On July 14, 2015, the EU High Representative Federica Mogherini and Iranian Foreign Minister Javad Zarif announced that Iran, the five permanent members of the United Nations Security Council, Germany, and the EU managed to broker the Joint Comprehensive Plan of Action (JCPOA). The JCPOA addresses the long-debated technical issues of acceptable thresholds for Iran’s uranium enrichment, future status of the existing uranium enrichment facilities in Fordow and Natanz as well as the nuclear research reactor in Arak, inspection mechanisms for the International Atomic Energy Agency (IAEA), an implementation timeline, and maintenance of the existing sanction regimes imposed by the United States, the European Union, and the United Nations.

Achieving balance on each one of these issues was a major challenge throughout the negotiation process. The pressure has been especially high in Iran and the United States, as both countries have invested a considerable amount of political capital in the conflict that ensnared them in a downward spiral of accusatory rhetoric and hardline tactics. While it is crucial to understand the specifics of
past negotiations and failures, the breakthrough of the comprehensive agreement inspires a completely new set of questions. Mogherini and Zarif released a joint statement saying that “this achievement is the result of a collective effort,” and that “this is an historic day also because we are creating the conditions for building trust and opening a new chapter in our relationship.” Such statements raise two points: 1) why has the agreement come about only now, and 2) can the parties create enough momentum to cooperate on other future issues, ones that go beyond the Iranian nuclear program?

To answer the first question, one has to understand that for any negotiation process to yield a sustainable and mutually acceptable solution, parties must perceive the status quo to be unbearable and realize that unilateral action has lost its ability to yield previously intended results. In other words, as the ‘pain’ felt in the current situation increases, so does the attractiveness of a negotiated solution as a way out of the predicament. Perceiving pain does not require that the parties experience it equally; rather, the essential point is that the parties mutually recognize some pain. So, in order to understand why the JCPOA came through now, after a dozen failed rounds of negotiations, we must first grasp the extent of the pain that the key negotiating parties were experiencing. Understanding the answers to the first question—the sources of the pain—also likely end up revealing the answer to the second—the sources of the gain, or the opportunities available in the near and distant future for further cooperation as a result of the negotiation process.

While the process so far has generally been analyzed through the lens of U.S.-Iran relations, a more nuanced approach requires expanding this view. It is important to keep in mind that these were not bilateral talks between Washington and Tehran, but multilateral ones that benefited from the active participation of other relevant international actors. One incredibly important actor in this process was the European Union.

Is Energy the Missing EU Link?

Since the Joint Plan of Action was signed in Geneva on November 23, 2013, the EU and its member states participating in the talks assumed a more assertive role. On a symbolic level, while the format of the talks is usually referred to as P5+1—five permanent members of the UN Security Council together with Germany—the EU is keen to use the label E3/EU+3, indicating that the process is actually performed by three members of the EU in conjunction with three other countries (China, Russia, and the United States), and facilitated by the High Representative of the European Union for Foreign Affairs and Security Policy. Furthermore, one month after the United States and Iran held their first bilateral meeting in August
2014 under the auspices of the P5+1 talks, the EU followed suit and joined them in a trilateral format. The decision was seen as a logical step aimed at ironing out the differences that still justify maintaining a robust sanction regime against Iran imposed not only by the United States, but also by the EU.

The EU facilitation was pivotal for the achievement of the JCPOA. One day after announcing the deal with Zarif, Mogherini issued a statement stressing that “the Iranian nuclear deal has been reached thanks to the facilitation of the EU ... with courage, the international community has made an historical step towards peace. With pride, I can say the European Union has made it possible.”

Mogherini, who won global praise for her role as a mediator, was able to uphold and promote good relations with Iran (which were established by her predecessor, Baroness Catherine Ashton), and by chairing the meetings, setting the agenda, and driving the process she was “putting oil on the wheels of the deal and pushing negotiators to come up with something solid.”

According to some observers at the talks, intense lobbying by large EU companies leveraged the negotiators, including the United States, into compromise. After all, companies from the EU member states—like Siemens, Daimler-Benz, Bayer, and others—have been very interested in rekindling commercial relationships with Iran, which the existing sanction regime has limited thus far. Lifting of the sanctions would thus not only benefit Iran, but also the many EU companies that are eager to export their goods to a market of nearly 80 million people.

While a thirst for new markets is one variable that should not be disregarded, it is still hard to fathom that this alone would prove sufficient to make a government yield on a highly contentious issue like the Iranian nuclear program. Instead, a variety of factors likely influenced the ‘pain’ that the European countries were experiencing, inducing them to cooperate and urge their counterparts to cooperate on the Iranian deal.

One such specific factor was Russia’s monopolistic gas supply, and the EU’s desire to uncouple itself from it. This sentiment has only intensified since the erosion of European–Russian relations after Russia’s annexation of Crimea, the parallel destabilization of the situation in Ukraine, and the imposition of restrictive EU measures against the Russian Federation. The magnitude of the EU–Russia energy dependency becomes ever more apparent when individual countries are analyzed, with Lithuania, Estonia,
Bulgaria, and Slovakia all relying on a single Russian supplier and a solitary pipeline for up to 80 to 100 percent of their annual gas supply. As a result, European energy companies have a strong vested interest in developing alternative pipeline routes and finding new gas suppliers, which has inspired them to begin lobbying for alternatives.

In particular for Germany—the oft-cited economic engine of the European Union, role-model for long-term sustainable growth, and member of the E3/EU+3 negotiation team—the extent of pain they experienced at the time the agreement was reached was considerably higher than commonly understood. This is a useful illustration of the growing, overwhelming pain felt across the EU, especially when it comes to energy security, that could have helped alter the perception of the participating actors: the mounting pain brought on by an insecure energy future led Germany and many of its European partners to a tipping point in the negotiation process, one that required exploring viable alternatives to existing policy preferences.

**Germany’s ‘Pain’**

As of now, Russia maintains a strong grip on Germany’s gas balance, providing up to 40 percent of natural gas supplies. With Angela Merkel’s decision to end all domestic nuclear energy production after the environmental backlash as a result of the May 2011 Fukushima incident, Germany is likely to meet even more of its energy demand with natural gas from Russia as opposed to polluting coal from other Eastern European countries. Fifty percent of Russian gas imports transit through Ukraine to provide EU countries with about 16 percent of the gas they consume, so any scenario halting Ukrainian transit would mean an imminent national security threat to Germany. If Russia hypothetically chose to impose a complete gas embargo, Germany would only have a nine-month grace period before fully depleting domestic gas reserves.

This doomsday scenario might seem far-fetched and mired in conspiracy theory to some. However, Germany has been on the edge of a major gas supply shortage several times over the last couple of years. Historically, extreme cold periods, supply interruptions, low storage inventories, and regional bottlenecks in the transport system have often occurred simultaneously. In January 2009, the political ramifications of a Russia–Ukraine gas dispute disrupted import flows, which coincided with an extreme cold spell in Western Europe. In February 2012, the...
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gas crisis in southern Germany involved bottleneck supply issues, inaccurate gas storage forecasts, and revealed just how unprepared the so-called anchor of the European Union was to deal with an extreme cold weather front. The most recent instance of gas supply shortage in the EU occurred in April 2013, at which point high gas demand across most of Europe once again coincided with low storage filling levels in Germany.

One of the reasons why Germany, like most other EU member states, continually faces the consequences of inaccurate forecasts of their gas storage supply is the application of an inherently flawed calculation method. The European Commission demands that the infrastructure of every member state be capable of coping with the disruption of its single largest gas infrastructure (the so-called N-1 indicator), even during a time of exceptionally high gas demand. Yet the criterion is, in fact, ill-equipped to measure supply security comprehensively. It fails to capture several important restrictions, assumes that all available gas capacity in storage can be used anywhere in the country, and does not account for grid capacity, range, and potential bottlenecks in the transport system.

Typically, gas storage units are physical assets with an average coverage of 100 kilometers. As such, in scenarios with multiple assets that are unavailable or out of range, and/or storage withdrawal rates less than 100 percent, the national security of supply is no longer guaranteed. The consequences of the inaccuracy of the N-1 formula became clear during the 2012 southern Germany gas crisis. The limited range of Germany’s physical gas storage facilities, which are largely based in northern Germany, left the rest of the country under-supplied and vulnerable to external shocks. During that period, regional bottlenecks jeopardized the security of supply despite the fact that there was an apparently sufficient amount of gas available.

To make matters worse for Germany, the market value of storage capacities has decreased by more than 80 percent over the past decade and is facing a similarly poor outlook over the next five years to come. With the continued pressure to reduce gas storage fees, many operators have increasingly started decommissioning their assets. This has left storage system operators stripped of their commercial leverage and effectively shut them out of the more attractive commercial application of storage capacity due to unbundling.

Germany is on its way to jumping out of the frying pan and into the fire, leaving physical gas storage providers with no regulatory power in the existing infrastructure network and zero commercial incentive to provide the nation with a secure gas supply. As such, Germany remains highly dependent on the technical and political stability of imports. Its dependence is assumed to increase even further with the decrease in both domestic production as well as Dutch gas production, coming from the gas fields in Groningen. Under the backdrop of an escalating conflict in Ukraine, Russia may turn into a volatile and unreliable trading partner in the years to come.
to come. And this, in turn, may only aggravate Germany’s energy supply pain and drive it towards a crucial tipping point. Without action on the part of the German government to forward the diversification of gas supplies, the next gas crisis for Europe’s anchor of economic stability will not be as easily avoided.

Iran as the Way Out?

Iran seems to hold the key to easing Germany’s (and the EU’s more broadly) gas supply and storage dilemma, potentially encouraging cooperation between two sides over the long term. In fact, soon after the JCPOA was signed, the European Commission Vice President Maroš Šefčovič stated: “The return of such a big player to the global energy market will clearly have implications on the global oil and gas market. It fits very well with the diversification strategy of the European Union and the energy union.” Indeed, Iranians are interested to discuss with the EU and its member states issues that go beyond the nuclear talks, especially when it comes to energy concerns. In September 2014, Iran’s Deputy Petroleum Minister for International Affairs, Ali Majedi, was named Ambassador to Germany. Majedi, one of Iran’s leading specialists in international oil and gas trade, confirmed that in tandem with the nuclear talks, Europeans and Iranians have discussed various routes of delivery of Iranian gas to the EU once the sanctions on Iran have been lifted.

The prospect of distributing Iranian gas to the EU has the potential to foster cooperation between the two sides over the long term. This strong incentive was missing from the previous bargaining process. In fact, in the previous rounds of negotiations, prior to the fall of 2014, the E3/EU+3 devoted too much attention to the punitive aspect of sanctions as a response to Iranian non-cooperation. Alternating only between the options of shortening or lengthening the stick indicates that the E3/EU+3 necessarily limited their ability to create enticing incentives for the Iranian side. In order to increase the attractiveness of cooperation, it is not enough to ‘dwindle the stick’; it is necessary to offer ‘carrots’ that are truly appealing to the other side.

The incentives offered until the end of 2014 clearly demonstrate the E3/EU+3’s limitations in identifying Iranian interests. Offers such as potential cooperation on civilian nuclear energy, reassurances of Iranian territorial integrity, or assistance in agricultural and economic development garnered negligible interest from Iran. However, potential cooperation in the energy sector may yield different results. In fact, following the Russian annexation of Crimea, in April 2014 the EU’s Directorate-General for External Policies issued a report emphasizing how “high potential for gas production, domestic energy sector reforms that are underway, and ongoing normalization of its relationship with the West make Iran a credible alternative to Russia.” By September 2014, the European Commission started
increasing the urgency of importing Iranian oil. Evidently, the mutually enticing nature of this arrangement has the potential to co-opt the parties into further successful relations.

With oil prices currently falling below the benchmark price required for the Iranian government to balance its federal budget, a window of opportunity has opened up for the two counterparts, Iran and the EU, to find a way out of their impasse, particularly as U.S. sanctions depressed the Iranian economy to a 6 percent GDP deficit in 2013 and fully restricted the sale of petroleum products. The U.S. government has claimed that Iran’s oil exports have fallen by 60 percent since the introduction of the EU embargo. Under the provisions of the JCPOA, “all of the UN sanctions and the most economically damaging U.S. and EU nuclear-related sanctions will be lifted or suspended once Iran implements, and the IAEA verifies, its nuclear commitments.”

With a gross natural gas production of almost 8.2 trillion cubic feet, Iran is the world’s third-largest dry natural gas producer, after the United States and Russia. Despite its production potential, Iran only accounted for 1 percent of global gas trade in 2012, while its government has announced ambitious export targets to reach 10 percent of global supply by 2025. Most gas production in Iran comes from the South Pars gas field, a portion of a larger gas structure that straddles the territorial water borders of Iran and Qatar, 62 miles offshore in the Persian Gulf. South Pars accounts for 40 percent of Iran’s total gas reserves and is estimated to hold 17 million barrels of natural-gas condensates. Qatar’s North Field and Iran’s South Field gas fields share the same geological environment, for which the production and development costs are identical and the lowest in the world. The rapid development of Qatar’s North Field gas resources over the past ten years gives a good indication of how fast Iran could market its own resources once it overcomes technology as well as investment hurdles, and once it resolves internal and international political challenges.

Still, compared to the size of the Iranian oil sector, the Iranian gas market remains relatively under-developed, accounting for only about 5 percent of the estimated $231 million per day in Iranian revenues from crude oil and condensate exports (2011–2012). Prior to the financial sanctions imposed in 2011, natural gas exports accounted for less than 4 percent of Iran’s total export revenues, while crude oil products amount to over 78 percent. For Iranian decision makers, the influx of unconventional U.S. gas supplies has rearranged the bargaining chips on the international decision-making table. The U.S. shale gas revolution has not only provided a solution to U.S. energy security concerns, but has also put a cap on high Russian gas prices, as it can become a potential source of
diversification. It has transformed a seller-dominated market to one dominated by buyers, which affords additional leverage to European clients when negotiating on the historically high Russian oil-indexed gas prices specified in long-term contracts. Future gas exports from the United States will contribute further to this trend, but prices for exported gas will be higher than domestic U.S. prices due to the cost of liquefied natural gas (LNG) transport. Moreover, many analysts believe that exports of U.S. shale gas will go primarily to Asian markets, where the prices are higher than in Europe.

Technically, Iranian decision makers can offer two options in terms of gas supply routes to the European market as part of building momentum toward future cooperation. The first is to route gas through pipelines on its territory, an option that is cheaper but involves a greater commitment over the lifetime of the project and potentially more players (transit countries). The second is to transport LNG, which is more costly but gives the exporter more flexibility and involves less obtrusive production. Liquefied natural gas (LNG) is created by cooling the gas to a liquid to -160°C, which can then be shipped out safely and efficiently. LNG is a clear, colorless, non-toxic liquid that can be transported and stored more easily than natural gas because it occupies up to 600 times less space. When LNG reaches its destination, it is returned to a gas at regasification facilities. It is then piped to homes, businesses, and industries. For now, Iran does not have the infrastructure in place to export or import LNG, nor does it have a complete pipeline system connecting it to Europe.

However, Iran’s gas grid is already connected to Turkey via the Tabriz–Ankara pipeline (also known as IGAT-9). IGAT-9 is a 56-inch, 1,863-kilometer pipeline system operating along seventeen gas compressor stations, and carries gas from Assaluyeh at the Persian Gulf to Bazargan at the border of Turkey. The Turkish Petroleum National Company (TPAO) is expected to produce up to 46 million cubic meters a day of gas from South Pars, of which 50 percent will be for domestic consumption in Turkey and 50 percent will be for onward delivery to Europe. Once completed, around 35 billion cubic meters a year of Iranian gas would travel through Turkey to Greece and Italy via the new ‘Persian Pipeline’ route. This would represent approximately 25 percent of Gazprom’s exports to Europe from 2014.

While the Persian Pipeline option benefits from already having part of the infrastructure from Iran to Turkey in place and would involve relatively less capital expenditure, European and Iranian decision makers would be agreeing to long-term gas contracts subject to considerable political insecurities and geopolitical volatility. Cross-border gas pipelines have a history of serving as the focal point of disputes and disruptions and the source of conflicts over rents. For instance, in the 1930s, the prospective export of Iraqi oil from the Kirkuk field led to pressure from the British partners in Iraq Petroleum Company (IPC) for a
line via British-mandated Palestine and from the French for a line via French-
mandated Lebanon and Syria. The result was a compromise, a single line out of
Kirkuk that divided into two after Haditha to deliver oil to Tripoli and Haifa,
which led to considerable disputes over profit-sharing agreements. The risks per-
ceived as inherent in cross-border pipelines will inevitably increase the cost of
financing and impact the cost of the delivered fuel. In addition, pipe exports
require an established trust between parties in order to support a long-term and
large-volume commitment. The pipelines need to function at capacity from the
beginning to justify the investment made in building the pipeline network, and
European counterparts may feel that committing to this degree in the absence
of mutual trust is too risky. As such, the pipeline to Europe option remains one
with a very long time horizon.

However, to mend fences and bridge the lack of potential trust between Europe
and Iran, Iran could advocate LNG shipments to Europe in the event that sanc-
tions are lifted. This could be done within a time frame of five to ten years,
depending on the capital investments that such an endeavor would require.
Due to increasing global volumes transported in the form of LNG, translating
into increasing liquefaction and regasification capacities available globally as
well as a rapidly increasing number of LNG carriers, the global gas market is
becoming increasingly interconnected. Iran could always reroute any excess gas
to Asia if regional markets were to become oversupplied. Also, compared to pipe-
line gas, the associated risk from terrorism of LNG projects—threats of piracy and
tropical storms aside—is considerably smaller as each individual ship can act freely
and re-route when necessary.

The LNG option, in other words, offers Iran and its
European counterparts more flexibility in the early
stages of testing their relationship. An initial agree-
ment could propose small gas volumes of 5 million
tons per year, which could be incrementally increased
to 1 Bcf/day (or billion cubic feet per day) over a ten-
year testing period. From a cost perspective, both gas
transportation options to European markets would
be well below current Russian gas sales prices to
both European and former Soviet countries. Development costs of Iranian LNG
—which include the cost of production, liquefaction, shipping and regasification
(ranging from 2.60 to 5.00 $/MMCF, or million cubic feet)—would be very com-
parable to the cost of shipping Iranian gas via the Persian Pipeline to Europe (2.12
to 5.00 $/MMCF). Compared to the 2012 EU sales prices of Gazprom, Russia’s
largest gas exporter (10.78–13.59 $/MMCF), the Iranian option—either LNG
or pipe—would leave considerable room for Europe to negotiate improved
prices with Iran. While we cannot predict with absolute certainty how high
Iranian decision makers will price their final gas deliverables, this does highlight how the entry of Iranian gas supplies into the global market may well improve the bargaining power of European customers vis-à-vis Russia.

It should be noted that any expansion of Iranian gas exports to European clients must be carefully balanced with the increasing domestic gas needs of Iran itself. Coupled with the economic isolation of the country and the highly subsidized prices of natural gas products until recently, any increase in production has thus far been rapidly absorbed by the domestic market, which consumed 5.5 trillion cubic feet of dry gas in 2012.27 With the government’s mandate to increase Compressed Natural Gas (CNG) use in transportation as a substitute for gasoline, domestic demand will undoubtedly grow in the future. In addition, Iran must also dedicate a portion of its natural gas production to enhanced oil recovery as its gas fields suffer from a distinctly larger-than-expected decline rate, which represents the rate at which the production of an oil and gas field is declining over its lifetime.28

**Was Energy a Motivator in the Nuclear Deal?**

With all this in mind, on July 15, 2015, just one day after signing the deal with Iran, Federica Mogherini convened a behind-closed-doors meeting of EU policymakers and asked that the EU immediately start high-level talks with Iran on energy issues. At that meeting, Mogherini told the EU Commission to “provide support for preparing the resumption of economic and trade relations with Iran following the lifting of the international sanctions, once the agreement [has] entered into force.” She also proposed “an official visit to Iran by several members of the Commission at the end of the year or at the start of 2016 to discuss a number of subjects of common interest with the Iranian authorities, such as trade, research, energy and culture.”

Moreover, at her press conference in Vienna, Mogherini stressed that, with the JCPOA signed after a decade of tenuous talks, the EU should strive to create a broader network of key actors in the Middle East, including Iran, “to see if some forms of regional cooperation are possible.” According to some observers, “there definitely is an assumption in Brussels that any deal will lead to greater cooperation with Iran.” For this reason, some analysts have already pointed out that the EU could use this moment to reestablish a framework of energy, trade, economic, and geopolitical ties that existed during Khatami’s presidency in the 1990s but have since dissolved.33

**Just the Beginning ...**

The signing of the JCPOA on the Iranian nuclear program is nothing short of a true success, as it sets the stage for subsequent cooperation between Iran and
the international community. However, maintaining cooperation is often an even more delicate and complicated endeavor than establishing it. Because it is a process of creating joint gains, cooperation is only possible if parties are willing to reciprocate. Reciprocity, however, should not be expected to produce immediate returns. Parties reciprocate because they are interested in developing relationships based on trust and the expectation that, within an indefinite time horizon, the other party will reciprocate when necessary. In other words, the expectation of future reciprocal behavior becomes an essential component of the ongoing relationship. Therefore, once signed, an agreement should promote the spirit of cooperation, which could mean including elements not explicitly mentioned in the text.

In the case of the JCPOA agreement with Iran, there appears to be a great deal of room for future cooperation between Europe and Iran that transcends the narrow scope of the explicitly agreed-upon terms. Upholding the agreement is certainly the first and most crucial step in helping the parties view each other as reliable partners with whom it is possible to explore further cooperative endeavors. However, sustaining future cooperation depends not only on the parties’ ability to produce joint gains, but on realizing that these gains are directly dependent on their cooperation. The possibility of cooperation in the energy sector is certainly enticing to both the EU and Iran.

For the EU, future cooperation rests on the expectation that a steady supply of comparatively attractively priced Iranian gas may allow it to diversify its gas imports. That would also have potentially significant geopolitical ramifications. The option of exporting its surplus gas supplies would facilitate quicker economic development in Iran, after suffering under the existing sanctions regime. The fact that the existing pipelines cannot meet Europe’s growing demand for gas may be a blessing in disguise. The gradual and coordinated dismantling of sanctions called for by German Chancellor Merkel could represent an opportunity to test the willingness of both sides to cooperate. The initial transport of gas to the EU by ship could serve as a building block in fostering a sense of trust between the parties, albeit to a lesser degree than a pipeline would, not only in terms of maintaining a steady exchange of goods, but also upholding the terms of the JCPOA agreement.

If it proves its utility, this could further expand to include arrangements for building pipelines and a more robust distribution of gas to Europe. Such an arrangement would be mutually binding and would create a codependency between the parties that could help ensure future positive relations. Evidently, the scope and potential of the agreed terms of the nuclear deal extend beyond
the mere technical issues that are generally discussed both at the table and in the public forum. The JCPOA could open the door to a more mutually beneficial rapport between Iran and the West. With the opportunity present, the challenge remains to make use of it.

Notes

11. Ibid.


22. U.S. Energy Information Administration, “Natural Gas Exports from Iran.”

23. Maximilian Kuhn, Enabling the Iranian Gas Export Options.


25. Maximilian Kuhn, Enabling the Iranian Gas Export Options.


27. U.S. Energy Information Administration, “Natural Gas Exports from Iran.”


30. Ibid.