



Foreign Policy Centre Briefing: Toward a Grander Turkish Energy Strategy

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Better aligning foreign policy and energy policy for the energy security of Turkey and the Euro-Atlantic region

Introduction

In tandem with the global recession, the energy price shocks of 2008 that reverberated around the world proved a powerful reminder of the increasing vulnerabilities of the globalized world. As a further reminder for Turkey, a number of its recent foreign policy moves that seemingly had nothing to do with energy issues further heightened existing uncertainties in the energy world. A recent cogent example is Turkey's stalled normalization process with Armenia that has inadvertently alienated Azerbaijan, creating a situation that threatens the viability of the Nabucco pipeline project.

Turkey needs a grander energy strategy that better aligns foreign policy and energy policy for Turkey as a member of the Euro-Atlantic region. Straddling two continents, Turkey is close to over 70 percent of the world's proven petroleum and natural gas reserves.¹ It is also an emerging market with the 15th largest economy in the world. Turkey is thus poised to act as a connector between energy suppliers and consumers apart from being an important energy market itself. However, having a geostrategic location is not a strategy *per se*; it is merely a good foundation for one. Similarly, being a bridge (or market) for energy is not a strategy *per se*; it is a desired condition to achieve a broader reach. Finally, boosting so-called "strategic depth" by promoting zero problems with (some) neighbors is also not a strategy *per se*; we need priorities to determine which neighbors to support. For example, blindly supporting Iran's nuclear energy projects is demonstrating that Turkey's energy strategy is failing to account for—or prioritize—the long-term security of the Euro-Atlantic region.

A proper energy strategy must be both comprehensive and flexible enough to allow even for the failure of certain tactics in attaining its primary objective. Turkey's primary objective regarding energy should be to achieve energy security first for Turkey and then for the Euro-Atlantic region in a way that promotes regional stability and development. A strategy to achieve this objective might consist of at least the following five elements:

- **Energy Security:** Securing affordable, reliable and timely access to energy for Turkish consumers;
- **Energy Transit:** Leveraging Turkey's geographic position to bolster energy security for the region;

¹ "The CBI noted that Turkey is close to 71% of the world's proven gas and 73% of oil resources, and a "natural hub between several vital energy suppliers and energy consumers." BERR emphasized the "potentially large role" for Turkey in future EU energy security, "since it borders some of the richest hydrocarbon territories in the world and is already a key transit state for gas into the EU." House of Commons (UK), "Keeping the Door Wide Open: Turkey and Eu Accession: Seventh Report of Session 2007-08," ed. Business and Enterprise Committee (2008), 33.



- **Energy Processing and Services:** Adding value to the energy supply chain via processing and other services;
- **Energy Leadership:** Striving to be a leader, not just a consumer, in energy technology and talent; and finally,
- **Energy Diplomacy:** Promoting energy security and stability in the Euro-Atlantic region by deepening trust and cooperation.

Indeed, these strategic elements require Turkey to integrate its foreign and energy policies in a more holistic and nuanced manner. In particular, Turkey must strive to build with its neighbors an environment of trust and stability—economic, political and social—that fosters regional energy security.

The importance of an integrated foreign policy and energy policy for the security of Turkey and the greater Euro-Atlantic region cannot be overstated. As recently noted, “as ... experts and policy-makers in Europe ... plan their countries’ recoveries, it will be doubly important to address broader, cross-cutting issues, such as energy and energy security, in a north-south and transatlantic perspective.”² To do so, our energy strategy must be handled at the highest levels of government, adequately engaging all stakeholders, domestic and foreign, in trade, development, diplomacy, education, and energy and natural resources.

Turkey’s energy strategy should aim to meet domestic energy needs *and* mutually benefit the long-term security and development of the Euro-Atlantic region. After all, Turkey’s stated priority is to be a member of the European Union. Furthermore, with countries like Russia and China already skillfully combining energy and foreign policy to secure their global interests, Turkey cannot afford to go it alone on a path that warms relations with the East and cools them with the West. However, by fulfilling its self-proclaimed role as regional intermediary, Turkey can benefit itself and turn its energy relations with the East into a reward, not a worry, for Europe.

The Energy Challenge

In his introductory statement for the 2009 Statistical Review of World Energy, BP CEO Tony Hayward used one word to capture the energy events of 2008: “Volatility.”³ In the summer of 2008, oil prices peaked at around \$150 per barrel, then plummeted by the end of the year to below \$40. In Turkey, natural gas prices practically doubled from that summer to the following winter, and then fell several months later to just above pre-peak levels.⁴ The energy shocks—alongside the intensifying debate on global climate change—heightened the focus on developing energy supplies that are sustainable economically and environmentally.

² Silvia Colombo and Ian Lesser, “The Mediterranean Energy Scene: What Now? What Next? (Mediterranean Strategy Group Third Meeting Summary Report),” (Rome: German Marshall Fund of the United States, 2010).

³ Tony Hayward, “Volatility and Structural Change,” (2009).

⁴ Natural gas prices were around 0.45 TL/m³ in May 2008, rose to almost 0.8 TL/m³ by November 2008, then dropped back down to just under 0.5 TL/m³ by May 2009. ISPAT, “Turkish Energy Industry Report,” (Investment Support and Promotion Agency of Turkey, Republic of Turkey Prime Ministry, 2009).



The fact remains, however, that while we search for sustainable energy, fossil fuels will continue to be the dominant energy source for years to come.⁵ According to BP's projections, global energy consumption will double by 2050, and at current rates there are "enough proven reserves for 40 years of oil and 60 years of gas."⁶

Turkey will not be an exception to this picture of fossil fuel dependence. Turkey imports 92 percent of its petroleum, 98 percent of its natural gas, and half of its coal.⁷ Given Turkey's energy market size, these import rates make Turkey the world's fourteenth largest oil importer, fourteenth largest coal importer and ninth largest natural gas importer.⁸

Over two-thirds of Turkey's primary energy is imported, and Turkey's rapid population and economic growth rates are driving rapid energy sector growth. Turkey's population is increasing at 1.3 percent per year, but its energy demand had been rising at 6 to 8 percent per year⁹ before the global recession began in 2008. Of course, the recession dampened Turkey's energy demand, but it will undoubtedly recover soon¹⁰: Turkey's population will continue to grow, exceeding one hundred million by 2050,¹¹ and Turkey will maintain its rapid pace of development. More of its economy will shift from agriculture to services, more of its population will move from the country to the city,¹² and more people with more money will adopt more energy-intensive lifestyles.¹³ The situation will be dire: electricity demand is expected to grow at 7 percent per year from 2009 to 2018 and exceed projected installed capacity by 2017.¹⁴

⁵ "We need ongoing investment in alternative energies and energy efficiency if we're to have any prospect of tackling climate change. But whatever achievements are made in alternative energy, fossil fuels are almost certain to remain a dominant source of energy well into the future." Tony Hayward (BP CEO), Statistical review launch. Hayward, "Volatility and Structural Change."

⁶ "BP upbeat on oil and gas reserves," UPI, 24 Mar 2010, http://www.upi.com/Science_News/Resource-Wars/2010/03/24/BP-upbeat-on-oil-and-gas-reserves/UPI-73351269437761/?pvn=1.

⁷ ISPAT, "Turkish Energy Industry Report."

⁸ EIA, *International Energy Statistics* (U.S. Energy Information Administration, 2010 [cited 6 April 2010]); available from <http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm>.

⁹ UniCredit, "Turkish Energy Sector Report," (2009).

¹⁰ Turkey's energy consumption grew by 1.4% in 2008 and fell by 5.5% in 2009, but is expected to recover to at least 2.5% annually in 2010-2013. ISPAT, "Turkish Energy Industry Report."

¹¹ "Germany's Population by 2050," German Federal Statistics Office, November 2006, p. 50, online at <http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/EN/Content/Publikationen/SpecializedPublications/Population/GermanyPopulation2050,property=file.pdf>

¹² In 1995, 16% of Turkey's GDP was in Agriculture; by 2005, only 11% of it was. In 1995, Industry was 27% of Turkey's GDP; in 1998 it had dropped to 24%, but by 2005, it was back to 27%. In 1995, Services were 56% of Turkey's GDP; by 2005, they were 63%. In 1995, 62% of Turkey's population was urban; by 2005, 67% was, with urban population growing about 1million per year over that period. At 2.1%, the urban population growth rate was well above the Turkish population growth rate of 1.3%, although both were on gradually declining trends. Finally, to round out the picture of economic development, inflation and PPP-adjusted GDP per capita rose over 30% from 5,912 to 7,786 (2005 dollars). (Source: Gapminder.com: www.bit.ly/9BeKXg, www.bit.ly/aoh31K, www.bit.ly/dnVNcf, www.bit.ly/dovbCQ, www.bit.ly/cweNc0, www.bit.ly/cKkrXZ.)

¹³ A recent McKinsey study suggests that small advances in development (GDP per capita) can cause large increases in energy consumption. The study categorized various energy-consuming goods as "necessities" (e.g., refrigerators), "normal goods" (e.g., vacuum cleaners and air conditioners), and "luxury items" (e.g., washing machines and dishwashers) and observed the relatively steep trends in consumption for certain regions of economy. The study's data suggested the market penetration of "necessities" in Turkey is relatively high, but that there is significant room for growth in the market penetration of normal goods and luxury items. Furthermore, the penetration slopes are steep: as PPP GDP per capita grows in Turkey with economic development, the market penetration of these goods rises quickly until they reach near saturation. Electricity consumption will correspondingly rise. Florian Bressand et al., "Curbing Global Energy Demand Growth: The Energy Productivity Opportunity," (McKinsey Global Institute, 2007).

¹⁴ ISPAT, "Turkish Energy Industry Report."



Turkey's energy needs have had and will continue to have a tremendous impact on its foreign relations. For example, natural gas consumption rose steeply in the late 1980s due to a 25-year gas deal concluded with Russia in 1987, with per capita natural gas consumption rising almost six times by 1989.¹⁵ Now Turkey depends on Russia for 63 percent of its natural gas imports,¹⁶ consuming almost nine times more per capita in 2008 than it did in 1989.¹⁷ Natural gas is Turkey's fastest growing energy source, expected to increase at 7 percent between 2010 and 2013,¹⁸ and Turkey's dependence on Russian gas could grow to 80 percent in the coming decade.¹⁹

Turkey's large energy dependence on Russia is cause for concern but not necessarily bad. Thanks to warming relations with Russia, Turkey enjoys growing trade volumes with Russia. In addition, dependence runs two ways: while Turkey depends on Russia for the majority of its natural gas, Russia depends on Turkey as its second largest trading partner after Germany.²⁰ Furthermore, as Bulent Alireza of the Center for Strategic and International Studies suggests, the recent "energy backbone" of Turkish-Russian relations has fostered diplomatic cooperation in the region.²¹ Turkey's energy strategy should seek not merely to wean Turkey off its overwhelming reliance on Russian natural gas but also to deepen diplomatic cooperation and promote better relations and development in the region.

Changing demand and rising consumption around the world will also dramatically shift the geopolitical landscape. New carbon capping and pricing schemes will change demand profiles and create new sources of volatility. More importantly, rapidly rising economies ravenous for new energy sources are transforming world energy flows. In 2008, China alone accounted for three-quarters of the world's energy growth. India had the second largest increase. As non-OECD demand overtakes OECD demand, energy prices will be increasingly subjected to uncertainties and shocks. Traditional spheres of influence are also changing, as seen in China's rise as energy consumer that is diminishing Western influence among energy exporters in the Middle East, the Caspian region and Central Asia.²²

Clearly, Turkey cannot assure energy traffic merely by building an energy bridge. A broader energy strategy that coheres with its foreign policy is imperative.

¹⁵ Its 1987 level was 0.009 toe per capita; its 1989 level was 0.052 toe per capita. Gapminder.com, www.bit.ly/bhk6IX.

¹⁶ ISPAT, "Turkish Energy Industry Report."

¹⁷ BP reported Turkey's gas consumption at 32.4 Mtoe in 2008 and Turkey's population was 73.9 million (World Bank figure): $32.4 / 73.9 = 0.438$ toe per capita. Compare this to 0.052 toe per capita in 1989. "Statistical Review of World Energy 2009," (BP, 2009).

¹⁸ ISPAT, "Turkish Energy Industry Report."

¹⁹ Statement by Stephen Larrabee. Brookings Institution, "Turkey, Russia and Regional Energy Strategies" (Washington, D.C., 15 July 2009).

²⁰ "Russia cannot afford to lose Turkey, says expert." *Hurriyet Daily News*, 18 January 2010.

<http://www.hurriyetdailynews.com/n.php?n=russia-cannot-afford-to-lose-turkey-says-expert-2010-01-18>.

²¹ "Moscow Visit By Turkish PM Underscores New Strategic Alliance," Radio Free Europe Radio Liberty, 13 Mar 2010,

http://www.rferl.org/content/Moscow_Visit_By_Turkish_PM_Underscores_New_Strategic_Alliance/1927504.html.

²² Colombo and Lesser, "The Mediterranean Energy Scene: What Now? What Next? (Mediterranean Strategy Group Third Meeting Summary Report)."



The Elements of Energy Strategy and their Foreign Policy Links

The five broad elements of energy strategy suggested earlier provide a good starting point for discussing how energy policy must be more tightly integrated with foreign policy.

Energy Security: Securing affordable, reliable and timely access to energy for Turkish consumers

In order to discuss how Turkey can help improve the energy security of the Euro-Atlantic region, we must first discuss how Turkey can achieve its own energy security by securing affordable, reliable and timely access to energy for Turkish consumers. As Tony Hayward emphasizes, "there are no silver bullets" for achieving energy security.²³ There are, however broadly accepted approaches for energy security, namely: fostering energy efficiency, competition, diversification, and physical security.

Efficiency

Efficiency often takes backseat in most energy discussions but must be part of any energy security strategy. To cite just two examples: On the production side, Siemens reports that upgrading old fossil fuel power plants can improve their efficiency by as much as 10 to 15 percent.²⁴ On the consumption side, energy efficiency improvements in buildings can greatly reduce demand: typical efficiency gains range from 20 to 30 percent, and buildings generally account for about 40 percent of total energy demand.²⁵

To help promote energy efficiency domestically and regionally, Turkey should join initiatives like the European Emissions Trading System.²⁶ Doing so would create positive spillover effects in other areas of Turkey's foreign relations areas by fostering integration and driving progress on eventual EU accession.

Competition

Competition is also an indispensable element of energy security. This does not mean competition within just Turkey but also among players in the region.

Unfortunately, the record in promoting foreign competition for Turkish energy tenders is poor. Specifically, Turkey's recent cancellation of nuclear power plant tenders is discouraging. At the end of 2008, the Turkish government announced its decision to construct five gigawatts of installed nuclear capacity by 2020 in order to generate 10 percent of Turkey's total electricity needs. After Russia's

²³ Tony Hayward, "The Challenge of Energy Security," (2010).

²⁴ http://www.siemens.com/innovation/en/publikationen/pof_fall_2009/infrastruktur/kraftwerke.htm

²⁵ See, for example:

<http://www.euroace.org/EuroACE%2520documents/040617%2520Towards%2520Energy%2520Efficient%2520Buildings%2520in%2520Europe.pdf>, and <http://www.facilitiesnet.com/energyefficiency/article/Clinton-Climate-Initiative-Unveils-Program-to-Boost-Energy-Efficiency--9397>.

²⁶ "In the spirit of facilitating negotiations, and moving the focus toward constructive issues, Daniel Gros, Director of the Centre for European Policy Studies (CEPS), recently suggested to "create a 'Union for the environment' between the EU and Turkey". This would include Turkey joining the European Emission Trading System (ETS), he added." (EurActiv.com, 24 Nov 2009)



AtomStroyExport submitted the only bid, the tender was cancelled in November 2009.²⁷ Turkey has also decided against using a competitive tender for its second nuclear power plant. As a result, Turkey has chosen direct inter-governmental agreements with Russia and South Korea²⁸ despite the fact that many countries, including the US, Canada and France, demonstrated interest in competing for Turkey's nuclear power tenders.²⁹

In addition to the cancellation of the tenders, the Turkish government was also criticized for the way it handled them. The tender that AtomStroyExport won (that was later cancelled) was considered too short-fused for the twelve other bidders, and their extension requests had reportedly "fallen on deaf ears."³⁰ Turkey was also criticized for its timing of the tender, setting it during a time when companies were unlikely to be rushed into taking new capital-intensive projects.³¹ Furthermore, the terms of the tender were criticized for requiring foreign vendors to take back used fuel, a requirement that appeared to favor Russia.³² Although Prime Minister Erdoğan's last visit to France in April 2010 aimed at strengthening energy cooperation with that country,³³ the question remains: how committed is Turkey to establishing favorable conditions for international competition?

Furthermore, although Turkey is making progress in privatizing its energy sector—and has a dedicated Prime Ministry Privatization Administration—much work still needs to be done. The state-owned Turkish Petroleum Corporation (TPAO) controls 70 percent of Turkey's oil output and gets "preferential rights."³⁴ State-owned companies dominate the Turkish electricity from end to end, with roughly two-thirds or more of generation and distribution and 100 percent of transmission in state hands.³⁵ Turkey set a goal for itself of privatizing the Turkish Electricity Generation Company (EUAŞ) by 2006, but as the US Energy Information Administration reports, "the privatization process has wavered due to lack of investor interest and political uncertainty, although external institutions have kept the process on track."³⁶

²⁷ ISPAT, "Turkish Energy Industry Report."

²⁸ To build the nuclear plants at Mersin and Sinop, respectively. "Turkey Signs Nuclear Deal with South Korea," Asia Times, 1 Apr 2010, http://www.atimes.com/atimes/Central_Asia/LD01Aq01.html.

²⁹ "Turkey Signs Nuclear Deal with South Korea," Asia Times, 1 Apr 2010, http://www.atimes.com/atimes/Central_Asia/LD01Aq01.html.

³⁰ "The apparent haste in the government's desire to undertake the bidding resulted in 12 of the bidders being unable to prepare the necessary documentation to take part in the second step of the tender. The second tender required the detailed specifications the bid's technical aspects. / Their requests to the government for an extension of the tender process in order to have the required time to put together a suitable offer was reported to have fallen on deaf ears." <http://www.todayszaman.com/tz-web/detaylar.do?load=detay&link=164556&bolum=105>.

³¹ "Even the timing of the bidding process has been criticized as it began in September -- a time when companies were increasingly less willing to take on large long-term financing projects. Some pundits said Turkey was lucky to have even received one bid considering the volatile market and criticized the government's haste in initiating the tender process given the tough economic times." <http://www.todayszaman.com/tz-web/detaylar.do?load=detay&link=164556&bolum=105>.

³² World Nuclear Association, "Emerging Nuclear Energy Countries," last updated 22 April 2010, accessed online at <http://www.world-nuclear.org/info/inf102.html>.

³³ "Turkey Pm to Visit France on Bilateral Ties," *Xinhua*, 6 April 2010.

³⁴ U.S. Energy Information Administration, *Country Analysis Brief: Turkey* (2009 [cited 23 April 2010]); available from <http://www.eia.doe.gov/emeu/cabs/Turkey/Background.html>.

³⁵ UniCredit, "Turkish Energy Sector Report."

³⁶ U.S. Energy Information Administration, *Country Analysis Brief: Turkey* ([cited]).



Diversification

Another essential part of energy security is diversification. Broadening the base of energy resources and energy suppliers creates stability and resilience against future energy shocks.

One way to improve energy diversity is to develop more domestic energy resources. Almost all of Turkey's petroleum and natural gas demand is met via imports. However, recent Energy Ministry numbers reveal that only 20 percent of Turkey's land and one percent of its sea have been explored for oil and gas. It is imperative that Turkey move ahead with domestic energy exploration, but it will likely encounter foreign resistance, particularly with respect to the waters around Cyprus. Considering that non-energy issues are at the heart of the Cyprus dispute, Turkey must nonetheless balance its foreign policy choices with its energy priorities to facilitate its energy exploration. Turkey must pay attention to the implications of any Cyprus settlement for its long-term energy needs.

By building nuclear power plants, Turkey would be diversifying its energy resource base. However, this would not necessarily reduce or balance Turkey's foreign energy dependencies. Turkey's decision to build its first nuclear power plant with Russia extends Turkey's dependency on Russia beyond primary energy supply and into critical energy technology and expertise, notably with respect to Russian uranium centrifuges. The March protocol to cooperate with South Korea on the second nuclear power plant may be a tactic to fight the perception of deepening dependence on Russia.³⁷ The nuclear power deals demonstrate that proper diversification is not just about flows of primary energy supplies, but also about flows of technology, knowledge, and talent.

Renewable energy, even though it will trail fossil fuels in influence, could make a profound impact on the resilience of Turkey's energy portfolio. Turkey's stated goal is to increase renewable energy generation to 30 percent of total generation by 2023, Turkey's centennial. Turkey is already making substantial use of its hydropower potential. While hydropower makes up only three percent of Turkey's primary energy supply, it accounts for over 10 percent of its domestic energy production and over 16 percent of its electricity generation.³⁸ In addition, Turkey has one-eighth of the world's geothermal potential, and also vast areas that are ideal for major wind and solar energy development.

However, the presence of energy potential is necessary but not sufficient: Turkey needs to do much more to invest in—and foster investment in—the technology and talent required to develop its potential.

Physical Security

While efficiency, competition and diversification are critical building blocks for energy security, the physical security of energy infrastructure must also be assured. Controversial policies that have nothing to do with energy can trigger retributive attacks against energy infrastructure. Turkey has been a victim of

³⁷ "Turkey Signs Nuclear Deal with South Korea," *Asia Times*, 1 Apr 2010, http://www.atimes.com/atimes/Central_Asia/LD01Aq01.html.

³⁸ IEA, "World Energy Balances," (2009).



terrorist attacks against its pipelines in the past, and recent events in the Middle East show that energy terrorism may be on the rise. Saudi Arabia recently arrested 113 suspects on charges of conspiring with al-Qaeda to attack oil facilities in the Kingdom.³⁹

The prospect of infrastructure attacks is a particular concern for Turkey's deals with Iraq. Recently, Turkey has arranged to buy oil from Iraq via the Kirkuk-Ceyhan pipeline and to buy gas from Northern Iraq. But given the possibility of "wide-scale sectarian violence",⁴⁰ it is hard to put full confidence in Iraq's ability to meet its energy commitments and protect its energy infrastructure. After all, the Kirkuk-Ceyhan pipeline was not only empty until 2007 because of the Iraq War, but was frequently damaged by sabotage attacks.

With respect to nuclear power, physical security is of paramount importance. Reactor accidents not only affect electricity supplies but also wreak economic, social and political havoc, even if there is no significant radioactive release. Furthermore, extensive safeguards must be taken to bolster the nuclear non-proliferation regime, requiring close cooperation with foreign governments and international agencies. Unfortunately, the perception that Turkey is overly permissive toward Iran's nuclear power program is not earning it positive marks in the nuclear safety world.

Energy Transit: Leveraging Turkey's geographic position to bolster energy security for the region

If Turkey can reliably secure its own energy supplies, then it can greatly strengthen the next strategic element of transporting energy to Europe. For natural gas in particular, the vision for 2020 is to see over 120 billion cubic meters of gas flowing into Turkey, with half of it consumed domestically and the rest transported to Europe.⁴¹ Turkey's ability to do this is of immense value for the energy security of both Western energy consumers and Eastern energy suppliers: consumers are assured of more reliable and affordable energy supply, and producers are assured of more reliable and stable energy markets.

The expanding web of Turkey's oil and gas pipelines is well-cited proof of its value as a geographic energy corridor:

- The Baku-Tbilisi-Ceyhan Oil Pipeline delivers crude oil from the Caspian to the Mediterranean through Azerbaijan, Georgia and Turkey.
- The Kirkuk-Ceyhan Oil Pipeline delivers oil from Iraq to the port of Ceyhan.
- The Samsun-Ceyhan Oil Pipeline helps reduce the tanker load through the Turkish Straits.
- The Baku-Tbilisi-Erzurum Gas Pipeline delivers Caspian gas—and possibly Shah Deniz gas in the future—to northeastern Turkey.
- The operational Turkey-Greece Gas Interconnector is being extended to Italy.

³⁹ "Saudi Arabia Reports Terror Arrests," *Associated Press*, 24 March 2010.

⁴⁰ "Iraq Boosts Energy Links with Turkey," *UPI*, 31 March 2010.

⁴¹ <http://www.the-atc.org/events/c09/content/presentations/A2-Cimen-Selahattin-MinistryOfEnergy.pdf>



- The Arab Natural Gas Pipeline promises to bring Egyptian gas to Turkey via Syria.
- Finally, the much talked about Nabucco Pipeline will carry forward gas imported into Turkey from the Caspian region and potentially Iran and Iraq all the way to Vienna.

Turkey enjoys Western support for its mission to strengthen its energy transit role. Europeans consistently voice the desire to diversify their energy sources—and to reduce their dependence on Russian gas in particular. Eurogas estimates that European demand for natural gas will increase 40 percent by 2030 as European gas production declines.⁴² Europe already depends on Russia for one-third of its natural gas.⁴³ As the European Commission concluded in 2009, the gas transit through Turkey and the “swift implementation of Nabucco” are of “utmost importance” to Europe.⁴⁴ Ten years ago, a European strategy green paper voiced the same sentiment in broader foreign policy terms, saying, “It is essential for the Union to maintain satisfactory relations with transit countries if it is to have stable access to the energy products it needs.”⁴⁵

Turkey also offers much value to other states in the region. For the region’s energy-rich countries, Turkey represents not only a large energy market and corridor to Europe, but also a capable partner that is quickly developing strong regional partnerships in business and development. In trade, Turkey is increasingly a leading partner for its non-Western neighbors. Its exports to the Organization of Islamic Countries rose over 50 percent in 2008⁴⁶ and Turkey’s trade with Africa has risen from just over \$4 billion in 2002 to over \$18 billion in 2008.⁴⁷ Turkish exports to the Middle East are now almost a third of those to the EU.⁴⁸ In foreign aid, Turkey is also becoming a strong donor country with the Turkish Development Cooperation Agency (TIKA) giving \$780 million to the region in 2008 alone.⁴⁹

⁴² Engdahl 2010.

⁴³ Franziska Holz, Christian von Hirschhausen, and Claudia Kemfert, “Perspectives of the European Natural Gas Markets until 2025,” *The Energy Journal* (2009).

⁴⁴ “In July 2009 Turkey signed the Intergovernmental Agreement on the Nabucco gas pipeline. This project is an important strategic step towards closer energy cooperation between the EU, Turkey and other States in the region as well as towards the diversification of energy sources. The timely completion of the Southern Gas corridor, through notably the swift implementation of the Nabucco Intergovernmental Agreement, remains one of the EU’s highest energy security priorities.” European Commission, “Conclusions on Turkey: Extract from the Communication from the Commission to the Council and the European Parliament “Enlargement Strategy and Main Challenges 2009-2010”, Com(2009)533 Final,” (2009).

⁴⁵ Also, “This is especially true for gas, where the main risk lies in transit conditions and continuing diversification of transport routes, not in the status of world reserves.. / With regard to supplies originating in Russia, the Caspian Sea Basin, North Africa and the Middle East, two regions deserve special attention, Eastern and Northern Europe on the one hand and the Mediterranean Basin on the other. [...] A range of transport routes will also be necessary if the resources of the Caspian Sea Basin are to be fully exploited. Particular attention should therefore be paid to transit states such as Turkey, the CEEC countries, Ukraine, the Baltic States and the Caucasian countries.” European Commission. 2000. “Toward a European Strategy for Security of Energy Supply.” Green Paper.

⁴⁶ “Turkey Trade, Exports and Imports,” *EconomyWatch*, http://www.economywatch.com/world_economy/turkey/export-import.html.

⁴⁷ Tuncer Kayalar, “Turkish Trade and Investment Promotion Strategy toward Africa,” *Harvard Africa Policy Journal* 5 (2009).

⁴⁸ “Exports to Middle East up,” *Hürriyet Daily News*, 30 August 2009, <http://www.hurriyetdailynews.com/n.php?n=exports-to-middle-east-up-2009-08-30>.

⁴⁹ UNDP, “Turkey: Preparations underway for capacity assessment of Turkish Development Cooperation,” 13 July 2009, <http://europeandcis.undp.org/cd/show/E1E48697-F203-1EE9-B3B6464A8E5A6DF4>.



However, to really leverage its position in the region, Turkey's foreign policy must convince neighbors to the east and the west of its reliability in energy affairs and in international relations in general. Building regional consensus is as important as ever, but Turkey struggles with this as its actions irritate neighbors it counts on for energy transit success. Turkey has been ruffling feathers and undermining regional trust by suggesting it might act as more of an energy bazaar—buying low and selling high—rather than as an energy bridge with a simple toll. As the UK House of Commons observed, Turkey “has occasionally been undermining its own claim of being an energy bridge by making exaggerated demands. Turkey is still hesitant about accepting a transit regime, because of lingering ideas at some quarters that Turkey, rather than becoming a major transit hub for Europe should opt for a role as a seller of energy bought at lesser value on its eastern frontiers.”⁵⁰

Furthermore, Turkey's hasty diplomatic maneuvers have jeopardized key energy projects. In pushing normalization while failing to resolve the Armenian-Azerbaijani Nagorno-Karabakh territorial dispute, Turkey has irritated Baku and nudged it closer to Russia. On March 23, talks between Turkey and Azerbaijan on the Nabucco deal were suspended for over a month for “political reasons.”⁵¹ Azerbaijan is reportedly “openly skeptical about Nabucco” and has demonstrated inclinations to export gas to Russia or Iran instead of Turkey.⁵²

Although Nabucco has finally been ratified by all of participating states, it still faces serious uncertainties. Nabucco will only start to see gas in 2014, and will not be fully ready until 2018 with a not-so-trivial chance—35 percent—that construction will not start this year as planned.⁵³ The rival Nord Stream by Russia, however, will be operational in 2011,⁵⁴ and the EU's Energy Commissioner Günther Oettinger has upset Turkey and Bulgaria by voicing support for Russia's South Stream (although one should not forget that Turkey aided Russia by permitting it to use Turkey's territorial waters in the Black Sea).⁵⁵ Finally, Russia's recent surprise proposal to merge Gazprom with Ukraine's Naftogaz would assure Russian control of Ukraine's gas infrastructure and “deal a death blow to Nabucco.”⁵⁶

⁵⁰ House of Commons (UK), “Keeping the Door Wide Open: Turkey and Eu Accession: Seventh Report of Session 2007–08.”

⁵¹ “Turkey, Azerbaijan suspend talks on Nabucco,” ITAR-TASS News Agency, 23 Mar 2010, <http://www.itar-tass.com/eng/level2.html?NewsID=14946569&PageNum=0>. Also, “Armenia Issue Dogs Turkey-Azerbaijan Gas Talks,” Radio Free Europe Radio Liberty, 23 Mar 2010, http://www.rferl.org/content/Armenia_Issue_Dogs_TurkeyAzeri_Gas_Talks/1991612.html.

⁵² “Nabucco's future depends on Turkmenistan,” RIA Novosti, 9 Mar 2010, <http://en.rian.ru/papers/20100309/158135872.html>.

⁵³ “EU official throws cold water on Nabucco,” Hurriyet, 25 Mar 2010, <http://www.hurriyetdailynews.com/n.php?n=on-the-fate-of-nabucco-pipeline-2010-03-25>.

⁵⁴ “Why Russia's Nord Stream is winning the pipeline race,” European Voice, 29 Jan 2009, <http://www.europeanvoice.com/article/imported/why-russia%E2%80%99s-nord-stream-is-winning-the-pipeline-race/63780.aspx>.

⁵⁵ “The agreements advanced Turkey's longstanding goal of becoming an energy hub. But it also marked a severe blow to the European Union-backed Nabucco pipeline project, a Western effort to decrease Europe's energy dependence on Russian energy by transporting gas from the Caspian Sea area to Europe via Turkey.” In “Moscow Visit By Turkish PM Underscores New Strategic Alliance,” Radio Free Europe Radio Liberty, 13 Mar 2010, http://www.rferl.org/content/Moscow_Visit_By_Turkish_PM_Underscores_New_Strategic_Alliance/1927504.html.

⁵⁶ “Putin Calls for Merger With Ukraine on Energy,” *New York Times*, 30 April 2010.



It is also still not clear whose gas will fill the Nabucco pipeline. As one analyst observes, "Even if the 10-15 billion cubic meters of gas per year projected to be tapped from Azeri fields were to become available, much gas would still be needed to meet the pipeline's capacity of 31 billion cubic meters of gas a year."⁵⁷ The prospect of filling the remaining capacity with Turkmen or Iranian gas (or Turkmen gas via a gas-swap deal with Iran) adds sizeable uncertainty and encumbers the project with foreign policy complications, not least of all because of the West's overt distrust of Iran.

Furthermore, a territorial dispute between Azerbaijan and Turkmenistan threatens the Trans-Caspian pipeline project that would feed Nabucco. Turkmenistan is willing to bypass Azerbaijan via Iran or Russia, which would either make the West uncomfortable by giving Iran an "economic lifeline"⁵⁸ and more influence over Europe or defeat the Nabucco's advertised purpose of diversifying how natural gas gets to Europe (that is, not from Russia).⁵⁹ This could be an existential issue for Nabucco. The European Commission's allocation of 200 million euros to the Nabucco project is contingent on the final investment decision in the project; but, "If [Turkmenistan] fails to come to an agreement with the EU within six months, the EU will spend the money on other energy projects."⁶⁰

Nabucco highlights that a cautious and steady foreign policy strategy must accompany Turkey's energy transit aspirations. Not only must Turkey assure its own energy security to be viable as an energy transit state, it must also conduct its foreign policy in a way that establishes it as a reliable partner in the region.

Energy Processing: Adding value

What if Nabucco ultimately fails? While it is one of the most critical aspects of Turkey's current energy strategy, being a transit country should not be Turkey's only focus. To help maintain its edge in global energy dealings, Turkey must also strive to add value to the energy supply chain.

Turkey's energy strategy does not appear to provide any contingencies for failures in its pipeline politics. Turkey relies heavily on the promise of reducing European dependence on Russian gas. As analysts point out, the development of liquefied natural gas (LNG) that can be shipped from any place in the world is breaking down traditional barriers to natural gas transport, namely the cost and difficulty of constructing long, regional pipelines. As natural gas becomes more of a commodity like oil, Turkey's energy strategy must be able to accommodate changes in global markets.

But looking at the numbers, Turkey is regressing in its ability to accommodate global market changes. Turkey's refining capacity fell short of Turkey's oil

⁵⁷ Gal Luft, "How to Beat Iran's Pipeline Strategy," in *Middle East Strategy at Harvard* (Cambridge, MA: 2009).

⁵⁸ Ibid.

⁵⁹ "Nabucco's future depends on Turkmenistan," RIA Novosti, 9 Mar 2010, <http://en.rian.ru/papers/20100309/158135872.html>.

⁶⁰ "Nabucco's future depends on Turkmenistan," RIA Novosti, 9 Mar 2010, <http://en.rian.ru/papers/20100309/158135872.html>.



consumption level in 2008, which was 690 thousand barrels per day.⁶¹ However, refinery capacity, which has remained almost constant above 700 thousand barrels per day for the last twenty years, fell to 613 thousand barrels per day from 2003 to 2008.⁶² In the case of oil, Turkey may be missing a significant opportunity to add value to the energy supply chain. There is clearly much to gain in the oil supply chain via refining. In the last three quarters of 2009, Koc Holding reported its largest refining profits from TÜPRAŞ (Turkish Petroleum Refinery) as opposed to its other refining companies around the world.⁶³ Regarding gas, Turkey must think about boosting its attractiveness to foreign customers by building gas liquefaction terminals and storage capacities in addition to pipeline infrastructure—particularly if development in LNG makes pipeline investments less attractive.

Indeed, the rise of LNG could pose a major threat to Turkey's pipeline strategy. One of the main differences between oil and gas has been that oil is a fungible commodity, due to the ability to replace one source of supply with another. But the rise of LNG means natural gas is behaving increasingly as a "globally traded commodity like oil."⁶⁴ It is not an easy question to answer if LNG will by-pass pipelines. "Any pipeline from Qatar to Europe," one analyst notes, "needs to transit volatile regions like Iraq and the Southern part of Turkey. At the same time, using Qatar's gas in LNG form is more costly."⁶⁵ Still, this technology advance alters the geopolitical energy landscape and threatens Turkey's significance as an energy bridge.

Turkey must therefore aggressively seek ways to add value to the energy supply chain. Possibilities to do so include building natural gas liquefaction facilities, oil refineries, and specialized petrochemical facilities. For example, the International Energy Agency (IEA) has warned of tight energy markets in coming years due to lagging oil-refining capacities. While the economic crisis has temporarily relieved demand, the energy market will surely tighten further. That Turkey's oil-refining capacity has not kept up with even its domestic consumption growth, as described earlier, is a major cause for concern.

A crucial way to add value to energy routes is by protecting them, an activity it is uniquely able and positioned to do. As the US draws down its military presence in the Mediterranean and Middle East, new arrangements will have to provide for the physical security of energy shipments and infrastructure. With the second largest military after the US in NATO, Turkey could conceivably help contribute to energy security in a major way. However, doing so would require it to boost confidence that its interests align with those of Europe.

⁶¹ "Statistical Review of World Energy 2009."

⁶² Ibid.

⁶³ "Koc Holding posts TL 1.4 billion net profit in 2009," Today's Zaman, 13 Mar 2010, <http://www.todayszaman.com/tz-web/news-204140-koc-holding-posts-tl-14-billion-net-profit-in-2009.html>.

⁶⁴ Hayward, "The Challenge of Energy Security."

⁶⁵ Abbas Maleki, "Energy Supply and Demand in Eurasia: Cooperation between Eu and Iran," *China and Eurasia Forum Quarterly* 5, no. 4 (2007).



Energy Leadership: Striving to be an energy technology leader, not consumer.

In addition to adding value to the energy chain, Turkey must focus on improving its energy leadership. Even though it may have no choice but to be largely an energy importer in the future, Turkey should strive to develop strong, indigenous energy talent and technology to give it a competitive advantage. One of the main reasons that countries like the UK are excited about Turkey's EU accession is because of the deep market for energy technology that Turkey represents. A UK House of Commons report noted, "The energy sector [in Turkey] clearly offers many opportunities, ranging from those offered by the domestic market to plans for international transit into the EU. The UK has much expertise to offer in this sector."⁶⁶ This kind of positive engagement with Turkey is welcome; but Turkey should ensure that it does not come at the expense of developing its own domestic technical and human capital.

The ability to develop leading energy technology and talent will be crucial to keeping up with change in the energy landscape. Natural gas is a sector where technology leadership will be important. As fossil fuels become more difficult and less economical to extract, the countries with superior technology, engineers, and scientists will have an undeniable edge. Turkey has to start sharpening its edge now. The new natural gas fields in North America, Europe, and around the world will require innovative technology. While Turkey may celebrate successes like the agreement on a joint project with Bulgaria to build an LNG terminal, it is Bulgaria that was approached by Oman to develop natural gas fields, not Turkey.⁶⁷

To improve Turkey's capacity to head engineering projects, Turkey must invest heavily in educating its workforce. Turkey trails Europe significantly in education. The World Bank reports that only 40 percent of 20 to 24 year olds in Turkey had a secondary degree in 2005, half the EU15 rate. It further noted, "The Turkish workforce in the manufacturing sector has lower levels of education than nearly all comparator countries. Almost 60 percent of the Turkish workforce in the manufacturing sector has less than ten years of education, compared with 9 percent in Bulgaria, 27 percent in Vietnam, 33 percent in Chile, and 40 percent in Poland." As a direct consequence, "One third of Turkish firms [surveyed] rate education and skills as a major or very severe constraint, more than any of the comparator countries except Brazil. Poland and Bulgaria were much lower, each below 20 percent."⁶⁸

One should not forget, however, the tremendous talent Turks and Turkish youth possess. Turkish students frequently earn admission to the best institutions of higher education around the world and occupy distinguished positions in areas of science, engineering, economics, policy, and industry. The challenge for Turkey

⁶⁶ "The energy sector clearly offers many opportunities, ranging from those offered by the domestic market to plans for international transit into the EU. The UK has much expertise to offer in this sector." House of Commons (UK), "Keeping the Door Wide Open: Turkey and Eu Accession: Seventh Report of Session 2007-08."

⁶⁷ In addition, Oman has proposed that Bulgarian companies extract natural gas in Oman. "Bulgaria and Turkey to Build Joint Gas Terminal," Standart, 1 Apr 2010, <http://paper.standartnews.com/en/article.php?d=2010-04-01&article=32678>.

⁶⁸ World Bank, "Turkey - Higher Education Policy Study Volume I: Strategic Directions for Higher Education in Turkey," (2007).



is not a dearth of raw talent; it is the cultivation of that talent: to train it, retain it and apply it to the pressing areas of Turkey's development, especially in energy matters.

Perhaps we can look to China for a model of a sweeping strategic approach to building technological leadership in energy: China is undertaking a great green revolution. China's massive wind power projects are an imposing sign of its strategy. By throwing vast resources at building mega-farms of wind generators, China is not just making an investment in renewable energy capital: it is building the industry that will make it a leader in the green energy economy of the future.⁶⁹

Indeed, to be a leader, Turkey must significantly raise its investment. As a recent meeting of the German Marshall Fund highlighted, "the shortage of investment is likely to outweigh any other threats to energy security in the short-to-medium term."⁷⁰ Turkey's struggles with implementing an effective bidding process give pause to potential future bidders and investors, as does the persistent dominance of state-owned entities over the energy market. Establishing energy leadership will require developing a proper climate for investment, not least of all by providing a stable policy environment that attract foreign investors.⁷¹

As we have seen, Turkey possesses geographic advantages in energy transit and vast renewable resources in wind, solar, and hydro and geothermal energy. But to leverage these it must invest heavily in the technical and human capital required to generate energy leadership.

Energy Diplomacy: Promoting energy security and stability in regional affairs by deepening trust.

The idea of an "outward looking" energy policy is actually a relatively new concept for Turkey. Until the close of the twentieth century, Turkey's energy policy had been characterized as largely "inward looking." Ambassador Temel İskit wrote in 1996, besides debating the role of foreign capital in Turkey's domestic oil, "Turkey was not involved particularly in developments occurring on the international energy scene."⁷² While the global oil crisis in the early 1970s shocked Turkey into joining the IEA, it still remained "more or less" passive in international energy policy.⁷³ It is no accident that Turkey changed course in the 1990s with respect to turning its energy policy outward: the emergence of post-Soviet states created new opportunities for the development and shipment of regional energy resources.⁷⁴

⁶⁹ "China's Wind Power Plans Turn On Coal," NPR, 10 Dec 2009, <http://www.npr.org/templates/story/story.php?storyId=121244275>.

⁷⁰ Colombo and Lesser, "The Mediterranean Energy Scene: What Now? What Next? (Mediterranean Strategy Group Third Meeting Summary Report)."

⁷¹ Ibid.

⁷² Temel İskit, "Turkey: A New Actor in the Field of Energy Politic?," *Perceptions Journals of International Affairs* (Center for Strategic Research, Ministry of Foreign Affairs of the Republic of Turkey) I, no. March-May (1996).

⁷³ Ibid.

⁷⁴ Ibid.



But Turkey must do more than engage in deals with energy-rich states to promote regional energy security; it must foster more trust and cooperation in regional energy activities. Tony Hayward suggests that “Europe could significantly improve its [energy security] position by [...] breaking down the barriers between national grids and building more cross-border connections.”⁷⁵ However, not simply physical barriers need to be removed. Cross-border connections of mutual trade, compatible policies, and dedicated diplomacy must also be created and maintained. In this vein, Turkey can pursue a more proactive and progressive energy policy by, as mentioned earlier, trying to join the European Emissions Trading System and striving to harmonize its energy market with Europe’s, particularly in the areas of regulation, privatization and competition.

Yet there are persistent concerns about the direction of Ankara’s foreign policy. European observers are concerned over Ankara’s apparent reorientation toward the Middle East as well as the “increasing volatility” of its foreign policy. Ankara’s recent knee-jerk reactions to alleged “anti-Turkish” discussions and resolutions abroad only serve to heighten Europe’s concern about a change of direction by Turkey.

Turkey must focus on enlightened foreign policy that promotes broader regional trust and cooperation—even outside of energy-specific activities—to generate energy security. The Georgia-Russia conflict in 2008 illustrated how large a threat regional conflicts pose for energy security. Dr. Yenikeeff at the Oxford Institute for Energy Studies concludes that longstanding regional interethnic conflicts in the Caucasus “have serious potential to destabilize the ‘fourth corridor’ of energy supplies to Europe ... thus representing ‘dormant volcanoes’ ready to erupt.”⁷⁶ These “dormant volcanoes” cannot be attended to by energy policy alone.

Turkey must also beware not to let its own dormant volcanoes disrupt its energy relationships. Recently, developments in the Armenian question abroad have evoked strong, impulsive reactions from the Turkish government that may negatively impact its own energy future. If regional issues remain unresolved, they reduce Turkey’s attractiveness as a transit route for energy supplies.

Conclusion

It is of course not possible to develop a perfect energy strategy that resolves the nuances of foreign policy-energy policy interactions. However, that fact should not discourage us from building a grander energy strategy that aligns Turkish energy policy and foreign policy with it's the interests of the greate Euro-Atlantic region.

There is great need for stabilizing foreign policy given the substantial uncertainty in the geopolitics of energy, notably driven by global changes in energy demand (especially in China and India) and also by significant changes in technology

⁷⁵ Hayward, "The Challenge of Energy Security."

⁷⁶ Shamil Midkhatovich Yenikeeff, "The Georgia-Russia Standoff and the Future of Caspian and Central Asian Energy Supplies," in *Oxford Energy Comment* (Oxford Institute for Energy Studies, 2008).



(especially with LNG and renewable energy). Turkey's energy policy should consist of major elements—to achieve energy security for Turkey, to leverage its geography in providing secure transit and adding value to the supply chain, and to develop global energy leadership and energy diplomacy—that properly align foreign policy and energy policy considerations.

A grander energy strategy should be rooted in the idea that energy can be a positive-sum game for Turkey and the region. As the German Marshall Fund Mediterranean Strategy Group noted, "With the proliferation of new routes (and now new sources), assumptions about a zero-sum competition for control over transport and markets are increasingly questionable."⁷⁷ The best chance for energy security for Turkey and the Euro-Atlantic region is to construct a more "outward-looking" energy strategy that properly aligns foreign policy and energy policy to create a more conducive environment for long-term energy security.

⁷⁷ Colombo and Lesser, "The Mediterranean Energy Scene: What Now? What Next? (Mediterranean Strategy Group Third Meeting Summary Report)."