that a key component of the P-2 was produced at a facility associated with the Iranian Ministry of Defence, contradicting an earlier assertion that it had been manufactured in a private workshop.[21] The involvement of a military facility obviously adds to fears about the country's nuclear intentions. There are also concerns about the claimed pace of Iran's work on the P-2 centrifuges. According to the Iranian government, the designs were acquired from abroad in 1995, but work did not start in Iran until 2001. The IAEA is said to believe that the P-2 programme is too advanced for this to be accurate.[22]

Beyond the centrifuge programme, Iran has admitted to having been engaged in previously undeclared work on laser enrichment since the early 1990s. A pilot plant was set up in 2000 at Lashkar Ab'ad, where technicians have performed enrichment experiments using imported uranium metal.[23] Two approaches have been pursued in this field: atomic vapour laser isotope separation (AVLIS); and molecular laser isotope separation (MLIS). The Iranians have been slow to provide information on the plant's laser enrichment capabilities, and the IAEA reported in June 2004 that the details have been understated. As a result of IAEA investigations, furthermore, it has been revealed that Iran managed to produce samples of uranium enriched up to 15 per cent in laser enrichment tests.[24]

Another component of Iran's nuclear infrastructure directly related to its enrichment programme is the uranium conversion facility (UCF) at Isfahan. This plant is capable of converting uranium yellowcake into uranium hexafluoride —presumably to be sent to Natanz for enrichment—as well as uranium dioxide and uranium metal. Moreover, the previously undeclared Jabr Ibn Hayan Laboratory is known to have converted uranium tetrafluoride into uranium metal.[25] The Isfahan facility apparently became operational in February 2004 and the IAEA reported in September that Iran plans to introduce 37 tonnes of yellowcake as feedstock at the UCF for conversion into UF_6.[26]

Plutonium and polonium

IAEA investigations in 2003 revealed that Iran had concealed the fact that it had developed the capability to separate plutonium from irradiated uranium targets. From 1988–92, plutonium separation experiments were conducted in a hot cell

at the Tehran Nuclear Research Centre, using uranium targets that had been produced at the Isfahan Nuclear Technology Centre and irradiated in the Tehran Research Reactor.[27] The IAEA reported in June 2004 that Iran had understated the amount of plutonium that it had clandestinely separated, although the amounts involved were only in the milligram range. In addition, the agency suggested that separation experiments took place more recently than previously declared.[28] Indeed, it is not known if the Iranians irradiated and processed further undeclared uranium targets.[29]

In February 2003 Iran revealed that it was building a previously unknown facility at Arak to produce heavy water.[30] It is said to have claimed initially that the heavy water would be for export only.[31] Iran has since declared its intention to build a new research reactor—the IR-40—that will be fuelled by natural uranium and use heavy water as a coolant and moderator.[32] The official application of the IR-40 will be research and development of radioisotopes for civil use. However, the reactor will also be capable of producing weapons-grade plutonium. One projection is that it could produce between eight and ten kilograms of plutonium annually, sufficient for one or two nuclear bombs.[33]

IAEA investigations also revealed that from 1989–93 Iran conducted experiments to irradiate bismuth to produce polonium. The latter has few civilian applications, yet it can be mixed with beryllium to form a neutron initiator for some types of nuclear weapons. Although Iran contends that it produced polonium to examine its possible utilization in nuclear batteries, the IAEA has stated that this explanation is 'not entirely adequate'.[34]

Iranian procurement

IAEA investigations into Iran's nuclear activities have revealed a complex procurement network that spans numerous countries and regions. In particular, the investigations have highlighted the significant role played by the clandestine proliferation network established by A.Q. Khan, the 'father' of Pakistan's nuclear programme. Information provided to Pakistan by the IAEA in 2003 resulted in Khan admitting to selling nuclear technology to Iran, as well as to Libya and North Korea.[35] Iran's acquisition of technology and assistance from Pakistan has been particularly important to the progress made in its enrichment programme, including the P-1 and P-2

centrifuges. Although Pakistani President Pervez Musharraf claims that the transfers to Iran were not officially authorized,[36] there are suspicions that senior military commanders, including Musharraf, and members of the intelligence services knew about the dealings.[37] Companies in Austria, Germany, Switzerland and other states in Europe and Asia have also been investigated by the IAEA as potential sources of technology and assistance for the Iranian nuclear programme.[38] There are concerns that Iran may also have acquired nuclear weapon designs from the Khan network. The basis for such fears is that Libya acquired documentation on nuclear weapons design and fabrication from the network in late 2001 or early 2002, including engineering drawings related to nuclear weapon components.[39]

Seeking Iranian compliance, 2003–04

IAEA Director General Mohammed ElBaradei submitted six reports to the agency's Board of Governors between June 2003 and September 2004 based on investigations related to Iran. Each report highlighted concerns about the country's previously undeclared activities and its repeated failure to provide a complete and accurate assessment of the nature and scale of its nuclear programme. To date, ElBaradei has stopped short of concluding that Iran is developing nuclear weapons. Rather, Iran has been reported as failing to meet its safeguards obligations with respect to the reporting of nuclear material, the processing and use of such material and the locations where it has been stored and processed. The reports have prompted a series of resolutions from the Board of Governors, expressing serious concern about Iran's behaviour and demanding full co-operation to resolve outstanding issues. However, the board has yet to find Iran in non-compliance with the NPT, despite the piecemeal nature of its responses to the IAEA and the increasingly confrontational stance that it has taken in 2004. As of September 2004, significant issues are yet to be resolved, including the true extent of the P-2 programme, the origin of the contamination found on centrifuge parts and Iran's failure to suspend all enrichment-related activities in line with requests made by the IAEA.

The US position

The Bush administration consistently lobbied its fellow IAEA board members throughout 2003–04 to find Iran in non-compliance with its NPT obligations

and to refer the matter to the United Nations (UN) Security Council, which has the power to introduce sanctions. The Bush administration's position reflects the traditional US approach to Iran, focussing on isolation and punishment to coerce it into changing its nuclear policy. As early as September 2003, US Ambassador to the IAEA Kenneth Brill stated that: 'the facts already established would fully justify an immediate finding on [sic] non-compliance by Iran with its safeguards violations'.[40] The Bush administration is concerned that Iran is trying to get close to the nuclear threshold, using the NPT as a cover, and with the aim of withdrawing from the treaty after giving six months' notice and declaring itself a nuclear weapon power.[41] The unsuccessful efforts of the White House to escalate the issue have included attempts to insert a 'trigger mechanism' into the IAEA Board of Governors' resolutions. If Iran does not meet the board's requests to provide a complete assessment of its activities, or if it engages in further serious breaches of its safeguards agreement, such a mechanism would prompt immediate referral to the Council. Despite its efforts to refer Iran to the Security Council, the Bush administration has not yet put forward a clear and coherent strategy for managing developments following such an escalation.

European 'engagement'

In contrast to the policy of the US, several European governments—notably those of France, Germany and the UK—have sought to engage Iran in dialogue in an attempt to influence its decisions on nuclear matters. The EU-3 have sought to delay finding Iran in non-compliance with the NPT in order to avoid an escalation of the issue and to leave further room for talks and negotiations. The European view is that, if the issue escalates too rapidly, Iranian decision-makers, notably hard line conservatives, might be encouraged to take the country further down the path towards nuclear weapons acquisition. The European preference is to keep Iran engaged by offering incentives for improved behaviour. For the most part this position has received the support of the Non-Aligned Movement, Japan, Russia and the IAEA itself. For example, Japan made investment in the Iranian oil sector conditional on Tehran signing an Additional Protocol to its safeguards agreement,[42] while Russia asked Iran to be more transparent and to sign the protocol. In October 2003, Moscow even announced a 12-month delay to the start-up of the

Bushehr nuclear power plant[43] and has insisted that spent fuel will have to be repatriated to Russia for the project to proceed.

A significant element of the European approach has been to tie development of EU–Iran trade relations to improved behaviour in the nuclear field. Iran is eager to enhance its economic position and concluding an EU Trade and Cooperation Agreement is viewed as pivotal to this; two-way trade totalled US$15.4 billion in 2001.[44] In June 2002, EU foreign ministers agreed to negotiate a Trade and Cooperation Agreement with Iran,[45] but it was made clear throughout 2003–04 that the nuclear issue and trade talks are 'interdependent'.[46]

Iran's deal with the EU-3

The European approach appeared to produce dividends in October 2003 when the foreign ministers of France, Germany and the UK visited Tehran at Iran's invitation. The trip took place just ten days prior to an IAEA deadline for Iran to co-operate fully with the agency, to sign an Additional Protocol and to suspend all enrichment and reprocessing activities. The main outcomes of the meeting were that Iran agreed to sign the protocol, to act in accordance with its terms prior to signature and to suspend all enrichment and reprocessing activities. Significantly, the agreement also recognized Iran's right to use nuclear energy for peaceful purposes. It was stated, furthermore, that Iran could expect to enjoy easier access to modern technology and supplies in a range of areas once the nuclear problems were fully resolved.[47]

Despite the opposition of numerous hard line conservatives to any concessions in the nuclear field, the agreement appeared to have the backing of the main power centres in the country, since Rowhani—appointed by Supreme Leader Ayatollah Ali Khamenei—was the chief negotiator.[48] The regime appeared to have made the decision to co-operate in order to avoid diplomatic and economic isolation, in particular from the EU. Ominously, however, Rowhani stated on 22 October that the suspension of enrichment 'could last for one day or one year' depending on whether Iran continues to believe that the deferment is beneficial.[49] Indeed, the question of what constitutes 'suspension' has since complicated the international community's dealings with Iran on nuclear matters.

Although there are significant differences between the American and European approaches towards Iran, the EU-3 have consistently underlined that their nego-

tiations with the country have only occurred after consultations with other members of the international community, especially the US. Indeed, the Bush administration publicly welcomed the EU-3 initiative in October 2003, although it stressed that everything depended on Tehran meeting its commitments. It has been recognized on both sides of the Atlantic that a unified approach is key to addressing the nuclear challenge posed by Iran. After the EU-3 visit to the Iranian capital, US Deputy Secretary of State Richard Armitage said that the administration believes a united front is 'especially critical in dealing with Iran's clandestine nuclear weapons program'.[50]

The Additional Protocol

The initial breakthrough by the EU-3 was quickly followed by further promising developments. In a move clearly driven by its desire to address growing international concerns, Iran signed its Additional Protocol in December 2003. The protocol must be ratified by the Iranian parliament (the Majlis) and the Council of Guardians before it can enter into force—the latter is regarded as the most influential political entity in Iran and is controlled by conservatives. However, the Iranian government has already agreed with the EU-3 to act in accordance with the provisions of the protocol prior to its ratification. Under the protocol, Iran must provide an 'expanded declaration of its nuclear activities' and give the IAEA 'greater authority in verifying the country's nuclear programme', including broader rights of access to information and sites, as well as the power to employ the most advanced technologies in the verification process. The Additional Protocol is an important element of the strengthened safeguards system implemented as a result of past failures to detect clandestine nuclear activity in Iraq and North Korea. It is a legal document signed by a state and the IAEA, appended to an existing safeguards agreement, granting the agency 'complementary inspection authority to that provided in underlying safeguards agreements'. A principal aim is to enable the IAEA to obtain assurances about declared and possible undeclared activities.[51]

Iran also promised the IAEA in December 2003 that it would suspend the operation and/or testing of centrifuges at the pilot plant at Natanz—with or without nuclear material. It also agreed to suspend the further introduction of nuclear material into any centrifuges and the installation of new centrifuges at the pilot

and commercial plants at Natanz. In addition, Iran agreed to 'withdraw nuclear material from any centrifuge enrichment facility if [sic] and to the extent practicable'.[52]

Outstanding issues and problems of interpretation

Despite Iran's concessions it soon became evident that it had decided to adopt a narrow interpretation of 'suspension', in contrast with the EU-3 and the IAEA, which embraced a much broader definition. Reports emerged in early 2004 that Iran was continuing to assemble centrifuges and to manufacture related components, thereby raising concerns that it was not living up to its side of the bargain. The official Iranian position was that the suspension did not cover the manufacture of centrifuge parts or the assembly of centrifuge machines. After further negotiations with the EU-3, the Iranian government agreed in February 2004 to widen the coverage of the suspension to encompass the assembly and testing of centrifuges and the domestic manufacture of centrifuge components, 'including those related to existing contracts'.[53] Importantly, the EU-3 pledged in return to help Iran resolve its outstanding issues with the IAEA.[54]

Despite this supplemental agreement, several companies in Iran continued to produce centrifuge equipment and hence the IAEA Board of Governors concluded in June that the suspension was not yet 'comprehensive'.[55] Although the agency confirmed Iran's claim that component production had been suspended at three workshops, three additional workshops 'belonging to private companies' were continuing to produce, 'claiming that they have not received adequate compensation' for the postponement or termination of contracts.[56]

Iran's failure to suspend fully all enrichment-related activities, its continued failure to provide a complete assessment of the P-2 programme, and outstanding issues regarding the contamination of centrifuge parts, all contributed to the toughening of the board's stance in mid-2004. A resolution passed in June was highly critical of Iran, although the European-sponsored text avoided escalating the matter and instead pressed for further dialogue. It stated that: the board 'deplores' that, 'overall, as indicated by the Director General's written and oral reports, Iran's co-operation has not been as full, timely and proactive as it should have been'.[57] The resolution also noted with concern Iran's decision to proceed with the production

of uranium hexafluoride at its UCF, which the board described as 'at variance with the Agency's previous understanding as to the scope of Iran's decision regarding suspension'.[58] Iran had announced in late April that it intended to perform hot tests of the UF_6 production line at Isfahan. However, the IAEA has concluded that, given 'the amounts of nuclear material involved', the testing 'would technically amount to the production of feed material for enrichment processes'. Unsurprisingly, the official Iranian position is that the suspension of enrichment-related activities does not include the production of UF_6,[59] a view that contrasts markedly with that of the IAEA. As a voluntary measure to restore international confidence, the board urged Iran in June to reconsider its decision to begin production testing at the UCF, as well as its decision to start constructing the heavy water research reactor at Arak.[60]

A deepening sense of crisis

Throughout 2004 Iran adopted an increasingly confrontational approach to the nuclear issue. Its growing belligerence reflects deepening frustration at the refusal of the IAEA to give the country a clean bill of health, as well as its apparent strategy of playing Europe and the US off against each other in order to delay any future punitive action by the international community for failure to comply with NPT obligations.

Tehran responded angrily to the June resolution and resumed construction and testing of centrifuges, including breaking IAEA seals on equipment at Natanz. As one commentator noted in July 2004, the Iranian reaction was a setback for the European approach of maintaining dialogue with Iran.[61] However, this has not been for lack of effort on the part of the members of the EU-3, each of which has become increasingly frustrated with Tehran's confrontational stance, its reneging on the deal to suspend enrichment-related activities and its failure to resolve outstanding issues with the IAEA.

In a further effort to reach a compromise, EU-3 representatives met with Iranian officials in Paris, France, at the end of July. Iran was apparently warned that, if it remained on its present track, the matter would have to be referred to the Security Council. The Europeans reportedly wanted Iran to declare that it would not withdraw from the NPT, to recognize that international concerns about its activities

were justified and to commit to keeping the EU-3 informed about its nuclear programme. The Iranians responded in a now predictable fashion, accusing the Europeans of bowing to US pressure and failing to uphold their side of the agreement to help resolve the international dispute over Iran's nuclear programme.[62] After the Paris meeting Iranian Foreign Minister Kamal Kharrazzi stated that: 'We still continue suspension on uranium enrichment, meaning that we have not resumed enrichment'. He also said, though, that the government was no longer committed to its agreement not to build centrifuges.[63] Mohammad Mousavian, Head of Foreign Policy at the Supreme Council on National Security, responded by warning that 'either Europe agrees to close Iran's file at the IAEA and transfer nuclear technology to Iran—in response Iran will ratify the Additional Protocol—or we cancel all previous agreements'. According to Mousavian, if ratification of the protocol was put before the Majlis under present circumstances, it would be rejected by the now conservative-dominated parliament. Prior to the meeting, Mohamoud Mohammadi, Deputy Chairman of the Majlis' Foreign Policy and National Security Commission, had said that ratification of the protocol was 'conditional' on the IAEA approving Iran's right to employ nuclear technology for peaceful purposes. Mohammadi declared that there is concern in Tehran that the protocol could be used as an instrument for putting political pressure on Iran.[64]

A final deadline for full compliance?

It appears that Europe's growing sense of frustration with Iran pushed the EU-3 closer to the position of the US in mid-2004. However, although Washington lobbied for a tough resolution at the September meeting of the IAEA Board of Governors, the EU-3 again succeeded in pushing through a version that allowed more time for negotiations—the Bush administration had wanted to impose a pre-US election deadline of 31 October for full co-operation and to insert a 'trigger mechanism'.[65]

Although Iran has been given more time to meet the board's demands, the resolution effectively sets a deadline for co-operation. It underlines that, in November, the board will decide 'whether or not further steps are appropriate' to ensure that Iran satisfies its obligations under its safeguards agreement. The phrase 'further steps' makes it clear, for the first time in two years, that referral to the Security Council is a likely option if Iran fails to meet the agency's demands. Key elements

of the resolution include a request for further information on, and explanation of, centrifuge contamination, the scope of the P-2 programme, and the timeframe for plutonium separation experiments. Furthermore, the board registered concern about plans to introduce 37 tonnes of yellowcake at the UCF and 'deeply regrets' Iran's view that the suspension does not cover all enrichment-related activities. Perhaps most significantly, it called on Iran to suspend immediately all enrichment-related activities, including the manufacture or import of components, the assembly and testing of centrifuges and the production of feed material at the UCF.[66] Collectively, these issues provide a yardstick against which the level of Iranian compliance can be gauged.

The angry response from Tehran was predictable, given its growing belligerence throughout 2004. Rowhani stressed that, if Iran was referred to the Security Council, it would limit co-operation with the IAEA, stop short-notice inspections and pull out of the NPT.[67] Moreover, although the government said that it would continue to observe a voluntary suspension of a narrower range of activities, including actual enrichment, it would continue to prepare feedstock for centrifuges. Disturbingly, Rowhani also asserted that Iran already had the technology to produce nuclear bombs.[68] His responses appear to reflect recognition by Tehran that the nuclear crisis may be entering a new and critical phase.

What next: showdown or climb down?

The answers to two questions will define how the Iranian nuclear situation unfolds in coming months. The first question is: will the IAEA Board of Governors refer the matter to the UN Security Council if Iran continues not to fully comply with the agency's demands? The answer depends primarily on Iran's behaviour as 2004 ends, specifically the extent to which it fulfils the board's requests or whether it maintains its policy of brinkmanship. If Iran does not give ground on any of the issues identified in the September resolution, it will be difficult for the EU-3 and other board members to continue to reject a referral. Indeed, if the board did not opt for a referral in such circumstances, it would risk further undermining the credibility of both the IAEA and the wider nuclear nonproliferation regime.

Given Iran's past success in playing Europe and the US off against one another, Tehran could well opt for a policy of partial compliance designed to undermine

the consensus needed to escalate the issue (to the point at which it is referred to the Security Council). This approach appears to have worked in the past, but it is difficult to judge what level of compliance would suffice to keep the board divided. Given Europe's growing frustration with Iran, it appears that, at the very least, the country would again need to stop producing components for and assembling centrifuges, and probably would need to widen its definition of 'suspension' to include the production of uranium hexafluoride. Such action could potentially undermine any support that the US may be able to build to initiate 'further steps'. Indeed, the Europeans are unlikely to back a tougher approach if it is perceived that Iran has made significant progress towards meeting the board's demands, and if there is a feeling that engagement is likely to produce further results.

The second question is: what type of action is the Security Council likely to take if the board opts for referral? An initial step could be to condemn Iran for not living up to its NPT commitments and to impose a timeframe for compliance with the demands of the IAEA. A second step could involve attempting to coerce Iran into compliance through the imposition of specific sanctions that would target foreign assistance for the country's nuclear programme. A third step could see the imposition of broader economic sanctions.

Identifying the options is one thing, but implementing them is something else. Indeed, beyond condemning Iran for not complying with its NPT obligations, it would be difficult to gain the necessary support among the permanent members of the Security Council (China, France, Russia, the UK and the US) for the imposition of even limited nuclear-related sanctions. In this respect, Russia has the most to lose economically, given the assistance that it has provided to Iran for the Bushehr plant. Of course, if Iran continued to pursue an increasingly confrontational line and to reject international demands to comply fully, the likes of China and Russia could potentially support tougher action by simply abstaining from relevant votes and not exercising their power of veto.

There are several factors that will have an influence on future Iranian calculations and international responses. The most notable are the policies of the second Bush administration and the current ascendancy of the conservatives in Iranian politics. The commonly held view is that his administration will maintain a tough policy on Iran. Indeed, the administration is reported to be looking at the pros and cons of

the military option as a last resort to prevent Iran from going nuclear. If the US remains ensnared in Iraq, which looks likely for the foreseeable future, this would probably undermine any support in Washington for military action. The second Bush administration, though, would not be hamstrung by the need to seek re-election in 2008. The possibility exists, therefore—however slim it may be—that it could plump for an incremental strategy of engagement in an effort to stop Iran from venturing further down the nuclear path. Obviously, this would depend on the character of Bush's national security team, but it should be remembered that Armitage stated in late October 2003 that Washington was prepared to engage in limited discussions with Iran on matters of 'mutual interest'.[69] Such a strategy would require Iran to comply with the IAEA's demands, although it would receive political and economic incentives in return.

Of course, US engagement would require the participation of Iran and this is far from guaranteed given the animosity that has existed between the two countries since the current Iranian regime took power following the revolution of 1979. Indeed, the rise of the conservatives in Iranian politics does make this seem unlikely. The conservatives took control of the Majlis in the parliamentary elections of February 2004 amidst accusations of foul play—the Council of Guardians banned numerous reformist politicians from running. According to a September 2004 report, more than 200 deputies from the Majlis have urged the Iranian government to defy the international community and to press ahead with enriching uranium.[70] Moreover, reformist President Mohammad Khatami cannot run in the 2005 presidential election because he will already have served the maximum two terms in office. The stage would appear to be set, then, for the conservatives to become even more entrenched in national politics. Unfortunately, this will increase the likelihood of Iran maintaining its policy of brinkmanship on the nuclear front.

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Endnotes

1 The views expressed or implied in this article are those of the author and do not necessarily represent those of the Joint Services Command and Staff College (JSCSC), the UK Ministry of Defence or any other government agency.

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