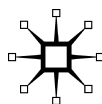


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# 1

## Introduction

### **Russia's Contested "Energy Weapon"**

How and why do countries become dependent on each other for something as vital as their energy supply? How do they build and maintain critical levels of trust across political, military, and ideological divides? And how do they cope with uncertainty and risk in these relations?

Europe's dependence on Russian natural gas has in recent years become a fiercely debated issue in European politics. The actual and potential consequences of far-reaching energy imports from the "big bear" have become a subject of growing concern not only among importing nations, but also at the level of the European Union. The gas trade has come to decisively influence EU-Russia relations and there is nowadays hardly any aspect of these that can be discussed without, directly or indirectly, taking into account natural gas. The recent "gas crises"—notably in 2006 and 2009—in which several EU member states faced acute gas shortages as a consequence of disputes between Russia and Ukraine over the extension of import and transit contracts have, in the eyes of many analysts, proved the reality of Europe's vulnerability. Moreover, some have interpreted Russia's gas disputes with Ukraine and several other ex-Soviet republics as part of a wider Russian ambition to regain political and economic influence in its "near abroad." According to this interpretation, Russian natural gas has become an "energy weapon" analogous to the OPEC's "oil weapon", and the argument is that such a weapon might be—and is possibly already being—used not only against Ukraine and other former Soviet republics, but also against Western Europe.<sup>1</sup>

Others, challenging this view, emphasize that Russian gas exports, to an overwhelming extent, take the form of undramatic business relations and technical cooperation from which both Russia and the EU profit, and that the frequent disputes with former Soviet republics have centered on economic rather than political issues, typically linked to the problem of nonpayment. Moreover, to the extent that the gas trade is political, it may be argued that this is not an extraordinary thing. Despite the Western ideal of an international economy based on free, depoliticized market relations, close links between politics and economics are in actual practice part and parcel of international

business. Energy is one of many fields in which international trade is not a “purely economic” phenomenon. Furthermore, since natural gas emits only half as much carbon dioxide as coal (which it often replaces), Russian gas can be argued to make an important contribution to combating climate change. The main threat, according to this view, is not that Russia, for political reasons, would deliberately disrupt its gas supplies to Europe, but rather that its gas industry might fail to make the necessary investments in pipelines and gas fields and that it, as a result, will not be able to live up to and further expand its export commitments.<sup>2</sup>

Independent of perspective, the importance of Russian natural gas for Europe’s energy supply is unlikely to decrease in coming decades. This is because of the expected depletion of North Sea and other intra-European gas resources, which are currently considered guarantors of Western Europe’s security of supply and a necessary counterweight to imports from non-European sources. Gas production within the EU peaked in 1996 and has been in a phase of steady decline since around 2004. The International Energy Agency (IEA) expects gas production within the EU to decrease from 196 billion cubic meters (bcm) in 2009 to 89 bcm in 2035. The only factor that could possibly reverse this trend would be a European revolution in unconventional gas production, the probability of which is difficult to assess at the present time. Norwegian gas production will continue to increase from today’s level of around 100 bcm, but not by more than 10–20 bcm, and a production peak will be reached within a decade or two. At the same time, the main scenario predicts that the EU’s demand for natural gas will continue to increase, from 508 bcm in 2009 to a level of around 629 bcm in 2035.<sup>3</sup> This anticipated growth is closely related to European energy and climate policies, in which a gradual phase-out of coal for electricity generation plays an important role. Following the 2011 Fukushima disaster in Japan, it appears probable that natural gas, together with renewable energy sources, will replace much of Europe’s nuclear power as well.

Against this background, most analysts now agree that if Europe’s future energy demand is to be met, Russia’s natural gas is direly needed. Other non-European gas suppliers – and, possibly, intra-European shale gas – may alleviate the situation to a certain extent, but even so any decrease in Europe’s demand for Russian gas seems unrealistic. Economic recession may slow demand on the short term, but in the long run imports from the East will most probably have to increase. At the same time, growing competition from China and other countries for Siberia’s gas may change the traditional logic of Russian-European interdependence in the field of natural gas. Nobody knows how this development will influence EU-Russia relations and, more generally, the overall political landscape in Europe.

## **Soviet Natural Gas and the Hidden Integration of Europe**

How and why did Western Europe become such a massive importer of Russian natural gas? Clearly, today’s dependence did not emerge overnight. The crucial formative period of the East-West gas trade can be located in the decade 1965–1975—that is, in the midst of the Cold War. Intense negotiations

**Table 1.1** West European dependence on Russian natural gas as of 2011, by country (bcm, measured at 0 degrees centigrade)

	Domestic	Russian	Other	Dependence (%)
Austria	1.6	4.9	4.7	44
Belgium		7.4	21.9	25
Finland		3.8		100
France	0.7	8.6	38.3	18
Germany	10.0	30.8	53.2	33
Greece*	0.0	2.1	1.8	53
Italy	7.7	15.4	54.1	20
Netherlands	64.2	4.0	9.6	5
Switzerland*		0.3	3.3	8
Turkey	0.7	23.5	18.3	55

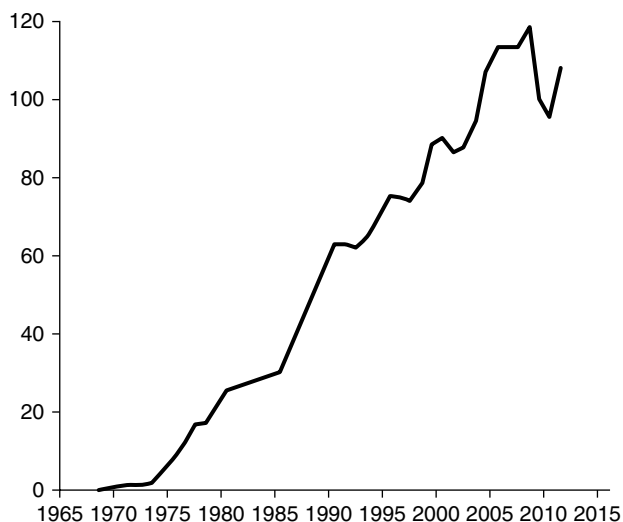
\* Figures for 2010.

Source: BP Statistical Review of World Energy 2011.

between the Soviet Union and Italy, Austria, West Germany, Finland, and Sweden gained momentum in 1966–1967, and a number of key pioneering agreements were reached in the period from 1968 to 1970. First deliveries started to Austria as early as 1968 and to West Germany, Italy, and Finland in 1973–1974. France followed suit in 1976. Strikingly, several West European countries and regions were connected with the communist pipeline system of Eastern Europe before linking up with the grids of other EC and NATO member states.

At the time when the Berlin Wall fell and the Soviet Union collapsed, Soviet natural gas had become one of the most important sources of fuel in Western Europe. “Red” gas was taken into use on a large scale by a wide range of industrial enterprises, by power plants, by the municipal sector, and by millions of households. This was made possible through the construction of one of Europe’s most critical and expensive infrastructures, which for its part formed a most remarkable case of East-West relations and of what has been labeled the “hidden integration” of Europe in the Cold War era.<sup>4</sup> In no other field did Western and Eastern Europe develop such close material relations during this era as in natural gas. Indeed, the gradually deepened gas trade and the construction of ever larger pipelines, generating far-reaching dependencies and vulnerabilities on both sides, ran counter to the fundamental logic of the Cold War. From the perspective of natural gas, the “Iron Curtain” takes on a new meaning and Europe looks different from what we are being told in much of the general historical literature.

Despite this peculiar and paradoxical development, and notwithstanding the central importance of Russian gas in current European and Russian affairs, little attention has been paid to their historical underpinnings. On one hand, the export of Soviet natural gas—and of Soviet oil—is often explicitly mentioned as an interesting phenomenon in the earlier literature on European postwar and Cold War history. On the other, it has, in practice,



**Figure 1.1** Soviet/Russian natural gas exports to Western Europe, 1968–2011 (bcm).

Sources: Stern 1980, p. 59; Stern 2005, p. 110; Oil and Gas Journal; BP Statistical Review of World Energy.

remained a “black box,” discussed only in passing in connection with political or economic analyses of, for example, German chancellor Willy Brandt’s New Eastern Policy, cooperation between Italy and the Soviet Union in the automotive sector, or in relation to the NATO’s embargo policies concerning West European exports to the communist bloc of large-diameter steel pipes and advanced compressor technology.<sup>5</sup> In other words, East-West natural gas relations have never been subject to an in-depth historical inquiry in their own right. As a result, we do not know how and why Europe’s dependence on Russian natural gas has actually come about.

The aim of this book is to fill this gap. *Red Gas* investigates how and why governments, businesses, engineers, and other actors sought to promote—and oppose—the establishment of an extensive East-West natural gas system at odds with Europe’s formal political, military, and ideological divisions. It explains why political leaders and energy companies in several West European countries prioritized the integration of their gas supply systems with those of communist Eastern Europe, rather than first and foremost seeking integration with their Western neighbors. The book reveals how a variety of actors on either side of the Iron Curtain managed—and sometimes failed—to build and maintain sufficient levels of trust across military and ideological divides and how they used natural gas relations for a variety of purposes other than for the access to a high-quality fuel. At the center of the narrative stands the fear of unwanted consequences of energy dependence and the perceived vulnerability of actors to supply interruptions and price shocks, and the opportunities that the gas



trade seemed to offer politically, economically, and environmentally—in an age obsessed with its ever-growing thirst for fuel.

Building on primary documentary sources from Russian, Ukrainian, German, and Austrian archives, the book centers empirically on the period from the mid-1960s, when the first gas export agreements were negotiated and the first East-West pipelines built, to the years around 1990, when the Berlin Wall fell, the Soviet Union collapsed, and the Cold War ended. It uncovers the complex formation of energy trade strategies from the side of governments and businesses in both the Soviet Union and the importing Western nations, and the complex process of negotiating the East-West gas contracts. The book unpacks the major conflicts between key players—both across borders and domestically—in their struggle to shape Europe’s energetic future. It also tells the story of how Soviet and West European stakeholders—with mixed success—approached the task of actually creating—materially and institutionally—the new trans-European pipeline infrastructure, and of using it in practice. An underlying argument, of relevance for policymakers and analysts of today, is that we will not be able to understand the dynamic nature of Europe’s current energy dependence, let alone properly deal with it, in the absence of a thorough historical understanding of how today’s situation has come about.

### **Dependence in the Making: A Systems Perspective**

How and why does a large technical system (LTS) such as the East-West gas grid come into being? Earlier studies of LTS<sup>6</sup> have stressed the importance of scrutinizing the activities of “system-builders” and their evolution over time. System-builders are the actors who, by definition, have the most far-reaching power to shape a system’s evolution—and to kick it off in the first place. System-builders may be technically oriented innovators, but more often they are passionate business leaders or centrally placed governmental actors who have the necessary ability, mandate, and connections to bring about major infrastructural projects, turning diffuse and often controversial visions into material reality. One of their key challenges is to mobilize sufficiently strong actor networks. Having a talent in viewing the system in its totality, spotting the links between its diverse technical, political, and economic components, the successful system-builder identifies “reverse salients” in the form of weak components and links, and turns these—analytically and discursively—into “critical problems” that must be solved for the system to come about and expand along desired lines.<sup>7</sup>

When system-building takes place in a transnational context, however, it is an extremely demanding process to master, due to differences in standards, regulations, political traditions, and business culture in the countries involved.<sup>8</sup> Crucially, system-builders setting out to cooperate with “the other” have to accept that they cannot to the same degree take control over the system-building process as they may be used to in their national environments. East-West system-building in the Cold War context formed an extreme case of transnationalization, dependent as it was on what I call “system-building coalitions” that cut across the Cold War’s most radical political, ideological, and military divides.

Yet transnational system-building sometimes becomes an even more dynamic process than system-building in a national context. *Red Gas* shows that effective coalitions of system-builders may turn the apparent problems of cross-border tensions and disparities into opportunities for accelerated development and growth. Natural gas system-builders in East and West spotted what I call “complementary reverse salients,” or problems on either side that “fitted” each other and could be resolved precisely through increased transnational cooperation and integration. In the 1960s, for example, vast volumes of natural gas had been discovered in the Soviet Union, but the growth of the domestic Soviet gas system was retarded by the inability of the domestic steel industry to produce high-quality steel pipe. West European system-builders, for their part, knew how to build pipes, but lacked large domestic gas resources. This asymmetrical situation motivated actors in East and West to work out a countertrade arrangement in which Soviet natural gas was exported to Western Europe in return for West European deliveries of large-diameter steel pipe. Transnational coalitions of system-builders working together on resolving complementary reverse salients constituted the most fundamental driver of Europe’s evolving energy dependence throughout the Cold War period.

Europe’s dependence grew at a steady pace through processes of gradual learning and positive feedback. Initially, there was great suspicion on either side. In such a situation it was of a certain importance that East-West gas system-builders could point to exports of red gas across the Iron Curtain not as a totally new phenomenon, but as a logical follow-up on exports of Soviet oil. Moreover, gas system-builders effectively exploited the opportunities offered by early, inexpensive pilot projects as test cases for the future. Pilot projects and experiences of earlier cooperation helped system-builders assure themselves that they were dealing with a system with which they could communicate and cooperate in a meaningful way. To borrow a concept from social systems theory, this made it easier for “resonance” to be generated. Resonance between Soviet and West European systems in turn made it easier for system-builders to build trust.<sup>9</sup>

For resonance and trust to be retained, the Soviet Union also needed to show that it could provide the gas in the agreed quantity and quality, while the importers needed to demonstrate their ability to receive and pay for the gas. Failure to do either were bound to reduce the prospects for further expansion of the system. As it turned out, the Soviet Union was so obsessed with the need to ensure its Western partners of its reliability as an exporter that the country’s own gas users were left to freeze when sufficient gas was not available.

Having survived its formative phase, transnational system-building became a self-reinforcing process, generating a virtuous circle of positive feedback that inspired actors on either side to gradually scale up their commitments and visions. Ultimately, through its development over nearly half a century, the system became a mature transnational infrastructure with a very high level of what students of large technical systems call “momentum.” A high level of momentum made attempts to alter the system’s direction of development exceedingly difficult.

In some cases, such as in connection with US-led opposition to expansion of the East-West gas trade in the early 1980s, Soviet gas exports became subject

to major public and political debates, and demands for radical change—and even abandonment—of the system were voiced. By then, however, the system had grown so powerful that these demands had little chance of materializing. The robustness of the system was reconfirmed in 1989–1991, when the Berlin Wall fell, the Soviet Union collapsed, and the political map of Europe was radically redrawn. These extreme political and economic upheavals notwithstanding, the East-West gas system—and Western Europe’s dependence on Russian gas—remained in place and continued to grow. The difficulty to “change direction” is clearly disturbing to actors who, in our own time, consider Europe’s dependence on Russian natural gas problematic and wish to “do something” about it.<sup>10</sup>

## The Political Nature of the East-West Gas Trade

How political have Russia’s gas exports been? *Red Gas* argues that economic considerations were always more important than political ones in bringing about and sustaining the gas flow between East and West. In the absence of profit expectations, neither the Soviet Union nor Western Europe’s importers would have supported the creation of the system. At the same time, the book argues that Soviet natural gas, to a certain extent, did function, and was perceived of, as an “energy weapon” and that it continues to do so in an age when the gas is no longer red. The relative importance of this political dimension in relation to economic considerations has been greatly exaggerated and the true nature of the “weapon” misunderstood by many analysts, but this does not mean that it has been non-existent.

The evidence suggests that we need to broaden our view and adopt a conceptualization of “energy weapons” that reaches beyond the much-debated nightmare of politically motivated supply disruptions. An energy weapon can be so much more. This book thus widens the weapon metaphor to include issues such as dumping of red gas on Western markets, “divide and rule” strategies in which some customer countries were favored over others in Soviet attempts to splinter the Western world, rhetorical practices in which natural gas exports served to strengthen the Soviet Union’s legitimacy on the international arena, and so on. While there is no evidence that the Soviet Union, up to its collapse in 1991, ever aimed to make use of the threat of supply disruptions for political blackmail, the empirical material does support the view that it sought to divide Western Europe by offering natural gas to some countries but not to others, and that national prestige was an important concern when Moscow set out to negotiate its export contracts. After the collapse of communism, politically motivated supply disruptions did occur, though usually in combination with other, less political motives.

Importantly, actors were often unaware of the real motives of their partners beyond the Iron Curtain. West Europeans were highly suspicious of Moscow’s intentions, and all importers took into account politically motivated supply disruptions and aggressive price dumping as a real risk when negotiating with the Soviets and building the import infrastructure. Huge investments were made in technical facilities whose purpose was to reduce the adverse impact of unexpected Soviet moves. Whether or not the Soviet gas weapon “actually”

existed, its socially constructed reality thus had a very tangible impact on the physical characteristics of the European gas system.

As it turned out, Western Europe's expensive back-up pipelines, emergency gas storage facilities, gas-quality transformation stations, and other precautionary measures did find their role in the rapidly growing East-West gas trade. The reason, however, was not that Moscow intentionally disrupted supplies, but that the export pipelines built on Soviet territory were plagued by recurring technical failures. In the construction phase of export pipelines, the everyday chaos of what was allegedly a "centrally planned economy" ensured that key equipment was often missing and that projects rarely had a chance of living up to the timetables specified in the export contracts. Seeking to enforce the deadlines, decision makers allowed pipelines and compressor stations along the international transmission routes to be built in a haste by a workforce that during the most sensitive construction phases largely consisted of probationers and conditionally released prisoners. The disastrous quality of pipelines and compressor stations built in the 1960s and 1970s inevitably gave rise to repeated technical failures and accidents later on.

Paradoxically, the real victims of the failures were not Western Europe's, but the Soviet Union's gas users. Northwestern Siberia was the world's largest gas region, but lack of pipeline capacity nevertheless made gas a scarce resource in the red empire. Soviet gas users, therefore, had to compete with West European importers for insufficient volumes of gas. Moscow, desperately seeking to ensure the West of its reliability as a partner, opted to sacrifice domestic supplies rather than cut exports. The result of this highly political choice, in terms of human suffering and industrial productivity, was devastating.

To the extent that East-West natural gas system-building was a political activity, this was true not only as far as the Soviet Union was concerned, but also in terms of West European interests. It is no coincidence that the formative phase of Soviet natural gas exports overlaps with a period of détente in East-West relations. Not only did the favorable geopolitical climate in the late 1960s and early 1970s make it easier for proponents of the East-West gas trade to mobilize support for their visions, but red gas was in itself identified as a foreign policy tool with great potential to improve the relations between the capitalist and the communist world. In some cases Western governments even subsidized the construction of pipelines across the Iron Curtain for political reasons. In the end, the perceived political opportunities were seen to far outweigh the perceived political risks.

## **Outline of the Book**

*Red Gas* tells the story of East-West natural gas relations from both a Soviet and a Western perspective. It takes into account a vast body of empirical evidence from "both sides" and in original languages. The ambition has been to document Soviet natural gas exports to Western Europe from the perspective of those people and organizations who have been—or tried to be—central in envisioning, negotiating, planning, building, operating, and

using the transnational gas infrastructure. The structure of the book reflects this symmetry ambition.

Chapter 2 sets the stage by outlining the historical emergence of the Soviet Union as a major natural gas producer and the rise of natural gas as a “typical communist” fuel with a special role to play in building socialism. Chapter 3 follows this up by analyzing the fierce internal debate in the Soviet Union on how to exploit the country’s rapidly growing gas resources in the best way. It was in this context that the first export strategy took shape. By 1966, Moscow had made up its mind to enter the West European gas market, and negotiations were initiated with Italy, Austria, France, Finland, and Sweden.

Austria became the first capitalist country to conclude a gas agreement with the Soviet Union. Chapter 4 traces the complex negotiation process that led up to this pioneering deal. The talks took place in parallel with Austria’s eager attempts to associate itself more closely with the European Economic Community (EEC), a development that was fiercely opposed by Moscow, and Soviet-Austrian natural gas relations thus became linked to a broader struggle about Austria’s position in Cold War Europe. The historical contract, of great significance for the future of both Austria’s and Europe’s energy supply, was eventually signed in June 1968.

West Germany also bordered on the Iron Curtain and thus seemed strategically positioned to import natural gas from East European sources. In the context of the Cold War, however, a West German import of Soviet gas was bound to become much more controversial than Austria’s. Germany was, in Soviet perspective, a country full of “revenge-seeking passions,” still dominated politically and economically by “former Nazis and even war criminals,” as Brezhnev put it at the 1966 Party Congress. The German federal government, for its part, still followed a policy of refusing to recognize East Germany as a sovereign state and the postwar borders in the east. The anti-Soviet sentiments were notable. Chapter 5 inquires how, in spite of these difficult relations, an import of Soviet gas to Germany and the construction of a transnational pipeline infrastructure for this purpose became a major topic of internal debate in the Federal Republic. The project failed to materialize, but the discussions served as a useful preparation for later negotiations.

Chapter 6 analyzes how the first Soviet gas exports worked (and how they did not work) in practice. Exports to Austria commenced in September 1968, just ten days after the Warsaw Pact’s military invasion of Czechoslovakia, through which the gas was to be transited. The chapter shows how the Soviet gas ministry’s system-building efforts took the form of constant crisis management in the chaos of the centralized Soviet economy. It also documents how domestic gas users—particularly in Ukraine, Belarus, Lithuania, and Latvia—faced unwanted competition from customers abroad for the same scarce gas resources.

In the aftermath of the Czechoslovak invasion, renewed negotiations were initiated between the Soviet Union and several West European countries. Moscow, now in need of rebuilding its international legitimacy and prestige, was even more eager than before to bring about natural gas exports. Most Western countries similarly judged that efforts to improve East-West relations, following the 1968 events, must not be given up, but rather intensified.

Unsuccessful earlier negotiations with Italy, France, Finland, and Sweden were revived. In addition, Germany seemed to become seriously interested in Soviet natural gas. Chapter 7 shows how German foreign minister—and later chancellor—Willy Brandt's close collaborator Egon Bahr identified natural gas as a vehicle in launching a new German Eastern policy (*Ostpolitik*). The chapter reconstructs the dramatic negotiations that eventually led to a first Soviet-German contract. It also traces the attempts from the side of the German, Italian, and French governments to coordinate their negotiations and thereby improve their bargaining power vis-à-vis the Soviet side, and the opposition from the Netherlands, the main competing exporter, along with several international oil companies.

Chapter 8 unveils how the Soviet Union, having signed export contracts with Germany, Italy, France, and Finland took on the immense task of bringing Ukrainian and Siberian gas in large quantities to Western Europe. The stakes were now much higher than in the initial Soviet-Austrian export arrangement. The construction of the export pipeline infrastructure was integrated into the overall Soviet system-building effort. It was a chaotic process and the Siberian pipelines were in the end delayed by many years. The export infrastructure that actually materialized looked very different from the one originally planned. In particular, Ukrainian gas came to play a more important role in meeting export obligations, an arrangement that caused severe gas shortages throughout the westernmost Soviet regions as the Kremlin, struggling to retain its reputation in Western Europe as a reliable exporter, prioritized deliveries across the Iron Curtain. Chapter 9 analyzes the same development but from a Western perspective, focusing on the practical experience of importing large quantities of Soviet gas to Germany and Italy.

The perceived functionality of the East-West gas trade stimulated further export contracts. Chapter 10 investigates how increased deliveries of Soviet gas became highly attractive following the 1973/1974 oil crisis. Moreover, a large contract was successfully negotiated according to which the Soviet Union was to play an important role as a transiteer of natural gas from far-away Iran to Europe. This was followed by a more contested West European vision of a further doubling of red gas imports. Coinciding with a period of increased East-West tension, these efforts were vehemently opposed by US president Reagan. For the first time, imports of "red" gas became subject to a vivid international and public debate, in which widely differing views of Europe's vulnerability clashed against each other. In the end, Washington was not able to prevent the Europeans from radically scaling up the East-West natural gas system.

Chapter 11, finally, analyzes the period from the late 1980s to the present. The fall of the Berlin Wall and the collapse of the Soviet Union made the future of the East-West gas trade difficult to predict. Immense difficulties to establish a stable institutional framework for trading gas among the former Soviet republics gave rise to repeated intentional supply cutoffs to Ukraine and Belarus, through which Russian natural gas was transited to Western Europe. Despite the seemingly insurmountable problems, the period saw a further steep increase in Russian gas exports.

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