

The Soviet Union's Rise as an International Energy Power: A Short History

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In no other domain are Russia and Europe linked together as closely as in the area of energy. Over the course of the twentieth century, energy flows between East and West have overcome ideological barriers, wars, and sanctions. Soon after the Bolsheviks seized power in 1917, they emulated the approach of their Tsarist predecessors by exporting oil produced in the Caucasus to the capitalist West in order to buy Western technology necessary for Soviet industrialization. In the 1930s, a failed energy policy markedly decreased the Soviet Union's importance as an oil supplier to international markets. During World War II, the Soviet Union even had to import fuel, particularly for aviation, from the United States (US). Intensive efforts to develop new oil fields in the Volga-Ural region re-established the Soviet Union's significance on the European oil market from the late 1950s onward.

In the frosty atmosphere of the early Cold War period, the Soviet "oil offensive," as it was sometimes called in the West, stirred fears of Moscow's growing influence over European affairs, prompting the North Atlantic Treaty Organization (NATO) to advise its members to show restraint in purchasing Soviet oil. In 1962, the Western Alliance even imposed an embargo on the sale of steel pipes and pipeline technology to the Soviet Union. Despite these measures, Western Europe's imports of Soviet oil increased steadily, and the embargo was lifted in 1966. Especially the global

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energy crises of the 1970s led many West European countries to perceive energy supplies from the Soviet Union as more reliable than those from the crises-ridden Middle East, allowing the Soviet Union to regain significance as an exporter of oil, and increasingly also gas, to Europe. At that time, even the US considered a proposal by Moscow to import Soviet gas, and several US companies explored the option of becoming engaged in a large natural gas project in Western Siberia.

While many in the West remained suspicious of the growing share of Soviet oil and gas in European energy consumption, Moscow also had reservations about the prospect of becoming too dependent on foreigners for technology and markets. However, if Moscow wanted to meet the growing energy demand at home, keep supplying its communist allies in Eastern Europe, and continue to ship oil and gas in increasing volumes to costumers in Western Europe and potentially also beyond, the Soviet Union needed to boost domestic production. Faced with stagnating production in existing fields and the prospect of a looming domestic energy crisis, it was only in the late 1970s, however, that the Soviet leadership finally decided to expand investments into energy-rich Western Siberia; apart from oil, the Soviet Union also started to exploit the large natural gas fields in the northern part of the Tiumen' region. In exchange for credits, pipe steel, and technology, some of Western Siberia's gas was shipped directly to Europe via a new export pipeline, marking the beginning of a historically unprecedented expansion of energy relations and laying the foundations for the Soviet Union's rise to becoming Europe's key energy supplier.

Despite the relevance of energy and Russia's role as the most important provider of oil and gas to Europe, surprisingly little research has thus far been conducted on the historical trajectories leading to current interdependencies.¹ While even newer studies on global aspects of the Cold War generally have little to offer in terms of the role of energy,² historians of energy do not typically focus on the Cold War as such and largely exclude the Soviet Union from their global oil histories.³ When Cold War historians did address the energy issue, it has been nearly exclusively from a Western perspective.⁴ However, no meaningful investigation of East–West energy relations during the Cold War is possible without taking into account the Soviet perspective. In particular, there is still very little research based on new archival material on issues such as Soviet strategic thinking about the development of the country's oil and gas sector, the establishment of energy relations within the Soviet-controlled Eastern European communist states, or the various meanings that Soviet leaders have attached to energy as a

factor in their relations with Western Europe and the US. This book will rectify some of these deficiencies.

After a brief analysis of the main trajectories in Soviet energy policy and East–West relations from the early 1920s up to World War II, this essay offers an overview of the Soviet Union's rise as an international energy power during the Cold War. It argues that Soviet decision-making in the sphere of energy politics was influenced and conditioned by a complex interplay of domestic, regional, and global factors: the Soviet Union needed to produce energy in ever-larger quantities not only to fuel industrialization and modernization, but also to sustain its ambitions as a great power. The various Soviet oil and gas campaigns from Stalin to Brezhnev were designed to support the needs of the country's military and its energy-intensive economy. During the Cold War, energy also served as an important tool in Moscow's project to integrate the socialist states of Eastern Europe into a single "energy space" through the construction of an extensive pipeline system. With regard to the capitalist states of the West, the primary function of Soviet energy exports was to gain access to Western technology and hard currency. This access enabled the Soviet Union not only to finance its own energy development projects, but also to buy wheat, and to compensate for the losses it made by providing East European allies with energy below world market prices. Especially in smaller European countries, such as Finland, or certain states of the Third World, energy exports also served as a means of expanding Soviet political influence.

The Cold War certainly loomed large over each step of economic rapprochement between East and West, as concerns over the security implications of increased energy trade and the potential dangers resulting from growing (inter-)dependencies repeatedly emerged in the political discourse on *both* sides of the Iron Curtain. However, the story of the Soviet Union becoming Europe's key energy supplier is ultimately not one that followed Cold War logic—if such a logic is understood as a competition between two opposing political camps, each with its unique economic system and ideological belief. Rather, cooperation was ultimately driven by national economic interests and the challenges presented by the larger regional and global markets. If the Iron Curtain marked the symbolic—and also the physical—line dividing East and West during the Cold War, the increasing flow of energy through an expanding transportation infrastructure, accompanied by a growing amount of direct personal contact at all levels (from engineers and scientists to ministers and heads of state), reveals a different map of Europe. On this map, the border between East and West became

increasingly blurred as the two parts became more and more interlinked through shared economic interests and a common ambition to stabilize political relations.

By tracing the long historical path leading to these transnational energy linkages between the Soviet Union and Europe, this essay introduces some of the key issues that will be addressed in detail in the individual chapters of the present volume. It then presents the structure of the book, providing short chapter summaries.⁵

THE BOLSHEVIKS' ATTITUDE TOWARD OIL

The Bolsheviks were critical of the imperialists' greed for raw materials. However, they knew that their new state had little chance of surviving without oil from the Caucasus, grain and coal from Ukraine, or cotton from Turkestan. The Bolsheviks seized power in 1917 with the promise to free the peoples of Russia from the colonial "yoke" of Tsarism. However, when many non-Russian peoples started to invoke this right of self-determination by opting to leave Russia, the Bolsheviks opposed the dismemberment of the former Tsarist Empire with every means at their disposal. The Russian Civil War was not only a war over land and peoples; it was also a war over resources. In the Caucasus, which was mainly inhabited by non-Russian ethnic groups and responsible for over 97 percent of the former Russian Empire's oil production at the time, people were also fighting for access to the oil fields around Grozny and Baku.⁶ In an interview published in *Pravda* on November 30, 1920, Iosif Stalin—at the time the People's Commissar (Narkom) for Nationality Affairs—was cited as saying that whoever controlled the Caucasus controlled not only the country's principal source of raw materials and fuel, but also the trade and transportation routes between Europe and Asia.⁷

Following the military conquest of the Caucasus by the Red Army, the Bolsheviks nationalized the petroleum industry and expelled foreign entrepreneurs from the country. By the beginning of the 1920s, however, the revolution and the war had left their mark on the oil industry, which had to get back on its feet as quickly as possible. Against stiff resistance from the party, and even though he was never tired of denouncing the capitalists of the West, Vladimir Lenin himself advocated the granting of concessions to Western companies as an incentive for their return. At the party congress in March 1921, Lenin appealed to fellow party members: "Without concessions, we cannot hope to receive the benefits of advanced modern capitalist

technology. And without that technology, we cannot build the foundations for our large-scale industry in sectors such as the extraction of petroleum, which is of such extraordinary importance for the entire world economy.”⁸

The leader of the Russian Revolution, admitting that the new state was not in a position to modernize with its own resources alone, strongly urged the party members “not to make any written record” of his remarks as these were not intended for the wider public.⁹ However, this emphasis on the importance of petroleum was not seen as a program for building the future of Soviet Russia. Rather, the Bolsheviks viewed petroleum as a means to an end. Similar to coal or peat, oil was to be used primarily as fuel for the industrialization of the country. It also served to produce fuel for the automotive sector, whose development had barely started, and for the aviation industry. Just as Russian entrepreneurs had done during the Tsarist era, the Bolsheviks treated oil as an export product to be shipped to the West—such as wheat or timber—in the largest possible volumes in return for technology and foreign currency. Exporting these resources meant access to the world market and the inflow of “hundreds of millions of gold roubles,” as Lenin told the membership at the above-mentioned party congress. Without them, the country would not be able “to overtake advanced capitalism.”¹⁰

The drilling technology of the British firm Vickers and collaborations with American and German structural engineers, for example, made a major contribution to the rejuvenation and modernization of the Soviet petroleum industry in the Caucasus.¹¹ By the end of the 1920s, Soviet oil production exceeded the peak volume attained in 1901 in Tsarist times, making the country again one of the world’s leading oil exporters.¹² Simultaneously with the stabilization of the petroleum industry, the Bolshevik regime started revoking the much-reviled concessions granted to foreign companies and, again, forced them out of the country.¹³

To counter the growing Soviet supply of oil to world markets, Western international energy companies, fearing to lose their dominant position, attempted to impose a blockade. But these attempts were effectively countered by the Bolsheviks’ significantly lower prices. At the time, two-thirds of Soviet oil was being purchased by five European countries: the United Kingdom (UK), Italy, Germany, France, and Spain.¹⁴ By 1930, Soviet oil represented approximately 15 percent of West European oil consumption. In Germany, the ratio was approximately 20 percent, and in Italy it was as high as 68 percent.¹⁵ Although some warned that the Soviet Union was, in fact, preparing for a large-scale “oil offensive” by flooding the market with

cheap energy to oust Western international companies,¹⁶ European governments generally did not perceive “red oil” as a security risk. At the time, the Soviet Union was even supplying oil to the British and French navies.¹⁷

Given the strategic importance attributed to oil by the Soviet leadership, its members showed astonishingly little willingness to actually promote and expand the sector in the long term. Admittedly, oil production had been constantly increasing. By 1928, petroleum earnings already represented 14 percent of the Soviet Union’s total income in foreign currency.¹⁸ However, the petroleum sector was assigned significantly less importance than other areas of the economy, such as the coal sector.¹⁹ Thus, while the share of petroleum in total energy consumption in the Soviet Union rose by 8 percentage points, from approximately 11 percent in 1927/28 to approximately 19 percent in 1937, the coal sector grew significantly faster; its share in the energy mix increased by 18 percentage points from 30 percent to 47.7 percent over the same period.²⁰ This growth was attributable not only to the powerful coal lobby, but also to the low-priority economic planners such as Gleb Krzhizhanovskii, head of the Soviet Union’s State Planning Committee (Gosplan), attributed to oil in the development of the domestic economy.²¹ There was a relatively widespread view at the time that petroleum would only have a transitory role as a resource for fuel production and would soon be replaced by other energy carriers.²²

Oil did not fit the image of modernity that the Bolsheviks were aiming for in the early Soviet period. Rather, the development of electricity was placed at the heart of energy policy within the bright future promised by Communism. It is telling that oil was not featured in Lenin’s famous dictum of “Soviet power plus electrification of the entire country.”²³ While electrification would also be based on oil- and coal-fired generation plants, the Bolsheviks were relying on the construction of large hydroelectric power stations to an even greater degree.²⁴ In the Bolsheviks’ worldview, hydroelectric power plants were a much better symbol of the new Soviet era than the oil well derricks in the petroleum-contaminated landscape around Baku. Oil, which was also viewed as redolent of capitalism, was not the focus of mobilization campaigns, such as those carried out for electrification, the construction of hydroelectric power stations, or the mining of steel and coal. Up until the outbreak of World War II, oil was barely featured in the official propaganda of the new Soviet state.

OIL IN WARTIME

The consequences of this rather ambivalent attitude toward petroleum soon made themselves felt. Not only did oil export earnings decline sharply at the beginning of the 1930s following a dramatic fall in the price of oil due to the international depression. In the beginning of 1932, even export volumes fell because of the Soviet Union's increasing domestic demand for oil. In 1940, despite a poor harvest, the country earned more from sales of grain than of oil.²⁵ From what they had observed during World War I and from their own experience in the Russian Civil War, the Bolsheviks were well aware that a modern mechanized war could not be won without oil. In December 1925, Stalin described the "petroleum question" as one of the "fundamental issues for world powers," which would ultimately lead to friction between imperialist states.²⁶ Two years later, in his political report to the Central Committee, he stated that it was not possible to wage war "without oil" and that the "likely victors in the coming war" would be those who had "superiority in terms of oil."²⁷ However, the Soviet leadership still did not translate that awareness into any type of concrete strategy that placed oil at the center of a new energy policy.

Whereas countries such as the UK, Germany, France, and the US had begun the transition of their economies from coal to oil at the beginning of the twentieth century and accelerated this conversion significantly during World War I, the Soviet Union initiated this change only at the end of the 1930s. In light of increasing political tensions in Europe at this time, the Soviet leadership was concerned about a potential fuel shortage in the case of war. An even bigger concern was that virtually the whole oil-producing and -processing industry was concentrated in the Caucasus. If a foreign power succeeded in conquering this exposed region, the Soviet Union would be de facto cut off from its oil supply. While the Soviet leadership had been aware of the presence of substantial deposits of petroleum in the Volga-Ural region since the end of the 1920s, it made little effort to develop these resources. Given the increasing apprehension about the possible outbreak of war in the late 1930s, the focus was on boosting production as fast as possible. In the short term, this could be achieved only by the extraction of greater oil volumes in the Caucasus.

While Azneft', the Soviet company operating in the area around Baku, succeeded in increasing its production,²⁸ the Soviet leadership was dismayed by the dramatic decline in oil production from the fields in the Groznyi region. The state oil company Grozneft' represented 36.2 percent

of total Soviet oil production in 1932, but by 1937, this figure had fallen to 22 percent.²⁹ This decline was not acceptable to the party leadership, and in spring 1940, it dismissed Fëdor Bykov, the First Secretary of the Communist Party of the Chechen-Ingush Republic. In his place, the Politburo appointed Viktor Ivanov, who was in charge of the petroleum industry within the Chechen-Ingush Party Bureau and thus had substantial experience. It was now his task to eliminate the problems in the republic and, in particular, to get oil production back on track. Indeed, in mid-November 1940, he reported to the fourth plenum of the Chechen-Ingush Party Bureau that the “malicious theory” alleging a shortage of oil in the Groznyi region had already been rebutted by an increase in production. He claimed that the oil-processing industry in and around Groznyi, which then processed around one third of Soviet oil, had also stabilized its production levels.³⁰ That the oil production targets had been set too high from the outset and could not be met simply because of the area’s geology (in fact, oil production in the Groznyi region peaked at the start of the 1930s) was news that the Soviet leadership did not wish to hear. Ultimately, however, nothing could prevent the decline of Groznyi’s significance within Soviet oil production over the subsequent years.

While the Soviet leadership’s awareness of the importance of petroleum increased in the late 1930s, an actual shift in the energy policy paradigm occurred only after Nazi Germany launched its attack on the Soviet Union in June 1941. Once it became clear that one of Hitler’s aims was to cut off the Soviet Union’s oil supply by conquering the Caucasus, Stalin ordered entire plants to be dismantled and relocated to the Volga-Ural region. He also ordered the move of approximately 10,000 petroleum workers from the Caucasus region to the new production site for the fast-tracked development of the new deposits.³¹ The Wehrmacht operation was a failure to the extent that German troops did not gain control of the oil fields of Groznyi and Baku and succeeded only in occupying the petroleum complex at Maikop in Adygeia, which had largely been destroyed by the Soviet Army. Because Stalin had ordered the precautionary dismantling of parts of the facilities in Groznyi and Baku, including concreting over some drill holes (which in some cases caused irreparable damage), and production east of the Volga had not started up to the required extent, Soviet oil production decreased by approximately one-third between 1940 and 1946.³² Despite its proven major resources of fossil energy carriers, the country thus faced a serious supply shortage during the war with Nazi Germany. Without fuel deliveries from the US under the Lend-Lease Act, the Red Army would

have been severely restricted in deploying its mechanized units, particularly its air force.³³

The production increase changed the geography of Soviet oil production: the Volga-Urals now became "Second Baku," and the heightened awareness of the economic and strategic military significance of oil also led to a change in Moscow's foreign policy approach in the immediate postwar period.³⁴ In 1946, the Soviet leadership, through covert warfare and political pressure, not only attempted to secure concessions for the exploitation of Iranian oil fields,³⁵ but also seized the petroleum sector in Romania, which was occupied by the Red Army. Romania was the second-largest oil producer in Eastern Europe after the Soviet Union and had been the main supplier of fuel to the German war machine.³⁶ The Soviet Union also temporarily took control of Austria's oil production, which was substantial at that time.³⁷

On the domestic political front, oil now became part of large-scale mobilization campaigns. The first propaganda posters calling for increased oil production began to appear in 1941, which was around the time of the outbreak of war with Nazi Germany.³⁸ This reinterpretation of the status of petroleum continued after the war. Oil was now elevated to the symbol of general progress. In the early 1950s, oil also stood for a rising individual standard of living, reflected in an (albeit very slow) increase in the number of cars. Finally, the Soviet "oilman" (*neftianik*) was celebrated alongside the established figures of the coal and steel worker as a symbol of the Soviet "shock worker" and "hero of labor."³⁹

Oil also gained a new image in international trade: whereas as little fuss as possible had been made of Soviet exports of oil products in the 1920s and 1930s, the Soviet Union now celebrated oil exports as a contribution to the "beloved motherland," in the words of a Soviet propaganda poster of 1950.⁴⁰ Not only did this denote the expression of a new patriotic sentiment; it was also the first time that the Soviet Union acknowledged oil as an integral element of its image as an international great power.

THE POLITICS OF OIL TRADE

The accelerated development of the petroleum resources of the Volga-Ural region meant that the decline in production from the Caucasus was successfully offset by the end of the 1940s; it also ensured that, from the mid-1950s, the Soviet Union was actually producing a surplus of oil, which it was able to export in ever-increasing quantities. Another positive

factor in the energy balance was that the Soviet Union was now able to import oil and other raw materials not only from Romania and Austria, but also from other East European countries, which at the time were still net exporters of energy carriers. Only in the 1960s, with the expansion of energy-intensive industries and through the construction of a vast export pipeline system, did the countries of Eastern Europe become increasingly dependent on Soviet oil and—later—gas imports.⁴¹

Soviet exports to the West were essentially directed at those countries with which the Soviet Union had traded before the war. Italy, France, the UK, and, following Stalin's death in 1953, West Germany purchased oil from the Soviet Union (although initially only in very modest quantities). The main recipients at this stage were smaller countries, particularly Finland, Sweden, and Ireland. In 1954, these three countries absorbed nearly three-quarters of Soviet oil exports to non-communist countries.⁴² Overall, however, at the start of the 1950s, the volumes shipped to the large European countries were too small to cause concern in the West, particularly because the Soviet leadership was anxious to present itself to its major European customers as a reliable trading partner. Much like before the war, the Soviet Union regarded these countries as important trading partners and sources of hard currency income. The same did not necessarily apply to the smaller European economies or the countries of the Third World. In this case, the Soviet Union did not hesitate to use oil as a political instrument, even as a means of exerting pressure, when the Kremlin considered it opportune.

Oil could be highly effective as a means of political pressure in situations of particularly high dependency. In the 1950s, for example, Finland imported between 80 and 90 percent of its oil from the Soviet Union and other socialist states in Eastern Europe.⁴³ Finland, which shared a long border and a bloody history with the Soviet Union, was interested in good trade relationships to maintain good neighborly relations. The Finnish government was even prepared to forego economic assistance from the West to achieve this goal. When the Soviet Union curbed its oil exports in 1958 because it was unhappy with the composition of the new Finnish government, the government in Helsinki decided to resign and form a new administration. Rather than accepting the offer of economic assistance from the US, and shipments of oil to Finland from Western energy companies such as Shell, Finland opted to accommodate Soviet interests to achieve better relations with its big neighbor to the east.⁴⁴

Oil and politics also mixed in other parts of the world. After the exclusion of the Yugoslav Communist Party from the Communist Information Bureau (Cominform) in 1948, the Soviet Union imposed a blockade against the country and resumed oil shipments only in 1954, following the rapprochement between Khrushchev and Tito. Moscow also stopped oil deliveries to Israel in 1956 after the Suez Crisis. In addition, the Soviet Union interrupted oil exports to China, when Sino-Soviet relations hardened in the early 1960s. Particularly in the Third World, where the Soviet Union and the US continued the East–West conflict by vicarious means, exports served as a weapon in the competition between the two political systems. In the 1950s and 1960s, the Soviet Union thus supplied selected Third World countries in Latin America, Africa, and Asia with oil and other goods under favorable conditions and attempted to exploit this in propaganda as a contribution to their “liberation” from the Western “colonial powers.” At the same time, the Soviet Union had a measure of appeal as a trading partner for many countries because, in contrast to the international oil companies, it was prepared to conclude barter transactions. In the 1950s, the Soviet partner exchanged oil for Egyptian cotton, Cuban sugar, Uruguayan wool, and Israeli citrus fruits. Even with Finland, its most significant European partner at the time, trade was mainly conducted through exchanges of goods: the Finns supplied technology, ships, and other finished products, and imported oil and other raw materials from the Soviet Union.⁴⁵

THE SOVIET “OIL OFFENSIVE”

From the mid-1950s onwards, Soiuznefteksport (SNE), the Soviet state-owned oil export company, began to flood the European market with ever-increasing amounts of cheap oil. Thus, the first Soviet “oil offensive,” as it was often termed in Western discourse at the time, had started.⁴⁶ By 1960, the Soviet Union was producing more oil than Venezuela, bringing it into the second position globally after the US.⁴⁷ Exports also rose dramatically. Whereas the Soviet Union exported a total of 3.7 million tons of oil in 1955, it was a staggering 85.8 million tons in 1968. Approximately half of these exports went to Western Europe.⁴⁸ However, the quantities shipped to Western Europe were still relatively modest, and the income earned by the Soviet Union from sales of oil was too low to raise any question of dependence, or even interdependence, in Soviet-West European energy relations. Even in the case of Italy (which, in absolute volume terms, became

the world's largest purchaser of Soviet oil), Soviet oil represented only 16 percent of the country's total oil consumption in 1959.⁴⁹ Given the high global surplus supply of oil at the time, European countries could have easily switched to other suppliers in the event of difficulties with the Soviet Union.

Still, from the late 1950s onwards, energy became a topic on the Western political agenda. When the British government imposed an embargo on imports of Soviet oil to the UK in 1959, it justified this decision with the argument that the Soviets would use oil as a means to gain political advantages. Yet British reports from the time show that this was not the main motive. The government's primary concern was protecting the economic interests of domestic energy companies and keeping an unwelcome competitor in the British market at a distance, particularly because the Soviet Union was offering its products at much more favorable prices than Western firms.⁵⁰ Because Britain drew its oil supplies also from other sources at the time (in the 1960s, the UK's major suppliers included Saudi Arabia, Iran, Kuwait and Libya), London was far from reluctant in 1961 to support a secret recommendation from the NATO Council, which urged its members "on their own responsibility to exercise caution and restraint in determining the level of their oil imports from the Soviet bloc" in view of possible political implications.⁵¹

The same British government was, however, less pleased when the US strengthened its sanctions against the Soviet Union following the Berlin and Cuba crises in 1961/62. In November 1962, Washington succeeded in getting a secret resolution passed by the NATO Council designed to prevent even those deliveries of large-diameter pipes to the Soviet Union that had already been contractually agreed on.⁵² The aim was to torpedo projects such as the Druzhba ("Friendship") oil pipeline that was to transport Soviet oil via the Soviet republics of Ukraine and Belorussia to Poland, Hungary, Czechoslovakia, and the German Democratic Republic (GDR) and, hence, to the borders of Western Europe.⁵³ Because the provisions of the resolution were left relatively vague, Italy and the UK refused to cancel existing trade contracts with the Soviet Union. However, the boycott proved to be of no strategic benefit. The oil pipeline was successfully completed in 1964 without any major delay, not only because the Soviet Union ramped up its own production of large-diameter pipes; companies in non-NATO countries such as Sweden and Japan also jumped into the breach in some cases. The major losers were West German steel companies,

which forfeited large orders for the supply of pipes to the Soviet Union because of the boycott.⁵⁴

The completion of the Druzhba oil pipeline also had impacts on energy relations with individual West European countries, because Soviet crude oil could now be transported to the West faster, cheaper, and in greater quantities. Although the Federal Republic of Germany (FRG), for example, nearly doubled its oil imports from the Soviet Union from 3.1 to 5.6 million tons between 1965 and 1967,⁵⁵ the share of Soviet oil in the country's total oil consumption was still less than 10 percent. Even in the case of Italy, still remaining the largest European purchaser of Soviet petroleum, the share did not exceed 20 percent.⁵⁶ When NATO finally lifted the embargo on pipe sales in November 1966, the debate in the West was no longer about the possible risks for Western Europe created by "red oil." Rather, this time an increasing number of voices warned about a possible Soviet oil shortage in the near future, caused by declining growth rates, increasing domestic demand, and existing supply commitments to East European satellites. Thus, many doubted the ability of the Soviet Union to maintain its exports to the West at a high level in the coming years, much less to significantly increase them.⁵⁷

The exact state of the Soviet energy economy at the time could not be determined with any degree of certainty, as Soviet statistics were thought to be manipulated. The West had therefore to learn to observe the situation and formulate assumptions. When the head of Gosplan, Nikolai Baibakov, visited Iran in April 1967 to negotiate the import of Iranian oil and natural gas in return for Soviet economic aid and technology, the British Foreign Ministry interpreted this negotiation as an indication that the Soviet Union was preparing for a domestic shortage of oil.⁵⁸ More generally, in London, and even more so in Washington, the prevailing view held that the Soviet Union could be tempted to become more closely involved with oil-rich states of the Middle East to solve its energy problems. For example, Central Intelligence Agency (CIA) reports from the time repeatedly suggested that in the event of a renewed outbreak of the Arab-Israeli conflict, as last experienced in the region in June 1967, the Soviet Union might be tempted to provide assistance to the Arabs and acquire greater influence over the Arab oil sector in return.⁵⁹

The Americans and British, who were not importing any Soviet oil, naturally viewed the global energy situation differently than the Germans, Italians, and French. As more and more producer countries in North Africa and the Middle East were nationalizing their oil production and trade, the

Western-controlled global energy companies started losing direct access to petroleum sources—a trend that, London and Washington feared, would undermine the security of Western energy supply. Whereas in 1952 the big Western oil companies, the so-called “Seven Sisters,”⁶⁰ still controlled approximately 90 percent of total global oil trade, this proportion had fallen to 75 percent by 1968.⁶¹ This controlling stake, again, declined sharply after the energy crisis of 1973/74, which saw a further wave of nationalization of production and trade.

For a long time, the Americans and the British perceived the Soviet Union not as an energy power in the true sense, but rather as an adversary and potential disruptive factor in their global oil interests. Little if any attention was paid to the fact that in the second half of the 1960s, the Soviet Union had started to develop new oil and natural gas reserves in Western Siberia and Central Asia. In view of the large distances and harsh climatic conditions in these areas, Western observers did not believe that the Soviet Union would be able to offset the forecast decline in oil production in the Volga-Ural region with gas and oil from other parts of the country within the foreseeable future. They considered it more likely that Moscow would attempt to gain more influence in the Middle East.⁶² This perception persisted well into the 1970s. Not only did Western observers underestimate the potential of West Siberia’s oil and gas, which became decisive barely ten years later. In light of the large capital investment input required and the uncertain prospects thereof, even the Soviet leadership remained, for a long time, at odds about what role Siberian raw materials were to play in the country’s future energy mix and exports.

THE OIL SHOCK OF 1973/74 AND MOSCOW’S CHARM OFFENSIVE

In the early 1970s, the Europeans still did not seem to be greatly concerned about their large reliance on Middle Eastern and North African oil. When the US ambassador in the Netherlands, John William Middendorf, talked to the German minister of defense, Helmut Schmidt, about the possibility of a global energy crisis and the potential negative consequences for Europe at a NATO meeting in The Hague in October 1970, the German minister was surprised. Schmidt stated never to have been aware of such a risk.⁶³ The fact that Europe was sourcing approximately 80 percent of its oil from the Middle East and North Africa and a further 7 percent from the Eastern

bloc at the time (that is to say, from “uncertain areas,” as the US ambassador emphasized), does not appear to have concerned Schmidt. NATO Secretary General Manlio Brosio, an Italian, also found the ambassador’s arguments less than convincing and asked whether this was truly a problem for Europe or, rather, an issue for the Americans and the international oil companies.⁶⁴

Only three years later, as a result of the energy crisis of 1973/74, Middendorf’s warning regarding Europe’s dependence on Arab oil proved to be well founded. As a protest against the support given to Israel in the Yom Kippur War in October 1973, the Organization of Arab Petroleum Exporting States (OAPEC) curbed its production and ceased deliveries to the US and the Netherlands. At the end of November, OAPEC added Portugal, South Africa, and Rhodesia to the embargo list. This embargo, which was lifted only in March 1974, led to a massive increase in prices and supply shortages in numerous European countries. However, Middendorf’s fear of the Soviet Union jeopardizing Europe’s energy supply did not materialize. On the contrary, Soviet–West European energy relations had become closer, and once the crisis of 1973/74 passed, Moscow was endeavoring to use the global oil scarcity as an opportunity for economic rapprochement, not only with the Europeans, but with the Americans as well.

At the time when Middendorf expressed his warning, the Europeans had already embarked on a new chapter in their energy relations with the Soviet Union, aimed at boosting the imports of both oil and natural gas. Austria became the first European country to import Soviet gas in 1968. One year later, Italy and the FRG commenced negotiations on Soviet gas imports. In West Germany, the government, as part of its new Ostpolitik, adopted the concept of “transformation through trade” (*Wandel durch Handel*). Beyond increasing economic benefits, the intensified trade relationships were to improve political relations as well.⁶⁵ A milestone in this context was the large German–Soviet barter deal concluded in February 1970. The FRG supplied the Soviet Union with 2000 km of pipeline and, in return, received Soviet natural gas. These pipelines were to be used to transport Soviet gas from already developed fields of Western Siberia into the European part of the country, through Czechoslovakia and up to the West German border in Bavaria. From there, the gas was to be distributed not only to Germany but also to France and toward Vienna and Milan. This transaction, guaranteed with a loan from a consortium of German banks, was to keep the German large-diameter pipe production plant of Mannesmannröhren-Werke GmbH in Mündelheim running at full capacity

for two and a half years. It would also, in the words of the German news magazine *Der Spiegel*, make up for the “rebuff” suffered by the German steel industry following the embargo forced on its partners by the US at the beginning of the 1960s.⁶⁶

The geographical options for Soviet exports in the beginning of the 1970s were not confined to Europe. Soviet–American relations improved after US President Richard Nixon initiated a policy of détente, which aimed for increased trade relationships to facilitate East–West rapprochement. In the early 1970s, it would have been quite possible for both the US and Japan to join the list of recipients of Soviet gas. A particularly prominent issue of Soviet–American trade negotiations was the so-called “North Star,” a project for the construction of a pipeline from the large, but yet to be developed, Urengoi gas field in the northern part of Western Siberia. Via a pipeline of approximately 2400 km, the gas was to be transported near to the Soviet sea port of Murmansk, where it would be liquefied and shipped by tanker to the US. Another idea was to transport gas from Yakutsk in Eastern Siberia to the Pacific coast, from where it would be shipped in liquid form to Japan and the US West Coast.⁶⁷

During a visit to the FRG in May 1973, Leonid Brezhnev, General Secretary of the Communist Party of the Soviet Union (CPSU), was positively euphoric in discussions with his German business partners on the question of energy relations and promised to use all his personal influence to ensure the Soviet Union could meet the high demand for natural gas not only of socialist countries, but also of Germany, Austria, France, and, above all, the US. Just as he was convinced about the economic benefits of cooperation, the Soviet leader hoped that closer energy relations would make “people realize that the Soviet Union is not cutting itself off [from the outside world].”⁶⁸

Brezhnev’s assurances to personally advocate for this project are indicative of the difficulties the development of Western Siberia contained. The Soviet leadership had ordered the prospecting and development of Western Siberia already in the mid-1960s, following the discovery of ever-larger oil and gas reserves in the region. However, the development was proceeding slowly, because the undertaking was much more complex and costly than any of the Soviet energy projects to date. In addition, there was a widespread perception among Soviet planners that a sustainable development of Siberia required a far more comprehensive approach, which would go beyond the mere extraction of raw materials. This included the construction of an extensive infrastructure comprising dozens of new cities for workers

(and their families) of the petrochemical industry to allow some of the production of raw materials to be processed locally or at least be made usable for industry. Finally, as a particularly difficult technological challenge, there was the question of how to transport the raw materials under Arctic conditions across thousands of kilometers through the swamps of the tundra and taiga.

It was to be expected that this major project would encounter strong internal resistance because of the high costs, numerous risks, and uncertainties that it involved. Baibakov, for example, one of the most influential figures in the field of energy policy at the time, indicated serious doubts in the mid-1960s about the project's economic viability. He was also skeptical of ideas proposing the construction of large export pipelines for gas transport.⁶⁹ While some groups opposing the development of Siberian raw materials and the construction of pipelines feared a decline in capital investment in other regions and sectors, others were against the expansion of economic ties with the capitalist West as this was considered strengthening the ideological enemy. Accordingly, they warned against an excessive dependence on Western foreign currency earnings. When the Soviet Politburo discussed US President Nixon's upcoming visit to the Soviet Union in April 1972, Soviet Head of State Nikolai Podgornyi feared that large-scale cooperation projects with the West made the Soviet Union appear to be "planning to sell off the whole of Siberia" and technologically helpless.⁷⁰ Against this background, the West's offer to solve the transportation question by supplying pipes and, in the case of the "North Star" project, even a fully constructed liquefaction plant and tanker vessels, provided Brezhnev with policy arguments in the arm wrestle at home over the development strategy for Western Siberia.

As the oil shortage was noticeable in all quarters and led to a boom in the demand for gas, the crisis of 1973/74 served as a catalyst for Soviet-West European energy relations. Gas was now viewed as a suitable substitute for oil and for coal, the latter of which was still widely used. Although the Soviet Union was not producing sufficient oil to fill the supply gap created by the OAPEC boycott in the short term, the Europeans identified the large Soviet raw material reserves as an opportunity to reduce their dependence on Arab oil in the long term. With the world's largest proven gas reserves, the Soviet Union's natural gas, alongside Dutch, Algerian, Libyan, and (later) Norwegian gas, would indeed play an ever-increasing role in the European energy mix during the 1970s and 1980s. In fact, it was the Arabs' attitude in the crisis of 1973/74 that finally made the Soviet Union appear as the

lesser evil in the eyes of the Europeans in terms of the security of their energy supply.

The Americans started from a rather different position. Because of their own considerable fossil fuels production and oil imports, primarily from Venezuela and Persian Gulf countries, they were not dependent on Soviet energy, and Washington's assessment of any possible energy cooperation with the Soviet Union differed from the European view. Although Nixon and his National Security Adviser, Henry Kissinger, viewed trade as a force for improving political relations, the transactions also had to turn a profit. Given the major investment of capital required for the implementation of the "North Star" project, it was understandable that the Americans would be less enthusiastic than the Soviets. The latter were dependent on Western technology and loans for the development of Siberia, which made them much more motivated to establish an energy partnership. This became evident when Moscow attempted to use the 1973/74 crisis to build up the level of confidence in Soviet-American relations required for the successful implementation of such a large and long-term undertaking as the "North Star" project.

The heated atmosphere of the Arab–Israeli confrontation, however, required the Kremlin to operate extremely sensitive and balance all interests. To keep the positive sentiments toward the Soviet Union in the Arab world, Moscow continued to present itself as a protector of the Arabs. On November 16, 1973, Radio Moscow hence justified the Arab boycott as a "necessary measure of self-defense" to resist the "tanks and aircraft supplied by the USA to Israel."⁷¹ However, in its dealings with the US, Moscow adopted a very different tone. In a radio broadcast for North America on the same day, the commentator told listeners that "the energy crisis [could be] overcome" if countries cooperated more closely with one another. He argued for the removal of the "discriminatory measures" that continued to obstruct trade between the US and the socialist states: "How can the US expect to cope with its economic and energy problems when it refuses countries rich in resources equal trade conditions?"⁷²

The exact meaning of this had been made clear by Radio Moscow on November 4, 1973. In a radio interview, Nikolai Nekrasov, member of the Academy of Sciences responsible for the development of Siberia, said that the day was approaching when "cold Siberia [would] light and heat New York," which was undisguised propaganda in favor of the American-Soviet gas project.⁷³

The Soviet charm offensive achieved little in the US. Washington did not consider the Siberian gas project to be sufficiently profitable and showed little enthusiasm about providing Moscow with credits. As Kissinger explained in direct talks with Mao Zedong, the leader of the People's Republic of China, in November 1973: "Even if [the Soviets] were able to produce the natural gas they have claimed, and there is still some dispute about that, it would only amount to about five percent of our needs. And it would take ten years to deliver. And within that ten-year period, we will have developed domestic alternatives, including natural gas in America. That makes it much less necessary, in fact probably unnecessary, to import natural gas in quantities. [...] They want 8 billion dollars [in credits] just for natural gas [development]."⁷⁴

The Soviet offer also encountered major resistance in the US Congress from political circles that, under the leadership of Senator Henry M. Jackson, had from the outset argued against a more open US trade policy toward the Soviet Union and denied the country Most Favored Nation (MFN) status, which would have been a prerequisite to accessing large credits.⁷⁵ Finally, the deterioration in Soviet-American relations beginning in the mid-1970s led to the definitive burial of all hopes for implementing the energy projects. A Soviet-American energy partnership was to remain a utopian dream, which also meant that, for the moment, the vast potential of Siberia remained largely underused. Delays in the development of the energy reserves of Siberia had serious consequences, in that in the mid-1970s, there were increasing signs that the Soviet Union was, indeed, heading toward a domestic energy crisis.

IMPLICATIONS OF THE SOVIET "ENERGY CRISIS" FOR EASTERN EUROPE

The problems the Soviet Union was facing in the energy sector did not go unnoticed by the CIA. Given the ever-declining growth in production in the older fields in the Volga-Ural region and the partial development of the fields of Western Siberia, the CIA predicted, in studies published in spring 1977, that by the mid-1980s, the Soviet Union would become a net importer of fossil energy carriers.⁷⁶

Indeed, problems in the Soviet energy sector were, at least since the mid-1970s, real and tangible, particularly in their effect on Soviet energy relations with Eastern Europe. Although most socialist members of the

Council for Mutual Economic Assistance (CMEA, also referred to as Comecon) were energy self-sufficient until the early 1960s, the buildup of energy-intensive industries such as the petrochemical industry, actively promoted under Nikita Khrushchev's time as First Party Secretary, sharply increased their dependency on Soviet raw material imports in the subsequent years.⁷⁷ Even though Eastern Europe also imported some oil from the Middle East (in part via the Soviet Union, which bought mostly from Iraq, Libya, Algeria, and Egypt), the bulk was provided directly from Soviet production. With the exception of Romania, which disposed of significant reserves of liquid hydrocarbons and remained a net exporter of oil until the end of the 1970s, an estimated 85 percent of oil required by Eastern Europe was covered by Soviet production in 1970.⁷⁸ The GDR, Bulgaria, and Czechoslovakia became dependent on Soviet supplies for more than 90 percent of their oil requirements.⁷⁹

The global energy crisis of 1973/74 substantially aggravated Eastern Europe's energy supply situation. Pressed with the need to enhance oil shipments to Western Europe, Moscow was increasingly less inclined to support the economies of its East European allies with cheap energy. In the aftermath of the global oil shock, Moscow even encouraged these states to look for alternative sources in North Africa and the Middle East.⁸⁰ Poland, for example, which imported all of its oil from the Soviet Union, had started oil import negotiations with Algeria, Iraq, and Iran even before the crisis. After the Arab embargo, a Polish delegation visited Tripoli to look for additional possibilities.⁸¹ Moreover, this was the time when several East European countries started introducing conservation measures to save energy and engaged in various regional energy cooperation projects.⁸² While the Soviet Union ultimately stabilized its oil exports to Western Europe following the Arab embargo, it did so in part at the expense of its allies in Eastern Europe. According to Western estimates, they saw a cutback of Soviet oil supplies by approximately one-third until the mid-1970s.⁸³

Another important consequence of the global energy crisis of 1973/74 was the Soviet Union's growing reluctance to continue delivering energy to Eastern Europe for prices well below those of the world market. In 1975, it revised the old formula from 1958, according to which the price for Soviet oil was based on the average world market prices of the past five years, and raised it to prices for the precedent year.⁸⁴ Accordingly, if the Eastern Europeans had paid 30.3 Soviet rubles (SUR; \$28.4) per ton of oil in 1973, they paid 45.4 SUR (\$60.4) in 1975.⁸⁵

The Soviet leadership did not abandon its East European allies, as maintaining and strengthening intra-bloc alliances remained a top political priority for Moscow. But in confidential talks with leaders of other East European socialist parties, Brezhnev was quite blunt in pointing out the major investment problems his country was facing, including the challenge of developing Siberian energy, and the inability to further subsidize its East European allies. During a meeting with leaders of East European socialist parties in Budapest in March 1975, including János Kádár from Hungary, Edward Gierek from Poland, and Erich Honecker from the GDR, Brezhnev made his point quite clear:

Today I came here, figuratively speaking, with empty pockets [...]. Naturally, we are not refusing to continue to develop our cooperation. [But we] have to state honestly that we are faced with a number of difficult problems [within the Soviet Union]. Among them are the further improvement of the agriculture, increase of production of oil, [natural] gas, and lumber, construction of the Baikal-Amur railroad, obligations to the fraternal countries, and further improvement of the living standards of the population. [...] In order to transport [natural] gas from [Tiumen'] to the European part, to deliver it to Bratislava or Budapest, we need huge financial and material resources. We do not have enough pipes of our own, so we have to use currency to purchase them abroad. [...] In short, there are many problems. We have thought seriously about how to make our economy more profitable. So far, unfortunately, the return of the investment has been decreasing.⁸⁶

Eastern Europeans and Soviet citizens alike felt the impact of their country's "energy crisis" first hand. Concerned about remaining a trustworthy trading partner, the Soviet leadership was determined to keep supplying its customers in Western Europe with the contracted gas quantities even in harsh winters, which meant it was prepared to deliver gas that was not actually available. The gas supply to Soviet domestic consumers in the Ukrainian Soviet Socialist Republic (SSR) was repeatedly cut back or even switched off altogether, so that the West Europeans, who had no knowledge of the desperate state of affairs in the East, would stay warm in their apartments.⁸⁷ Naturally, the Soviet media was careful not to write about such severe cutbacks; in the late 1970s; however, Soviet journals and newspapers repeatedly informed their readers about the problems of energy production and the challenges of developing Siberian energy.⁸⁸

The Soviet energy complex did indeed enter a crisis in the mid-1970s; yet, the CIA's assessment ultimately proved to be incorrect. By the end of

1977, the Soviet leadership finally ramped up its campaign for the development of West Siberian energy, and natural gas in particular.⁸⁹ In 1978, production at Urengoi started, and at nearly the same time, the conditions had been put in place for the construction of an export pipeline between the new Siberian fields and Western Europe. An external event, the Iranian Revolution of 1979, lent crucial momentum to the creation of Soviet–European energy linkages.

THE IRANIAN REVOLUTION AND THE BUILDING OF THE “WORLD’S BIGGEST PIPELINE”

When Brezhnev started his Siberian campaign at the end of the 1970s, the region had long since become the Soviet Union’s most significant raw materials production center. According to Soviet statistics, the Tiumen’ region in Western Siberia had emerged as the country’s largest oil producer as early as 1974, and three years later, the region was also heading the statistics for gas production.⁹⁰ After the discovery of large gas fields, such as Urengoi and Medvezhe, in the second half of the 1960s, the question was not whether the region had sufficient fossil energy carriers, but whether there was sufficient capital investment and manpower to develop these fields within a reasonable period of time.

Although part of the gas produced was intended for export to Western Europe, the main priority was supplying the domestic market. Furthermore, the “gasification” of the country was designed to ensure sufficient oil reserves for highly profitable sales abroad. Whereas the Soviet Union derived approximately 20 percent of its foreign currency receipts from oil exports at the start of the 1970s, higher world market prices and growing export volumes caused this figure to rise to approximately 50 percent by the mid-1970s.⁹¹ However, the Siberian natural reserves were so large, that part of the resource could be freed up for export if the West was prepared to provide technical and financial assistance. Once again, the FRG played a central role.

The FRG received Soviet gas via a pipeline through Czechoslovakia for the first time in October 1973, and a year later, Italy started sourcing gas from the Soviet Union via a pipeline through Austria. France imported gas from the Soviet Union in 1976.⁹² During the 1970s, the countries that became the main recipients of Soviet gas were hence essentially those that had previously been the main customers of Soviet oil. As a result of continuing growth in imported quantities, in 1978, Soviet gas already represented 10.7 percent of

France's total consumption of natural gas. At the time, the equivalent figure in West Germany was 15.9 percent, and in Italy as high as 29.5 percent.⁹³ Given these numbers, it would thus certainly not be appropriate to speak of there being a European dependency on Soviet natural gas or energy in general, particularly because gas still represented only a very modest share of the energy mix in these countries.⁹⁴ This situation would only change after the building of a large-scale pipeline used solely for exports of Siberian gas to Europe.

The idea of building an export gas pipeline between Western Siberia and Europe had been discussed in German–Soviet trade talks since 1977.⁹⁵ By spring 1978, the discussions had “not reached a stage” that would allow conducting specific negotiations at the political level.⁹⁶ The reason was the FRG's and Soviet Union's preference for the idea of a tripartite transaction with Iran, which had been under discussion since spring 1973. Under this arrangement, Iran was to supply around ten billion cubic meters of gas to the Soviet Union via a pipeline, and the Soviet Union would release the same volume from its own production for Western Europe. The FRG was to be the hub for the on-selling of the gas to other West European countries.⁹⁷

The Soviet–Iranian pipeline was almost complete when the Shah was toppled at the beginning of 1979 and the Islamic Republic of Iran was declared. What the Europeans and Soviets initially perceived as a shock soon proved to be an opportunity; the establishment of the Iranian Republic brought the idea of a direct pipeline connection between Siberia and Western Europe into the foreground, which essentially represented the continuation and further extension of the project that had been discussed with the Americans in the early 1970s. When the top leadership of the FRG and Soviet Union met for talks in Moscow at the end of June and beginning of July 1980, both Brezhnev and Prime Minister Aleksei Kosygin took the opportunity to advocate for this project:

[Brezhnev:] [...] The reality of the situation is this: we have large reserves of natural gas available, particularly in Western Siberia, and we would be ready to increase our deliveries to the Federal Republic of Germany and other Western countries. This would require the construction of a gas pipeline from northern areas of Tiumen' to the western border of the Soviet Union. If we built such a pipeline, it would have to be a very big one; 40 billion cubic meters of natural gas a year would have to flow through it, and we have included this project in our plans for the coming years. If there is any interest in doing so, we will agree on a collaboration for its implementation.⁹⁸

[Kosygin:] [...] The natural gas pipeline confronts us with major technical and geological problems. As far as the natural gas reserves are concerned, they are abundant. We are not building a pipeline for the short term. It will have to remain in operation for 30 to 35 years. That is how long the resources last. It will be the world's biggest pipeline.⁹⁹

For the Soviet Union, the natural gas pipeline deal, which was financed with West European credit and details of which were negotiated through to 1983,¹⁰⁰ was of major benefit: in return for natural gas, Western Europe supplied the urgently needed steel pipes and other technical equipment. The Soviet Union had already carried out similar projects with Western involvement, such as the 2750 km Soiuz (“Union”) gas pipeline constructed between 1975 and 1978 as an international partnership. That gas pipeline, which ran from Orenburg in the South Urals to Uzhgorod on the Ukrainian–Slovak border (from where it continued as the Transgas pipeline through Eastern Europe to Central and Western Europe), had also been financed with Western loans. The construction of some sections of the route involved manpower from natural gas-importing countries (Bulgaria, the GDR, Poland, Czechoslovakia, and Hungary).¹⁰¹

“SIBERIAN MIGHT” AND GAS FOR EUROPE

From the Soviet perspective, the development of West Siberian energy, and particularly gas, was much more than an economic project. It also had an important domestic political and social function. In the context of economic stagnation and serious social shortcomings, the Siberian campaign, conducted with a considerable propaganda effort, was designed to impress upon the population the undiminished potency and dynamism of the communist project.¹⁰² Soviet posters portrayed the development of Siberia as the embodiment of Soviet “might” (*razmakh*) and fresh beginnings.¹⁰³ Brezhnev regarded the campaign as a personal prestige project. In addition to lobbying for it in talks with his West European negotiating partners, he and other high-ranking party officials travelled to Siberia to plead the case for the project. Brezhnev repeatedly spoke at Komsomol meetings to inspire young people with the project, particularly because a lack of motivated and diligent workers was one of the largest problems the campaign for the development of Siberia was facing.¹⁰⁴

In contrast to the previous situation, the party leadership was now facing not only the usual opposition to the project from within the party (in this

case, mainly representatives of non-Siberian regions who feared they might receive fewer funds), but also criticism of their energy policy expressed in the semi-official form of specialist periodicals and newspapers. In addition, for the first time in the late Soviet period, there was also some veiled social criticism. In their literary works, writers such as Sergei Zalygin, Viktor Astafev, and Valentin Rasputin were raising environmental and social policy concerns regarding the development of Siberia. Apart from condemning the unbridled squandering of natural resources, they criticized that the approach taken was unsustainable and based on the exploitation of these resources as rapidly as possible, without sufficient consideration for the implications. In his novel *Farewell to Matyora*, for example (the original Russian text *Proshchaniie s Materoi* was first published in 1976, and a Soviet film was produced in 1981), Rasputin outlines an apocalyptic scenario. Because of the construction of a large hydroelectric power station, several villages, including Matyora, are going to be submerged under a dam storage lake. In this tale the village of Matyora symbolizes a centuries-old peasant culture that is now under threat from the modern age.¹⁰⁵

Despite these domestic difficulties, the Soviet leadership was determined to portray Siberia's economic development in a positive light. The gas pipeline between Siberia and Western Europe was placed in the same context as other "peace projects," designed to symbolize international friendship and increased prosperity. The project also became politically explosive when US President Ronald Reagan ordered an embargo on the supply of steel pipes to the Soviet Union in response to the declaration of martial law in Poland at the end of 1981 (these sanctions were, in effect, an expansion of the sanction regime which had been imposed already in January 1980 by US President Jimmy Carter as a reaction to the Soviet Union's military invasion of Afghanistan in December 1979).¹⁰⁶ In contrast to the situation under Kennedy, however, this time the Europeans, now including the FRG, did not follow the American decision. Nevertheless, Chancellor Schmidt assured the Americans ahead of discussions on West German assistance to the construction of the pipeline, that the FRG would "never allow itself to become more than 30 percent dependent on Soviet gas," a limit that he said had been set "some years ago."¹⁰⁷

However, the transatlantic quarrel over the matter was actually opportune for Moscow. The Soviet leadership now started to make real progress with the construction of the pipeline, with every success being systematically exploited for propaganda purposes. Soviet media and political propaganda portrayed those involved in building the East–West pipeline as frontline

soldiers of labor, virtually on a par with veterans of the Great Patriotic War. These workers also gained faster access to apartments, child care, or even a car. In return, the workers, as highlighted in a report in *Der Spiegel*, were prepared to accept a performance-based system unusual for Soviet conditions. Work brigades “who worked too slowly or with an inferior level of quality” automatically received a lower salary: “Failure meant dropping a level in the pay scale—a hint of capitalism in the pipeline.”¹⁰⁸

The US had already lifted its sanctions by the time the so-called Urengoi–Uzhgorod pipeline was officially opened at the end of 1983. It was one of six new Siberian pipelines, with a total length of approximately 20,000 km, to be opened between 1981 and 1985.¹⁰⁹ In addition to further consolidating the Soviet Union’s leading power status as Europe’s main energy supplier, this definitively established natural gas as the most important component of the domestic Soviet energy mix, and Western Siberia as the Soviet Union’s predominant raw materials power house. Through these energy linkages, Soviet energy exports grew by 270 percent between 1970 and 1988.¹¹⁰ The natural gas from Urengoi, transported via the new gas pipeline, helped to double the volume of natural gas exported to Western Europe.¹¹¹ The level of dependence of some of the larger European countries on Soviet oil and gas increased significantly, with Soviet oil and gas representing 20–30 percent of their total consumption. Conversely, the Soviet Union’s dependence on Western Europe also increased. At the start of the 1980s, the Soviet Union obtained 80 percent of its foreign currency from energy exports—which also meant that the Soviet leadership was almost completely dependent on fossil energy carriers for the acquisition of foreign currency and, therefore, on a single export commodity.¹¹²

The collapse of oil prices in the second half of the 1980s was not the reason for the demise of the Soviet Union. In spite of the slump in prices, at the end of the decade exports of oil and gas still accounted for 75 percent of foreign currency receipts.¹¹³ The Soviet Union failed because it was unable to overcome its ongoing and fundamental systemic crisis. It was the high income from oil exports that weakened the incentives to carry out the reforms that were so urgently needed. Instead of reforming the agricultural sector, for example, Moscow sought to generate funds from short-term increases in oil exports to buy grain from abroad. In fact, one of the reasons why the income from energy exports was so essential for the Soviet Union specifically in the late Soviet period was that these exports enabled it to repeatedly pay for large grain imports from abroad. With the loss of some of that income, however, the party leadership had less financial means available

for the short-term mitigation of defects affecting every area of the economy, or to mollify political discontent. To compound the problem, the Soviet Union also had to divert income from commodities to fund such costly projects as the arms race with the US and the war in Afghanistan, which were sources of considerable losses.

The Soviet Union collapsed, but Kosygin was, nonetheless, right. The natural gas connection between Europe and Russia was indeed a project with long-term viability, surviving even the collapse of 1991 largely unscathed. Today, Europe still sources its gas mainly from West Siberian fields—in some cases even through the same transportation routes constructed in late Soviet times. However, even the West Siberian reserves are finite, and some of the current transportation lines are in need of repair or unreliable. Russia has long been working to develop new deposits and has constructed new pipelines to European destinations. As before, the question is not whether Russia has sufficient oil and gas reserves but rather when, and at what cost, they will be developed, and which transport routes will be taken. In light of its high strategic significance, energy continues to be not only an economic good, but also a highly political resource. For Europe's dealings with Russia, the question is not whether dependencies in the energy domain are desirable, but how those dependencies should be managed. For the coming years and decades, the Europeans will continue to be dependent on Russian energy imports, and there will be no easy and cheap way to circumvent this country's major raw material basis.¹¹⁴

STRUCTURE AND OVERVIEW OF THE PRESENT VOLUME

The chapters collected in this book are structured into three main sections: Part I analyzes developments from World War II until the height of the Cold War in the early 1960s, considering the re-entry of the Soviet Union to the international oil market and Western reactions. Part II follows the story through the period of détente and into the 1980s, analyzing the reasons for the expanding East–West trade from various national perspectives. Part III addresses the complicated story of intra-bloc energy relations and investigates the economic crisis and demise of Communism in Eastern Europe as well as the legacies resulting from these processes.

In the first chapter of Part I, “From Crisis to Plenty: The Soviet ‘Oil Campaign’ Under Stalin,” Felix Rehschuh discusses the politics of oil during late Stalinism. The author explains the relatively slow shift in Soviet energy policy from coal to oil from the late 1930s to the early 1950s. He

argues that although World War II was an important factor in Moscow's decision to pay more attention to the oil industry and to the building up of a second center of oil production in the Volga-Ural region, the Soviet leadership apparently saw no real need to accelerate production in the eastern parts of its country until the worsening of relations with its former Western allies in the late 1940s. Military and defense considerations, it is argued, played an important role in the Soviet leaders' decision to push the Volga-Ural oil industry, going against the formidable resistance of the so-called "Baku lobby" that favored investment in the Caucasus oil region. Soon after this shift, work began on the construction of a large new production center in the Soviet heartland. Also, thanks to additional oil produced in the Volga-Ural region, the Soviet Union was able to restart exporting oil to Western Europe after an absence of almost 20 years from world markets.

In the next chapter, titled "Stalin's Oil Policy and the Iranian Crisis of 1945–1946," Nataliia Egorova analyzes Soviet interests concerning post-war arrangements in Iran. She claims that a key driver of Soviet interests in this part of the world was Moscow's desire to obtain oil concessions in the northern part of Iran, ultimately leading to serious complications with the US and the UK, which both had political and economic interests in the country. The author argues that during the period that came to be known as the "Iranian Crisis," the Soviet Union neither planned to annex the Azerbaijani-populated northern part of Iran and join it with the Soviet republic of Azerbaijan, nor should this crisis be considered the beginning of the Cold War, as some historians have argued. Moscow was not interested in a confrontation with its former Western allies and ultimately pulled its troops back from Iran in 1946, just after an agreement had been reached with the Iranian government on the question of oil.

The third chapter in this part is Niklas Jensen-Eriksen's "'Red Oil' and Western Reactions: The Case of Britain." When the Soviet Union re-entered the world oil markets as a major exporter in the late 1950s, there were mixed reactions in the West. While some feared that cheap Soviet oil would undermine the position of major Anglo-American oil companies in the West European market, others saw "red oil" as a potentially dangerous political weapon to be wielded against capitalism and the cohesion of the Western world. This chapter explores these divergent reactions in the British case. The UK has been seen as a leading opponent of Soviet oil exports during the late 1950s and 1960s, and as a strong supporter of British oil industry in the international market. However, as documents from British archives reveal, the British government was actually deeply

divided, with strong arguments both for and against importing Soviet oil. In the end, these divisions allowed the Soviets to score a propaganda victory, even though the practical benefits for them turned out to be rather limited.

In the final chapter of the section, Roberto Cantoni investigates Soviet plans to enhance oil exports to West European countries through the building of a large pipeline system. In his chapter, "Debates at NATO and the EEC in Response to the Soviet 'Oil Offensive' in the Early 1960s," the author argues that this caused anxiety at the European Economic Community (EEC) and at NATO, as some of their respective members, and especially their oil companies, feared that Moscow could use oil as a weapon to weaken the West's military and economic resources. On the other hand, countries such as Italy and West Germany were willing to deal with the Soviets to place considerable industrial orders and acquire Soviet oil. In the early 1960s, pipelines thus became the main bone of contention, and the battle for primacy in building them caused tensions not only between the West and the Soviet Union, but also among the EEC and NATO member states. To complete the pipeline system, however, the Soviets needed considerable amounts of large-diameter steel pipes, which they had to import from the West. Thus, the US delegation at NATO proposed a comprehensive embargo of such large-diameter pipes to delay the system's construction. In 1962, the embargo was in fact enforced. This chapter argues that the outcome of the battle for pipelines was characterized by both technical and political considerations, and that the two aspects, in fact, became indistinguishable. What an oil pipe was—or what it was not—as a technological product depended on the political struggle to control or suppress commerce with the Soviet Union.

Viacheslav Nekrasov opens Part II of this book with his chapter titled "Decision-Making in the Soviet Energy Sector in Post-Stalinist Times: The Failure of Khrushchev's Economic Modernization Strategy," analyzing Soviet energy policies during the Khrushchev era, from the mid-1950s until the second half of the 1960s. This was the time when, thanks to growing oil and gas exports, the Soviet Union became increasingly entangled with regional and global energy markets, and also emerged as a major consumer of fossil fuels due to its own expanding heavy industries (namely, chemical and machine-building). Moscow's dependency on fast-growing production rates was caused by the need to maintain both its own economy and the economies of its socialist allies, which during the 1960s became net importers of Soviet oil and gas; at the same time, Moscow needed to keep energy exports to the West at a high level to remain able

to buy technology and consumer goods in exchange for its raw materials. This chapter argues that this expansionist economic strategy, which depended on an ever-increasing production of energy, could not keep pace with developments inside the Soviet Union, namely the need to develop new energy frontiers outside the traditional production areas in the Caucasus and Volga-Ural regions, whose production rates were stagnating or declining. The Soviet Union's energy policy predicament was caused by bad planning and a lack of coordination among the various organizations responsible for formulating and implementing energy policy. Far from being able to dictate policy, Khrushchev had to deal with influential interest groups representing different sectors of the economy, some of which were opposed to certain aspects of his policy.

Following the story, Elisabetta Bini examines, in "A Challenge to Cold War Energy Politics? The US and Italy's Relations with the Soviet Union, 1958–1969," the relationship between the Italian state-owned company Ente Nazionale Idrocarburi (National Hydrocarbon Agency, ENI) and the Soviet Union between the late 1950s and the late 1960s. Based on corporate and state archives in Italy and the US, the author argues that ENI was one of the first West European oil firms to establish relations with the Soviet Union, challenging US international energy policies and oil interests in Italy. ENI used its deals with Moscow not only to access cheap sources of energy and, in turn, export its own petrochemical and industrial products, but also to force American and British oil companies to meet Italy's energy needs. Therefore, while the agreements that ENI signed with the Soviet Union between the late 1950s and the early 1960s challenged Cold War oil policies, they also strengthened Italy's position and membership inside the North Atlantic Alliance. At the same time, once the process of détente made relations between the blocs easier, ENI and Italy became pioneers who had anticipated certain forms of cooperation between Western Europe and the Soviet Union.

In another national case study, Alain Beltran and Jean-Pierre Williot investigate the topic of "Gaz de France and Soviet Natural Gas: Balancing Technological Constraints with Political Considerations, 1950s to 1980s," tracing the beginnings of cooperation between France and the Soviet Union from first contacts in the second half of the 1950s to the signing of the first contract of gas purchase in 1971 until the start of gas deliveries in 1976. The authors also analyze developments in the following years, focusing on the French reaction to the US embargo on deliveries of pipelines and pipeline technology to the Soviet Union in 1982. Unlike Italy and West Germany,

France never became a major importer of Soviet gas, which by the end of the 1980s constituted only a small fraction in the country's overall energy mix. France was, however, a key European player in fostering closer ties with the Soviet Union from the early Cold War period onwards, often going against US and Western general interests.

The next chapter deals with the "Rise of Western Siberia and the Soviet–West German Energy Relationship During the 1970s." Dunja Krempin analyzes the long path to the Soviet Union's decision to develop Siberian oil and gas and explains how the development of this key energy frontier was closely connected to enhanced international cooperation. While the 1960s and 1970s mark a period of intense internal Soviet debates on energy policy, it was only in the late 1970s, when the rising West European interest in Soviet energy converged with a rapid deterioration of the Soviet energy and fuel sector, that the Brezhnev leadership finally decided to take the decisive leap into Western Siberia, with a focus on the production of oil and gas. Although this decision was largely based on domestic economic considerations, the author argues that the prospect of increased energy exports to, and cooperation with, West European countries and companies played a tremendous role as well. In this context, the FRG was to become a key partner and the future pillar in the Soviet Union's comprehensive energy plans.

The final chapter in this part is David Painter's "From Linkage to Economic Warfare: Energy, Soviet–American Relations, and the End of the Cold War." The policy of détente during the late 1960s and early 1970s opened up new prospects for Western–Soviet cooperation, namely in the area of energy. US companies were at the forefront in exploring large investment options in the case of West Siberian gas. Due to strong US domestic political opposition and a general worsening of US–Soviet relations in the second half of the 1970s, these projects failed. Instead, military buildup and economic "containment," including sanctions on pipeline technology, were to become the driving policies during the Reagan era, aiming at a weakening of the Soviet Union's potential. Washington sought in vain to obstruct the Europeans from building up their energy partnership with Moscow. The Soviet economy had already experienced first economic turbulences in the early 1980s, but when the price of oil fell in the mid-1980s, the country's foreign currency reserves dwindled and the crisis worsened. When the Soviet Union eventually broke up in 1991, the so-called "Reagan victory school" saw this in retrospect as a vindication of Washington's policy. In contrast, this chapter argues that US policies were

not the main cause of the oil price collapse. In a longer perspective, by choosing confrontation over cooperation, the US not only exacerbated Cold War tensions and damaged relations with its allies, but also missed an opportunity to set in motion processes that might have ended the Cold War and facilitated reform in the Soviet Union without creating conditions that led to instability and future animosity.

Part III opens with Falk Flade's "Creating a Common Energy Space: The Building of the Druzhba Oil Pipeline." The rapidly growing increase of Soviet oil and gas shipments to the energy-hungry socialist states of Eastern Europe during the 1960s and 1970s was made possible also through the construction of a colossal pipeline system. The first major pipeline connecting the oil fields of the Volga-Urals—and later also Western Siberia—with the socialist allies in the East was the Druzhba ("Friendship") pipeline, to be followed by other large-scale projects with illustrious names such as Bratstvo ("Brotherhood"), Soiuz ("Union"), or Progress. As a result, the Soviet Union entered into long-term commitments toward its satellites, which became dependent to a considerable extent on Soviet energy imports. Based on documents from Russian and East German archives, this chapter analyzes the history of the planning and construction of the Druzhba pipeline. The author examines the motivations of Moscow and the individual socialist countries to initiate this project, he looks into the way the project was debated, planned, and executed, and, finally, considers some of the mid- to long-term consequences that the existence of the pipeline had for intra-bloc relations.

The aim of the next chapter by Suvi Kansikas is to add a new view on Soviet trade relations with its allies. In "Calculating the Burden of Empire: Soviet Oil, East–West Trade and the End of the Socialist Bloc," the author examines Cold War politics as a factor restraining Soviet actions vis-à-vis its allies. Particular emphasis is put on the Soviet intra-bloc mechanisms and the role of the CMEA in managing the relations. In order to show how Soviet–East European relations played out, this chapter elaborates internal CMEA discussions on economic dependency, intra-bloc cooperation, and changing the CMEA mechanism to better suit Soviet purposes. It is argued that even though the Soviet Union was the only major energy exporter in the CMEA, energy was not an easy weapon to be used for exploiting or controlling the allies. A decision to change the price system had to be made on the multilateral CMEA forum. And it had to be implemented in a way that would not leave the allies in economic difficulty. Soviet oil and gas financed the economic system of the socialist bloc. However, it also fueled the pattern of interdependency in both East–East and East–West trade.

“Drifting Apart: Soviet Energy and the Cohesion of the Communist Bloc in the 1970s and 1980s” is the title of Lorenz Lüthi’s chapter. The author focuses on multinational oil, gas, and electricity projects within the CMEA that were initiated to satisfy the increasing energy needs of the socialist states in Eastern Europe, but largely failed because of a drop in Soviet energy deliveries during the 1980s. The Soviet Union started large-scale energy shipments to the fraternal states in socialist Eastern Europe in the early 1960s. Given the relative scarcity of energy resources in Eastern Europe, the dependency increased over the period from the early 1960s to the early 1980s to such a degree that the Soviet Union progressively found it difficult to supply the quantities needed or even requested. The economic development, and by extension the internal social peace, of the socialist countries of Eastern Europe depended on annually increasing Soviet energy deliveries. Subsidized Soviet supplies of energy to a certain degree formed the glue that kept the CMEA together. Once the Soviet capabilities of increasing energy deliveries had become exhausted in the early 1980s, the economic integration of the CMEA reversed itself until its collapse in 1991.

The final chapter of the book is written by Margarita M. Balmaceda, who takes the analysis beyond the end of the Cold War, investigating “The Fall of the Soviet Union and the Legacies of Energy Dependencies in Eastern Europe.” Against the background of the energy (inter-)dependencies created during the Soviet period between the energy-rich and energy-poor Soviet republics, as well during the Cold War between the Soviet Union and individual European CMEA states, this chapter focuses on the post-Soviet impact of these legacies on each of these two groups of states. In doing so, it focuses not only on the way they affected relations between individual states, but also on their impact on these states’ political and economic development after the dissolution of the communist “bloc” and the breakup of the Soviet Union. These legacies, this chapter argues, go well beyond energy dependency: they affected not only these states’ range of energy options, but also Russia’s ability to use energy as a foreign policy tool. Most importantly—as shown through the case studies of Ukraine, Belarus, and the Baltic states—the energy legacies of the Soviet era synergized with other characteristics of the transition period and of the external environment at the time of the Soviet/CMEA dissolution to significantly constrain the conditions for political and economic development of these newly independent states after 1991.

NOTES

1. With the prominent exception of Per Högselius, *Red Gas: Russia and the Origins of European Energy Dependence* (New York: Palgrave Macmillan, 2013), there is no comprehensive study on Soviet energy from a transnational perspective based on archives in Eastern and/or Western Europe. Other in-depth works on Soviet gas include Thane Gustafson, *Crisis Amid Plenty: The Politics of Soviet Energy under Brezhnev and Gorbachev* (Princeton, NJ: Princeton University Press, 1989) and Jonathan Stern, *Soviet Natural Gas Development to 1990: The Implications for the CMEA and the West* (Lexington: Lexington Books, 1980), both published before the opening of communist archives. Although Högselius' analysis covers a large timespan, it uses archival material mostly from the late 1950s, the 1960s, and partly also from the 1970s, and it focuses exclusively on gas. His case studies include Bavaria and Austria, and to some extent also the FRG, but Högselius writes relatively little about other important West European consumer countries such as Italy or France. The roles of NATO, the European Economic Community, or non-European countries like the US are treated only fleetingly, and intra-communist bloc relations are not dealt with in any comprehensive way. And while there is a strong literature on the story of Soviet oil, most of this research has been written during the Cold War. Newer studies such as Marshall Goldman, *Petrostate: Putin, Power, and the New Russia* (Oxford: Oxford University Press, 2010) focus mostly on events after the fall of the Soviet Union and cover history superficially. Goldman, too, bases his work almost exclusively on secondary literature published before the opening of communist archives.
2. E.g., Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (Cambridge: Cambridge University Press, 2005).
3. E.g., Daniel Yergin, *The Prize: The Epic Quest for Oil, Money, and Power* (New York: Simon & Schuster, 1991).
4. An overview of both the Western literature and newer studies in Russian is presented in this chapter and the individual essays of the present volume.
5. This Chapter draws on the author's previous research, namely: Jeronim Perović, "Russlands Aufstieg zur Energiegrossmacht:

- Geschichte einer gesamteuropäischen Verflechtung,” *Osteuropa* 63, 7 (2013), 5–28; Jeronim Perović and Dunja Krempin, “‘The Key is in Our Hands:’ Soviet Energy Strategy during Détente and the Global Oil Crises of the 1970s,” *Historical Social Research* 39, 4 (2014), 113–44.
6. See the section on Caucasian oil production in Ferdinand Friedensburg, *Das Erdöl im Weltkrieg* (Stuttgart: Ferdinand Enke, 1939), 39–43.
 7. “Polozhenie na Kavkaze. (Beseda s tov. Stalinym),” *Pravda*, no. 269, November 30, 1920, 1.
 8. Quotation translated from the German text: W. I. Lenin, *Werke*, vol. 32 (Berlin: Dietz, 1982), 272.
 9. Lenin, *Werke*, vol. 32, 272.
 10. *Ibid.*
 11. Geoffrey Jones and Clive Trebilcock, “Russian Industry and British Business 1910–1930: Oil and Armaments,” *The Journal of European Economic History* 11, 1 (1982), 61–103, here 96–7.
 12. On production figures, see Goldman, *Petrostate*, 4–6.
 13. Jones and Trebilcock, “Russian Industry and British Business,” 101.
 14. A. A. Igolkin, *Neftianaia promyshlennost’ SSSR (1928–1950-e gody)* (Moscow: Institut Ekonomiki RAN, 2011), 245.
 15. Claudia Wörmann, *Osthandel als Problem der Atlantischen Allianz: Erfahrungen aus dem Erdgas-Röhren-Geschäft mit der UdSSR* (Bonn: Europa Union, 1986), 27.
 16. J. Trachtenberg, “The Soviet Oil Offensive,” *The Living Age* 21 (September 1933), 35–7 (translated article, originally published in German in the Vienna conservative daily *Neues Wiener Tagblatt*).
 17. Wörmann, *Osthandel als Problem der Atlantischen Allianz*, 27.
 18. Goldman, *Petrostate*, 29.
 19. A. A. Igolkin, *Neftianaia politika SSSR v 1928–1940-m godakh* (Moscow: Institut Rossiiskoi Istorii RAN, 2005), 7–9.
 20. Igolkin, *Neftianaia promyshlennost’*, 30.
 21. *Ibid.*, 27–8.
 22. A. A. Igolkin, *Sovetskaia neftianaia promyshlennost’ v 1921–1928 godakh* (Moscow: RGGU, 1999), 127.
 23. Lenin’s famous citation dates from December 22, 1920. Quote from the German text: W. I. Lenin, *Werke*, vol. 31 (Berlin: Dietz, 1977), 513.

24. On building of hydroelectric plants and power-stations in the early Soviet period: Klaus Gestwa, *Die Stalinschen Grossbauten des Kommunismus: Sowjetische Technik- und Umweltgeschichte, 1948–1967* (München: Oldenbourg, 2010), especially 48–74. On early Soviet economic planning and electrification policy: Heiko Haumann, *Beginn der Planwirtschaft: Elektrifizierung, Wirtschaftsplanung und gesellschaftliche Entwicklung Sowjetrusslands 1917–21* (Düsseldorf: Bertelsmann, 1974).
25. Goldman, *Petrostate*, 6, 30.
26. Quotation translated from the German text: J. W. Stalin, *Werke*, vol. 7 (Berlin: Dietz, 1952), 142.
27. Quotation translated from the German text: J. W. Stalin, *Werke*, vol. 10 (Berlin: Dietz, 1953), 137–38.
28. In 1937, Azneft’ was responsible for a total of 60 percent of Soviet oil production: Igolkin, *Neftianaia politika*, 137.
29. Rossiiskii gosudarstvennyi arkhiv sotsial’no-politicheskoi istorii (Russian State Archive of Social and Political History, RGASPI), f. 17, op. 117, d. 87, l. 76.
30. If Grozneft’, according to Ivanov, produced about 5978 tons of oil in June 1940, production increased to 6820 tons by October: RGASPI, f. 17, op. 22, d. 3725, l. 2.
31. Steve LeVine, *The Oil and the Glory: The Pursuit of Empire and Fortune on the Caspian Sea* (New York: Random House, 2007), 49–51.
32. Based on data from Goldman, *Petrostate*, 6.
33. Natalya Butenina, “Lend-Lease: The Oil Factor,” *Oil of Russia* 1 (2005), www.oilru.com/or/22/360. See also the document collection contained in: <http://lend-lease.airforce.ru/english/index.htm>.
34. On the rise of “Second Baku,” see Felix Rehschuh’s chapter in this book.
35. Fernande Scheid Raine, “The Iranian Crisis of 1946 and the Origins of the Cold War,” in Melvyn P. Leffler and David S. Painter, eds., *Origins of the Cold War: An International History*, 2nd edn (London: Routledge, 2005), 93–111. On the “Iranian Crisis” of 1946, see also Nataliia Egorova’s chapter in this volume.
36. A. A. Igolkin, *Sovetskaia neftianaia politika v 1940-m–1950-m godakh* (Moscow: Institut Rossiiskoi Istorii RAN, 2009), 264.

37. Walter M. Iber and Peter Ruggenthaler, "Sowjetische Wirtschaftspolitik im besetzten Österreich: Ein Überblick," in Walter M. Iber and Peter Ruggenthaler, eds., *Stalins Wirtschaftspolitik an der sowjetischen Peripherie: Ein Überblick auf der Basis sowjetischer und osteuropäischer Quellen* (Innsbruck: Studien Verlag, 2011), 187–207.
38. The most famous propaganda poster is the one by Pavel P. Gorelyi: "Toward 38 million tons of oil and gas in the year 1941!" (*Za 38 mln. tonn nefti s gazom v 1941 godu*), http://www.plakaty.ru/plakaty/sotsialnye/za_38_mln_tonn_nefti_s_gazom_v_1941_godu/?sphrase_id=2534
39. The new importance attached to the *neftianik* is also visible from studying contemporary propaganda posters, for instance the 1948 poster by P. Krivonogov: "Oilmen, more oil for the homeland! Let's fulfill the five-year-plan in four years!" (*Neftianniki, bol'she nefti Rodine! Vypolnim piatiletku v 4 goda*), http://www.plakaty.ru/plakaty/sotsialnye/neftianniki_bolshe_nefti_rodine_vypolnim_pyatiletku_v_4_goda/
40. This poster was made by Vassilii N. Elkin, titled "Let's transport more oil for the needs of our beloved homeland" (*Bol'she perevezem nefti dlia nuzhd liubimoi Rodini*), http://www.plakaty.ru/plakaty/sotsialnye/bolshe_perevezem_nefti_dlya_nuzhd_lyubimoy_rodiny/
41. Margarita M. Balmaceda, "Der Weg in die Abhängigkeit: Ostmitteleuropa am Energietropf der UdSSR," *Osteuropa* 54, 9–10 (2004), 162–79; John P. Hardt, "Soviet Energy Policy in Eastern Europe," in Sarah M. Terry, ed., *Soviet Policy in Eastern Europe: An Overview* (New Haven, CT: Yale University Press, 1984), 189–220; William M. Reisinger, *Energy and the Soviet Bloc: Alliance Politics after Stalin* (Ithaca: Cornell University Press, 1992).
42. Jennifer I. Considine and William A. Kerr, *The Russian Oil Economy* (Cheltenham: Edward Elgar Publishing, 2002), 64.
43. Niklas Jensen-Eriksen, "The First Wave of the Soviet Oil Offensive: The Anglo-American Alliance and the Flow of 'Red Oil' to Finland during the 1950s," *Business History* 49, 3 (2007), 348–66, here 354.
44. Jensen-Eriksen, "The First Wave," 358–9.

45. Niklas Jensen-Eriksen, "The Cold War in Energy Markets: British Efforts to Contain Soviet Oil Exports to Non-Communist Countries, 1950–1965," in Alain Beltran, ed., *Le pétrole et la guerre: Oil and War* (Brussels: Peter Lang, 2012), 191–207, here 201.
46. For example Harold Lubell, *The Soviet Oil Offensive and Inter-Bloc Economic Competition* (Santa Monica, CA: RAND Corporation, 1961).
47. Jensen-Eriksen, "The Cold War in Energy Markets," 196–7.
48. Robert E. Ebel, *Communist Trade in Oil and Gas: An Evaluation of the Future Export Capabilities of the Soviet Bloc* (New York: Praeger, 1970), 39.
49. Pier Angelo Toninelli, "Energy Supply and Economic Development in Italy: The Role of State Owned Companies," in Alain Beltran, ed., *A Comparative History of National Oil Companies* (Brussels: Peter Lang, 2010), 125.
50. This becomes evident from discussions within the British government on the utility of the embargo in the mid-1960s: Anita L. Burdett, ed., *Oil Resources in Eastern Europe and the Caucasus: British Documents 1885–1978*, 8 vols. (Cambridge: Cambridge University Press, 2012), vol. 8, especially part 1.2.
51. As quoted in Burdett, *Oil Resources*, vol. 8, 283.
52. Wörmann, *Osthandel als Problem der Atlantischen Allianz*, 31. On internal British discussions on Soviet energy in the early 1960s, see the chapter by Niklas Jensen-Eriksen in this book.
53. On the building of this pipeline, see Falk Flade's chapter in this volume.
54. Christian Th. Müller, "Der Erdgas-Röhren-Konflikt 1981/82," in Bernd Greiner et al., eds., *Ökonomie im Kalten Krieg* (Hamburg: Hamburger Edition, 2010), 501–20, here 505. On internal Western embargo discussions about the Druzhba oil pipeline, see the chapter by Roberto Cantoni in this volume.
55. Burdett, *Oil Resources*, vol. 8, 116.
56. In 1966, West Germany's share was 7.5 percent, Italy's 19 percent: Burdett, *Oil Resources*, vol. 8, 59.
57. This is evident from secret US and British position papers: Burdett, *Oil Resources*, vol. 8, 113; "National Intelligence Estimate," Washington, DC, November 14, 1970, in *Foreign Relations of the United States (FRUS), 1969–1976*, vol. 36: *Energy Crisis, 1969–1974*

- (Washington, D.C.: Government Printing Office, 2011), 136–51, especially 142–46.
58. Burdett, *Oil Resources*, vol. 8, 80.
 59. See, for example, “Prospects for US Access to World Oil Over the Next 15 Years or So,” contained in the “Memorandum Prepared in the Central Intelligence Agency,” Washington, DC, August 28, 1969, in *FRUS, 1969–1976*, vol. 36, 25–35, especially 26. The assumption that the Soviet Union might be tempted to expand into the Middle East to secure oil imports, was also debated in Western publications at the time. For example by Robert Hunter, *The Soviet Dilemma in the Middle East, Part II: Oil and the Persian Gulf* (London: Institute for Strategic Studies, 1969), 5.
 60. At the time, the “Seven Sisters” included the following Western companies: Standard Oil of New Jersey, Royal Dutch Shell, Gulf, Texaco, Standard Oil of California, Mobil, and British Petroleum.
 61. “Memorandum Prepared in the Central Intelligence Agency,” Washington, D.C., August 28, 1969, 26.
 62. “National Intelligence Estimate, Washington,” Washington, DC, November 14, 1970, 142–6.
 63. “Telegram from the Embassy in the Netherlands to the Department of State,” The Hague, October 20, 1970, in *FRUS, 1969–1976*, vol. 36, 134–35, here 134.
 64. *Ibid.*
 65. Cf. Werner D. Lippert, *The Economic Diplomacy of Ostpolitik: Origins of NATO's Energy Dilemma* (New York: Berghahn Books, 2011).
 66. “Röhren-Kredit: Salto am Trapez,” *Der Spiegel* 7 (1970), 34.
 67. A short description of these two projects is contained in: “Memorandum from the President’s Special Consultant for Energy (DiBona) to the President’s Assistant for National Security Affairs (Kissinger),” Washington, DC, March 19, 1973, in *FRUS, 1969–1976*, vol. 36, 441–3.
 68. Quote from the German language record of talks between German Chancellor Willy Brandt und Leonid Brezhnev held on May 20, 1973, in *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (AAPBD) 1973*, 3 vols. (München: Oldenbourg, 2004), vol. 2, 758–65, here 761.
 69. Högselius, *Red Gas*, 41.

70. *The Diary of Anatoly S. Chernyaev 1972*, ed. Svetlana Savranskaya, transl. Anna Melyakova (Washington, DC: National Security Archive, 2012), entry of April 8, 1972, 11, <http://nsarchive.gwu.edu/NSAEBB/NSAEBB379>
71. Quote from Burdett, *Oil Resources*, vol. 8, 407.
72. *Ibid.*, 407–8.
73. *Ibid.*, 408.
74. “Memorandum of Conversation between Mao Zedong and Henry Kissinger,” November 12, 1973, History and Public Policy Program Digital Archive, Gerald R. Ford Presidential Library, National Security Adviser Trip Briefing Books and Cables for President Ford, 1974–1976 (Box 19), 19, <http://digitalarchive.wilsoncenter.org/document/118069>
75. On US policy toward the Soviet Union and US-Soviet energy relations, see the chapter by David Painter in this book.
76. “The International Energy Situation: Outlook to 1985” was released on April 18, 1977, and “Prospects for Soviet Oil Production” on April 25, 1977; in the months to follow, the CIA would publish several other studies on the Soviet Union’s energy situation: *The Soviet Oil Situation: An Evaluation of CIA Analyses of Soviet Oil Production: Staff Report of the Senate Select Committee on the Intelligence United States Senate* (Washington, DC: Government Printing Office, 1978), 1.
77. On energy during the Khrushchev period, see Viacheslav Nekrasov’s chapter in this volume.
78. “Memorandum from the President’s Special Consultant for Energy,” Washington, DC, March 19, 1973, in *FRUS, 1969–1976*, vol. 36, 142.
79. Report on “Soviet Oil Supplies to East and West Europe,” British Embassy, Bonn, March 18, 1974, in Burdett, *Oil Resources*, vol. 8, 451–85, here 466.
80. “National Intelligence Estimate,” Washington, DC, December 5, 1973, in *FRUS, 1969–1976*, vol. 36, 741.
81. According to a report by the British Embassy in Warsaw, December 21, 1973, in Burdett, *Oil Resources*, vol. 8, 430.
82. British government report, December 4, 1973, in Burdett, *Oil Resources*, vol. 8, 420–23, here 422; Jochen Bethkenhagen, *Die Energiewirtschaft in den kleineren Mitgliedstaaten des Rates für gegenseitige Wirtschaftshilfe: Entwicklungstendenzen in den achtziger*