

# TURKEY AND THE BOMB

**Sinan Ülgen**

**NUCLEAR POLICY | FEBRUARY 2012**

**CARNEGIE EUROPE**

**CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE**

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## Summary

Though most states that want a nuclear weapon can get one through determined effort, the fact remains that most choose not to proliferate. Turkey is no exception. Not even the prospect of a nuclear-armed Iran is likely to push Ankara to develop its own nuclear weapons. The only circumstance where such a scenario would acquire a degree of likelihood is a breakdown in Turkey's security relationship with the United States.

As a member of the North Atlantic Treaty Organization, Turkey is host to Alliance nuclear weapons. Relying on this nuclear deterrent, Ankara has a very clean nonproliferation record and is actively pursuing a range of conventional forces to protect it from modern threats. It is unlikely that Turkey would voluntarily damage its relations with key allies and seriously complicate its international standing by choosing to proliferate.

But proliferation is not the whole story. Turkey is intent on transitioning to nuclear power and has disclosed an ambitious nuclear program that shapes Ankara's viewpoint on international nuclear governance. As a strong proponent of states' rights to the peaceful use of nuclear energy under the Nuclear Non-Proliferation Treaty, Turkey argues against some international efforts to constrain the exchange of nuclear-sensitive materials. Ankara even supports Iran's rights to a civilian nuclear program. It has attempted to broker nuclear-fuel-swap deals with Tehran and favors robust diplomacy and economic cooperation to defuse the tension surrounding Iran's nuclear program.

Thus far, Turkey has invested in a number of technologies needed to form the basis of its own civilian nuclear energy program, but it lacks the relevant infrastructure to enrich uranium or reprocess spent nuclear fuel. On the outside chance Turkey desired the bomb, those factors make it unlikely that Ankara could quickly develop a nuclear weapon. It has left its nuclear options open, however, refusing to rule out acquiring enrichment technology in the future.

All things considered, Turkey is a state more interested in soft than hard power. If faced with a nuclear trigger, Ankara would likely continue to strengthen ties with the traditional guarantors of its security.



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## The Theoretical Debate

Policymakers worry that an Iranian nuclear weapon will force Iran's neighbors to explore the nuclear option. The oft-repeated argument claims that an Iranian nuclear weapon would lead to a regional arms race. Turkey, along with Egypt and Saudi Arabia, are the countries most often cited as likely to develop indigenous nuclear capabilities to counter Iran.

In fact, warnings about a Middle Eastern regional arms race are eerily similar to the dire Cold War-era warnings about the likelihood of a global nuclear arms race. In 2009, Brent Scowcroft, the former national security adviser to presidents Gerald Ford and George H. W. Bush, told the Senate Foreign Relations Committee, "If Iran is allowed to go forward, in self-defense or for a variety of reasons we could have half a dozen countries in the region and 20 or 30 more around the world doing the same thing just in case."<sup>1</sup> U.S. Secretary of State Hillary Clinton told a Senate Appropriations Subcommittee, "A nuclear armed Iran with a deliverable weapons system is going to spark an arms race in the Middle East and the greater region."<sup>2</sup> Former Bush administration official John Bolton told the United States House of Representatives' Committee on Foreign Affairs, "If Iran obtains nuclear weapons, then almost certainly Saudi Arabia will do the same, as will Egypt, Turkey and perhaps others in the region, and we risk this widespread proliferation even if it is a democratic Iran that possesses nuclear weapons."

In 1957, a secret Central Intelligence Agency (CIA) National Intelligence Estimate concluded, "within the next 10 years countries could, by exploiting the potential of their nuclear research and power programs, produce at least a few nominal (20 to 40 kiloton) nuclear weapons using only native resources."<sup>3</sup> Believing that only France, Canada, Sweden, and West Germany had the financial wherewithal to pursue an indigenous capability, the United States worried that a European weapons effort would spark a cascade of proliferation beginning in East Germany and ending in Japan. These worries contributed to the American decision to forward deploy nuclear weapons at military bases throughout Europe.

In both cases, policymakers assumed that in an anarchical, self-help world, individual states will logically seek out nuclear weapons to defend themselves from annihilation. While useful, this security paradigm fails to explain the relatively small number of states with nuclear weapons, compared to the large number of states capable of building those weapons.

History has shown that states willing to commit resources and time can overcome technical obstacles and successfully develop first-generation nuclear weapons. However, most nuclear-capable states have chosen to remain non-nuclear. The decision to pursue nuclear weapons is rooted in technical capability combined with decisionmaker intent. States are subjected to a series of proliferation constraints and the decision to proliferate is rarely easy. Turkey is no exception.

There are a number of considerations that are likely to influence Turkish policymakers' decision about whether to proliferate. Turkey has a very clean record in terms of nonproliferation. It is party to all the relevant international instruments and regularly engages in a number of outreach activities to spread the acceptance of nonproliferation rules and norms in its own region. Turkey

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is also a long-time member of the North Atlantic Treaty Organization (NATO) and as such is intricately involved in the Western approach to deterrence. Turkey considers its relationship with the United States to be the key to its own security in a region beset by instability. And as threatening as a nuclear-armed Iran may be for regional stability, the “domino effect” of proliferation that may follow Tehran’s acquiring of nuclear weapons will not in itself be sufficient to trigger a Turkish proliferation.

To counter threats like Iran, Turkey has relied more on the deterrence of others and bulking up its conventional forces. Thus Turkey remains one of the NATO nations hosting forward-deployed nuclear weapons. Ankara’s position on the debate within NATO about the future of these weapons is therefore critical. At the same time, Turkish diplomacy has been active to defuse the tension surrounding Iran’s nuclear program. Turkey even took the lead with Brazil in 2010 to sign a nuclear-fuel-swap agreement with Iran.

Proliferation, however, is not Turkey’s only nuclear concern. Turkey is intent on transitioning to nuclear power. It has disclosed an ambitious nuclear program despite the global rise in nuclear skepticism following the Fukushima accident in March 2011. In the end, and short of the unlikely scenario of a total dismantling of the security partnership with the United States, Ankara will remain committed to the NATO security guarantee, while developing its indigenous intelligence, surveillance, and information management capabilities.

## Turkey’s Nonproliferation Policies

Turkey has a long history of supporting international policies designed to stop proliferation. During the Cold War, these efforts were part of a larger NATO attempt to maintain strategic stability and military parity with its Warsaw Pact adversaries. Since the advent of the nonproliferation regime, Ankara has

adopted strong nonproliferation policies due in large part to its NATO membership, location at the apex of the Middle East, and its frontline-state status during the Cold War.

Turkey is a signatory of the Nuclear Non-Proliferation Treaty (NPT), the Comprehensive Test Ban Treaty, the Chemical Weapons Convention, and the Biological Weapons Convention—the four most comprehensive treaties governing the spread of weapons of mass destruction (WMD). In general, Ankara promotes nuclear disarmament, and Turkey welcomed U.S. president Barack Obama’s Prague Speech on nuclear weapons, in which he committed the United States to nuclear disarmament while warning that the process “may not happen during [his] lifetime.”<sup>34</sup> The tone of the American president’s speech fit nicely with Turkey’s nuclear outlook and reinforced Turkish thinking about the subject.

In recent years, Ankara has been advocating the implementation of a regional nuclear weapons-free zone, which officials see as part of an overall strategy to decrease tensions in the region. This, in addition to its staunch commitment to the nonproliferation agenda, gives Ankara the image of being a reliable and committed international partner and helps decrease tensions in the volatile Middle East. Efforts to promote stability have become the centerpiece of Turkish security and foreign policies.

Regional upheaval and the fact that other states in the region have failed to follow Turkey’s example continue to shape Ankara’s nonproliferation outlook. For example, Israel, India, and Pakistan are nuclear-weapon states outside of the NPT framework and have elected not to sign the treaty. Algeria, Sudan, and Israel have not signed the Biological Weapons Convention, and Egypt and Syria have thus far refused to sign the Chemical Weapons Convention. Iran is pushing ahead with its nuclear and missile programs. No state in the region is a formal member of the Missile Technology Control Regime, and many states in the region are known to have pursued nonconventional weapons in the past.

Turkey hopes that international efforts to establish a regional nuclear weapons-free zone will eventually lead to global disarmament. Ankara has always maintained that this process will take decades, but it sees the lessening of regional tensions as the first step toward achieving this goal.

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## **Iran and Turkey: A Delicate Balancing Act**

Turkish-Iranian relations have long been dominated by their history of rivalry, stemming from competing imperial and religious ambitions. In recent history, from 1979 until the late 1990s, Turkish officials viewed Iran with contempt because of the regime’s alleged support for Islamic extremists seeking the overthrow of Turkey’s secular republic and Iran’s alleged support for Kurdish

separatists in northern Iraq and southern Turkey. Relations began to thaw after the two countries agreed to work together to combat Kurdish terrorism. The agreement coincided with the rise of the Free Life Party of Kurdistan—the Iranian branch of the Kurdistan Workers’ Party.

The latest Western efforts to sanction Iran began in 2003,<sup>5</sup> which roughly coincided with the election of current Turkish prime minister Recep Tayyip Erdogan’s Justice and Development Party and the introduction of its new “zero problems” foreign policy. In contrast to Turkey’s previous Iran policy, the Justice and Development Party has publicly embraced the Islamic Republic and has sought ways to increase diplomatic and economic cooperation. Iranian and Turkish diplomatic relations have flourished in recent years due to a growing economic relationship and security cooperation against common threats. Between 1991 and 2011, Turkey’s exports to Iran increased from \$87 million

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to \$3.2 billion; its imports from Iran increased from \$91 million to \$11.6 billion during the same time period due to Turkey’s growing demand for Iranian natural gas. Trade volume between the two countries reached \$15 billion, albeit with an \$8 billion Turkish trade deficit. Though the bulk of trade is tied to natural gas, Iran has shown some interest in opening its economy to Turkish investment. The other important industry is tourism—every year 1 million Iranians visit Turkey—and Iran is a key conduit for Turkish trucks taking products to Central Asia.

While insisting on the need for Iran to cooperate with the International Atomic Energy Agency (IAEA) and to ensure the transparency of its nuclear activities, Prime Minister Erdogan has supported Tehran’s controversial enrichment and nuclear program. This, in turn, has drawn the ire of the United States and its Western allies who have been working hard to financially and diplomatically isolate the Islamic Republic. Since 1979, the United States has generally pursued a coercive sanctions-based policy. They seek to crack down on Iran for its failure to answer a number of outstanding questions regarding its previous nuclear activities and take other steps that would reassure the international community that its nuclear dreams are exclusively peaceful. But according to the Turkish Foreign Ministry, the Turkish-Iranian relationship is defined by the shared belief in noninterference, amicable neighborly relations, and economic and security cooperation. These principles have led the Turkish government to publicly proclaim its preference for dialogue and intense diplomacy to resolve the Iranian nuclear crisis, meaning that Ankara has not been an enthusiastic supporter of U.S. and European sanctions policy.

However, it is incorrect to conclude that Turkey is comfortable with the idea of a nuclear-armed Iran. From the outset, Turkey and its Western allies agreed that Iran should not have nuclear weapons. A nuclear-armed Iran would undermine regional stability, a bedrock principle of Turkey’s foreign and security

policy. Without a doubt, an Iran with nuclear weapons would also pose problems for Turkish foreign policy and regional ambitions. While Turkey does not feel directly threatened by Iran, if Tehran had nuclear weapons, it would certainly alter the balance of power and upset strategic stability. There is also the risk that an Iranian nuclear weapon could prompt other states in the Gulf to take a series of steps to ensure their own security. The possibility of a regional arms race would seriously alter the region's landscape.

Turkey's approach to convince Iran to be more cooperative differs from many of its traditional Western allies. Though President Barack Obama has sought to invite Iran into direct dialogue, Tehran has not accepted the offer of direct diplomacy. As a result, Washington reverted to its strategy of forcing behavioral change through the threat and finally the reality of sanctions. The Turkish policy regarding sanctions is a microcosm for Turkish nuclear diplomacy in general. Turkey is willing to accept the multilateral United Nations (UN) sanctions because they deride Iran for not abiding by the binding demands of the UN Security Council (UNSC) and because they are backed by the legitimacy of the United Nations. However, Turkey has thus far refused to support American and European sanctions because it believes that would only strengthen the Iranian hard-liners and disproportionately affect the Turkish economy. Moreover, the government views the West's demand that Iran halt enrichment as a clear violation of Iran's rights under the NPT to pursue peaceful nuclear activities.

Ankara has thus engaged directly with Iran on a number of diplomatic issues, consistently arguing that coercive sanctions are counterproductive because they encourage rash behavior. Moreover, there is a belief that sanctions are simply the prelude to military intervention by either the United States or Israel. The potential fallout from a military strike, the threat of the Middle East being sucked into a regional war, and the possibility that Turkey could be targeted by Iranian missiles in a counterstrike has strengthened Ankara's resolve to negotiate a settlement.

Given the stakes, it is clear that Turkey would never have sat idly on the sidelines while Western powers negotiated with Iran. Wary of setting a precedent that limits the rights of states to pursue nuclear technology, Prime Minister Erdogan has defended Iran's right to enrichment, while staunchly reaffirming his country's belief that Iran should not acquire nuclear weapons. Diplomatically, Foreign Minister Ahmet Davutoglu has acted as an important intermediary between Tehran and the West. In times of diplomatic deadlock, Davutoglu has worked to overcome the political obstacles to resolve the impasse.

One such instance took place in May 2010, when Iran, Brazil, and Turkey brokered a deal that would have had Iran send 1,200 kg of low-enriched

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uranium (LEU) to Turkey, and then the LEU would be sent to Russia and France for further enrichment and fuel fabrication. The Brazil, Iran, Turkey joint declaration stipulated that Iran would receive 120 kg of uranium fuel for the Tehran Research Reactor in exchange.<sup>6</sup> The joint statement varied little from a proposal put forward by the United States and its European allies a year earlier that would have also had Iran send 1,200 kg of LEU to Turkey and then on to Russia and France. It was widely reported that Iran had initially agreed to the Western-led and -backed fuel-swap proposal in October 2009, before internal domestic political pressure led to Iran walking back from the agreement.<sup>7</sup>

The May 2010 Iran-Brazil-Turkey joint declaration was announced just days before the UN Security Council passed resolution 1929, which ratcheted up the sanctions against Iran for not complying with IAEA and UN Security Council resolutions, including answering IAEA questions about its previous nuclear activities. Turkey and Brazil ultimately voted no to the sanctions, believing that they countered the spirit of the joint declaration and undermined the trust earned by the agreement. On the other side, Western nonproliferation analysts were critical of the deal because, at the time, the amount of LEU Iran would have shipped to Turkey would not have seriously hampered Iran's ability to quickly develop a nuclear weapon. Tehran would have still retained enough LEU for one nuclear weapon had it decided to further enrich its LEU to weapons grade. In addition, the deal did not address the 20 percent enriched uranium that Tehran currently has at its disposal, whether Iran would continue to enrich to this level even if it received foreign fuel, and whether Iran would commit not to enrich beyond this level.

The crux of the U.S. and European strategy was to carve out a two-year window for negotiations by removing enough LEU to prevent Iran from being able to quickly develop a nuclear weapon. Turkey, on the other hand, argued that the deal was an important confidence-building measure and believed that it had succeeded where the major powers had not. Turkey's no vote seriously strained its relations with the United States, which was counting on Ankara to support Washington's efforts to punish Iran for its nuclear intransigence.

Since the signing of the joint declaration and the very public rebuke by many members on the UNSC, Turkey has changed tactics and has once again assumed the role of facilitator, often acting as a conduit for messages from the West to Tehran and vice versa. In January 2011 diplomats from the United States, the United Kingdom, France, China, Russia, and Germany met their Iranian counterparts in Istanbul for discussions about the Iranian nuclear program. Turkey did not take part in the negotiations and only served as the host of the event. The next meeting between this group of the five permanent members of the Security Council plus Germany and Iran is also scheduled to take place in Turkey. Given the stakes, Ankara will likely remain an active diplomatic partner in the West's quest to resolve the Iranian nuclear crisis. However, Turkey has said over and over again that it believes Iran has the

right to enrichment and nuclear technology. Ankara's position is very clear—it will support the UNSC sanctions but will leave the enforcement of unilateral American and European sanctions up to private Turkish businesses, despite the intense pressure to comply with these measures. Moreover, Turkey will remain staunchly opposed to any military action and will maintain that all avenues of diplomacy must be exhausted, even though the controversy surrounding the conclusion of the joint declaration has prompted Ankara to change tactics and work behind the scenes to ensure that its interests are being maximized.

Clearly, the desire to be a regional power and exert greater influence over regional affairs has contributed to Turkey's position on Iran. But Ankara's relations with Tehran recently came under stress thanks to the issue of missile defense and the two countries' diametrically opposite priorities concerning the future of the Syrian regime.

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## The Missile Defense Debate

After the fall of the Soviet Union, Turkey became acutely aware of the threats posed by the growing arsenals of ballistic missiles across the Middle East. This reevaluation of Turkey's main security threats that took Ankara's attention away from the Soviet Union and directed it toward its neighbors coincided with renewed U.S. and Israeli emphasis on the development of ballistic missile defenses. The aim of these systems was to defend against the growing missile threat in the Middle East, posed primarily by Iran and Syria. Turkish security planners, who have long harbored suspicions about the intention of regional leaders, concluded that they should explore ballistic missile defenses or run the risk of being vulnerable to retaliatory missile strikes should hostilities break out in the Middle East.

Given the technical constraints in Turkey's domestic defense industry, officials turned to a number of foreign suppliers for the technology. They concluded that the joint U.S.-Israeli Arrow system would best serve Turkey's immediate security needs because the system had been engineered to counter the missiles deployed by Turkey's Middle Eastern neighbors. Between 1996 and the mid-2000s, Turkish and Israeli officials held dozens of meetings about the sale of Israel's powerful Green Pine Radar and its Arrow II interceptor. The United States was initially opposed to the system's export but eventually acquiesced and encouraged Israel to deepen discussions with Turkey. The United States provides most of the funds for the Arrow program, making the formal approval of the U.S. and Israeli governments necessary for export.

Despite lengthy discussions, diplomatic, financial, and logistical problems prevented Ankara from acquiring ballistic missile defense capabilities. Ankara has continued to pursue the technology but has expanded the list of potential

suppliers to include systems like the U.S. Patriot, Russia's S-400, China's FD-2000, and the Eurosam Samp/T produced by a French-Italian partnership. The project is reportedly meant to be separate from the larger missile defense shield that NATO wants to deploy throughout Europe.

During the 2010 NATO summit in Lisbon, the 28 allies fiercely debated whether to adopt ballistic missile defense as an Alliance-wide mission. The Obama administration was seeking to integrate the U.S. system with that of its European allies to better defend against Iranian ballistic missiles. The Turkish position was a source of great consternation and misunderstanding during the debate. Turkey maintained that a ballistic missile defense system should not worsen its relationship with neighboring countries, that the system should cover all Turkish territory, and that its components on Turkish territory should be operated by the Turkish military.

An accord was reached only after the allies agreed not to name Iran and Syria as specific threats, and to put off any decisions about who will operate the system, in accordance with Turkish demands. Turkey also agreed to host the early warning radar on its territory.

Turkey's reluctance to name Iran and Syria was grossly misunderstood by the international press and the other NATO allies. In general, ballistic missile defense as a concept is controversial because a robust system, if it were technically effective, has the potential to upset strategic stability. Opponents of the system argue that it may encourage the target state to develop systems to overwhelm and defeat even the most advanced ballistic missile defenses.

In light of these facts, Ankara worried that specifically naming Iran as a threat to the Alliance would prompt hard-liners in Tehran to accelerate their missile and nuclear programs to defeat the system. Turkey adopted a capabilities approach and requested that its NATO partners focus on all states that were developing ballistic missile capabilities as opposed to a more limited number

of states like Iran and Syria on the basis of their perceived intent to threaten the Alliance or its regional partners. In addition, officials believed the system should be defensive and not single out any country as a target.

Despite Turkey's careful diplomacy, Ankara's decision to host the early warning radar system on its territory has provoked Tehran. In mid-December 2011, Hussein Ibrahim, the acting president of the Iranian Parliament's Foreign Policy and National Security Commission, stated that Iran would retaliate by striking the radar site in Turkey should it be attacked. This warning came in the midst of a growing rift between Ankara and Tehran about

the behavior of the regime of Bashar al-Assad in Syria. While it is striving to nudge Assad toward reforms, Tehran is inclined to support the Assad regime at all costs. The deterioration of Turkey's relationship with Iran is likely to have

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## The NATO Debate and the Future of Tactical Nuclear Weapons

Nuclear deterrence, as many of these issues, has its roots in the Cold War. Then, the United States entered into agreements with its NATO allies to extend the threat of retaliation against an adversary with nuclear weapons. Known as extended deterrence, the policy obligates the United States to retaliate against a nuclear state with its own nuclear forces in the event that any NATO ally is attacked. In order to maintain credibility, reassure allies, and decrease the likelihood of some European powers building their own nuclear weapons, the United States forward-deployed nuclear weapons in Europe. Several NATO states, Turkey included, agreed to provide bases for these weapons and aircraft, as well as crews to deliver them pursuant to NATO authorization. To further share the moral and physical burdens of nuclear deterrence, Alliance members dedicated military equipment and crews to participate in refueling and other operations necessary to conduct potential nuclear missions.

As part of its NATO commitment, Turkey has hosted American nuclear weapons for nearly six decades. In the past, Turkey's main reason for hosting American nuclear weapons was to deter its historic regional rival, the former Soviet Union. Yet past events, like the unilateral American decision to remove its medium-range ballistic missiles from Turkey in exchange for the former Soviet Union to do the same in Cuba, convinced many in the Turkish security establishment that the United States would sell out its allies if it were directly threatened with annihilation by the USSR. These feelings were exacerbated after the United States imposed an arms embargo on Turkey for its invasion of Cyprus in 1974. These suspicions can be traced back to the hesitancy of many NATO member states to include Turkey in the Alliance over fears that its proximity to the unstable Middle East could embroil NATO in a war there.

After the collapse of the Soviet Union, the weapons' strategic value waned, raising questions about their military value and whether or not the forward deployment of tactical nuclear weapons enhances NATO security. Turkish officials, meanwhile, have believed that NATO's weapons have deterred its proliferation-prone neighbors like Iran, Syria, and Iraq under Saddam Hussein. Turkey was actively involved in the drafting of NATO's most recent Strategic Concept, which stated: "Deterrence, based on an appropriate mix of nuclear and conventional capabilities, remains a core element of our [NATO] overall strategy. The circumstances in which any use of nuclear weapons might have

to be contemplated are extremely remote. As long as nuclear weapons exist, NATO will remain a nuclear alliance.”<sup>8</sup>

However, the debate about whether these weapons should continue to be stationed in Europe is heating up, and the calls to remove them from European soil have grown louder in recent years. While planning for the 2010 NATO summit in Lisbon, the allies fiercely debated the status and practicality of the American tactical nuclear weapons in Belgium, Germany, Italy, the Netherlands, and Turkey. Many within the Alliance advocated for their removal, while others opposed, saying they should remain until the nuclear threat to NATO is removed.

Turkey quietly supports maintaining the weapons on its territory and expects other NATO countries to continue their tactical nuclear weapon stewardship as part of the Alliance’s burden-sharing principle. Turkey hosts an estimated 90 B61 gravity bombs at Incirlik air force base near Adana; 50 bombs are slated for use by the American air force, with the other 40 to be delivered by the Turkish air force.<sup>9</sup> But the Turkish air force does not have aircraft certified for nuclear missions. Moreover the United States does not permanently maintain a nuclear fighter wing at Incirlik. Should these weapons have to be used, the United States would have to fly in a nuclear fighter wing from another European country. The scenario therefore raises a number of questions about these weapons’ operational readiness. Though Ankara has gone out of its way to emphasize its support for a nuclear weapons-free world, it has acknowledged that these efforts will likely take many years, prompting the need to maintain a credible minimum deterrent until disarmament is achieved. Turkish security elites also view nuclear weapons as a status symbol, believing that their presence firmly solidifies the U.S.-Turkish defense partnership. There is an assumption that if the weapons were removed, Turkey’s status in NATO would be negatively affected.<sup>10</sup> The weapons are not only for deterrence but have a number of political implications and have come to symbolize the United States’ commitment to Turkey’s defense.

The direct link that the forward-deployed nuclear weapons establish between Turkey and the United States is also of relevance to those Turkish policymakers that are increasingly uncertain about NATO’s willingness and ability to honor its collective defense commitments under Article 5 of the North Atlantic Treaty. They have some reason to be wary. During the first Iraq war in 1991, the Turks requested the invocation of Article 5 so as to obtain a NATO-sponsored missile defense system. That request was blocked for several weeks at the NATO Council, and the episode is still fresh in the memory of the Turkish security establishment. This inability of the Alliance to act decisively at a time when Ankara believed itself to be threatened by Saddam Hussein’s weapons of mass destruction convinced Turkish policymakers to strengthen their security relationship with the United States as a hedge against the inability of NATO to honor its commitments to Turkey in a time of crisis.

The Turkish position on tactical nuclear weapons is also shaped by the fact that the question of nuclear weapons has not exactly been the subject of an internal debate in Turkey. Unlike in many Western European countries, there is no visible antinuclear political force in the country. The Green movement is politically weak, almost to the extent of being nonexistent. Remaining political parties have clearly prioritized the national security angle of the debate and have not developed an antinuclear platform. As a result there is no domestic pressure buoyed by political forces for the removal of these weapons from Turkish territory.

Moreover, Turkey does not face an imminent decision on the future of its potentially dual-capable aircraft. The F-16s that are at the disposal of the Turkish air force do not have to be renewed until the mid-2030s. There is therefore no economic pressure that forces a decision on Turkish policymakers.

American proponents of tactical nuclear weapons in Europe have long argued that their presence has dissuaded nuclear latent countries from pursuing an indigenous nuclear weapons program and that their removal might prompt states to develop their own weapons to deter emerging threats. Some argue that Iran's controversial nuclear program could catalyze a Turkish nuclear weapons effort if the United States were to prematurely remove its nuclear weapons from Turkey. Susi Snyder and Wilbert van der Zeijden countered these claims in a report for IKV Pax Christi, writing that Turkish officials were "slightly offended by the suggestion, and pointed out that Turkish governments have consistently denied that they would even consider renegeing on their NPT commitment and developing their own arsenal."<sup>11</sup>

In fact, Turkey indicated that it would support the withdrawal of American tactical nuclear weapons if it was consulted beforehand and NATO was operating in consensus. Premature removal by the Americans could hurt the Alliance, but an Alliance-wide agreement would not be opposed by Ankara if a consensus could be reached. In its place, Ankara believes that NATO could rely on its conventional forces or other strategic and nonstrategic American nuclear forces for deterrence.

Thus far, Turkish officials haven't directly addressed the issue, suggesting a certain amount of reticence about throwing their full support behind a withdrawal of tactical nuclear weapons. Despite this, the growing debate within NATO will likely force the Alliance to address this topic in the not so distant future, prompting the need for a serious reevaluation of NATO's burden-sharing principle. For Turkey, the forward deployment of American tactical nuclear weapons speaks to the larger issue of Turkey's stance on nuclear deterrence and how Ankara envisions reconciling its commitment to disarmament with its immediate security concerns.

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## Turkey's Nuclear Energy Ambitions Driving Its Nuclear Policy Diplomacy

Nuclear energy, however, is another matter entirely. For more than four decades, the Turkish government has proposed developing an indigenous nuclear energy program. And beginning in 2006, Turkey was among the thirteen countries in the Middle East that announced intentions to begin developing a new or long-dormant nuclear energy program.<sup>12</sup> The country is part of a growing movement of developing and developed states that are pursuing nuclear energy as a way to decrease carbon emissions while also decreasing reliance on unstable foreign energy suppliers.

Turkey's nuclear policy is influenced strongly by the fact that it is a non-nuclear-weapon state seeking to develop an indigenous nuclear energy program. Under Article IV of the NPT, every signatory has the right to pursue peaceful nuclear activities and the nuclear supplier countries are obligated to facilitate the exchange of nuclear technology and material. In recent years, the Turkish interpretation of Article IV has been a source of friction between Turkey and some of its Western allies, especially when it comes to international efforts to limit nuclear-aspirant countries from accessing enrichment and reprocessing technologies. Turkish officials view these efforts as a threat to Turkey's own nuclear ambitions and have challenged proposals designed to make it harder for a state to access nuclear technologies.

This has come at a time when Turkey's surging economy and growing population is straining the country's current electrical infrastructure. Electricity demand has on average grown at more than 8 percent per year in the last decade, prompting Turkey to import almost 75 percent of its primary fuel sources just to meet internal demand. According to the estimates of Turkey's energy regulator, the growth in electricity demand will average 6.5 percent per year to 2030. Natural gas makes up 48 percent of all energy imports, making Turkey extremely susceptible to price fluctuations and market disruptions.

To combat these vulnerabilities, the Turkish government has moved aggressively to increase the capacity of its existing power plants while also planning for the eventual introduction of a whole slew of alternative energy projects. The government plans for renewable energy, fossil fuels, natural gas, and nuclear energy to each provide 25 percent of Turkish electricity by 2040, which corresponds to an established capacity of 30,000 megawatts. The goal is ambitious and many analysts have argued that the timeline is unrealistic, especially with regard to Turkey's nuclear ambitions.<sup>13</sup>

These ambitious plans have made Turkey one of the most potentially lucrative and active nuclear markets in the world. The government is planning for nuclear energy to account for 5 percent of Turkish electricity production by

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**Turkey's nuclear policy is influenced strongly by the fact that it is a non-nuclear-weapon state seeking to develop an indigenous nuclear energy program.**

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2023. Turkey's ambition as an emerging nuclear power state also influences Ankara's stance on the transfer and adoption of sensitive nuclear technologies, including uranium enrichment. Enrichment and spent fuel reprocessing technologies are useful for large-scale nuclear programs<sup>14</sup> but are also necessary for the production of fissile material for nuclear weapons. Acquiring fissile material as well as these technologies is the most difficult and most expensive part of the nuclear fuel cycle. For this reason, limiting the spread of these technologies has been the focus of international efforts to prevent proliferation.

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**The government is planning for nuclear energy to account for 5 percent of Turkish electricity production by 2023.**

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## To Enrich or Not to Enrich?

Recent trends in supply-side controls are driving many aspects of Turkey's current nuclear diplomacy. From a proliferation standpoint enrichment and reprocessing technologies are inherently dual use. The process to enrich uranium for reactors is virtually the same as producing fuel for a nuclear weapon. The difference lies in the percentage of uranium-235 in the fuel. Light-water reactors use 3 to 5 percent enriched uranium fuel, while the core of nuclear weapon uses 90 percent enriched uranium. Reactor fuel is referred to as low enriched uranium, and uranium enriched to the 90 percent level is called highly enriched uranium (HEU). In both cases, uranium gas is fed through a series of centrifuges—rapidly spinning tubes that separate uranium-235 from uranium-238. The heavier U-238 naturally moves to the wall of the centrifuge and the lighter U-235 collects in the center. The lighter, more fissile U-235 is collected in a scoop and fed to another centrifuge. The process is repeated over and over again until the desired purity is reached. Reprocessing is the process that separates plutonium from spent reactor fuel. Like the very highly enriched uranium necessary for nuclear weapons, plutonium can be used in a nuclear explosive device.

Despite its robust commitment to pursue nuclear energy, Turkey has not announced any plans to pursue enrichment or reprocessing, but has hedged about its future plans, leaving open the possibility that it may decide to pursue these technologies at a later date. Indeed speaking about NPT states' rights to uranium enrichment in the context of Iran, Prime Minister Erdogan stated that if needed for its civilian nuclear program Turkey would also go ahead with domestic uranium enrichment.<sup>15</sup> One thing standing in the way of its access to technology, however, will be the barriers to access to critical nuclear technologies that have been established over the years.

Since the early 2000s, nuclear supplier countries like the United States, France, Japan, and Korea have made a more strident effort to control the transfer of nuclear technology to recipient states. Many arms control advocates

believe that placing controls on the spread of centrifuge, enrichment, and reprocessing technologies is vitally important to decreasing the threat of proliferation. The recently signed nuclear cooperation agreement between the United States and the United Arab Emirates is the most striking example of these new efforts. The agreement explicitly precludes the UAE from enrichment and reprocessing.<sup>16</sup>

### **The Fuel Bank Solution**

One of the ideas gaining the most traction is for the establishment of a multilateral enrichment center to provide nuclear fuel to NPT member states that are deemed to be in good standing with the IAEA. The IAEA has recently approved two international fuel banks proposed by Russia and the Nuclear Threat Initiative (NTI).<sup>17</sup> The NTI model gives the IAEA the responsibility for maintaining reserve stocks of low-enriched uranium that could be released under certain circumstances or enrichment centers would be internationally controlled and operated. The idea is that states developing nuclear energy would not need enrichment or reprocessing technologies or centers, drastically reducing the likelihood of clandestine proliferation.

When the multilateral fuel bank initiative was discussed by the IAEA Board of Governors in September 2009, Turkey did not voice its support for the initiative. Turkish policymakers are still keenly aware of the Bush-era initiative prohibiting the transfer of sensitive technologies including enrichment to countries that did not already possess such an infrastructure. Prompted by the crisis surrounding Iran's nuclear program and the recent push by some Middle Eastern states to acquire critical technologies, nuclear suppliers have proposed a series of measures to tighten export controls. The most restrictive proposal was put forward by the United States in 2004. The proposal sought to restrict the export of sensitive enrichment and reprocessing technologies to states that do not already possess these capabilities. The Bush administration argued that these restrictive measures were necessary to curb the spread of enrichment and reprocessing technologies, especially after the revelations about Pakistani scientist A. Q. Khan's illicit proliferation network and Iran's nuclear program. In its place, nuclear-aspirant states would be able to receive nuclear fuel from an internationally controlled consortium or fuel bank.

In 2009, the multilateral fuel bank initiative was resisted as a violation of the rights granted to signatory states of the NPT. The proposal initially rekindled the fears of countries like Turkey that interpreted it as a measure that would help to substantiate demands to prohibit the transfer of sensitive technologies to aspirant countries. Similarly it stoked fears that the establishment of multilateral fuel banks could be used to usurp the sovereign rights related to uranium enrichment.

The proposal bounced around the Nuclear Suppliers Group (NSG), an international organization that seeks to develop guidelines to govern nuclear-related exports, for four years without winning the necessary consensus for adoption.<sup>18</sup> Eventually, the United States joined the NSG's other 44 members in supporting a criteria-based system for the transfer of enrichment and reprocessing technologies. The approach, which was first put forward by Canada, establishes a set of objective and subjective criteria a recipient state must meet before being allowed access to sensitive nuclear technologies.<sup>19</sup>

The United States agreed to the Canadian proposal in principle but attached a series of riders to strengthen the restrictions. The U.S. proposal would “black box” and only supply complete “turnkey” facilities to the importing country. That is, these facilities would be operated by non-native personnel with the recipient country's consent and be built so that the recipient country would not be able to replicate the facility, including the sensitive components.<sup>20</sup>

A number of countries, including Turkey, strongly objected to these stringent export control guidelines, arguing that they violate the spirit of Article IV of the NPT. Opponents argue that NSG guidelines already say that suppliers should exercise restraint in transferring enrichment and reprocessing technologies and that the regulatory framework already exists to reassure supplier countries that the technology will not be diverted for weapons use. Moreover, strong objections were levied against the imposition of subjective guidelines, which many felt were deliberately vague and designed to prevent the sale of critical technologies to a whole host of states. According to NSG guidelines:

Suppliers should exercise restraint in the transfer of sensitive facilities, technology, and material usable for nuclear weapons or other nuclear explosive devices. If enrichment or reprocessing facilities, equipment, or technology are to be transferred, suppliers should encourage recipients to accept, as an alternative to national plants, supplier involvement and/or other appropriate multinational participation in resulting facilities. Suppliers should also promote international (including IAEA) activities concerned with multinational regional fuel cycle centers.

For a transfer of an enrichment facility, or technology therefore, the recipient nation should agree that neither the transferred facility nor any facility based on such technology will be designed or operated for the production of greater than 20 percent enriched uranium without the consent of the supplier nation, of which the IAEA should be advised.<sup>21</sup>

The guidelines are voluntary, but they have thus far prevented the sale or transfer of enrichment or reprocessing technologies to any new states.

### **Strengthening Regulations**

After years of negotiations, the NSG agreed on more stringent restrictions designed to prevent the spread of enrichment and reprocessing technologies in June 2011. The new rules prevent the sale of these critical technologies to

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**As a country intent on developing local technological assets to support its nuclear power program, Turkey will continue to fight within the NSG to maintain a more flexible regime for international technology transfer.**

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countries that have not signed the Additional Protocol to the IAEA Safeguards Agreement, which allows tougher IAEA monitoring and more stringent inspections. The NSG agreement is seen as a reaction to a decision that granted India an exception to NSG guidelines. Under the old agreement, India would have been able to purchase sensitive enrichment and reprocessing technologies, despite not signing the NPT.

These new rules mirror Ankara's policy, which always supported placing these tangible conditions on enrichment and reprocessing technology sales. However, the debate about imposing these criteria was not easy and many states had been pushing for tougher restrictions. Moreover, it is likely that further efforts to control the transfer of enrichment and reprocessing technologies will continue at the NSG. As a country intent on developing local technological assets to support its nuclear power program, Turkey will continue to fight within the NSG to maintain a more flexible regime for international technology transfer.

The NSG's June 2011 agreement ended debates about the proposals put forward by France in 2008, which called for the strengthening of the criteria for technology transfer by adding the following requirements:

- A member of the NPT in full compliance;
- A comprehensive Safeguards Agreement and Additional Protocol in force;
- No breach of safeguards obligations, no IAEA Board of Governors decisions taken to address lack of confidence over peaceful intentions;
- Adherence to NSG guidelines;
- Bilateral agreement with the suppliers that includes assurance on non-explosive uses, effective safeguards in perpetuity, and retransfer controls;
- Commitment to apply international standards of physical protection; and
- Commitment to IAEA safety standards.

Ankara had said that it was willing to accept the proposal outlined above, but it was not prepared to support further subjective criteria. South Africa, on the other hand, opposed these amendments as a matter of principle arguing that they were eroding the sovereign rights set out in the NPT.

Turkey is steadfastly opposed to calls for supplier states to take into account whether or not the actions by the importing state may compel its neighbors to seek similar technologies, or whether the recipient state is in an unstable region.<sup>22</sup> Officials worry that Turkey could be penalized for its proximity to Iran and the Middle East and that it could be classified as being in an unstable

region. Turkey put forward its own argument, saying that only those states engaged in “bad” behavior should not be able to enrich and reprocess, without elaborating who those “bad” states were.<sup>23</sup>

Turkey also stridently objects to the introduction of the black box and turnkey concepts over concerns that they may hamper civilian cooperation between countries in good standing with the NPT. Ankara believes that specific criteria must be established by the NSG and that the criteria should take into account any justifiable concern about proliferation because nonspecific subjective criteria may prove to be impossible to streamline and will undermine nuclear cooperation between states.

Moreover, Ankara is concerned that restrictions on enrichment technology to members states in good standing with the NPT also infringe on Article IV rights. With regard to the United States’ black box proposals, Turkey has argued that they limit the recipients’ ability to cooperate with supplier states. Ankara believes that Middle Eastern states will bear the brunt of these restrictions, even if they meet the criteria put forward by the NSG.

With an eye toward its own nuclear program, officials worry that these conditions will hamper Turkish efforts to develop its own nascent nuclear industry. In addition, there is a fear that these restrictions will make recipient states dependent on the nuclear suppliers for energy, thus negating the oft-stated desire to achieve energy independence. Despite these objections, Turkey welcomes the inclusion of the Additional Protocol as one of the criteria for nuclear export, believing that it is enough to halt proliferation without the use of black box and “turnkey” facilities.

## Could Turkey Build the Bomb?

Turkey does not have the necessary infrastructure to produce fissile material for a nuclear weapon, nor does it have the relevant infrastructure to mine uranium, enrich uranium, or reprocess spent nuclear fuel. Without this vital infrastructure, Turkey could not indigenously manufacture the fissile core for a nuclear weapon. However, the designs for first-generation nuclear weapons are widely understood and it is likely that Turkish physicists would be technically capable of fashioning first-generation nuclear weapons if the leadership were to give the go-ahead. And Turkey would almost certainly start by designing a simple “gun type” or first-generation implosion device.

The “gun-type” bomb is by far the easiest weapon to build. The basic bomb design contains a gun barrel, pointed at a subcritical highly enriched uranium target. To start the chain reaction, another subcritical HEU projectile is fired at the HEU target. Once combined, the two components start the nuclear chain reaction, resulting in a nuclear explosion. The most effective material for this style of weapon is 90 percent HEU, but a bomb could be made to work with 80 percent HEU.

An implosion bomb works by precisely squeezing the weapon's plutonium core with conventional explosives, which detonate precisely and squeeze the sub-critical fissile core to achieve criticality. The explosive shock wave also compresses the nuclear initiator, releasing a burst of neutrons, which augment the chain reaction. For weapons use, bomb designers need about 6 kilograms of 90 percent plutonium-239.

Typically, a proliferating state attempts to develop the complete nuclear fuel cycle because the technologies allow would-be proliferators to indigenously produce the necessary fissile material for weapons use under the guise of a civilian power program. The process involves mining and milling, conversion, enrichment, and fuel fabrication. These steps make up the front end of the nuclear fuel cycle. After spending time in a nuclear reactor, the spent fuel may undergo a further series of steps including temporary storage, reprocessing, and recycling before eventual disposal as waste.

### Turkey's Front End Capacity<sup>24</sup>

- **Mining:** This refers to the process of extracting uranium, or other fissile materials like thorium, from the ground. Despite having deposits of uranium and thorium scattered throughout Anatolia, Turkey does not have the infrastructure to mine uranium commercially.
- **Milling:** Once extracted, the mined uranium is taken to a mill, where it is crushed and turned into uranium "yellowcake." Beginning in 2009, the MTA Laboratory in Ankara began producing uranium hexafluoride on a small scale. Small-scale uranium purification is also done at the Nuclear Fuel Facility Unit in Küçükçekmece near Istanbul.
- **Conversion:** Conversion refers to the process of converting the milled uranium into uranium hexafluoride gas ( $UF_6$ ). Turkey has no facilities designed and dedicated to the conversion of uranium, although it converts natural uranium to uranium oxide ( $UO_2$ ) on a limited scale. The  $UO_2$  can be used in heavy-water reactors, which do not require enriched uranium.
- **Enrichment:** When mined, natural uranium is 99.3 percent uranium-238 (U-238) and .7 percent uranium-235 (U-235). The fuel for a majority of the world's nuclear reactor requires a 3 to 5 percent concentration of U-235. Enrichment is achieved using gaseous diffusion, gas centrifuge, or laser isotopic separation. Turkey does not possess any commercial-scale enrichment centers, nor has it announced plans to acquire or construct one. However, it has refused to rule out acquiring the technology in the future.
- **Fuel Fabrication:** After enrichment, the  $UF_6$  is converted back into  $UO_2$  and pressed into pellets for use in a nuclear fuel rod. Since 1986, the CRNC Fuel Pilot Plant in Küçükçekmece near Istanbul has, on a small scale, been producing  $UO_2$  pellets suitable for use in a nuclear reactor.

## Turkey's Back End Capacity

**Reprocessing:** A major proliferation concern relates to the undeclared extraction of plutonium from a nuclear reactor's spent fuel. Plutonium containing 90 to 95 percent of plutonium-239 (PU-239) is weapons grade. To produce weapons-grade PU-239, the plutonium is separated from the irradiated fuel rods. Plutonium is then generally converted into an oxide for transport and storage, or machined for use in the core of a nuclear weapon. In the nuclear weapons context, heavy-water reactors are better suited for plutonium production. The vast majority of reactors in the world are however light-water reactors. It is unlikely that Turkey could quickly or easily acquire a reprocessing capability because the supplier states have tightened export restrictions and have only transferred a small amount of equipment in recent years. Turkey also does not yet have any nuclear reactors.

## Turkey's Nuclear Program

Turkey and Russia signed an intergovernmental agreement in May 2010 for a subsidiary of Russia's state-owned atomic power company Rosatom to build, own, and operate a power plant at the Akkuyu site, on Turkey's Mediterranean coast, comprising four light-water reactor VVER units of 1,200 megawatt installed capacity each. The agreement has provoked a lively debate in Turkey about the viability of nuclear power. From an economic perspective, the Akkuyu agreement appears as an unusually beneficial agreement for Turkey.

The agreement contains provisions about the design of the power plant, its construction, operation, the purchase and sale of the electricity produced by the power plant, nuclear fuel supply, dismantling of the power plant, and the nuclear fuel cycle. The power plant will be operated by a project company to be established by the Russian party, and according to the agreement, the share of the Russian party in the project company will not be less than 51 percent. The first unit is expected to enter service in 2019 with another three coming online subsequently.

A very significant part of the financial risks remain the responsibility of the Russian project company, which has the exclusive responsibility for raising the capital necessary for the whole of the investment. In a way, a very simple solution has been found in the Akkuyu model for managing a quite challenging risk, which gave rise to very difficult and complicated corporate mechanisms in other countries and environments: The "Turkish" solution calls for the shift of all risks to the project company and thus to the Russian state. It also provides total protection for the Turkish treasury against the costs of delay that frequently arise in the construction of nuclear power plants.

Turkey's commitment is limited to the partial purchase of the electricity produced by the Akkuyu power plant. But despite this "skewed" investment

model that shifts financial risk to the Russian side, the average purchase price of 12.35 U.S. cents per kilowatt hour (in nominal terms) also appears to be economically advantageous for Turkey. More particularly, the present value of the contracted average purchase price has a range between 2.44¢/kWh and 5.84¢/kWh depending on the discount rate used. But even the higher price compares favorably with the average wholesale electricity price for 2010 of 9.38¢/kWh.

In addition, according to the agreement, the project company is responsible for nuclear waste management and the decommissioning of the power station. As envisaged in the relevant law, the company will contribute US\$0.15 cents/kWh to the two separate funds established for financing each of these activities. Moreover, the Russian project company will transfer 20 percent of its after-tax profits to the Turkish treasury after the end of the fifteen years covered by the electricity purchasing commitment of the Turkish state.

In light of the above, it is generally claimed that this project is highly “political” in nature and has been directed and supported by the Russian government. In other words, even if it is economically nonviable for the Russian side, it has to be considered in the context of the developing energy partnership between Turkey and Russia. A recent Turkish decision to give the green light to the Russian-sponsored South Stream pipeline project, a competitor to the EU-backed Nabucco pipeline, to cross its territorial waters is another important and new parameter in the evolving interdependencies between Ankara and Moscow.

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From the nonproliferation perspective, the standardized VVER-1200s light-water reactors are not ideally suited for the production of weapons-grade plutonium, though their diversion for this purpose is not impossible.<sup>25</sup> Moreover, Russia plans to deliver a “turnkey” reactor and repatriate all of the spent nuclear fuel. Russia will provide the fuel rods, oversee and operate the plant, and then remove the spent fuel. Turkey will not have access to the fuel rods, nor will it have access to accumulated spent fuel.

Turkey has invested in a number of technologies needed to form the basis of a civilian nuclear energy program. However, its lack of commercial-scale enrichment and reprocessing technologies make it unlikely that Ankara could quickly develop a nuclear weapon. Given the nascent state of its nuclear industry, as well as the difficulties involved with the development of commercial-scale enrichment and reprocessing, Turkey would likely have to rely on foreign suppliers for fuel cycle technology. Though the international community closely controls these technologies, the rise of illicit procurement networks, as well as the spread of technological know-how, does not preclude states from developing enrichment technologies by themselves.

## Living Without the Bomb

Turkey has a stellar history of nonproliferation and has signed on to every relevant IAEA and international instrument governing the spread of nuclear technology. Moreover, it is a member of NATO and an EU candidate country. It is unlikely, absent a rupture in relations with its NATO allies, a significant change in its security environment, or a drastic reevaluation of Ankara's immediate interests by the civilian leadership, that Turkey would consider developing nuclear weapons illicitly.

A Turkish decision to proliferate would seriously complicate its international standing, undermine its economic resurgence, and seriously damage relations with the United States and its other NATO allies. Moreover, any Turkish move toward weaponization would draw a harsh rebuke from the United States and would likely be met by an American proposal to strengthen security guarantees, as well as the threat of sanctions if Turkey were to continue its weapons efforts. Given Turkey's nonnuclear history and its long-standing reliance on the NATO security guarantee, it is hard to imagine a scenario where Turkey would simply cast aside its policy in favor of an independent weapons capability.

Instead of developing its own nuclear weapons capability, Turkey seems more interested in pursuing robust conventional capabilities that could, in theory, replace some of the missions previously reserved for nuclear weapons. To do so, Turkey has turned to foreign suppliers but has also committed to begin designing and manufacturing high-tech weapons domestically. And it will likely continue to increase its indigenous intelligence, surveillance, and information management capabilities.<sup>26</sup> Turkey's changing military posture is aimed at countering the threats posed by nonstate actors and bolstering Turkey's conventional war-fighting capabilities. Interoperability with NATO forces remains the key component of Turkey's defense policy and it is unlikely that Ankara would threaten its union with its most important allies.

For much of the Cold War, Turkey faced a nuclear-armed adversary. Instead of developing a small nuclear arsenal, Turkey chose to ally itself with the United States. But since the 1990s, Turkish policymakers have, in fact, been quietly dealing with the pressures of Iran's nuclear program. Ankara has actively sought an independent missile shield to counter the growing threats posed by the proliferation of ballistic missiles. In tandem, it has adopted a conciliatory foreign policy favoring robust diplomacy and economic cooperation. The policy is aimed at decreasing regional tension, which officials believe will lessen Iran's incentive to go nuclear, while developing technologies to protect Turkey from Iranian missiles.

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An Iranian nuclear weapon would alter the balance of power and significantly constrain Turkish freedom of action in the region. If this were to occur, it is far more likely that Turkey will continue with its decades-old policy of relying on NATO's nuclear policy for deterrence. The Turkish policy has thus far revealed a state more interested in pursuing soft power solutions to foreign policy problems. If faced with a nuclear trigger, Ankara would likely continue to strengthen ties with the traditional guarantors of its security.

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[www.edam.org.tr/eng/index.php?option=com\\_content&view=article&id=133&Itemid=220](http://www.edam.org.tr/eng/index.php?option=com_content&view=article&id=133&Itemid=220).

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