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Deconstructing the “energy weapon”: Russia’s threat to Europe as case study

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ABSTRACT

As the likelihood increases that Russia will dominate the European Union’s (EU) energy supply, questions have emerged as to whether Russia would use the *energy weapon* to influence EU member policies and extract political concessions. Countervailing voices argue that Russia would be restricted by interdependence and market forces. As of yet, no one has analyzed the assumptions underlying the energy weapon thesis. Moreover, many scholars examining EU–Russian energy relations rely on non-Russian data. This article seeks to fill several informational and theoretical gaps by including Russian sources and first-hand data and by systematically analyzing the conditions that must obtain before an energy supplier can successfully convert its energy resources into political power. The resulting model can be utilized to analyze the capacity of a supplier to use the energy weapon—whether it be Russia, Iran, Venezuela or any other energy heavyweight—and to assess whether the deployment was successful. Five purported cases of Russian manipulation are analyzed in this article and the findings indicate that, more often than not, Russia failed to achieve political concessions. Looking to the future, the plausibility of Russia using the energy weapon to exploit Europe’s dependence, particularly on gas, is also examined.

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1. Introduction

The tighter energy markets of recent years combined with the political instability of several energy producing countries have elicited widespread anxiety about energy availability (Yergin, 2006). Among the primary energy security concerns of policy makers and analysts are the resurgence of resource nationalism, the prospect of resource wars, and the vulnerability of energy dependent countries to political manipulation. The threat that energy exporting countries could use their control over energy supplies to influence the political behavior of client states was called the oil weapon during the 1973 oil embargo. In recognition that suppliers can manipulate other energy sources, such as natural gas, this article will use the term *energy weapon*.

Recent energy weapon threats include the oil disruptions vowed by Venezuela’s Hugo Chavez in 2008 (Wilson, 2008) and by Iran’s Ayatollah Khamenei in 2006 (Shanker, 2006). These threats were overt, but the energy weapon can also be deployed covertly—or implicitly—as Russia has purportedly done on numerous occasions over the past two decades. Despite the risk posed by use of the energy weapon and the numerous references to this danger expressed in the energy security literature, no one

has yet systematically studied the energy weapon. In April 2010, the Council on Foreign Relations convened a group of experts to discuss the current state of energy security research. They described a need for case study work and systematic analysis of the relationship between oil and gas supply and political decision making (Levi, 2010). Russian activities in the gas sector were specifically mentioned as a valuable area of inquiry.

This article fills those gaps by accomplishing several intertwined objectives: first, systematically disaggregating the component parts of the energy weapon; second, providing a model of the energy weapon that can be utilized to analyze the capacity of any supplier to convert its energy resources into political power; third, ascertaining, through a review of Russia’s behavior over the past two decades, if and how Russia has accomplished the steps necessary to wield the energy weapon; and, fourth, conducting before-after analyses of several oft-cited cases of Russia’s deployment of the energy weapon and ascertaining whether Russia has indeed attempted to coerce political concessions. By examining how states targeted by Russia responded, insight will be gained into Russia’s potential danger to Europe.

2. Russia as an energy superpower

Russia’s propensity to inflict energy disruptions on its customers in the former Soviet Union and in the former Warsaw Bloc—such as the cut-offs to Ukraine in 2006 and 2009—raises

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the question as to whether Russia would (or could) levy an energy weapon against countries of the European Union (EU). For forty years Russia has been a reliable energy supplier to Western Europe. As this section demonstrates, despite this track record, suspicions linger that Russia will use disruptions—or the threat of disruptions—to further its foreign policy and national security objectives.

Some analysts, arguing that Russian–European energy interdependence would temper any Russian inclination to employ the energy weapon, lament the Cold War tone of recent discussions (Stent, 2008). Proponents of the interdependence argument in the U.S. note that disruptions would be economically counterproductive as “Russia has little flexibility to suddenly change the flow of its gas exports that are wedded to European markets by pipe. Its only option would be to forego gas exports altogether” (Jaffe and Soligo, 2008, 35). The interdependence argument also holds sway in Europe where many scholars believe Russia would not risk its relations with major European countries, which it needs to guarantee its long-term prosperity, for short-term political gain (Eden-Fleig, 2007; Götz, 2007; Rahr, 2006). Other analysts and policy-makers, however, are less sanguine.

Among the adherents of the energy weapon thesis are notable Eurasian scholars, foreign policy experts and policy makers. United States Senator Richard Lugar (2008), in a hearing of the U.S. Senate Committee on Foreign Relations, expressed concern that Europe’s increased dependence on Russia and its vulnerability to disruptions would result in “less [NATO] alliance cohesion on critical foreign policy issues,” presumably because Europe would be moderating its foreign policy to appease Russia. A taskforce sponsored by the Council on Foreign Relations (2006) and jointly headed by two members of the U.S. Congress warned “Russia has used energy exports as a policy weapon.... The reassertion of government control over the Russian energy sector increases the risk that this weapon will be used again (4).” *The New York Times* has also linked Russia’s energy power with its foreign policy objectives: “Now that Russia is seeking to reclaim the geopolitical clout it had in Soviet days, it is wielding its vast energy resources, rather than missiles, to reassert itself (Kramer, 2008).”

Although disagreements abound over how Russia may potentially use its energy resources, almost no one disagrees about its hydrocarbon reserves or potential. In 2009, Russia had 5.6% of the world’s oil reserves, almost 24% of gas reserves, and 19% of known coal reserves (BP, 2010). Russia is the world’s leading gas exporter, with Europe receiving over 95% (EU ca. 60%) of that supply (Gazprom Factbook). Some European countries are more dependent than others: Germany, for example, receives over 40% of its gas from Russia. Italy, France, and Greece also receive gas from Russia, at 26%, 22%, and 70%, respectively (Gazprom Factbook). This gas is delivered by Gazprom, the former Soviet Ministry of the Gas Industry. The ability of the Kremlin to instigate a disruption against a gas customer would require state control over Gazprom’s deliveries.

3. The Kremlin and Gazprom

In many ways, Gazprom appears to operate as the Russian national gas company: the state earns 8% of its GDP through its 51% ownership of Gazprom (Ericson, 2009) and has the right, which it has exercised on more than one occasion, to shake up Gazprom’s management. Moreover, the revolving door between the Kremlin and the leadership of Gazprom (Dmitry Medvedev, for example, served as the Chairman of the Board for Gazprom prior to becoming Russia’s President) indicates that Gazprom’s decision-makers are acutely aware of the Kremlin’s foreign policy

goals. In return, Gazprom controls 65% of Russia’s proven natural gas reserves (plus reserves it controls with partners) and produces 90% of Russia’s gas.

Gazprom claims to be an independent commercial company and has undertaken a public relations initiative to promote this view. In 2010, for example, high-level Gazprom executives visited with a small group of energy industry elites in Germany and, during an off-the-record discussion, dismissed any notions that Gazprom could be used by the Russian government for political reasons.¹ These denials contrast sharply with opposing opinions about Gazprom’s role. As Stelzer (2008), Director of Economic Policy Studies at the Hudson Institute, stated: “To view Gazprom or any Russian energy company as anything other than instruments of Russian foreign policy is to be naïve in the extreme (17).” This perception of Gazprom and its pipelines is echoed, perhaps in less caustic language, by many others, such as Krastev et al. (2010) at the European Council on Foreign Relations and Vatansever (2010) at the Carnegie Endowment for International Peace. The fact that non-Russian observers hold this view is not surprising, but over the years, Russian sources—and even officials—have also linked Russia’s gas resources and Gazprom’s control over pipelines with Moscow’s political power.

In 1997, the Russian Ambassador to the Czech Republic directly linked Russian gas deliveries to the Czech Republic’s position on NATO membership (Naegele, 1997). The Russian state news agency *RIA Novosti* (2005) freely made reference to “gas attacks”—the Russian term for energy weapon—and the use of gas supply as a coercive or punitive tool. In 2008, two Russian journalists published a book, *Gazprom: The New Russian Weapon*, replete with details of how and when Gazprom has carried out Moscow’s foreign policy objectives (Zygar and Panyushkin, 2008). Beyond anecdotes and speculation, however, the confirmation of the Kremlin’s power over Gazprom is provided by President Medvedev, who acknowledged in a 2010 interview that gas prices played a key role in the Russian–Ukraine arrangement over the Black Sea fleet (Interfax, 2010). Moreover, the Russian Ministry of Energy’s (2011) website states that Russia’s energy resources are an “instrument for domestic and foreign policy”. Given the Kremlin’s majority ownership of Gazprom, its relationships with the various company executives, and the linkages of gas and politics by Russian official sources, the assumption in this article is that, although Gazprom may usually operate as a commercial enterprise, when the Kremlin calls, Gazprom answers.

4. The energy weapon

Although the Kremlin has some measure of control over Gazprom, the question remains: can Russia’s resources actually be converted into real political power and yield foreign policy gains? The *energy weapon model* presented here analyzes the stages that must be accomplished before a state can be considered to have transformed energy resources into political capital. This model is based on the recognition that, for a state to wield energy supply as a weapon, several conditions must be satisfied. First, the state must consolidate the country’s energy resources. Second, the state must acquire control of transit routes. Third, the state must use the energy resources in an attempt to further its own political objectives by—either implicitly or explicitly—threatening, punishing, or rewarding a targeted client state.

Most literature and public statements on energy security and the energy weapon concentrate exclusively on stage three (Baran, 2008; Lugar; 2008; Smith, 2006; Stelzer, 2008; Woehrel, 2009).

¹ Author’s interview with meeting participant, February 19, 2011.

Underlying this focus on the issuance of threats—as well as the anxiety many observers express about European dependence—is an automatic link between disruptions and client-state concessions. This automatic linkage is problematic, and this article argues that the energy weapon model should contain a fourth stage: the *reaction* of the dependent government to the threats, price hikes or cut-offs. It is surprising that this fourth stage is usually missing, because the prospect that has concerned Senator Lugar and other adherents of the energy weapon thesis is not the threat itself *per se*, but potential policy change in reaction. After all, it is policy changes by European countries, not Russian threats, which would ultimately result in less NATO “alliance cohesion on critical foreign policy issues.” As Fig. 1 demonstrates, each stage of the model is necessary for the successful implementation of an energy weapon.

4.1. Stage one: resource consolidation

As revealed by several incisive analyses of Vladimir Putin's graduate thesis—titled “Mineral Raw Materials in the Strategy for Development of the Russian Economy”—Putin firmly believes that the Russian government must control Russia's raw resources to both secure its domestic economic prosperity and to rejuvenate its status as a world power (Nappert, 2010; Olcott, 2004). That Putin believes such objectives cannot be trusted to Russian oligarchs and foreign investors is evidenced by the reconsolidation efforts that have followed the free-wheeling privatization rounds of the 1990s. The tribulations of the oligarch-owned oil company Yukos is perhaps the most infamous example: Yukos was dissolved following tax disagreements (Perekrest, 2008) and its assets were acquired by the majority state-owned oil company Rosneft. Foreign companies have also experienced difficulties—ranging from contract cancellations to harassment—and many, such as Marathon, have opted to halt their Russian operations (for a succinct report on Russian nationalization, see IHS Global Insight, 2006). While a small number of private Russian oil companies exist, majority (75%) state-owned Rosneft is one of the world's largest oil companies and is the second largest oil producer in Russia.

The Russian state has an even firmer hand over the Russian natural gas industry. Following the 1990s privatizations, Itera and Novatek were the only two major independent gas producers, and in 2006 Gazprom bought a 19.9% stake in Novatek and acquired shares in several of Itera's businesses (Grib, 2006; Mazneva, 2010). In January 2007, a Moscow court removed anti-monopoly restrictions that had hindered Gazprom from acquiring the remaining private gas producers in Russia. According to one report, “the latest ruling allows Gazprom to expand its existing monopoly on natural gas export and transportation to include production as well” (STRATFOR Global Intelligence, 2007).

In addition to resource consolidation in Russia proper, the Russian state has also challenged unwelcome intervention in

Russia's perceived sphere of influence—the former Soviet republics and Warsaw Bloc members. This view is exemplified by the writings of Michael Margelov (2002), who, as a member of Russia's Federal Assembly, stated that the South Caucasus and Central Asia “are historic zones of Russian interests” and therefore should not become “strategic ‘black holes’ or lost to other states’ geopolitical influence (209).” As Central Asia has significant resources, the Russian government has vested considerable effort in attempting to acquire or at least control some portion of those resources.

Central Asia is no stranger to energy-related geopolitical struggles: the region was the site of some of the greatest oil intrigues of the 19th century. The modern-day struggle for the region's resources began in October 1990, when the Soviet Union invited foreign oil companies to tender bids for fields in the Caspian basin. The first agreements were signed in the summer of 1991. When the Soviet Union disintegrated, those deals were transferred to the new independent states. In 1992, a consortium of Western oil companies signed an agreement with Azerbaijan to develop three of the largest offshore fields in the Caspian Sea. The consortium quickly discovered that the Caspian's mineral wealth far exceeded previous estimates and a fierce struggle for control ensued. Russia was eager to recoup some control over Azeri resources (“lost” in the dissolution of the USSR) and attempted to gain leverage through a variety of means, short of invasion (although, the specter of invasion was at the forefront of the Azerbaijan government's concerns).²

Russia's first tactic aimed at securing control over this oil involved a legal approach. During the Soviet era, Iran and the Soviet Union declared the Caspian a lake and therefore subject to the relevant laws regarding international lakes: beyond each country's coastal resources, all other resources are joint property (to be divided equally along with any eventual revenues) and any development must be agreed upon by all littoral states. If the Caspian had rather been defined as a sea, then each country would have proprietary rights to the subsea resources contiguous to its coast. After the USSR's dissolution, Russia declared that the original agreement was still valid and therefore claimed that it jointly owned the subaqueous resources of Azerbaijan and the other littoral states. The position of these states was simple: since they did not sign the USSR–Iran agreement, they were not bound by it. Russia has since given up its intransigence, but Iran continues to assert its earlier claim and the Caspian's status is still uncertain, with a November 2010 summit in Baku the latest in a series of failed attempts to achieve resolution (for more information on the Caspian issue, see Pannier (2010), Paliashvili et al. (2003), and Pomfret (2010)).

In addition to legal technicalities, Russia's second tactic in the Caspian was to obtain “ownership” by inserting a Russian company, Lukoil, into the international consortium. The consortium accepted Lukoil as a minority partner (holding a ten percent stake) with the hope that this concession would mollify the Russians and provide the companies with some leverage in case the Caspian would ultimately be declared a lake. With the status of many of the Caspian's resources undetermined and development at a standstill, Russia turned its attention to controlling the delivery of other energy resources, both Central Asian and otherwise, to market.³

In brief, despite the chaos following the Soviet Union's collapse—and the subsequent era of privatization—the Russian government has undertaken steps to consolidate its control over Russia's resources.

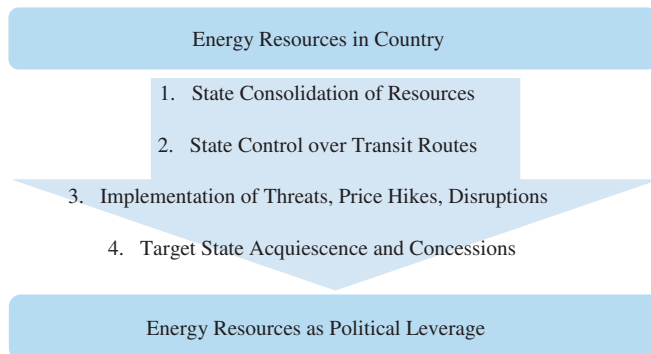


Fig. 1. Energy weapon model.

² Consortium history from author's personal archives, collected while employed by an energy company active in the region, 1989–1995. The Azerbaijan government's concerns were related to author in an interview with an Azerbaijan Embassy official, Washington, DC, June 1994.

³ From author's personal archives.

In the early days, Russia doggedly attempted to hold onto the Soviet Union's earlier claims on Caspian resources. And, in Russia proper, Putin has pursued a strategy to guarantee state—and not oligarch or foreign—control over resources.

4.2. Stage two: control over transit routes

The second stage of implementing an energy weapon requires that the supplier state controls delivery to the customer. Russia, for its part, has expended considerable political and economic capital in securing both existing energy transmission infrastructure as well as priority position in the development of new pipeline routes in Northern and Southern Europe. Ninety percent of Russia's oil is transported, within Russia, by state-owned Transneft, and Gazprom dominates the gas pipeline network (EIA, 2010). Outside of Russia's borders, former members of the USSR have come under pressure to transfer control of transit assets to Gazprom. One method involves using debt owed to Russia (usually energy debt) as a bargaining chip. For the past fifteen years, Russia has been purchasing majority ownership of energy assets, such as transit facilities, in cash-strapped but energy dependent former republics through these debt-asset swaps (Stent, 2008). Moldova provides an excellent example. Reeling under energy debt owed to Gazprom (in 1996 the figure was \$332.6 million), in November 1998 Moldova relinquished 50%, plus one share, of its gas distribution network to Gazprom (Bruce, 2007).

During the past decades, Russia has also been active in the development of *new* transit routes. In the early 1990s, Russia's focus was on acquiring the rights to export oil from the Transcaucasian region and Central Asia. During the Soviet era, Caspian oil was piped from Baku, Azerbaijan, via Grozny, Chechnya, to the Black Sea port of Novorossiysk, where it was shipped by tanker through Turkey's Bosphorus straits. From the very beginning of the Caspian saga in the 1990s, Russia made it clear to the consortium and the Central Asian states involved that it expected resources to once again travel through a route in its transit system. The Central Asian states and the consortium looked unfavorably on the prospect of complete dependence on Russia. They were also concerned about the transit price offered by Russia, which increased several times over the course of negotiations as different areas along the route raised their fees. The city of Novorossiysk, for example, demanded a renegotiation of its port fees.⁴

As the Central Asian states and the consortium partners considered routes that would bypass Russia, Russia undertook several measures to shape negotiations to its liking. First, Russia showed its resolve with respect to Chechen separatists with a forceful crackdown in the region. One possible pipeline route would have crossed Chechnya and, although Russia has officially attributed its conflict in the region to other factors, many analysts in the oil industry believed that Russia's invasion was directly related to its desire to keep this routing under its control.⁵ Second, Russia became increasingly involved in the South Caucasus. One of the most geographically sensible non-Russian pipeline routes would have passed through Azerbaijan and Armenia. The armed conflict that raged between the two countries in 1992–1994 over the Nagorno-Karabakh region made this proposition highly unlikely. Although tensions did exist between the two countries prior to the Soviet Union's dissolution, Russia has been blamed for fueling the conflict.

The consortium eventually selected two routes, only one of which went through Russia. The Russian route was viewed as the

solution for the transportation of early oil and not as the main long-term route. This apparent loss of transit control was met with bitter disappointment in Moscow, as expressed in this excerpt from a 1995 *Pravda* article: "It is now clear that the long, exhausting struggle by Russian diplomacy and the Russian oil business for priority rights—established long before the Revolution—to transport raw materials from the Transcaucasus region has been lost. The Americans and the Turks, who played the main role in these behind-the-scenes intrigues, are cleverly calling the outcome a 'compromise.' But in reality Russia is, of course, the loser, for its priority influence as the main successor to the USSR is being called into question (Bogomolov, 1995)."

The considerable effort Russia invested in attempting to secure oil transportation routes in the early 1990s has been replicated in its more recent exertions concerning gas pipelines. The Nord Stream pipeline, which will run underneath the Baltic Sea to Greifswald, Germany, was relatively easy to arrange (for details on Russia's gas pipelines to Europe, see Baev (2010) and Dusseault (2010)). However, the construction of a new southern pipeline has proven to be a particularly controversial issue as both the U.S. and Europe favor a diversification of routes and suppliers away from Russia.

As with the Central Asian oil pipeline routes, Western companies (and governments) have been seeking a way to transport Central Asian gas without involving Russia, but the political and geographical complexities of the region have made it difficult to find routes that avoid the area's hot spots. For many, the proposed Nabucco pipeline, which after crossing Turkey, Bulgaria, Romania, and Hungary would terminate at Austria's Baumgarten storage and distribution hub, seems a possible solution.

After having failed to insert Gazprom into the Nabucco project, Russia proposed the alternative South Stream pipeline, which would run underneath the Black Sea and have spurs terminating both in Southern Italy and at Baumgarten. Although backers of both pipelines typically refrain from designating the projects as competitors, both sides are concerned that the winning pipeline will be the one that is built first and secures both sufficient supply and demand. The Nabucco project has experienced difficulties obtaining supply contracts and has repeatedly pushed back its construction start date. If South Stream proceeds, Russia may indeed become the dominant transporter of gas to Europe from both the north and the south. For those who worry about European dependence on Russian pipelines, this prospect sets off red flags, particularly as more than one scholar has expressed the suspicion that Russia's pipeline projects are the pursuit of strategic advantage at the expense of financial feasibility (Baran, 2008; Vatanever, 2010).

In sum, the Russian government has acquired both control over resources and control over pipeline assets within Russia proper. Gazprom has also gained some transit assets beyond Russia's borders. High on Russia's present agenda is the construction of several new major pipelines, particularly Nord Stream and South Stream, which will dramatically increase its ability to control delivery of energy all the way from the source to customers in Europe, signaling a major accomplishment as far as the second stage of the energy weapon model is concerned.

4.3. Stage three: threats, price hikes, and disruptions

To implement an energy weapon, an energy supplier must not only control energy resources and delivery, but also intend to convert its power into political gains. This intent can be expressed by the issuance of threats—such as those made by Hugo Chavez in 2005 and Ayatollah Khamenei in 2006—or by actually instigating a price hike or disruption (partial or total). Whereas the threats issued by Chavez and Khamenei were overt, supply and price

⁴ Author's data gathered during visits to Russia in April 1993 and to Azerbaijan in April 1994.

⁵ This opinion is still prevalent in oil industry circles.

manipulations may also be covert. Indeed, to avoid international criticism, a supplier may attribute disruptions to weather, sabotage, technical problems, or other causes. What elicits suspicion in such cases is the *timing* of the disruption. Politically motivated price hikes are especially difficult to ascertain, as they may also be commercially justifiable. But again, the timing of the price hikes and the magnitude of the increase may indicate political motives, particularly when different customers receive different treatment. In the case of Russia, for example, many energy analysts have noted that the price of Gazprom's gas differs from country to country depending on each government's disposition towards Russia (Abdelal, 2004; Bruce, 2007; Jaffe and Soligo, 2008; Myers, 2006).

For decades, most countries belonging to the Soviet Union and the Warsaw Pact received Russian energy at subsidized prices, and many of Russia's cutoffs and price hikes over the past fifteen years may indeed have been commercial in nature—attempts to bring prices to “market” levels or to punish customers for non-payment. However unseemly the prospect of Russia implementing disruptions to coerce price increases or punish non-payment may be, the real worry of many observers is that Russia will try to influence the domestic and foreign policies and decisions of its European customers.

Several of the most oft-cited cases, in which disruptions seemed politically motivated, will be the focus of this paper. These comprise the 1992 and 1993 reduction of gas supplies to the Baltic States over the status of Russian civilians and military installations in those countries, the 2006 pipeline explosions that stopped supplies to Georgia, the oil refinery supply disruption to Lithuania in 2006, the early 1990s disruptions to Ukraine coinciding with the Russian–Ukrainian dispute over the Black Sea Fleet, and the 2009 cut-offs to Ukraine. While some degree of uncertainty over the root causes of these incidents will always remain, a review of them will help highlight possible behavioral patterns.

During the early 1990s, Lithuania, Estonia and Latvia were considering how to treat the Russian civilians and military personnel left on their territories; the discussions leaned heavily toward identifying ethnic Russians as foreigners and ejecting the Russian military. At the same time, Russia and the three Baltic states were haggling over gas prices and Russia, to gain bargaining leverage, on more than one occasion reduced gas supplies or implemented total cutoffs. While Russia may have had commercial reasons for the price increases and disruptions, a political read seems compelling when one learns that the Russian government viewed economic reprisal and threats as a bargaining tool. In July 1992, the Russian Duma itself made the connection between economic manipulation and politics by threatening sanctions in retaliation for any unfair treatment of ethnic Russians living in Estonia (Bohlen, 1992). In a 2005 review of Russia's gas conflicts, even the Russian state-owned news agency *RIA Novosti* linked the June 1993 gas cut-off to Estonia with that country's decision to define Russian speakers as foreigners (for more detail on these conflicts, see Smith (2004) and Smith (2006)).

Another example is provided by the gas pipeline explosions that disrupted supplies to Georgia in January 2006. For several years, Russia had been attempting to take over Georgia's transit assets, an acquisition that would have allowed Russia to connect pipelines from Iran to Russia and to hinder alternative pipelines that would bypass Russia and supply Europe with Central Asian or Iranian gas. Moreover, Russia and Georgia were tussling over the status of South Ossetia. Against the backdrop of these political and energy-related tensions, two explosions damaged the main and reserve pipelines supplying Georgia with Russian gas and were followed nine hours later by an attack, again in Russia, on the main electricity line into Georgia. Georgia accused Russia of sabotage

and Russia blamed the attacks on insurgents, but no groups ever claimed responsibility. At that time, Russia had been exerting heavy pressure on the pro-Western Georgian government to sell its pipelines and, according to Georgia's president, Mikheil Saakashvili, “officials at several levels of the Russian government had been issuing veiled threats (quoted in Chivers (2006)).” (For more information on the Georgian pipeline explosions, see Guardian (2006) and for a review of Russia–Georgia relations, see Allison (2008).)

A third example again involves the Baltic region. In 2006, Russia cut off an oil pipeline to Lithuania, supposedly for technical reasons. The shutdown occurred just after the Lithuanian government had reportedly antagonized Russia by opting to sell its sole refinery to Polish rather than Russian concerns (Kramer, 2006a; Socor, 2006; Torbakov, 2006). Whether the technical problems and explosions that characterized these examples were deliberate acts of Russian sabotage or not may never be determined; nonetheless, they have raised suspicions because they occurred just as Russia was displeased with its customer's behavior.

The contentious negotiations between Russia and the Ukraine over the Black Sea Fleet (a 300-ship fleet remaining from the dissolution of the Soviet Union) in the early 1990s provides another yet frequently cited example of Russia's strategic political use of energy supplies. In January 1992, Ukraine asserted ownership over the bulk of the fleet and in April of that year Ukraine President Kravchuk placed the fleet under Ukrainian jurisdiction. In August 1992, Russia and Ukraine agreed to divide the fleet, in principle, and to reach a final settlement by 1995. However, in July 1993, Russia claimed Sevastopol, the Ukrainian home port for the fleet, as a Russian city. Both sides agreed to resolve the issue at the September 1993 Massandra summit. One week prior to the summit, Russia reduced gas to Ukraine by 25%, purportedly as punishment for late payment, as it had done several times previously. At the summit, however, a link between fleet ownership and energy debt—and Russia's implicit right to reduce supply for non-payment—was made when Russia offered to cancel much of the Ukraine's multi-billion dollar debt (mostly for energy) in exchange for nearly full control over the Black Sea Fleet (Pirani, 2007; van Hamm, 1994). Kravchuk agreed to the deal and sent it to the Ukrainian Parliament for ratification.

The January 2009 cut-off to Ukraine has been attributed to economic causes; namely, disputes over prices and the siphoning of gas by Ukraine for its own use. While there may be some validity to this, the timing and Russia's propagandistic use of the cut-off have raised suspicions that the disruption was also a means to rally European support for Nord Stream. The cut-off occurred just as the Baltic States—which had been reluctant to support Nord Stream for environmental reasons—were about to begin their review process of Nord Stream's environmental implications (The Times (South Africa), 2009). Moreover, Putin and Gerhard Schröder, who heads the Nord Stream project, took the opportunity to appear on Russian television together to discuss Nord Stream's merits. Among Putin's comments to Schröder, two particularly stood out as pertinent: “The current situation only makes even more relevant our main task, our plans for the construction of a gas pipeline system along the bottom of the Baltic Sea,” and “I think that our European partners have now finally realized that this project is necessary and has to be carried out promptly (quoted in The Times (South Africa) (2009)).”

The intentions behind the disruptions in the above examples appear to be punitive or coercive. But Russia, it seems, may also be using price as a reward. Countries with governments friendly to Moscow pay considerably less than countries that lean more towards the United States and Europe. For example, Jaffe and Soligo (2008) found that westward-leaning Georgia paid \$235 per thousand cubic meters of gas, while Russia-friendly Belarus paid

\$46 and Ukraine, despite its highly publicized disputes with Russia, paid \$135. They concluded that “the fact that prices of Russian gas are negatively correlated with the degree of pro-Western orientation of the government reinforces the belief that Russia is using its energy resources as an instrument of its foreign policy (33).” The Prime Minister of Georgia, after failing to thwart a price increase in 2004 that coincided with disputes with Russia over military bases and NATO membership, expressed similar sentiments, holding the “view that the [gas] price increase [for Georgia]... is a political decision” (quoted in *Netreba and Solovyov (2005)*).

4.4. Stage four: acquiescence and concessions

The fourth stage of the *successful* implementation of the energy weapon is the targeted state’s response: it must modify its behavior on account of the threats or actual disruptions. In the case of rewards, the targeted state must continue its support. To examine reactions to use of the energy weapon, let us return to the examples of perceived political pressure cited in the previous section: the Baltic States in the early 1990s, Georgia and Lithuania in 2006, and the continuous disputes with Ukraine. An examination of the target governments’ actions after the price hikes and disruptions should reveal if they became more co-operative with Russia.

During the early 1990s, Russia was in intense negotiations with Lithuania, Estonia and Latvia over the presence of the Russian military in those countries. Despite the energy price hikes documented in the energy security literature, the Baltic States did *not* allow Russian troops to stay—a fact that is almost always neglected. The last of the troops left in 1994 (*The New York Times, 1994*) and in 1999 Russia turned over its last facility, a radar station that Russia had considered critical to its national security, to Latvia (*Latvian Ministry of Foreign Affairs, 1999*). Rather than face down Russia on their own, the Baltic States made a strategic decision to appeal to the international community, and one of the initial agreements with Russia was arranged at a Conference on Security and Cooperation in Europe (CSCE) meeting in Helsinki in 1992.

The pipeline explosions in the Georgia example are widely understood to have been a pressure tactic, but Georgia ultimately did *not* sell its transit assets to Russia. Instead, over the next two years Georgia moved even closer to the West; and, rather than moderating his behavior with regard to Russia, Saakashvili seemed to grow even bolder. The worsening of relations culminated in the 2008 war over South Ossetia (*Allison, 2008*).

The third example—the Lithuanian refinery sale to Polish concerns—differs from the first two in that the energy weapon was supposedly used punitively, rather than preemptively. As it was Lithuania’s only refinery, the supply disruption was presumably painful, but Lithuania did not renege on the sale to the Polish concern (*Kramer, 2006b*) and it is not clear if the disruption has caused Lithuania to change any other policies. The motivation for the disruption might have been to punish Lithuania *and* to send a signal to other countries that Russia’s bids for assets should not be refused.

These are three of the cases of political manipulation mentioned with some regularity in the energy security and energy weapon literature. Although only the two pre-emptive cases lend themselves to assessment—because they allow for *before-and-after analysis*—it appears that the energy weapon, when used for political leverage, had limited or no impact. Despite their weaker positions, the Baltic States and Georgia did not bend to Moscow’s political will. Perhaps their appeals to the West—and all targeted countries in these examples did receive some kind of support from the West (see *Socor, 2006; Stanley, 1994*)—emboldened

them to stand Russia down. One tentative conclusion may be that suppliers back down when the targeted country is able to benefit from strategic alliances.

On the other hand, the disputes over the Black Sea Fleet and the posturing over the construction of the Nord Stream pipeline have had outcomes that fall into a different category. The agreements made at the Massandra summit in 1993 were extremely unpopular in Ukraine and *not* ratified by Parliament, leaving Russia and Ukraine to begin negotiations anew, each still in control of 50% of the Fleet. Though generally tumultuous, relations between the countries gradually improved until 2004, when the “Orange Revolution” in Ukraine swept into power a western-oriented government, headed by Viktor Yushchenko. In January 2006 (following price disputes) supplies to Ukraine were cut off; in March of that year, pro-Russian political parties and leaders did well in the parliamentary elections (*Elder, 2009; Pirani, 2007*). In 2008, Yushchenko issued strongly worded statements of support for Georgia in its war with Russia, set again against a threat of major gas price increases and complications over Black Sea Fleet negotiations (*Maksymiuk, 2008*). Finally, in early 2010, Viktor Yanukovich (who had originally been forced out of the presidency by the “Orange Revolution”), won the presidential elections and relations with Russia immediately began to improve. An agreement was made in April of that year to extend the presence of the Russian Black Sea Fleet (which had by now dwindled to about 40 operational vessels) in Sevastopol from 2017 to 2047 in return for a discount on gas (*Kuzio, 2010; RIA Novosti, 2011; Socor, 2011a*). The Ukrainian opposition was furious and security analysts alarmed, but it seems as if years of negotiations and energy diplomacy leveraged against pro-West Ukrainian politicians have paid major dividends to Russia (*Peleschuk, 2010*).

On the Nord Stream front, the January 2009 disruptions to Ukraine elicited a strong response from Western European countries. The very next month, Jonathon Stern (2009) at the Oxford Institute for Energy Studies wrote of the “imperative” of either a European-partnered consortium controlling transit routes through Ukraine, or the construction of “bypass” pipelines in an article supportive of the Nord Stream project. Later that year, both Sweden and Finland approved the project after environmental and economic concessions on the part of Nord Stream (*OSW/Center for Eastern Studies, 2009*). It seems as if various “European partners ... finally realized that [the Nord Stream] project is necessary,” just as Putin had requested, coincidentally in the aftermath of Russia’s price negotiation-driven gas cut-offs to Ukraine.

5. Discussion

As indicated by the energy weapon model developed here, Russia appears to have accomplished the first three stages. Over the past fifteen years, the Russian government has consolidated its control over the country’s energy resources and transit assets. It has also acquired many resources and transit assets that had belonged to the Soviet Union’s former republics. Furthermore, Russia has at various times implemented price hikes and supply cut-offs, seemingly in the pursuit of political gains.

A Russia with the Soviet Union’s energy resources but without its obligations (such as supplying cheap energy to its republics) may become mightier than the Soviet Union ever was. The Soviet Union wielded its monopoly over energy resources and delivery to “achieve political acquiescence in the Warsaw Pact” (*Jaffe and Soligo, 2008*); thus, despite Putin’s assertion that Russia would not use its energy supply to pressure Western Europe (*Chance, 2008*), the prospect unsettles security analysts and other observers who fear for Europe’s independence. However, as emphasized earlier, most scholars stop their analysis at stage three—they recognize

that a threat or disruption has occurred, which fuels their fear, but do not examine whether or not the threat or disruption had its intended effect.

In some cases, Russia *does* seem to have implemented its energy weapon successfully. Without control over natural gas and important energy transit routes, for example, Russia could well have lost control over the symbolically significant Black Sea Fleet. However, the evidence for the *consistently* successful implementation of the energy weapon by Russia is less than overwhelming. Client states, even weak and highly dependent states such as the Baltic countries and Georgia, were able to resist changing their policies to appease Russia, often through the use of strategic alliances. This raises the question: why would Germany and other European countries not be able to resist similar pressure?

This more sanguine reading of Russia–European energy relations is, of course, grounded in the present. Twenty-five years ago, few would have believed that the Soviet Union and Warsaw Bloc would one day voluntarily dissolve themselves; what worries some policy makers and others are the long-term scenarios of world events that, from today's perspective, seem improbable. In one such scenario, a Russia led by the *Siloviki* (the Kremlin's hardliners) engages the West in a hot war and diverts Europe's supplies to China or elsewhere (Hill, 2006). The assumptions underlying such scenarios, from an energy standpoint, are that Europe's current dependency on Russia will continue and that European states will remain "helpless".

As the response of western states to the 1970s OPEC oil embargo—the first use of the energy weapon—demonstrated, consumer states can develop countermeasures to supplier state manipulation. In the 1970s, these measures included the establishment of the International Energy Agency, through which oil importers can coordinate and limit supply shocks; creation of 90-day strategic oil reserves; significant reductions in the oil intensity of Western economies as well as the emergence of a strategic alliance between the U.S. and Saudi Arabia, which further limited OPEC's effectiveness. Thanks to these protections, plus the rise of non-OPEC oil production, the Middle East oil weapon lost some of its leverage (Perovic, 2009).

Similar to the countermeasures of the 1970s, the EU—after the January 2009 Russia–Ukraine gas crisis—also implemented protective measures against gas disruptions. The EU now requires all Member States to adopt and regularly update preventive action plans (the first action plans should be adopted by December 3, 2012) and to identify energy security threats—for which the insights of this article are pertinent—and mitigation measures. Unsurprisingly, suggested measures in Annex II of this regulation include diversifying gas suppliers and gas routes; investing into network infrastructure; increasing the share of renewable gas as a supply side measure; and increasing energy efficiency and fuel-switching as demand side measures (EU, 2010).

Even prior to legislating the above protective measures, the EU was pursuing the establishment of a single European gas market, which is expected to significantly contribute to European energy security as it would increase gas flows within the entire European Union and moderate the consequences of disruptions, no matter what their cause (for example, natural hazard or political manipulation). The recent implementation of the "third energy package"—the unbundling of energy producers from the network—will further enhance energy security as suppliers such as Gazprom will have to relinquish their transportation infrastructure. As one would expect, Putin has vociferously protested the third energy package (Socor, 2011b). Unbundling could stop a producer from being able to enact the energy weapon, but many questions remain over how the regulation will actually be enforced. Moreover, a supplier with shared borders could still own its domestic infrastructure and could still cause a disruption on its side of the border.

These recent initiatives may help protect the EU, but Russia will continue to have a dominant position in Europe's energy supply in the near- to mid-term. However, most analysts expect this to change in the long-term as other sources—such as renewable energies and unconventional gas—emerge. Momentum is building for a large-scale renewable build-out. Utility-scale and distributed renewables have gained favor with academics and policy makers: Germany alone currently generates around 15% of its electricity from renewable generation technologies and plans to increase this to 80% by 2050 (Nicola, 2011). The DESERTEC proposal alone (a plan to facilitate both the installation of large-scale renewable plants in North Africa and the transportation of electricity to Europe) projects Europe receiving 15% of its electricity from renewable energies by 2050 (DESERTEC Foundation). Needless to say, projections such as these could imply a dampening of demand for natural gas, which currently supplies around 13% of Germany's electricity (European Nuclear Society). The story is similar in other major EU economies.

New technological innovations in processing and handling unconventional gas and liquefied natural gas (LNG) are also potential game-changers. LNG is as mobile and storable as oil, which means that formerly isolated gas reserves around the world may become economically viable. Moreover, recent gas discoveries in Brazil and the shale gas revolution in the U.S. mean that more LNG is available for Europe (Gustafson et al., 2008). Europe's traditional major suppliers of LNG, including Algeria, Nigeria, and Qatar (Kavalov et al., 2009), may find themselves under competition.

Diversification away from gas supplied directly from Russia, however, may not necessarily lead to diversification away from Russian, or partly Russian-owned, gas. Russia has been pursuing investments in several of the countries from which the EU hopes to procure non-Russian gas. For example, the 2009 joint venture between Gazprom and Nigeria's national oil company includes plans to construct a gas pipeline connecting African producers with Europe (BBC, 2009).

6. Conclusion

The term "energy weapon" denotes that an energy supplier state uses its resources as a political tool to either punish or coerce (or sometimes a combination of both) its customers. As tightening markets and concerns over scarce supplies seem likely to characterize energy relations of the future, it would be beneficial for policy makers to better understand energy relations and assess threats. As about 80% of the world's resources belong to state-owned oil and gas companies (Orttung et al., 2009), policy-makers around the globe may be increasingly faced with supplier states attempting to convert economic resources into political power.

A typical reaction to threats by pundits, scholars and policy-makers, such as U.S. Senator Richard Lugar, is the assumption that threats or the implementation of an energy weapon equate with target state acquiescence; an assumption that this article has demonstrated is unfounded. As the case study showed, some client states—even highly dependent and weak states—were able to withstand the pressure of disruptions and manipulations. Two interrelated objectives of this article were to analyze under which conditions a supplier can actually implement an energy weapon *successfully* and to provide policy makers with guidelines on ascertaining the credibility of a threat. For example, does the supplier sufficiently monopolize state resources? Does the supplier actually control the transit infrastructure?

By understanding the stages and process of the energy weapon, policy makers of consumer states would be able to

better assess the seriousness of a threat. Grave and real threats warrant a different response than bluffs. Policy makers have many audiences and, if policy makers are able to place threats in context and react accordingly, several desirable consequences could ensue. For example, if the threat was perceived as non-dangerous, then policy makers could: first, avoid language and actions that might escalate the conflict; second, help quell public panic; third, signal to oil and gas traders that the situation is non-threatening and thereby calm market reactions; and, fourth, avoid the cost of enacting unnecessary emergency response and contingency planning measures.

If an energy disruption threat is deemed as serious and imminent, then different reactions would be necessary. As our case study indicated, it seems that appeals to the international community were sometimes—but not always—helpful in achieving a resolution to the conflict. And, if contingency planning has been adequate, then policy makers could reassure the public and markets that the disruption is manageable. A feedback loop could also be in play here—as policy makers become better equipped to assess threats, they can also initiate and promote proper and adequate contingency planning.

In sum, appropriate responses by policy makers—informed by an understanding of the energy weapon—can help states cope with both real and empty threats of disruption and manipulation. At the European level, policy makers have already been pursuing measures—such as promoting a single energy market and diversification—that would, in addition to achieving other objectives, help minimize the threat and impact of supply disruptions. In addition to policy tools, the growth of renewables and LNG could potentially reduce dependence on Russian gas. The combination of all these measures, to the great relief of several U.S. senators and other observers, will help defuse Russia's energy weapon and restore the balance of power.

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