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Germany and Energy Security in the 2000s: Rise and Fall of a Policy Issue?

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Abstract

After some two decades of inattention, the issue of energy security once again moved to the top of the policy agenda in Germany in the mid-2000s. After briefly achieving renewed prominence, however, it has been eclipsed in German energy policy, at least temporarily, by heightened concerns about climate change. This paper explains the re-emergence of concerns about energy insecurity in recent years as well as the reasons for their subsequent overshadowing. It describes the steps that have been taken during this period to promote German energy security, analyzes their adequacy, and identifies potential conflicts with the goal of reducing greenhouse gas emissions and other aspects of Germany energy policy. It concludes that there are nevertheless good reasons to expect the issue of energy security to regain the attention of policy makers in the future.

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Keywords: Germany; Energy security

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1. Introduction

After some two decades of inattention, the issue of energy security once again moved to the top of the policy agenda in Germany in the mid-2000s. After briefly achieving renewed prominence, however, it has been eclipsed in German energy policy, at least temporarily, by heightened concerns about climate change. This paper explains the re-emergence of concerns about energy insecurity in recent years as well as the reasons for their subsequent overshadowing. It describes the steps that have been taken during this period to promote German energy security, analyzes their adequacy, and identifies potential conflicts with the goal of reducing greenhouse gas emissions and other aspects of Germany energy policy. It concludes that there are nevertheless good reasons to expect the issue of energy security to regain the attention of policy makers in the future.¹

2. The Re-emergence of Energy Insecurity in the Federal Republic of Germany

The current period is certainly not the first time that German political leaders have been concerned about energy security. After World War II, the problem took the form of securing adequate supplies of coal. Of even greater relevance to the contemporary situation is Germany's experience in the 1970s, when as a result of the oil shocks, Germany's energy security seemed to be acutely threatened. For much of the 1980s and the 1990s, however, the issue of energy security evinced little attention from German policy makers or the German public. What

¹This paper draws on approximately two dozen interviews conducted in Berlin in June 2006 and June 2007. Interviewees included members of parliament and/or members of their staffs from the CDU/CSU, SPD, and Green party; officials in the Federal Ministry of Economics and Technology (BMW), Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU), and the Foreign Office (Auswärtiges Amt); and

prompted energy security to return, albeit only temporarily, to the top of the energy policy agenda in the mid-2000s? One can point to a combination of medium- to long-term developments and dramatic political events.

2.1. Background Developments

The most important long-term development was the European Union's and Germany's growing dependence on energy imports, but especially on natural gas from Russia. This issue was flagged at least as early as November 2000 by the European Commission, when it published a Green Paper titled "Towards a European strategy for the security of energy supply."² The paper pointed out that, should no measures be taken, the share of the Union's energy requirements covered by imports would rise from the current 50 percent to 70 percent within 20 to 30 years. The paper also noted that 41 percent of natural gas imports came from a single country, Russia, and that that figure could rise to 60 percent as a result of membership enlargement and growing gas consumption.³

Although the Commission paper did not spell out the level of import dependence for each member country, the trends for Germany were similarly problematic. After declining following the oil shocks, the overall share of energy from imports had been rising since the 1980s. By the mid-2000s, this figure had reached 62 percent, not including uranium imports, and the government expected it to continue to grow as a result of declining coal production and the planned phase-out of nuclear power.⁴

outside energy policy experts.

²European Commission 2001.

³European Commission 2001, 21-23 and 40-41.

⁴BMWi/BMU 2006a, 11.

Germany was particularly dependent on imports of oil and petroleum products, which amounted to 97 percent of domestic consumption. By the mid-2000s, some 41 percent came from Russia or from Kazakhstan through Russian pipelines, and another 31 percent from Norway and the UK.⁵ Because of the fungibility of oil, much of which is transported by tanker, however, the concentration of such a high percentage of imports in just three countries did not raise alarms.

More troubling was the character of Germany's large and growing dependence on imports of natural gas. In the mid-2000s, Germany produced approximately 18 percent of the gas it consumed. Of the remainder, approximately 37 percent came from Russia (44 percent of imports), 26 percent from Norway, and 19 percent from the Netherlands.⁶ Over time, however, amount of gas produced at home was expected to decline, while, according to one estimate, the share of imports from Russia could rise to more than 70 percent by 2020.⁷ Because almost all of Germany's natural gas imports arrive via fixed pipelines, moreover, they could not be easily replaced in the event of a supply disruption.⁸

A second worrisome trend was the tightening of oil markets and the concomitant rise in world oil prices. This problem was of a more recent nature, dating back only to 1999 or 2000. Through the late 1980s and the 1990s, oil prices had generally remained between \$10 and \$20 per barrel, even dropping to less than \$10 per barrel in late 1998. Because of concerted efforts to reduce production by the members of OPEC, the price subsequently rose steadily, reaching \$30 per barrel in 2000. After a sharp dip following the terrorist attacks of September 2001, the

⁵BMW/BMU 2006a 12; Götz 2004, 2.

⁶BMW/BMU 2006a, 12; EIA 2006; Götz 2004, 2.

⁷Kempf and Müller 2007, 7.

⁸Müller 2007, 29.

world price resumed an upward course in early 2002 and continued to rise for the next several years because of unrest and disruptions in the Persian Gulf, Venezuela, and Nigeria. By 2004, German industry was already expressing concern about the negative economic impact of high energy prices and urging the government to take action.⁹

Despite these negative trends, German political leaders evinced little concern as late as 2005 about energy security in general and Germany's growing import dependence in particular. Indeed, just 10 days before the September federal election that year, Chancellor Gerhard Schröder presided over the signing of an agreement by German and Russian companies to construct a new gas pipeline underneath the North Sea that would connect Germany directly to Russian gas supplies. Scheduled for completion in 2010, the pipeline would have an initial capacity of 27.5 billion cubic meters (bcm) per year, half of which would be dedicated to Germany, with plans to later double its size.¹⁰

Shortly after the election, the new coalition government of the CDU/CSU and SPD demonstrated a somewhat greater interest in energy policy. The coalition agreement called for the development of a new comprehensive energy policy concept (Gesamtkonzept) and devoted nearly four pages (out of some 125 pages in the section on "Areas of Action") to energy.¹¹ Likewise, energy policy was one of 20 or so topics addressed by the new Chancellor, Angela Merkel, in her first general policy address (Regierungserklärung) on November 30, 2005.¹² Perhaps most significantly, as we will see, Merkel announced that she would be convening a national energy summit early the following the year.

⁹BDI 2004.

¹⁰Goetz 2005.

¹¹Bundesregierung 2005a.

¹²Bundesregierung 2005b.

Even then, energy security remained a low priority. The energy sections of the coalition agreement and the chancellor's remarks seemed motivated much more by concerns about climate change and high energy prices (and their implications for economic competitiveness) as well as deep differences within the coalition over the future of nuclear power. Whereas the agreement contained detailed and sometimes ambitious goals for renewable energy (increasing the share of renewables in electricity production to at least 20% and in total energy consumption to at least 10% by 2020), energy efficiency (doubling energy productivity by 2020 compared with 1990), and energy research, it contained no mention of Germany's import dependence.¹³

2.2. Triggers of Action

Rather, it was not until early 2006 that energy security finally, and rather suddenly, became the focus of a broader political debate. The trigger was the gas dispute between Russia and Ukraine that broke out at the very beginning of the year. Much of the natural gas that Germany and other EU countries buy from Russia passes by pipeline through Ukraine. Unable to reach a new agreement with Ukraine on natural gas prices and transit fees, the dominant Russian natural gas concern Gazprom cut exports to Ukraine on January 1. Although Gazprom continued to feed gas intended for its other European customers into the pipeline, many European countries immediately experienced a sharp drop in the supply of gas.

Given that the disruption occurred during the middle of winter, when gas demand for space heating is high, European leaders responded with alarm and sought to broker a quick resolution of the dispute. Although Russia was widely portrayed in the media as the culprit, German leaders were careful not take sides. Nevertheless, the episode had the effect of focusing

¹³Bundesregierung 2005a.

German minds on the question of energy import dependence and supply security (Versorgungssicherheit).¹⁴

Although pressure in the trans-Ukraine pipeline was quickly restored to normal levels, a series of further events continued to raise questions in Germany about the reliability of Russian energy supplies. On January 22, 2006, for example, mysterious explosions ruptured the pipelines supplying Russian gas to Georgia. And the next January, following a dispute very similar to the one involving Ukraine, Russia cut off oil exports to Belarus, affecting 20 percent of Germany's oil supply.¹⁵

Further impetus for Germany to address the question of energy security was provided by the European Union. In March 2006, the Commission published a much anticipated paper on "A European Strategy for Sustainable, Competitive and Secure Energy."¹⁶ In contrast to German energy policy during the preceding years, the paper placed as much emphasis on ensuring the security of the EU's energy supply as on the economic and environmental aspects. Although the paper did not come as a surprise to German officials - indeed, the German delegation to the EU had contributed to the process of developing the paper¹⁷ - it nevertheless both required the German government and provided the government with an opportunity to prepare a national response that assigned energy security the same priority as economic competitiveness and environmental sustainability in German energy policy.

¹⁴Umbach 2006, 13; Umbach 2007, 7; interviews.

¹⁵Wikipedia, "Russia-Belarus energy dispute," available at http://en.wikipedia.org/wiki/Russia-Belarus_energy_dispute (accessed August 24, 2007).

¹⁶European Commission 2006.

¹⁷"Deutsches Eckpunktepapier zur Energiepolitik in der EU," attachment to Council of the European Union, 6009/06, ENER 26 (Feb. 3, 2006).

3. Process: Developing a New Energy Policy

How in fact did the German government go about addressing these rather precipitously revived concerns about energy security? By chance, the principal vehicle was the energy summit that Merkel had announced the previous November, which evolved into an extended process. What turned out to be only the first of three summits was held on April 3, 2006. In attendance were the Chancellor; the federal ministers for economics and technology (Michael Glos), the environment (Sigmar Gabriel), education and research (Annette Schavan), and foreign affairs (Frank-Walter Steinmeier, represented by a deputy); and 21 high-level representatives from industry, labor, and civil society with an interest in energy policy. Security of energy supply, along with energy prices, climate protection, modernization of the electricity supply, innovation and technology, and international cooperation, was among the half dozen central themes discussed at the summit, and perhaps the most prominent of them.¹⁸

The participants agreed to hold a second summit in the fall. In preparation for that meeting, they also established three working groups that would present reports on (1) international aspects of energy policy, (2) national aspects, and (3) research and energy efficiency in September. Of particular interest here is the composition of the working groups and the implications that it would have on the results of the summit process.

The Federal Republic has never had a separate ministry for energy matters, as in the United States. Traditionally, energy policy had been viewed as a purely economic issue and, accordingly, had been the exclusive purview of the Ministry of Economics and Technology (BMW_i), which has an entire directorate (Abteilung) devoted to the subject. During the

¹⁸ Ergebnisse des Energiegipfels vom 3. April 2006. Available at http://www.bmu.de/files/erneuerbare_energien/downloads/application/pdf/energiegipfel_ergebnisse.pdf (accessed June 3, 2008).

Schröder government (1998-2005), however, responsibility for renewable energies was transferred to the Ministry for the Environment (BMU).

An even more recent development is the involvement of the Foreign Office (Auswärtiges Amt). Prior to the Merkel government, the ministry had taken little interest in and had little capacity to engage in matters of energy policy.¹⁹ The new Foreign Minister, however, quickly signaled that his ministry was going to be fully involved in the international aspects. Less than three months after taking office, at the annual Munich conference on security policy on February 5, 2006, he spoke about energy and indicated the need for an “energy foreign policy” (Energieaußenpolitik).²⁰ Then at the end of March 2006, he published articles on energy security simultaneously in the prominent dailies Handelsblatt and the International Herald Tribune.²¹ And his planning staff reportedly prepared a paper titled “Theses on Energy Security Policy: The Contribution of German Foreign Policy.”²²

These shifts in interest and responsibility were reflected in the composition of the working groups. Each was to be co-chaired by representatives of two ministries and to include representatives from the other interested ministries. Thus the BMWi was required to share leadership of working groups 1 and 2 with the foreign office and BMU, respectively. And even though BMWi had long been central in the development of policy on energy efficiency, it was denied a lead role in working group 3, which was co-chaired instead by representatives from BMU and the Ministry of Education and Research (BMBF). Not only did this arrangement limit the influence of BMWi, but it ensured that the international, including security of supply, and

¹⁹Müller 2005, 181.

²⁰Steinmeier 2006a.

²¹Steinmeier 2006b; Steinmeier 2006c.

²²Beste 2006.

environmental aspects of energy policy would receive strong institutional support.

The three working groups duly submitted their initial reports in September 2006 as planned. As might have been expected, the reports devoted considerable attention to the issue of security of supply.²³ The second energy summit was held on October 9. The discussion at the summit was largely limited, however, to the results of the first and third working groups, reflecting deep divisions within the working group concerned with national aspects of energy policy. The Chancellor announced that there would be a third summit the following spring, and the working groups were asked to prepare a further set of reports.²⁴

The summit process was paralleled by two other important processes at the international level. Germany was scheduled to hold the Presidency of the European Union during the first half of 2007, when the Commission was expected to present a detailed package of energy policy measures for consideration by the Council of Ministers and then the European Council. In addition, Merkel was scheduled to hold the chairmanship of the Group of Eight, which would be holding its annual summit in Germany in June 2007.

Also of note were important developments within the government bureaucracy, which paralleled and reinforced the diffusion of influence over energy policy away from BMWi and

²³Bericht der Arbeitsgruppe 1 „Internationale Aspekte“ zum Energiegipfel am 9. Oktober 2006 (Sept. 25, 2006), available at http://www.bmu.de/files/energieeffizienz/downloads/application/pdf/ag1_internationale_aspekte.pdf (accessed June 3, 2008); Bericht der Arbeitsgruppe 2 „Nationale Aspekte“ zum Energiegipfel am 9. Oktober 2006 (Sept. 25, 2006), available at http://www.bundesregierung.de/Content/DE/Artikel/2001-2006/2006/10/Anlagen/2006-10-09-ag-2-nationale-aspekt_e.property=publicationFile.pdf (accessed June 3, 2008); Bericht der Arbeitsgruppe 3 „Forschung und Energieeffizienz“ zum Energiegipfel am 9. Oktober 2006 (Sept. 25, 2006), available at http://www.bmu.de/files/energieeffizienz/downloads/application/pdf/ag3_forschung_und_energieeffizienz.pdf (accessed June 3, 2008).

²⁴Ergebnisse des zweiten Energiegipfels - Vorschläge für die internationale Energiepolitik. und ein Aktionsprogramm Energieeffizienz (Oct. 9, 2006), available at <http://www.bundesregierung.de/Content/DE/Artikel/2001-2006/2006/10/Anlagen/2006-10-10-energiegipfel-papier.html> (accessed June 3, 2008); Pressekonferenz zum Energiegipfel (Oct. 9, 2006), available at http://www.bundesregierung.de/nn_774/Content/DE/Mitschrift/Pressekonferenzen/2006/10/2006-10-09-pk-energiegipfel.html (accessed June 3, 2008).

toward BMU and the Foreign Office. Within the BMU, energy issues had previously been confined to a single sub-directorate (Unterabteilung), which was responsible for both climate protection and renewable energy. Over the course of 2006, however, the ministry's resources devoted to energy policy were greatly expanded. Separate sub-directorates were created for "Environment and Energy" and "Renewable Energies," and additional competency was added in energy efficiency.

A similar process took place within the Foreign Office. Previously, conventional energy policy had been handled by a small office (410-9) within the division for international nuclear policy (410) within the Directorate General for Economic Affairs and Sustainable Development. By June 2007, the relative importance of conventional and nuclear energy had been reversed. Not only was 410 now called "International Energy Policy," with nuclear issues handled by 410-9, but it had grown to be the largest division within the directorate general.²⁵ In addition, the directorate had added a new Commissioner (deputy director) responsible for international energy policy, and the Foreign Office had created an intra-ministerial energy working group (AG-E) that brought together representatives from numerous functional and regional offices.

4. Outcome: The (Temporary) Eclipse of Energy Security

The three working groups issued their final reports at the very end of the spring, and the third and final energy summit was held on July 3, 2007, somewhat later than originally intended.²⁶

²⁵Interview.

²⁶The three reports are BMWi/AA, Bericht der Arbeitsgruppe 1 „Internationale Aspekte“ zum Energiegipfel am 3. Juli 2007 (June 22, 2007), available at http://www.bdi-online.de/Dokumente/AG_1_Zus_Endbericht.pdf (accessed June 3, 2008); BMWi/BMU, Bericht der Arbeitsgruppe 2 „Internationale Aspekte“ (June 20, 2007), available at <http://www.bundesregierung.de/Content/DE/Artikel/2007/07/Anlage/2007-07-03-arbeitsgruppe-2-zusammenfassung-und-bericht,property=publicationFile.pdf> (accessed June 3, 2008); and Bericht der Arbeitsgruppe 3 „Forschung und Energieeffizienz“ (June 20, 2007), available at <http://www.bundesregierung.de/Content/DE/Artikel/2007/07/Anlage/2007-07-03-arbeitsgruppe-3-zusammenfassung>

Perhaps most striking about the results of the summit was the shift in emphasis that had occurred since the previous gathering. Although the summary of the proceedings reiterated the usual three general goals of energy policy - security of supply, economic efficiency (Wirtschaftlichkeit), and environmental sustainability (Umweltverträglichkeit) - now the focus was on the creation of an “integrated energy and climate program.”²⁷ As Chancellor Merkel stated, “with this program, we are taking on the central challenge of the 21st century, climate change.”²⁸ In contrast, the importance of addressing concerns about security of supply appeared to have diminished. Instead, the conclusions reached at the summit suggested that Germany would be able to enhance its energy security through its efforts to combat climate change. Certainly, few if any potential conflicts between these two goals were acknowledged.

This new or renewed emphasis on climate change -- and the corresponding de-emphasis of energy security -- persisted through the end of the year. In August at Meseberg, the cabinet approved a 29 point Integrated Energy and Climate Program (Integriertes Energie- und Klimaprogramm, or IEKP).²⁹ And in December, the cabinet adopted a detailed report on the plans for implementing each element of the program and proposed a comprehensive package of 14 laws and regulations to that end, with the promise of a second, smaller package of additional

-und-bericht,property=publicationFile.pdf (accessed June 3, 2008).

²⁷Ergebnisse des dritten Energiegipfels: Grundlagen für ein integriertes Energie- und Klimaprogramm” (July 3, 2007), available at <http://www.bundeskanzlerin.de/Content/DE/Artikel/2007/07/Anlage/2007-07-03-ergebnispapier,property=publicationFile.pdf>.

²⁸“Bundesregierung: Startschuss für Energie- und Klimaschutzkonzept” (July 3, 2007), available at <http://www.bundesregierung.de/Content/DE/Artikel/2007/07/2007-07-03-energiegipfel.html>.

²⁹Eckpunkte für ein integriertes Energie- und Klimaprogramm (n.d.). Available at <http://www.bmwi.de/BMWi/Redaktion/PDF/E/eckpunkt-fuer-ein-integriertes-energie-und-klimaprogramm,property=pdf,bereich=bmwi,sprache=de,rwb=true.pdf> (accessed June 13, 2008).

measures to follow in the spring.³⁰

As foreshadowed by the July summit, the IEKP placed much more stress on reducing greenhouse gas emissions than on enhancing Germany's energy security. Although many of the proposed measures could reduce Germany's energy imports, the purportedly comprehensive program contained few if any measures primarily intended to address Germany's dependence on imported oil and natural gas per se. Indeed, it said little or nothing on several issues of particular relevance to the security of energy supplies. For example, it contained no measures intended to diversify the sources of Germany's natural gas imports, such as promoting the construction of LNG terminals. Nor was there any discussion of the possible contribution of nuclear power to energy security (as well as to reducing greenhouse gas emissions), implying that no consensus had as yet been achieved on revisiting the previous nuclear phase-out decision.

4.1. Domestic Policy Measures

Apart from references to promoting the export of German energy technology and active participating in the formation of the European policy framework, the essential fields of action (Wesentliche Handlungsfelder) identified at the July 2007 summit lay primarily in the domestic policy arena.³¹ Indeed, these elements had already been largely spelled out by the environment minister Gabriel in his April 26 statement to the Bundestag on the government's climate policy.³² Likewise, the IEKP emphasized what Germany could do at home.

One important area of action would be increasing energy efficiency. Doing so would

³⁰Bundesregierung 2007a. For a useful summary, see also BMU 2007a.

³¹Likewise, the SPD policy statement "New Energy" contained almost no mention of the external policy dimensions.

³²See "Klimaagenda 2020: Klimapolitik der Bundesregierung nach den Beschlüssen des Europäischen Rates" (April 26, 2007), available at http://www.bmu.de/reden/bundesumweltminister_sigmar_gabriel/doc/39239.php (accessed June 16, 2008). See also BMU 2007b.

allegedly allow Germany to reduce the consumption of all forms of energy and electricity in particular. The July 2007 summit had reaffirmed the goal expressed in the November 2005 coalition agreement of doubling energy productivity by 2020, and Working Group 3 presented a comprehensive action program containing dozens of concrete recommendations for doing so. Subsequently, the IEKP identified 30 different ways to reduce energy consumption, and the December package contained five detailed proposals for new legislation, regulations, and guidelines in this area.³³

A second important area would be the promotion of renewable forms of energy, to which most of the rest of the package was devoted. When fully implemented in 2020, these measures were expected to increase the contributions of renewable energy to electricity production from 13 percent to 25-30 percent and to space heating to 14 percent, to increase the share of electricity produced from efficient combined heat and power (CHP) from 12 to 25 percent, and to increase the share of biofuels in the transportation sector from 6.6 percent to 20 percent by volume (and 17 percent by energy content).³⁴

Progress in each of these areas would allow Germany to reduce significantly its greenhouse gas emissions, thereby contributing directly to the goal of preventing or minimizing climate change. At the same time, it would presumably reduce Germany's dependence on imports of oil and natural gas as well, thereby enhancing the country's energy security. But these additional potential benefits were not explicitly spelled out.

4.2. External Policy Measures

³³Bundesregierung 2007b.

³⁴Bundesregierung, Bericht zur Umsetzung.

What had become of the external aspects of energy policy? As noted above, the Foreign Office under Steinmeier had become extremely active in this area, which had been neglected under previous governments. Moreover, these diplomatic efforts could be said to be directed primarily at the goal of enhancing Germany's energy security, although they were also intended to promote its environmental agenda. The biggest question raised by the final summit was how well Germany's energy foreign policy would be integrated into the overall Gesamtkonzept, or whether the internal and external (environmental and security, respectively) dimensions of energy policy would proceed largely on separate tracks.

The emerging energy foreign policy had several more specific aims of relevance to energy security. One was to help diversify the foreign sources of energy and transit routes so as to reduce Germany's vulnerability to supply disruptions, whether politically motivated or not. Another was to promote a stable and open investment climate in supplier countries so as to increase the production and export of natural gas and oil in particular. And a third was to promote greater energy efficiency and the use of renewable energy sources in other countries so as to reduce the global demand for fossil fuels.³⁵

How were these aims to be achieved? The overall approach propounded by the Foreign Office was to promote greater dialogue among producer, consumer, and transit countries. As Steinmeier argued in early 2007, "energy security must be organized in a cooperative way - globally and in Europe".³⁶ He lamented that in this sensitive area, there was what he saw as a lack of adequate dialogue. To remedy this deficiency, he repeatedly called for the creation of a system of cooperative energy security modeled after the Organization for Security and

³⁵Interviews. For a similar summary, see also Sander 2007, 22.

³⁶Steinmeier 2007a.

Cooperation in Europe, which would help to build mutual understanding and trust.³⁷

Germany's foreign energy policy would also have a strong EU component. One purpose would be to reinforce and promote the domestic goals with regard to climate protection, energy efficiency, renewables, and market liberalization through action at the regional level. But the EU was also seen as a crucial vehicle for pursuing the desired dialogues with other consumer, producer, and transit countries. The Foreign Office very much supported the development of a European external energy policy that would enable the Union to speak with a single voice.³⁸

Perhaps needless to say, of particular concern in recent German energy diplomacy have been relations with Russia. Echoing the theme of German efforts to overcome the division of Europe during the cold war, "change through rapprochement (Wandel durch Annaeherung), recent Germany policy toward Russia has been described as "change through increased interdependence" (Wandel durch Verflechtung).³⁹ Steinmeier placed considerable emphasis on inducing Russia to ratify the Energy Charter Treaty, which would provide a solid, market-based framework for reciprocal trade and investment. That failing, because of Russian resistance, he also strongly supported the negotiation of a new EU partnership and cooperation agreement with Russia that would contain a substantial chapter on energy grounded in the principles contained in the unratified Charter.⁴⁰ Another German goal has been to help Russia to make improvements in energy efficiency, thereby potentially greatly reducing its domestic demand for natural gas and

³⁷Steinmeier 2007a; Steinmeier 2007b.

³⁸For the most detailed description, see BMWi/BMU, Bericht der Arbeitsgruppe 2 „Internationale Aspekte“ (June 20, 2007), 2-3 and 11-16. See also Sander 2007, 22.

³⁹Interviews; Wagner 2006; Kempe 2007.

⁴⁰Steinmeier 2006b and 2006c; Steinmeier 2007b.

freeing up more gas for export.⁴¹

Despite the efforts that the Foreign Office had made to establish the importance of having an energy foreign policy, especially as a means for promoting energy security, however, such considerations were largely absent from the final energy policy documents agreed in late 2007. Only three of the 29 key points in the IEKP had any bearing on the external aspects of energy policy. And these, too, emphasized the goals of climate protection and energy efficiency rather than energy security.

5. Potential Problems with and Conflicts in German Energy Policy

In view of these developments, how well is the new German energy policy likely to enhance Germany's energy security? Despite the heightened emphasis on climate policy, this would seem to be a fair question, since concerns about energy security were a principal motivation for the energy summit process. Although the agreed policies will improve Germany's energy security position in some respects, there are also reasons to be skeptical. In particular, the policy (1) does not squarely face some problems, (2) may be based in part on unrealistic assumptions, and (3) lacks the tools to address effectively some energy security concerns.

One problem is the failure to address squarely the projected gap between demand for natural gas in the EU as a whole and assured supplies. Even if the German market would appear to be adequately supplied by long-term contracts between energy companies based in Germany and foreign suppliers such as Gazprom, future natural gas shortages in other EU countries would have a negative impact on the German economy, especially if the EU makes progress toward a single, open gas market. Gas delivered to Germany would be free to move to consumers willing

⁴¹ Interviews

to pay for it in other countries, potentially resulting in higher prices and shortages in Germany.

And when the IEKP was adopted, it was not clear where all the natural gas needed in the EU will come from. In 2006, the European Commission projected that total demand in the 25 members would grow from 376 MTOE in 2000 to 530 MTOE in 2020, while indigenous production would decline from 197 MTOE to just 80 MTOE over the same period. As a result, the dependence of the EU-25 on gas imports would rise from less than half to more than 80 percent.⁴² Yet, according to one 2006 estimate, only about 75 to 80 percent of the projected need for imports in 2020 was covered by long-term contracts and underway import projects, leaving a possible gap of approximately 23 percent.⁴³ The final report of Working Group 1 briefly raised this concern but did not offer an explicit strategy for addressing it.⁴⁴

A second potential problem is that the assumptions and goals for domestic policy on which the IEKP is based may be unrealistic. As a result, future German demand for gas and thus gas imports may be significantly higher than assumed.

During the last phase of the summit process, the analysis of the working groups was based on three alternative scenarios looking out to 2020. One was based on the goals set forth in the coalition agreement, another assumed the deployment of even higher levels of renewables, and a third assumed a suspension of the nuclear phase-out agreement.⁴⁵ Under all three scenarios, gas consumption was expected to decline slightly in absolute terms, although it was

⁴²European Commission 2006.

⁴³Engerer and Horn 2006.

⁴⁴BMWi/AA, Bericht der Arbeitsgruppe 1 „Internationale Aspekte“ zum Energiegipfel am 3. Juli 2007 (June 22, 2007), 7.

⁴⁵“Energieszenarien für den Energiegipfel 2007” (July 2007), available at <http://www.bundestkanzlerin.de/Content/DE/Artikel/2007/07/Anlage/2007-07-03-energieszenarien,property=publicationFile.pdf>

expected to rise as a share of the total energy mix, from 22.6 percent to somewhere between 24 and 26.7 percent, and even more as share of electricity production, from 11 percent to between 16 and 23 percent. As the final report of Working Group 2 noted, however, the absolute decline in gas consumption would depend on the achievement of the goals for energy efficiency and renewables, which were deemed by part of the group to be very ambitious.⁴⁶

As noted above, the coalition agreement had called for a doubling of energy productivity by 2020 over the level of 1990. Achievement of this goal would require annual increases averaging three percent for the remainder of this period. Yet increases in productivity since 2000 had averaged only 0.9 percent per year. Thus one part of Working Group 2 regarded the assumptions about energy efficiency improvements as unrealistic. And if energy productivity were to rise more slowly than projected, energy consumption and greenhouse gas emissions in Germany would decline more slowly than expected and natural gas consumption would actually increase, perhaps as much as 17 percent.⁴⁷

Similar questions surrounded the assumptions about renewable energy production. The coalition agreement had called for an increase in the share of renewables in total energy consumption to at least 10 percent and in electricity production to at least 20 percent by 2020. In fact, these shares had already reached 5.8 percent and 12.6 percent, respectively, in 2006, and, perhaps encouraged by this progress, the renewable energy scenario prepared for the third summit assumed that they would climb to 16.8 percent and 29.7 percent, respectively by 2020. Yet Working Group 2 was deeply divided over the feasibility of such rapid increases, and should they prove to be unrealistic, especially in electricity production, the demand for natural gas

⁴⁶Bericht der Arbeitsgruppe 2 „Internationale Aspekte“ (June 20, 2007), 11 and 26.

⁴⁷Bericht der Arbeitsgruppe 2 „Internationale Aspekte“ (June 20, 2007), 12-13. According to the energy scenario report, if productivity increased by two percent annually between 2005 and 2020, natural gas consumption would

would almost certainly be higher than projected because of constraints on the use of coal and nuclear power.⁴⁸

At least two other factors could make it difficult to reverse or even slow the growth in German natural gas consumption. One is the pressure to reduce greenhouse gas emissions. This will mean in particular addressing the use of coal for electric power generation in Germany, which currently accounts for about half. According to the government's climate policy, after 2012, companies will only be allowed to build coal-fired power plants if they are able to sequester and store carbon-dioxide emissions (CSS) or if they have acquired sufficient emissions allowances through either the EU's emissions trading system (ETS) or participation in climate protection projects abroad.⁴⁹ There are reasons to doubt, however, whether either of these options is realistic. It is not clear when the technology for large-scale CSS will become available at affordable prices, Germany still lacks a legal framework for underground storage, and establishing one is likely to be difficult, if the problems encountered in dealing with nuclear waste are any indication.⁵⁰ In addition, the emergence of prices for emissions certificates high enough to reduce carbon emissions would make coal relatively more expensive than gas.

The other factor is the planned phase-out of nuclear power, which until the early years of the decade was the source of 30 percent of Germany's electricity. As the contribution of nuclear energy declines, the difference will have to be made up for by either coal, renewables, or natural gas, and given the likely constraints on the first two sources, the logical alternative will be to

rise 17 percent instead of falling by two percent. See "Energieszenarien für den Energiegipfel 2007," 151-52.

⁴⁸Bericht der Arbeitsgruppe 2 „Internationale Aspekte“ (June 20, 2007), ii and 20-21. For details on the contribution of renewables to electricity production in 2006, see "Renewable Electricity Generation in Germany," available at www.volker-Quassching.de/datserv/ren-Strom-D/index2_e.html (accessed May 25, 2007).

⁴⁹BMU 2007.

⁵⁰Interview.

increase the share generated by gas, all of which will have to be imported. A recent analysis by Deutsche Bank found that if the phase-out is implemented as planned, the amount of natural gas used for power generation would increase by 250 percent from 2005 to 2020, or the equivalent of one third of Germany's total gas consumption in 2005.⁵¹

The Merkel government remained paralyzed on the issue, which meant that the phase-out would continue by default. A future government could reverse the decision, although public support for doing so is not strong. Indeed, the phase-out may have recently been accelerated and reinforced because of minor accidents and the discovery of safety problems, resulting in the temporary shut-down of two of the remaining 17 power plants and a revival of public concerns about nuclear energy.

Of course, increased German and EU reliance on natural gas imports would not be as big a source of concern if Germany and Europe could count on reliable access to adequate amounts of gas at reasonable prices from foreign sources. Indeed, that has been a central thrust of Germany's emerging foreign energy policy. Yet here, too, there are good reasons to be skeptical about how much the situation could be improved.

One approach is to diversify the sources of and transit routes taken by Germany's and Europe's natural gas imports. But the opportunities would seem to be few. For example, much stock has been placed in the construction of the Nabucco gas pipeline, which could link central Europe to gas fields in the Caspian Sea region and the Persian Gulf via Turkey. At this point, however, it is not clear where the gas needed to fill the pipeline would come from. Russia has signed contracts to acquire most of the gas exported by the Caspian states, while the political situation in Iran and Iraq currently precludes the possibility of transporting gas from or through

⁵¹Lewis 2007, 3-4.

those countries. Even if built and fully charged, moreover, the pipeline would alter the supply equation only marginally, given that its capacity would be just 30 billion cubic meters (bcm) per year, or just six percent of EU consumption.⁵²

As a result, many hopes have come to rest on the development of new Norwegian gas fields in the Barents Sea. Here, however, at least two obstacles have stood in the way. One is simply the technical challenge of extracting the gas under the difficult conditions represented by cold temperatures, including sea ice, and deep water.⁵³ The other has been an undefined maritime boundary with Russia, which shares the Barents Sea and has its own ambitious plans to develop the gas fields there.⁵⁴

That leaves adding new terminals for the reception of liquified natural gas (LNG). But so far, German energy companies, which import much of their gas from Russia, have shown little interest in building them. According to German energy expert Friedemann Müller, “They prefer to minimize competition on the German gas market because they are vulnerable due to their long-term purchasing contracts with Gazprom.”⁵⁵ Moreover, the one terminal under consideration, at Wilhelmshaven, would have a capacity of just 10 bcm per year, or just over 10 percent of Germany consumption. Thus in this area, Germany will be dependent on the decisions taken by and in other EU states to promote LNG, especially if the EU gas market becomes more liberalized.

As a result, the most important arena of German energy diplomacy is likely to be Russia.

⁵²<http://www.nabucco-pipeline.com/project/project-description-pipeline-route/project-description.html> (accessed June 3, 2008) and BP 2007.

⁵³Interview.

⁵⁴Energy Information Administration, Norway (August 2006), available at <http://www.eia.doe.gov/emeu/cabs/Norway/Full.html> (accessed June 13, 2008).

⁵⁵Müller 2007, 39.

Yet the energy summit documents suggest that the government has underestimated, or at least been unwilling to acknowledge publicly, the country's likely future dependence on Russian gas, which could reach more than 70 percent of imports by 2020.⁵⁶ There was certainly no mention of this fact in the final Working Group 1 paper on the international aspects of energy policy, where one might have expected it to appear. Likewise, the 220 page report on energy scenarios prepared for the 2007 energy summit contained no discussion of where Germany's gas is likely to come from in the future.

With regard to Russia, Germany faces two distinct, and somewhat contradictory, challenges. On the one hand, there is the risk, however remote, that Russia might seek to use German dependence to apply political pressure or seek political advantage. On the other hand, there is the danger that Russia will be unable to fulfill its contractual obligations. The principal Russian gas fields are in decline, whereas development has only recently begun on promising, but often difficult, new fields, such as Shtokman in the Barents Sea. Yet Gazprom, which produces 90 percent of Russian gas, has spent much of the money available for such investment on foreign acquisitions and preparing for the North Sea pipeline.⁵⁷ In addition, the Russian government has recently sought to exert more control over foreign energy concerns, creating an inhospitable climate for foreign investment. As a result, some anticipate a gap between, on the one hand, Russian production and, on the other hand, domestic consumption and existing export obligations by 2020 or even sooner.

Within the general strategy of "Wandel durch Verflechtung," Germany's principal approach to addressing these challenges has been to try to embed Russia in a multilateral rule-

⁵⁶Kemfert and Müller 2007, 7.

⁵⁷See Energy Information Administration, "Russia" (April 2007), available at <http://www.eia.doe.gov/emeu/cabs/Russia/Full.html>.

based framework for trade and investment based on liberal principles of market access. Thus far, however, this approach has borne little fruit.⁵⁸ Initially, as noted above, the foreign office hoped to induce Russia to ratify the Energy Charter Treaty and its important transit protocol, which would open up Gazprom's pipelines to other potential suppliers, and that failing, to replace the expiring EU-Russia partnership and cooperation agreement (PCA) with a new one that contained a substantial section on energy. The first approach, however, was met by unwavering Russian resistance, and the foreign office has also discovered to its chagrin that the success of its backup strategy is contingent on support of its EU partners. Negotiations on the new PCA were held up for 18 months because of Polish and Lithuanian objections and then put on hold as a result of the Russia-Georgia conflict in mid-2008 and other obstacles could arise in the future.⁵⁹

6. Analysis

Underlying the limitations of Germany's emerging new energy policy as a response to concerns about energy security lies a deeper set of questions about the centrality of those concerns in the policy-making process. In particular, why did energy security not move to the top of the policy agenda any earlier? Despite troubling trends in energy prices and import dependence that could be glimpsed years before, the issue did not become a subject of a broader debate until as late as the beginning of 2006. And why did energy security drop so precipitously in the hierarchy of policy priorities? Certainly by early to mid- 2007, the issue had been de-emphasized in favor of much greater stress on the need to combat climate change.

To be sure, there may be some objective grounds for the limited attention to energy

⁵⁸Speck 2007.

⁵⁹Renata Goldirova, "EU-Russia Partnership Talks Expected to Last a Year," EUobserver, available at <http://euobserver.com/19/26210> (accessed June 2, 2008).

security. At the most general level, Germany finds itself in a relatively secure position. It lies close to many of the world's gas reserves, and it is well connected to them by pipelines. As a result, Germany has been well supplied with gas at stable prices, and its anticipated needs are already covered by long-term contracts well into the future. In addition, German companies maintain approximately 80 days of gas in storage.⁶⁰ Even when crises have occurred, Germany has not been significantly affected. Thus there has been no urgent need to take action. Rather, the problem has been long-term in nature.

The same could be said of climate change, however. Yet Germany experienced some record high temperatures in 2006, and the first half of 2007 saw the publication of a series of three prominent reports by the Intergovernmental Panel on Climate Change (IPCC) on the likely consequences and possible ways of mitigating them that were widely read in Germany. As a result, the issue has come to be seen as more immediate and thus to dominate the political discussion of energy policy.⁶¹ Even though the most significant effects of climate change may not be felt for a long while, so the sentiment goes, the time to take action is now.

At the same time, however, more subtle and subjective processes may be at work. Arguably, one can detect a degree of complacency among German policy makers and a tendency to take an optimistic view of the situation that may not be warranted. This has already been suggested by the favorable assumptions about potential increases in energy efficiency and renewable energy production underlying the IEKP or the foreign ministry's faith in the ultimate willingness of energy producers to accept liberal Western market principles. But it can also be seen in official views about the challenges posed by German dependence on Russian gas in

⁶⁰IEA 2007, 97.

⁶¹Müller 2007, 27 and 37; interviews.

particular.

The concern that Germany's import dependence holds serious risks and that Russia might use its status as a major energy exporter as a tool or weapon has been voiced primarily by independent experts such as Frank Umbach at the Deutsche Gesellschaft für Auswärtige Politik and Friedemann Müller, until recently of the Stiftung Wissenschaft und Politik. Within the government, however, such concerns are viewed as exaggerated. Typically, officials point to the fact that Germany has never had a problem with gas deliveries from Russia or even from the Soviet Union during the cold war. Nor can Russia quickly find alternative customers, such as China, for the bulk of its exports. As a result, officials argue, there is no reason to worry about Germany's allegedly asymmetrical dependence. Likewise, they maintain that Russia will be able to honor its contracts for gas delivery, even if it means buying more gas from third parties such as the Caspian states.⁶²

If there is anything to this allegation of complacency and undue optimism, where could they come from? More generally, what political factors might account for the overall lack of emphasis placed on the issue of energy security in the 2000s? A promising place to begin is with the structure of government policymaking in the energy area. As noted above, until recently, energy policy was handled exclusively by BMWi. All government bureaucracies are characterized by particular biases, and the BMWi, for all its expertise on energy issues, is no exception. Within the BMWi, one can discern an emphasis on the domestic dimensions of energy policy, a faith in the ability of markets to deliver public goods, including security of energy supply, and a tendency to represent the interests of German industry, especially the major German energy companies in this case, with which the ministry maintains close links and some

⁶²Interviews.

of which are eager to maintain good relations with Russia.⁶³

Subsequently, the increased influence of the foreign office and BMU has, paradoxically, helped both to raise and lower the profile of energy security. On the one hand, the involvement of the foreign office brought greater attention to the international political dimensions of energy policy, which often concern security of supply. At the same time, however, the ministry has also been marked, since the shift to Ostpolitik nearly four decades ago, by a tendency to favor cooperative over confrontational approaches with first the Soviet Union and now Russia. On the other hand, the growing clout of BMU has strengthened those who would devote more attention to climate change.

These bureaucratic orientations have been reinforced by party politics and personalities. The positions of the government ministries tend to be closely associated with the parties, or at least the wings of the parties, that control them. For example, from 1998 to 2005, the foreign office was headed by Joschka Fischer of the Green Party, which could be expected to emphasize environmental issues. Since late 2005, a member of the centrist wing of the SPD has been at the helm. Not only that, but Steinmeier developed a strong interest in energy issues while serving as head of the chancellor's office and Gerhard Schröder's right-hand man between 1999 and 2005. In that position, he played a central role in the cultivation of close relations with Russia, which culminated in the agreement to build the North Sea gas pipeline.⁶⁴ According to one analysis, Schröder and Steinmeier "saw [in Putin's regime] Germany's reliable economic partner, capable of providing stable delivery of energy resources...", and this perspective seems to continue to

⁶³Interviews. See also Müller 2005, 176-80.

⁶⁴Interviews; Kempe 2007; Stent 2007.

infuse German policy.⁶⁵

Also important has been the interplay between Steinmeier and the ministers of economics and the environment. In interviews, Glos of the BMWi has been described as not having strongly campaigned for the position and not being particularly interested in energy issues. If true, these characteristics may have contributed to the diffusion of authority from BMWi to the other ministries. In contrast, Gabriel of the BMU has been described as being very capable and having high political ambitions. He has skillfully taken advantage of the heightened public concern about climate change to promote the agenda of his ministry and, in the process, his own political fortunes. An example of this might be his April 2007 statement on government climate policy, which contained many energy-related measures and pre-empted the conclusion of the energy summit process. In previous years, the efforts of the environment ministry to develop energy policy legislation had often been blocked by BMWi and potentially affected economic interests. Now, it appeared that BMU was in the driver's seat.⁶⁶

Not to be left out of the analysis has been the chancellor herself, who had initiated the process of re-evaluating German energy policy. Merkel took a particularly strong interest in the problem of climate change during the first half of 2007, creating a political opening for those who wanted to emphasize the issue. This may not be surprising for someone who had been trained as a scientist and had served as the minister of the environment from 1994 to 1994 as well as the German delegate when the Kyoto Protocol was negotiated and drafted.⁶⁷ But interviews suggested several additional, more political motives. First, this was one area where she could appear to demonstrate political progress, especially during her chairmanship of the

⁶⁵Araloff 2005.

⁶⁶Interviews.

Group of Eight, which had trouble reaching agreement on much else. Second, and relatedly, it was a way to boost her popularity by responding to an issue of great public concern.⁶⁸ Perhaps the most interesting suggestion is that she viewed the issue as a way to revive support for nuclear power, since the continued operation of at least the existing reactors might ultimately be regarded as necessary to reduce CO2 emissions. Whatever her motives, the chancellor's shift had the paradoxical effect of strengthening the hand of Gabriel, who could be her chief opponent in the next federal elections.

7. Conclusion

Despite the renewed emphasis on climate change in German energy policy, it would be premature to write an epitaph for energy security as a principal concern. To the contrary, the subject seems certain to return, sooner or later, to the top of the policy agenda. Perhaps the most important reason is Germany's growing dependence on natural gas as a share of the national energy mix, a growing percentage of which will have to be imported from outside the European Union. Whether and how quickly German gas consumption and imports grow will depend on a number of factors: how quickly energy productivity and production from renewables increases, whether clean coal technologies can be deployed on a large scale, and the future of nuclear power, to name the most important. But the projections underlying current policy-making efforts may be based on overly optimistic assumptions. At the same time, more and more of Germany's gas imports are likely to come from Russia. Yet large question marks remain over Russia's reliability as a political and economic partner. Certainly, it would be unwise to disregard the

⁶⁷Nicholas Kulich, "Merkel Delivers What Germans Want: Status Quo," New York Times, Sept. 12, 2007, A4.

⁶⁸The competition for public support during the first half of 2007 is also evidenced by the focus, noted above, in party policy statements on climate change.

possibility of another shock comparable in magnitude to the Ukraine-Russia gas dispute that did so much to raise the profile of energy security in early 2006.

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