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EU Energy Policy and Future European Energy Markets: Consequences for the Central and East European States

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Editorial Note:

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Margarita M. Balmaceda erwarb 1996 ihren Ph.D. in Politikwissenschaft an der Princeton University (USA). Sie ist Assistenzprofessorin für Internationale Beziehungen an der Seton Hall University sowie assoziierte wissenschaftliche Mitarbeiterin am Harvard Ukrainian Research Institute und am Davis Center for Russian Studies an der Harvard University, wo sie 1998-2000 Mitleiterin des Belarus-Projekts war. Das vorliegende Arbeitspapier entstand als Ergebnis eines Aufenthalts als Gastwissenschaftlerin am MZES. Es stellt eine Vorstudie für ein Buchprojekt über Energie- und Außenpolitik in Mittel- und Osteuropa dar.

Abstract

This working paper explores the European Union vector in the Central and East European (CEE) energy situation, in particular in terms of the CEE countries' energy relationship with Russia. Attention is paid not only to concrete EU energy policies but also to the larger question of European energy markets. EU policies impact the CEE states' energy relationship with Russia through specific EU requirements vis-à-vis the candidate countries, through the side-effects of other EU policies, through the Energy Charter and the Energy Dialogue process with Russia, and through new trends in EU energy thinking and policy striving for the establishment of a more open gas market in Europe. The way these trends and measures will impact the CEE states has to do both with the structural legacies of the COMECON system in these countries - transport and structural dependency, particular energy mixes, low energy efficiency - as well as with the specific nature of their relationship with the EU: these countries are to join the EU at a time of deepened integration and of an unprecedented role of energy in EU policy. The picture that emerges is a mixed one: some of the EU policies and initiatives would greatly increase the CEE states' dependency on energy imports, and thus, on Russian energy, while some would help in the management of this dependency. But it becomes clear that energy security issues will become increasingly important for the CEE states in the next two decades, and this factor should be taken into account in discussions about these countries' integration into the EU.

Dieses Arbeitspapier analysiert die Bedeutung der Europäischen Union für die Energiesituation in Mittel- und Osteuropa, insbesondere im Hinblick auf die Energiebeziehungen der mittel- und osteuropäischen Länder zu Russland. Die Aufmerksamkeit gilt dabei nicht nur den konkreten energiepolitischen Ansätzen der EU, sondern auch der weitergehenden Frage nach der Entwicklung der europäischen Energiemärkte. Der Einfluss der EU-Politik auf die Energiebeziehungen der mittel- und osteuropäischen Länder zu Russland erfolgt durch die spezifischen EU-Anforderungen an die Beitrittskandidaten, durch Nebeneffekte aus anderen EU-politischen Ansätzen, durch die Energiecharta und den Energiedialog mit Russland sowie durch neue Trends im energiepolitischen Denken und Handeln der EU, die auf die Errichtung eines offeneren Gasmarkts in Europa zielen. Wie sich diese Trends und Maßnahmen auf die mittel- und osteuropäischen Länder auswirken, ist einerseits durch das strukturelle Erbe des COMECON-Systems in diesen Ländern – strukturelle Abhängigkeiten, spezifische Energiequellenzusammensetzung, niedrige Energieeffizienz – und andererseits durch den spezifischen Charakter ihrer Beziehungen zur EU bedingt: Diese Länder treten der EU zum Zeitpunkt einer vertieften EU-Integration und einer bisher beispiellosen Bedeutung des Faktors Energie in der EU-Politik bei. Dabei entsteht ein gemischtes Bild: Einige der Ansätze und Initiativen der EU führen zu einem erheblichen Anstieg der Energieimportabhängigkeit der mittel- und osteuropäischen Staaten und damit der Abhängigkeit von russischer Energie, während andere das Management dieser Abhängigkeit erleichtern helfen. In jedem Fall wird deutlich, dass Energiesicherheitsfragen für die mittel- und osteuropäischen Staaten in den nächsten zwei Jahrzehnten zunehmend an Bedeutung gewinnen werden und dieser Faktor in den Diskussionen über die Integration dieser Länder in die EU berücksichtigt werden muss.

Contents

1 Introduction[1]

After the demise of the Warsaw Pact and the Council of Mutual Economic Development (COMECON), a body of literature emerged focusing on the issues and problems faced by the countries of Central and Eastern Europe in their striving to join all-European institutions, in particular the European Union (EU) and NATO.[2] However, in a context in which the integration hopes of many Central and East European countries (CEEC) have not been fulfilled and where some sectors of the population have been deeply disappointed by this process, the role of Russia in the CEE area acquires new meaning. For the countries excluded from the first stage of NATO and EU expansion announced in summer 1997, this provided an occasion to reflect on their foreign policy strategies. As noted by Sahm, they basically have three options at their disposal: (1) making do with a "weaker" variant of integration, i.e., with associated status in the EU and "Partnership for Peace" status in NATO; (2) trying to accommodate to EU and NATO criteria and trying again and (3) searching for alternative "integration possibilities" besides NATO and the EU. What option is chosen will be affected by both domestic political factors and through the international environment.

For the countries not included in the first round of NATO and EU accession, Russia proposes itself as an alternative gravitation center after Brussels.[3] Although due to its own political and economic crisis Russia can offer less than the EU or NATO in terms of providing economic benefits and political stabilization as a result of integration, there are various ways in which Russia figures in the CEEC-EU equation. For countries such as Belarus, Ukraine, Moldova and to a lesser extent Slovakia, integration with Russia may present itself as an alternative to delayed and unsuccessful attempts at integration with the EU. The same – though to a lesser extent - may be also true for countries such as Bulgaria, Romania and Yugoslavia, left aside from discussions about first-round entry into the European Union and therefore, especially affected by the problems of being "left behind" by the processes of European integration. But even for those countries more solidly on the way to EU admission (such as Poland, the Czech Republic and Hungary), the relationship with Russia may also come to play a role in the integration question. Although these countries have generally been successful in reorienting their economies towards Western Europe, there is one area where Russia continues to play an enormous role: energy.

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1 The author is greatly indebted to Peter Bonin, Beate Kohler-Koch, Astrid Sahm, Manfred Sapper and Volker Weichsel for their comments and suggestions on an earlier version of this paper.

2 See for example Graham Avery and Fraser Cameron, The enlargement of the European Union (Sheffield, England: Sheffield Academic Press, 1998), Michael J. Baun, A wider Europe: the process and politics of European Union enlargement (Lanham, Md.: Rowman & Littlefield, 2000), Karen Henderson (Ed.), Back to Europe: Central and Eastern Europe and the European Union (London and Philadelphia: UCL Press, 1999), Susan Senior Nello and Karen E. Smith, The European Union and Central and Eastern Europe: the implications of enlargement in stages. (Aldershot, UK ; Brookfield, USA: Ashgate, 1998), Christopher Preston, Enlargement & integration in the European Union (London and New York: Routledge, 1997), and Martin A. Smith and Graham Timmins, Building a bigger Europe: EU and NATO enlargement in comparative perspective (Aldershot: Ashgate, 2000).

3 See Astrid Sahm, "Integration, Kooperation oder Isolation? Die Ukraine und Belarus´ im Vorfeld der EU-Osterweiterung," Osteuropa 2001, No. 11/12, pp. 1391-1404, here p. 1392.

The repeated moving back of the date of effective entry into the Union, together with the already detrimental effects of some EU-related policies in areas such as agriculture, have led to increased disappointment and Euro-sceptical attitudes in CEE countries. Moreover, in areas such as energy, it has become clear that ten years of closer relations with the EU have not led to really significant changes in these countries' energy dependency situation. Given the centrality of energy for the functioning of the economy as a whole and the enormous weight of energy interest groups, this is an area where aspects of the relationship with Russia, compounded by other problems, may contribute to widening existing wedges in the relationship between the candidate countries and the EU.

This obvious interconnection of EU energy and integration policy on the one side and the development of the CEE-Russian energy relationship on the other side is related to the larger question of „what are the framing factors of energy policy in these countries?" At a first glance four aspects stand out which could play a role in the CEE countries' foreign energy policy and in energy decisions concerning the relationship with Russia in particular: (1) security perceptions of policy-makers and concrete policies vis-a-vis Russia; (2) economic limitations; (3) relations with other foreign actors, for example the EU; (4) the role of interest groups.[4]

In many CEE states a relative lack of clear and governmental-level foreign energy policies can be observed.[5] So, if no one in the state structure is really taking care of these questions, who is? What is determining policy decisions? In many cases, this absence of self-conscious governmental policy is being filled by the activity of interest groups, and by the striving to comply with EU directives - indeed, in some cases one almost has the feeling that energy policies are not being decided upon on their merits alone, but are being hastily adopted as a function of the country's overall desire to harmonize its legislation with EU standards. Thus, in order to understand the development of the CEE-Russian energy relationship it is not sufficient to look only at the relationship between Russia and each of the involved countries - it is also necessary to look at the CEE countries' evolving economic and legal relationships with the EU.

These two factors (complying with EU standards, and the role of interest groups) are not totally independent ones. The process of adapting to EU regulations is not a painless one, but one affecting important domestic economic actors, which may play a role in whether, to what extent and on which timetable EU directives are implemented. In some cases, because of the clear under-staffing of official entities (both in terms of actual personnel numbers, salary levels and qualifications), it is actually the energy companies which are playing some of the most significant roles in terms of preparing discussion and response papers in response to EU initiatives and, therefore, which are often largely responsible for shaping the terms of the debate. These trends have been reinforced by two

[4] In this paper, the term "interest groups" is used in a broad sense, to mean not so much formal collective actors such as unions and associations but a variety of "interest articulators" including corporate actors in the energy area.

[5] On this topic, see Margarita Balmaceda "Energy Interest Groups, Energy Privatization and Energy Relations With Russia: Cases from Central-East Europe," presented at the VI World Congress of the International Council for Central and East European Research, Tampere, Finland, July 29-3 August, 2000, manuscript.

characteristics of the post-Communist transformation process, namely institutional weakness (reflected in the fact that the official state institutions responsible for negotiations with the EU are not fully prepared to do their job) and the institutional/ownership murkiness[6] of large energy companies, leading to specific interests being able to take predominance over „national" interests.

Within this context, this paper explores the European Union vector in the CEE energy situation, in particular in terms of the CEE countries' energy relationship with Russia. Attention is paid not only to concrete EU energy policies but also to the larger question of Western European gas and energy markets, in an attempt to assess how developments in these could affect these countries' energy relations with Russia. This paper being the first publication to address this issue directly[7], it is but a beginning. So rather than offering concrete answers or quantified predictions concerning the CEE countries' energy future, it aims at presenting important trends, looking at new factors that might affect the CEE countries energy relationship with Russia, and presenting new questions.[8] Given the dearth of materials specifically on this topic, it was necessary to rely on a variety of sources dealing indirectly with this issue: the literature of EU energy policy making, on the enlargement process, on the energy situation of each individual country, on all-European energy markets, as well as on a variety of EU documents. The closest topic on which there is a body of literature - although small - is on the issue of CEE environmental policies and their relationship with EU programs.[9]

The paper goes about this question in the following manner: (1) first, it presents a brief overview of the energy situation in the CEE countries and highlights the differences between their situation and that of the Western European (WE) states; (2) second, it presents a number of EU policy instruments that - whether by design or through their indirect effects - can have an effect on the CEE countries' energy situation and energy relationship with Russia in the context of the EU's own energy relationship with Russia; (3) finally, it draws some implications of these processes for the CEE countries' current and future energy relations with Russia. Although many of the following observations can be applied to all the energy dependent countries of Central and Eastern Europe, the more specific comments and

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6 For the related concept of „asset ambiguity" and its implications for the issue of interest representation in post-Soviet societies, see Gerner Grabher and David Stark, "Organizing diversity: Evolutionary theory, network analysis and post-socialism" in John Pickles and Adrian Smith (eds.), Theorising Transition (London: Routeledge, 1998), pp. 65-66. On „interest murkiness" see Margarita M. Balmaceda, "Understanding Interest Groups in the Post-Soviet State: the Case of Ukraine," presented at the 1997 APSA (American Political Science Association) Annual Convention, Washington, August 28, 1997, manuscript.

7 Institutes such as the Stiftung Wissenschaft und Politik have published on energy issues in Russia and Central Europe, but their focus has been on more technical aspects of regional electricity cooperation. See for example: Klaus Schroeder, Rudolf Botzian, Andrei Kuxenko and Friedemann Müller "Transformation und Globalisierungsdruck in Europa. Die Bedeutung der deutsch-russischen Kooperation im Elektrizitätsbereich," April 1998, AP 3065, Rudolf Botzian "Produktionsstandorte auf dem europäischen Strommarkt unter Globalisierungsdruck: Ist Verlagerung nach Rußland möglich?" SWP Studien S 7/01, April 2001, and Rudolf Botzian, "Gesamteuropa: Starkstromnetze und politische Vernetzung," Stiftung Wissenschaft und Politik, Arbeitspapier KA 3079, August 1998.

8 Indeed, finding information and literature on EU „energy policy" towards CEE is a very difficult endeavor. Not surprisingly as, in the words of someone working at the European Commission, as „there is no EU energy policy towards CEE."

9 See for example Kerstin Tews**,** EU-Erweiterung und Umweltschutz : umweltpolitische Koordination zwischen EU und Polen (Leipzig : Leipziger Univ.-Verl., 1999), and Friedemann Müller and Susanne Ott (eds.), Bridging

examples will be based on the case of four Central European (CE) states, in particular the Czech Republic, Hungary, Poland, and Slovakia.[10]

This paper is part of a larger project examining the role of energy in the shaping of a new relationship between post-Soviet Russia and several former Soviet republics and former allies in Central-East Europe.[11] The project as a whole looks at questions such as: how is the Russian government using the energy card as a way to maintain influence over both former Central European allies and former Soviet republics? How can we explain the fact that some CEE countries have been more successful than others in diversifying their energy options? How does the domestic situation in these countries affect their energy relationship with Russia? The larger project seeks to answer these questions by assessing the legacies of energy links facilitating dependency on Russia, the degree of restructuring of the domestic energy market, and the interplay of Russian energy interests with domestic interest groups. Yet these factors cannot be fully understood without considering the role of the CEE states' other external relationships, in particular with the EU.

2. The Central and East European States as Actors in European Energy Relations

Despite some superficial similarities **–** such as the fact that both areas are highly dependent on energy imports - the energy situation and the energy policy constraints faced by the CEE countries put them in a very different situation than that faced by most current EU members. Important differences can be seen in three areas: structure of energy use and energy dependence, infrastructure, and politization of the issue. Moreover, as discussed in the next section, these countries also face different constraints in their relationship with the EU compared to current EU members.

2.1 Structure of Energy Use and Energy Dependence

The first important difference between the energy situation of these countries and that of the Western European ones has to do with the fact that the CEE countries have a much higher level of energy dependence on a *single source* (namely, Russia) than the WE countries. Although if one looks at *total*

Divides – Transformations in Eastern Europe: Connecting Energy and the Environment (Baden-Baden: Nomos, 1998).

[10] Throughout this paper, the term "Central European countries" (CEC) is used to refer exclusively to the following EU candidate countries: the Czech Republic, Hungary, Poland and Slovakia. The term "Central and Eastern European Countries" (CEEC) is used in a broader sense to indicate the larger group of post-COMECON states including, in addition to the four candidate countries named above, Belarus, Bulgaria, Estonia, Latvia, Lithuania, Romania, Ukraine, and the republics of the former Yugoslavia.

[11] "Energy and Foreign Policies in Central-East Europe." The overall project includes case studies of Russian (and Russian companies') energy policies towards Ukraine, Belarus, Hungary, Poland, and Slovakia.

energy import dependency of the EU candidate countries as a whole[12] the composite figure is actually lower from that in the EU members (37.3% vs. 48.9%):

Table 1: Energy Import Dependency in EU Candidate Countries, 1998 (%)

	All Fuels	Solid Fuels	Oil	Nat. Gas
EU	**48.9**	**45.5**	**76.8**	**41.7**
Candidates	**37.3**	**-2.5**	**87.7**	**72.2**
Bulgaria	**48.9**	**32.9**	**98.5**	**99.7**
Cyprus	**98.3**	**83.3**	**98.8**	**0**
Czech Republic	**25.7**	**-24.4**	**99.8**	**99.1**
Estonia	**36.3**	**8.4**	**85.4**	**100**
Hungary	**56.0**	**26.8**	**80.9**	**72.4**
Lithuania	**50.2**	**91.2**	**87.8**	**100**
Latvia	**61.2**	**56.5**	**105.4**	**106.4**
Malta	**99.9**	**0.0**	**99.9**	**0**
Poland	**6.0**	**-24.1**	**96.6**	**66.8**
Romania	**28.1**	**31.6**	**43.9**	**25.3**
Slovakia	**25.7**	**-24.4**	**99.8**	**99.1**
Slovenia	**51.7**	**15.6**	**108.6**	**99.2**
Turkey	**60.6**	**35.7**	**90.1**	**94.6**

Adapted from: "Candidate Countries: Import Dependency," in European Union, Directorate for Energy and Transport, Energy and Transport in Figures, available at: europa.eu.int/comm/energy_transport/etif/energy_countries/cand_import_dependency.html. Energy dependency is defined as "Net Imports/ (Bunkers+Gross Inland Consumption)." Negative numbers indicate that the country is a net exporter. Values over 100% are possible due to changes in stocks.

[12] Including Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Malta, Poland, Romania, Slovakia, Slovenia and Turkey.

A closer look reveals a more complex picture. First, if we look specifically at oil and especially gas, we can see a situation where the average indicators for the candidate countries are clearly higher than for the EU states. This is especially clear in the case of gas, where the candidate countries' dependency in terms of gas (72.2%) is much higher than that of EU member states (41.7%); a similar but less pronounced trend can be observed in the case of oil (87.7% vs. 76.8% in 1998).

Second, even when overall dependency rates may not differ significantly, dependency on a single supplier is much more marked in the case of the CEE countries. While in the WE countries the level of dependency on a single source hardly exceeds 30%, the CEE countries' level of energy dependency on Russian oil and gas hovers between 50 and 100 percent. (See Tables 2 and 3).

Table 2: Dependence on Russian Gas Imports (Russian gas as a percentage of total gas consumption/imports)

	% of consumption	% of imports
Hungary*	**54**	**89**
Poland**	**60**	**no data available**
Slovakia***	**96**	**100**
Czech Republic***	**76.56**	**78**

* Average figure for 1995-1997. Source: MOL, Marketing Department, letter (9 January 1998).
** Average figure for 1995-1997.
*** Average figure for 1993–97. Source: FSU Energy, ING Barings (1996) and Statistical Yearbook of the Slovak Republic (Bratislava: Statistical Office of the Slovak Republic, 1993–96).
**** 1999 data from the Czech Statistical Office, quoted in United States Energy Information Administration (USEIA) Country Briefs: Czech Republic, November 2001, available at www.eia.doe.gov/emeu/cabs/czech.html and other USEIA sources.

Table 3: Dependence on Russian Oil Imports (1995-1997)

	% of consumption	% of imports
Hungary*	**75**	**98**
Poland**	**50**	**50**
Slovakia***	**100**	**100**

* Figures for 1995–97. Sources: MOL Rt. Annual Report 1995 and MOL Marketing Department, letter (2 July 1998).
** Data for 1995.
*** Average data for 1993–97. Source: Statistical Yearbook of the Slovak Republic (Bratislava: Statistical Office of the Slovak Republic, 1993–96).

Third, if we look at the concrete CE candidate countries (Hungary, the Czech Republic, Slovakia, Poland), their oil and gas dependency rates tend to be above the average for the larger EU candidates' group[13] (oil dependency ranges from 80.9% in the case of Hungary to 99.8% in the cases of the Czech Republic and Slovakia, in contrast with the average of 87.7 for the candidate countries as a whole; gas dependency ranges from 66.8% in the case of Poland to 99.1% in the cases of the Czech Republic and Slovakia.)[14]

Table 4: Energy Mix: Selected CEE Countries' Energy Supply by Type, 1999 (as % of total production)

	Oil	Gas	Coal	Nuclear	Hydro
Czech Republic	**22**	**18**	**51**	**9**	**1**
Hungary	**30**	**40**	**15**	**15**	**0**
Poland	**21**	**11**	**68**	**0**	**<1**
Slovakia	**21**	**38**	**28**	**17**	**2**

For comparison:

	Oil	Gas	Coal	Nuclear	Hydro
Ukraine	**11**	**46**	**28**	**15**	**1**
Belarus	**42**	**57**	**2**	**0**	**0**
Russia	**21**	**55**	**17**	**5**	**2**

Source: William Chandler, Energy and Environment in the Transition Economies: Between Cold War and Global Warning (Boulder: Westview Press, 2000) p. 4; (original data derived from British Petroleum, Statistical Review of World Energy, 2000)

Moreover, if we include a consideration of issues concerning the energy source "mix" in each group of countries, the situation looks more complex. Those Central European countries that show a low total index of energy dependency (for example Poland with 6% and the Czech Republic with 25.7%) can only do so through heavy reliance on domestic coal, a deeply problematic fact which, moreover, will

[13] Including Turkey, Cyprus and Malta in addition to Bulgaria, the Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovakia and Slovenia.

[14] Data from "Candidate Countries: Import Dependency," op. cit.

have to change with accession to the EU. Indeed, the type of energy source "mix" present in some of these countries is very different from that observable in Western Europe. While the "energy mix" is not uniform in the CEE countries (see Table 4), some of these countries exhibit an energy mix (namely, a very high level of dependency on coal, such as in the case of Poland (66%) and the Czech Republic (51%) currently unthinkable in Western Europe.[15] Within the EU members' group,[16] the countries with higher dependence on solid fuels as a whole (including coal, lignite, peat and oil shale) are Greece (35%), Denmark (26%) and Germany (25%); the average for the group is 15%.[17] This energy mix pattern has important implications in terms of the political role of the coal industry, interest groups, environmental issues, and relations with Russia. The different "energy mixes," in particular the central role played by coal in some cases, lead to a very different chain of relationships between the various energy options, a chain of relationships which also has an important impact on the energy relationship with Russia as well.

Indeed, as shown by the Czech case, the initial energy source "mix" used by a country *does* matter. In the case of the Czech Republic, the triangle coal-atomic energy-gas played itself out in the following way: the consumption of coal needed to be reduced for environmental and foreign policy (relations with the EU, among others) reasons, leaving increased reliance on atomic energy and gas as options. Yet gas itself was a difficult option, because the change to hard currency payments to Russia after 1991 had led to pressures to reduce imports, and political and security concerns also precluded increasing reliance on Russian gas. Given this situation, the initial energy mix used by the country, together with the special sensitivities involved in the relationship with Russia, led to a situation of increased pressure for reliance on atomic power.[18] In the Czech case, although the building of a nuclear power plant was also expensive, in a situation where the nuclear power plant was close to completion, the increase in gas prices threw the scale in favour of nuclear power.[19]

At the same time, the controversy around the Temelin nuclear power plant in the Czech Republic, where Austria has denounced the environmental dangers posed by the plant's combination of Soviet design and Western fuel and called for its closing down, points to the effects that the energy mix issue can have on relations between current and prospective EU members.

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[15] Towards an European Strategy for the Security of Energy Supply: Green Paper, p. 28. and William Chandler, Energy and Environment in the Transition Economies: Between Cold War and Global Warning (Boulder: Westview Press, 2000), p. 4 (data derived from British Petroleum, Statistical Review of World Energy, 2000).

[16] The EU-15 group includes the 15 EU member countries: Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxemburg, The Netherlands, Austria, Portugal, Finland, Sweden and United Kingdom.

[17] "Gross Internal Consumption [by source], 1998," Towards an European Strategy for the Security of Energy Supply: Green Paper, p. 27.

[18] On the Czech case, see Volker Weichsel, Westintegration und Rußlandpolitik der Tschechischen Republik (Münster, LIT, 2000).

[19] I am indebted to Volker Weichsel for this comment.

2.2 The Infrastructure: Crumbing Walls and Standing Pipelines

The CEE states find themselves in a very different infrastructural situation concerning the possibility of overcoming their energy dependency on Russia. In contrast with the WE states, the technical and infrastructural preconditions (i.e., diversified pipeline systems and connections with European-wide networks) are simply not present in these countries, and there are not enough pipelines to connect these countries to alternative oil and gas supplies. Even the new pipeline connections that have been built (for example Hungary's Gyor-Baumgarten gas pipeline connecting it to Austria, or the Czech Republic's oil pipeline to Ingolstadt in Germany) are mainly small - both in terms of length and, most importantly, capacity. Thus, even these new alternative pipelines cannot compensate for the sheer infrastructural weight and long-term impact of the whole energy infrastructure system built during the Soviet period. Indeed, these alternative pipeline connections linking these countries to the West remain largely symbolic: a significant part of the small amounts of gas and oil carried through them is actually Russian**.** For example, in the case of the new gas pipeline connecting Hungary and Austria, its capacity cannot be increased above 4.5 billion cubic meters (bcm) per year, so the rest of Hungary's import needs have to be supplied through the Friendship pipeline coming from Russia through Ukraine.[20] Similarly, the Ingolstadt oil pipeline (inaugurated in 1995) linking the Czech Republic to the German pipeline system, although having the capacity to carry 10 million Tons of oil per year, seems to be used at only 14% of its capacity, which nevertheless represents 20% of the Czech Republic's oil imports; the oil reaching the Czech Republic through the Ingolstadt pipeline also includes Russian oil shipped through Italy.[21]

So these pipelines are not yet so much part of these countries' day-to-day energy supply system as have a large symbolic use (representing these countries freedom from total dependency on Russia), are largely reserved for emergency supplies (should supplies from the Eastern pipeline fail to come through) or for use as a way of exerting leverage in negotiations with Russian suppliers. These factors show that the "*possibility* of import-diversification has been much more important for the Visegrád countries than its *practice."* [22]

If we look at some objective elements in the energy situation of the CEE countries, we may see that - with some exceptions - not too much has changed since 1989. Most of these countries continue to be overwhelmingly dependent on Russian oil and gas imports, and - with the exception of the Czech Republic and Slovenia - have not achieved any significant degree of import diversification.

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[20] Moreover, of the gas imported through this pipeline, most is of Russian origin as well. (For example, of the gas imported in through that pipeline in 1998, most (1.7 bcm) was Russian (Panruszgas), with only a fraction being supplied by German (Ruhrgas, 0.6 bcm) and French (Gas de France, 0.4 bcm) companies. Hungary has signed long-term (15-year) agreements with Ruhrgas and Gaz de France, but these agreements are for relatively small amounts (the agreement going up to 2015 with Gazprom calls for gas deliveries of 6.5-11.5 bcm/year, while the 15-year agreement with Ruhrgas calls for 0.9 bcm/year, and the agreement with Gaz de France for 0.4 bcm/year). Tibor Palánkai and András Deák, "EU Enlargement and the Hungarian-Russian Economic Relations," paper prepared for the conference "The Enlargement of the European Union and Russia's Priorities," Moscow, 15-16 October 1999, manuscript, p. 6.

[21] See Weichsel, op. cit., pp. 82-83.

[22] Tibor Palánkai and András Deák, op. cit., p. 6. Italics mine (MB).

Low levels of energy efficiency continue to be an important problem in the CEE region, especially in countries such as Ukraine, where the amount of energy consumed per unit of GNP is more than four times higher than in Western Europe. If we take the CE region per se[23] as a whole, there has been a slow improvement in terms of energy intensity, despite setbacks in the period immediately following the political changes in 1989-90. (At the same time, it should be noted that there has been a faster rate of change in energy efficiency in Central and Eastern Europe as compared to Western Europe, possibly having to do with the closing of some inefficient industries using old machinery, and the installation of more efficient machinery in others.[24]) If in 1990 1846.3 Tons of oil equivalent (Toe) where necessary to produce a GNP of one million Euro (Meur) at 1990 values, by 1998 this amount had declined to 1569.4.[25] (These numbers are significantly higher than those in Table 5 below because they include only the CEE states, not the group of EU candidate countries as a whole, which also includes Cyprus, Malta and Turkey.) However, they remain significantly higher than the Western European average of 235.5 Toe/Meur GNP in 1998. These changes in CEE countries' energy intensity take place in the context of an overall reduction in energy consumption since 1990, especially pronounced in the period 1990-1995 and continuing at a slower pace since then. (See Table 6 below).

Table 5: Energy Intensity in CEE countries and other EU Candidate Countries as Compared With EU Averages (toe/Meuro)

Year	EU Average	EU Candidate Countries Average
1992	**246.3**	**1117.6**
1993	**247.7**	**1088.6**
1994	**240.7**	**1052.4**
1995	**240.0**	**1041.2**
1996	**244.6**	**1049.5**
1997	**237.8**	**979.1**
1998	**235.5**	**913.2**

Source: Modified from "Energy Intensity: Indicators for Candidate Countries," and "Energy Intensity" Indicators for the European Union," in European Union, Directorate for Energy and Transport, Energy and Transport in Figures, available at: http://europa.eu.int/comm/energy_transport/etif/energy_countries/cand_indicators.html; http://europa.eu.int/comm/energy_transport/etif/energy_general_overview/indicators.htm. Energy intensity is defined as "gross inland consumption of energy (in tons of oil equivalent)/gross domestic product (million Euro)."

[23] In the 2000 Annual Energy Review definition of the region as including Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, and the Slovak Republic.

[24] At the same time, we should not confuse the energy savings created by the introduction of new, highly-efficient technologies in specific industries with energy efficiency in a broader sense, which requires the restructuring of the whole economy away from reliance on branches highly dependent on energy imports. The case of Russia is an excellent example of this. I thank Volker Weichsel for bringing this point to my attention.

[25] 2000 Annual Energy Review, p. 133.

Table 6: Gross Inland Energy Consumption for CE,[26] in Mtoe

1980	**320.2**
1985	**328.1**
1990	**288.2**
1995	**251.2**
1996	**262.7**
1997	**252.5**
1998*	**240.5**

* Estimate
Source: 2000 Annual Energy Review, p. 136.

Table 7: Use of Energy per Sector of in the CE States in Million Tons of Oil Equivalent (Mtoe)

Sector / Country	**Industry**	**Domestic and Tertiaty**	**Transport**	**Total**
Hungary	**4.0**	**8.8**	**3.1**	**15.9**
Poland	**20**	**29.7**	**9.5**	**59.2**
Slovakia	**4.7**	**4.5**	**1.3**	**10.5**
Czech Republic	**11.4**	**8.7**	**3.8**	**23.9**

Source: "Candidate Countries: Final Energy Consumption," in European Union, Directorate for Energy and Transport, Energy and Transport in Figures, available at: europa.eu.int/comm/energy_transport/etif/energy_countries/cand_final_consumption.html

For the Central European region as a whole, the overall dependency on energy imports has actually increased. For example, dependency on oil imports was 86% of total oil requirements in 1998, a slight increase over 1990 (84%).[27] Gas import dependency in the same period increased more dramatically - from 53% of total needs in 1990 to 65% in 1998.[28]

If one looks at total import dependency data for individual countries, the results are even starker.

[26] Including Albania, Bulgaria, the Czech Republic, Hungary, Poland, Romania, and the Slovak Republic.
[27] 2000 Annual Energy Review, p. 135. These statistics exclude the former Yugoslavia.
[28] 2000 Annual Energy Review, p. 135.

Table 8: Total energy import dependency (in %)

	1990	1996	1997	1998 est.
Czech Republic	**11.9**	**22.5**	**24**	**25.3**
Hungary	**49.8**	**52.7**	**51.8**	**53.1**
Poland	**2.0**	**5.2**	**7.8**	**6.8**
Slovakia	**77.0**	**73.8**	**72.9**	**74.6**

Source: 2000 Annual Energy Review, pp. 139-141, 143.

But one area where things *have* changed significantly is in what concerns the role of the CEE countries as a market from a Russian perspective. What is clear in the case of the CEE countries is that these countries – especially Poland and Hungary – are rapidly changing – from being „mere appendixes of the Russian [Soviet] pipeline system“ and transit countries to *markets* attractive on commercial grounds, and able to pay in hard currency.[29] Thus it is no surprise that Russian energy companies such as Gazprom have decided to deal with them through totally different structures than those used in trade with Ukraine and Belarus.

2.3 The Political and Psychological Context

Another difference concerning the role of energy in the Central and East European countries has to do with the fact that, in these countries, there is an extreme politization of energy issues at the level of political thinking and prozelitizing.

Energy is a highly politicized issue in these countries for reasons having to do with both domestic and foreign policy issues. Concerning domestic politics, political reasons make the decision to eliminate energy subsidies - essential for any transformation of the energy sector - difficult to make as politicians fear moving to unsubsidized pricing in the context of the already high costs of economic transformation would be unpopular at best and highly destabilizing at worst.

Understanding the foreign policy reasons for the politization of energy in these countries requires a small excursus into the question of "what is so special about energy trade between Russia and the CEE states?” Many countries are not self-sufficient in terms of energy, many countries are dependent and vulnerable, and many energy companies, not only Gazprom (including Western ones), expand and build pipelines throughout the world. So, what is so special about this case?

[29] See Javier Estrada, Arild Moe and Kare Dahl Martinsen, The Development of European Gas Markets (Chichester, UK: John Wiley & Sons, 1995), pp. 193 and 273.

The legacies of difficult relations with the Soviet Union/Russia make it very difficult for trade with Russia to be conducted as if it was trade with “any other” country.[30] Indeed, for the Central and East European countries, the perception of the relationship with the main energy supplier (Russia) is totally different from the Western European countries’ perception of their relationship with their main suppliers (be it Norway, Russia, or Algeria). For the CEE countries, energy is the most sensitive part of trade with Russia, and trade with Russia is not just trade: it is marked by the shadow of it being trade with the former hegemon.

While dependency and energy dependency are not new phenomena, in the CEE cases considered here they take place in a very special context, of which the most important characteristic is the fact that these countries are trading with countries which are seen as more 'adversaries' than allies (such as Russia is seen today by many Central and Eastern European countries), even when these 'adversaries' used to be allies a few years ago. This last element adds a further exacerbating element: not only are these countries trading with an adversary, but the very fact that this adversary used to control the economy in a way that has created long-term negative consequences only adds to the distrust in the relationship. The fact that some Russian politicians have openly called for the use of energy as a political weapon in the relationship with various former republics has not contributed to creating a more trustful atmosphere.

Because of the strong structural and psychological legacies of having belonged to the Soviet block, a huge amount of mistrust exists, so that trade is never seen as "just" trade. The fact that the main trading partner, Russia, has a higher potential (or is perceived as having a higher potential) that it "will attempt to use any vulnerability against a weaker state"[31] has important implications for trade in the former COMECON region if only because of the heightened levels of threat perception. In addition, due to domestic fragmentation, institutional weakness and other political reasons - many of them related to the Soviet legacies - some of these countries are badly prepared economically and politically to deal with the complexities of their dependency on Russia. Thus, "the need to import energy from a potential adversary adds an international political dimension to an already bleak domestic picture."[32]

For all of these reasons, trade in this part of the world is much more than an economic exercise, and energy is much more than 'just' power. As a result, the situation of the countries examined here is not just another case of generic profit-driven interactions and, thus, cannot be explained simply by profit motives.

The reactive nature of the CEE countries’ energy policies is another element differentiating them from the Western European states. Despite the politization of energy issues at the level of discourse and political mobilization, these countries are often not so much following a real energy policy as reacting

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30 This section draws heavily from Paul D'Anieri, Economic Interdependence in Ukrainian-Russian Relations (Albany: State University of New York Press, 1999).

31 Gowa and Mansfield, “Power Politics and International Trade,” APSA, 87 No. 7 (June 1993), p. 408. cited in D'Anieri p. 51.

32 D'Anieri, op. cit., p. 73.

to events both outside (EU requirements, Russian companies' energy policies) and within their borders (behaviour of domestic interest groups). This apparent contradiction may indeed be the trademark of the Central and East European situation: a situation where, on the one hand, the energy question is very politicized at a popular level (to the point that in Hungary, for example, a special issue of the literature-oriented magazine *Central European Time* was devoted to the issue[33]), but this is often not backed up neither with the needed expertise,[34] nor with real policy-making capabilities.

Indeed, as noted above, some of the main official institutions entrusted with the shaping of energy policy remain largely understaffed, many of the best cadre having left for better-paid positions in the private sector. This is especially true of institutions dealing with foreign energy policy (as opposed to more technical issues such as energy efficiency, for example), in which the state has often been left in a position of largely reacting to the initiatives of large companies in the sector.

These differences in terms of structure of energy dependency, infrastructure, and politization of the issue also imply important differences in terms of the energy policy constraints faced by these countries. Indeed, most of these countries appear as 'objects' of energy policy, rather responding to external constraints than acting as proactive subjects.

3 Instruments of EU Energy Policy vis-à-vis the CEE States

Given these circumstances, the EU faces an uphill battle in seeking to help the CEE countries manage their energy situation while staying true to its general energy, environmental and common market principles. The EU has sought to deal with this situation through a variety of policy instruments. In this section, I discuss how some of these instruments - mainly through their indirect effects - can have an effect on the CEE country's energy situation and energy relationship with Russia. In fact, most of the impact of EU energy policies on CEEC-Russian energy relations is the result, not of concrete EU policies aimed at specific outcomes in the area of CEEC-Russian energy relations, but of the side-effects of other EU policies and rules. These are: (1) specific EU energy policy requirements vis-à-vis the candidate countries, (2) the Energy Charter process, (3) the Energy Dialogue Process with Russia, and (4) new trends in EU energy thinking and policy.

At the same time, in order to understand the effect these instruments can have on the CEE countries, one additional factor must be taken into consideration: the nature of these countries' relationship with the EU.

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[33] See CET – Central European Time (Budapest), special issue on "Az olaj kerdes" (The Oil Question), May-June 2000.

[34] (The very issue of CET made the fundamental flaw of confusing oil and gas!)

3.1 The Nature of Interaction with the EU and the Changing Role of Energy in the Integration Process

Another set of factors that makes the energy situation in the CEE candidates for EU membership different from that in the Western European countries has to do with the changing nature of European integration itself, and the role of energy issues in this process.

In the first place there is a significant difference between the current wave of EU expansion and previous waves, especially those taking place before 1995, to the point that we can not longer talk about *integration* (which implies the possibility of actually influencing the process and even potentially vetoing it), but about *enlargement,* which implies entering a community or institution with its own set of rules and idiosyncrasies.[35] Although the countries joining the EU in the 1970's "Southern" expansion also had to adapt to a pre-existing community with its own set of rules, the CEE candidate countries will join the EU at a time when, due to the deepened state of integration, they will have to adapt to larger and more complex Acquis Communitaire. Moreover, energy and energy policies have acquired a different meaning in this latest stage of European integration: First, because the emergence of EU energy policy *as conscious policy* is a relatively new phenomenon,[36] meaning that the CEE countries are some of the first to join at the time of a self-conscious EU energy policy. Secondly, energy and environmental issues play very different roles before and after a single market has been established. Several aspects of EU energy and environment related policies (the „polluter pays" principle, for example) did not have as much practical importance when countries such as Spain joined the Union, as it was „irrelevant because ... we didn't have a single market. (...) But then, when you've got a full market, where companies have to pay [for example] for this water to be clean *then* it matters."[37]

So, not only the role of energy issues in the integration process has changed, but also the very nature of the integration process itself.

As of mid-2001, the energy chapter in accession negotiations has been opened with all candidate countries except Bulgaria and Romania. It has been closed with Slovenia and Hungary (as well as Cyprus and Malta) and closing is imminent with Poland. The energy chapter continues open in negotiations with the other candidate countries. Given the situation described above, harmonization in the energy area presents especially difficult challenges, and the energy field is one area where there have been real problems with integration and accession negotiations and where issues in the bilateral relationships with Russia could "open a wedge" in relations with the EU.

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[35] I am indebted to Volker Weichsel for this comment.

[36] On the beginnings of a self-conscious European Union energy policy, see Janne Haaland Matlary, Energy Policies in the European Union (New York: St. Martin's Press, 1997) pp. 1-22.

[37] Interview with Christophe Manet, Enlargement Desk Officer for Poland and the Baltic States, DG XI, Brussels, 25.09.1997, in Kerstin Tews**,** EU-Erweiterung und Umweltschutz: umweltpolitische Koordination zwischen EU und Polen (Leipzig : Leipziger Univ.-Verl., 1999), p. 104. Translation and italics mine.

3.2 EU Expectations Towards the Associated Countries in Terms of Harmonization

The first way in which the EU can have an impact on the CEE states' energy relations with Russia is through admission criteria. To be able to join the EU, candidate countries need to fulfill a set of economic and political criteria, and to adopt the union's *Acquis communitaire*. More specifically, candidate countries will need to comply with energy-related EU statutes and rules in a variety of areas, ranging from narrowly technical issues such as quality of gasoline and diesel fuel to large structural issues such as liberalization of the gas and electricity markets.

1. Improvements in the quality of gasoline and diesel fuel to reduce pollutants[38] and the sulphur content of certain liquid fuels

Here two regulations are especially important: (1) the sulphur content of diesel cannot exceed 0.05%; (2) heating oil with a high sulphur content should be removed from the market. These requirements will require significant, long-term investments by local refineries. Moreover, EU regulations regulate the use of mixed components in gasoline. These rules will create incentives for Russian, Ukrainian and Belarusian refineries to develop the ability to refine oil to Western grade, and will also benefit the few refineries in Central Europe able to refine heavier Russian Urals-type oil to Western standard.

2. Hydrocarbons

In the case of hydrocarbons, one important element for the European Union is that permission for research, exploitation and development of hydrocarbons be adjudicated in a transparent way. Although countries such as Hungary officially have no problems in terms of conforming to these requirements,[39] several countries (Hungary as well) may ask for several years' delay (derogation), in order for their national oil companies to be able to work on concession areas without a tender.

3. Coal Mining

In terms of coal mining issues, EU requirements concern complying with European Coal and Steel Union regulations, and are related to the need to gradually ease out subsidies to coal production (in the interest of making possible a real internal market for energy) and move away from the use of coal, especially its most inefficient and environmentally dangerous types. Coal mining is an especially important issue for countries (such as Poland and the Czech Republic) highly dependent on coal for their energy mix, and one where the domestic and social implications of reducing coal production (in areas such as North Bohemia, for example) can lead to the strong mobilization of interest groups.

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[38] Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 Relating to the Quality of Petrol and Diesel Fuels and Amending Council Directive 92/12/EEC; Council Directive 1999/32/EC of April 1999 Relating to a Reduction in the Sulphur Content of Certain Liquid Fuels and Amending Directive 93/12/EEC.

[39] Szergényi István, Európai Energiapolitika - Magyar Energiapolitika (Budapest: Integrációs Stratégia Munkacsoport, 1997), p. 25.

Such pressures from the EU have direct implications for energy relations with Russia, as domestic coal is most often replaced by gas imported from Russia.

4. Safety of supply and reserves

Since 1968, the European Community has had an obligatory mechanism of oil and oil-product reserves.[40] Although 'safety of supplies' is a broader concept that can include many items in addition to a certain size of oil reserves, in its policy vis-à-vis CEE, the EU has not made any specific policy proposals or requirements concerning other related issues, so in practice these policies have been limited to oil reserves. Since 1972, the prescription has been that each country should have reserves equal to at least the 90-day average for domestic consumption (calculated on the basis of the previous year's consumption).[41] Hungary has fulfilled this requirement since it joined the International Energy Agency in 1996,[42] but other countries such as Poland and the Czech Republic are facing much larger problems in this area.[43]

Each country can choose the specific organizational structure to be used in providing 90 day's reserves, and two groups of countries have emerged: (1) those that have established centralized reserve systems; and (2) those that have made maintaining these reserves the responsibility of the oil companies.[44] In addition, the Council of Ministers resolution 79/639 has a detailed description of rules to be followed in case of an oil crisis, including mutual assistance, rules the CEE countries would be expected to follow.

5. Electricity and natural gas transit

Electricity transit is regulated by European Council 90/547/EGK; gas transit by European Council 91/296/EGK. The purpose of these directives is to ensure indiscriminate access to electricity[45] and natural gas transit,[46] in other words Third Party Access (TPA) to electricity and natural gas transit grids. TPA is also a central element in the Energy Charter process (discussed below). However, in addition to political issues related to the desire of current energy monopolists to maintain control over their grids, some of the technical preconditions facilitating third party access may not be present.[47] But some of these preconditions are gradually being put into place: for example Poland, the Czech Republic and Hungary's connection to the UCPTE electricity system, and the pipelines connecting

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40 Council of Ministers 68/414 (1968) prescribed 65 days' reserves.

41 Council Directive 68/414/EEC of 20 December 1968 Imposing an Obligation to Maintain Minimum Stocks of Crude oil and/or Petroleum Products; Council of Ministers' 72/425 (1972); Council Directive 98/93/EC of 14 December 1998 Amending Directive 68/414/EEC Imposing an Obligation on Member States of the EEC to maintain minimum stocks of Crude Oil and/or Petroleum Products.

42 Hungary was the first former socialist country to join the IEA.

43 In 2001, the European Union accepted the Czech Republic's request that the deadline for building a 90-day reserve system be extended to December 2005; in the case of Poland, the deadline has been extended until 2008. See Energy Information Administration, op. cit. and Ibid, "Country Briefs: Poland," November 2001, available at www.eia.doe.gov/emeu/cabs/poland.html.

44 Szergényi, op. cit., p. 26.

45 Council Directive 90/547/EEC of 29 October 1990 on the Transit of Electricity through Transmission Grids.

46 Council Directive 91/296/EEC of 31 May 1991 on the Transit of Gas through Grids.

47 Szergényi, op. cit., p. 26.

Hungary (Gyor-Baumgarten), the Czech Republic (Ingolstadt pipeline) and Poland (the planned gas pipeline to Denmark) with Western oil and gas sources and networks make it increasingly possible for the CEE countries to play a role in the East-West transit of electricity and gas.[48]

6. Atomic Energy

EU requirements in this area are related to the EURATOM agreement, which deals with issues such as safeguarding the safety of nuclear materials, the across-the-border transport of radioactive materials, defending the population against radiation, and strengthening the independence of nuclear energy regulatory agencies.

EURATOM Supply Directorate regulations will have a clear and direct impact on CEE nuclear energy relations with Russia, as some regulations limit the proportion of nuclear heating elements that the country can import from a single source, as "every member should make efforts not to buy more than 25% of these from one source." This would mean that countries such as Hungary would have to limit their import of Russian heating elements. (But they may also need 'derogations' in this field until Western companies can produce heating elements which are compatible with Russian technology.) This provision is likely to have important effects on the nuclear sector, although according to article 105 of the EURATOM agreement the Associated Countries can continue to sign supply agreements with the former Soviet states, even after joining the EU.[49] At the same time, we can observe a trend towards a growing role of Russia in European nuclear affairs, stemming from the Duma's May 2001 decision to accept the import of foreign nuclear waste. This decision takes place in the context of a decreasing role of environmental protection bodies in Russia, meaning that the issue of acceptance of foreign nuclear waste will be able to be manipulated by the top Russian leadership for political and economic purposes.

7. Opening of the internal electricity and market and observing the rules of the common electricity market[50]

The European Union would like to see the development of a single European electricity and gas market, with the main goal of increasing efficiency and security of supply. In order to conform to this, it would be necessary to carry out some modifications in the CEE countries' energy regulations and the organization of the electricity industry, so that these countries' electricity industries could become

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[48] On the Hungarian case, see Szergényi, op. cit.. On the UCPTE system see Christian von Hirschhausen, Uta Kreibig and Petra Opitz, „The Power Sector in Central and Eastern Europe: More Competition Needed in the Run-Up to EU Membership," Economic Bulletin [German Institute for Economic Research, Berlin] Vol. 38 No. 1 (January 2001) and Rudolf Botzian, „Gesamteuropa: Starkstromnetze und politische Vernetzung," Stiftung Wissenschaft und Politik, Arbeitspapier KA 3079, August 1998.

[49] Szergényi, op. cit., p. 28.

[50] Directive 96/92/EC of the European Parliament and the Council Concerning Common Rules for the Internal Market in Electricity.

competitive in terms of the EU internal market.[51] Transparency in pricing is also part of this opening process.[52] The opening of electricity market is especially difficult for the post-Soviet countries given the legacies of a single, monopolist company controlling all aspects of the electricity production and distribution process.

8. Environmental legislation

This includes the adaptation of national environmental legislation to EU standards and more specific goals such as the reduction of air pollution created by large enterprises.[53] For example, a country such as Hungary has had to commit to decreasing its CO_2 emissions (compared to the 1987 level) by 15% by 2010. The need to comply with these environmental requirements leads clearly to a preference for gas use, as natural gas produces 30% less CO_2 per unit of energy than oil – and 50% less than coal.[54]

EU expectations also include the joining of technical programs encouraging rational and environmentally safe energy use.[55] The EU is especially active in terms of funding environmental programs in Central and Eastern Europe because, despite the dismal environmental situation in those countries, the very seriousness of the situation also means that Central - and especially Eastern - Europe have relatively „easy" gains to offer in the environmental area, as even a one percent decrease in pollution can be quite significant in terms of absolute numbers.

9. Gradual opening of the internal gas market

Also in the benefit of improved efficiency and security of supply, the EU is interested in the gradual opening of the domestic gas market,[56] - by 20% as of August 2000, by an additional 27% by August 2003 and by an additional 33% by August 2008.[57] Countries are also required to observe uniform EU rules on the common gas market. Increasing price transparency for industrial producers is also seen as part of this process.[58]

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51 At the same time, it should be noted that not all agree that the EU's goal is first and foremost to make CEE energy companies more competitive. Many see EU policies as leading to the destruction of the CEE countries' domestically-owned industrial base, for the benefit of Western companies, whose interests are well-represented in the European Commission.

52 See Council Directive 90/377/EEC of 29 June 1990 Concerning a Community Procedure to Improve the Transparency of Gas and Electricity Prices Charged to Industrial End-users.

53 Council Directive 94/66/EC of 15 December 1994 amending Directive 88/609/EEC on the Limitation of Emissions of Certain Pollutants into the Air from Large Combustion Plants.

54 Chandler, op. cit., p. 106.

55 This includes joining the long-term Carno Programme on technical activities to encourage the rational and environmentally safe use of solid fuel (99/24/EEC: Council Decision of 24 December 1998 Adopting a Multi-annual Programme of Technological Actions Promoting the Clean and Efficient Use of Solid Fuels (1998 to 2002)), the long-term program of energy efficiency enhancement (SAVE Program; Decision 647/2000/EC), and the long-term programme for encouragement of renewable energy use (Altener Program).

56 Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning Common Rules for the Internal Market in Natural Gas.

57 European Commission, Opening up to Choice – Launching the single European Gas Market (Luxemburg: Office of Official Publications of the European Communities, 2000), p. 7.

58 See Council Directive 90/377/EEC of 29 June 1990 Concerning a Community Procedure to Improve the Transparency of Gas and Electricity Prices Charged to Industrial End-users.

In addition to the challenges present in opening up the electricity market, opening up the CEE countries' gas markets presents special difficulties, considering two additional factors: (1) these countries' overwhelming dependency on Russian gas; (2) the high dependency on gas use for household and heating use - especially in highly-gasified countries such as Hungary -, which raises the political costs of increasing household gas prices and makes it difficult to open the market for competition (in Hungary for example, gas monopolist MOL is forced to supply gas at a loss, as it faces increasing prices but is not allowed to rise prices to costumers; as a result it is seeking to leave the gas business, „returning" it to the state.)

3.3 The Consequences of Fulfilling EU Requirements on the CEE Countries' Future Energy Relations with Russia

The picture that emerges from the EU requirements described above is a mixed one: some of these requirements would increase dependency on Russia, some would decrease it, and some would help in the *management* of this dependency.

Some of the EU requirements in the area of energy would help the CEE countries become more resilient and better able to manage their energy dependency on Russia. The requirement of keeping 90 days' worth of oil reserves, although onerous for some countries to fulfil in the short term, will have positive effects in terms of dependency management. In the first place, because it provides a cushion against drastic seasonal swings in energy demand, it would allow for the negotiation of better prices for supplies during the heating-season. In the second place, a 90-day supply reserve makes a country more immune to pressure from individual suppliers. Finally, reserves protect a country against possible disruptions in supplies due to disputes between the supplier and transit countries (such as happened repeatedly in the case of supplies shipped through Ukraine in the early-mid 1990s).

There have been initiatives concerning the establishment of reserve requirements for gas as well. Although these have never materialized and, given the lack of needed infrastructure such as gas deposits, etc., would be even more difficult to comply with for the CEE states, they could play an even more important role in helping these states manage their acute gas dependency on Russia. At the same time, it should be noted that the majority of EU directives provide for a relatively long term of implementation (different for various directives) and that individual countries can be granted additional time.

4 The Energy Charter and the EU's Energy Dialogue with Russia

A second important policy instrument open to the European Union is the Energy Charter, first signed in 1994 as the European Energy Charter and later extended to include a growing number of non-European participants. Although - especially after its signing by non-European states - the Charter has come to acquire world-wide significance, it should be kept in mind that the original impulse for the

development of the treaty came from the challenges arising from the former Soviet Union, in particular the simultaneous Russian demand for energy payments in hard currency from CEE and the growing crisis of the Russian energy production system.[59] This, together with the end of central control and central energy bargaining with the West ("a system regarded by energy actors as very efficient and very stable") threatened to bring chaos into energy negotiations with - and energy supply to - the West.[60] To this concern about security of supply a political element was added: the desire to use the Charter as a means to help bringing additional investments into the energy industries of the former Soviet states, with the hope that this would help stall the region's economic decline and thus contribute to economic stabilization. The treaty, aimed at facilitating trade and cooperation between the Western European, former Soviet, and Eastern European energy sectors,[61] was intended at providing a comprehensive approach to deal with these issues.

The basic thrust of the Energy Charter is that energy trade should be governed by World Trade Organization rules, and that investment, exploration, production and transportation policy should be non-discriminatory. Therefore, "all the signatories must allow the transit of energy from third parties, and must not disrupt this in the event of a conflict with one of the parties."[62]

As Europe's need for energy - and especially for *cleaner* energy - increases while production stagnates, assuring future supplies (and especially *security* of supplies) has become a priority for the EU.[63] Supplies from Russia are at a premium, especially considering its relative stability compared to other suppliers such as Algeria. This search for security of supply has been at the basis both of the Energy Charter process and the "Energy Dialogue" started with Russia in 2000.

At first glance, one may look at the „Energy Dialogue" between the EU and Russia started with Romano Prodi's visit to Moscow in October 2000 as having to do only with increasing gas imports from Russia. (The basic idea, as put forward by Chancellor Schroeder, would be that „We need energy, Russia needs money, we have money, Russia has energy: it's clear that our interests are coming closer together."[64]) Such a view of the „dialogue" could indeed lead to apprehensions on the part of the smaller countries of the region, that their interests are not being considered in the context of a bilateral dialogue EU-Russia and that their own energy needs could be sacrificed to the desire for increased Russian energy supplies to Western Europe. This refers not only to the possibility of rising prices, but also to apprehensions on the part of minor players (in particular Ukraine) that, in the rush to increase imports from Russia, the transit interests of these countries may be ignored; for example, that

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59 Matlary, op. cit., p. 74.
60 Matlary, op. cit., p.156.
61 See Bryan Clark, „Transit and the Energy Charter Treaty: Rethoric and Reality," published in Web Journal of Current Legal Issues (1998, No.) in association with Blackstone Press Ltd., available at www.webjcli.ncl.ac.uk/1998/issue5/clarck5.html.
62 Matlary, op. cit., p. 76.
63 See European Commission, Directorate of Energy and Transport, Towards a European strategy for the security of energy supply : Green Paper (EU, European Commission: 2000).
64 Gerhard Schroeder, quoted in Evgenii Grigorev, „"U nas est' dengi, u Rossii est' energosyr'e," Nezavisimaya Gazeta 9 December 2000, p. 6. Translation mine.

the EU may not take into account Ukraine's interests in deciding about new transit routes for gas. Indeed, the EU itself has become aware of these apprehensions and is talking about the need to at least „keep the CEE countries informed" about the process.[65]

But a closer look at the „energy dialogue," especially in the context of the Energy Charter process, leads to the realization that - at least from the EU perspective - the Dialogue is about much more than about increasing imports from Gazprom and, therefore, could also have far-reaching implications for the CEE countries dependent on Russian oil and gas. When the EU talks about providing Russia with much-needed investments in the energy sector, it is not talking only about providing Gazprom with more capital through an increased share in profits from Western European markets or eventually loans, but also about allowing Western companies full access to the Russian energy market. This would mean not only companies collaborating with Gazprom in joint venture projects, but a totally changed Russian domestic energy landscape and an end to Gazprom's role as a monopolist, with important foreign implications. This changed landscape would include the opening up of the Russian gas production and export system to other Russian players, something Gazprom has opposed arguing gas-gas competition would lead to depressed gas prices in Europe and to lower revenues.[66] The EU's preferred scenario would also include Western energy companies working in Russia in the gas extraction, distribution and export business - and therefore competing with Gazprom -, and opening up Russian pipelines to the transit of gas from Turkmenistan and other competitors from the CIS.[67]

Although the principle of reciprocity would mean that Western energy companies should be allowed to work in Russia much in the same way as Gazprom already works in Western Europe,[68] it is easy to understand why Gazprom does not like this idea. Giving Western companies full access to the Russian energy market could break Gazprom's domestic monopoly on which so much of its political power rests, and could reduce its profits as an export monopolist. From the point of view of the Russian government, the break-up of the Gazprom monopoly - or of Gazprom itself - would be a mixed blessing: it would reduce Gazprom's political power vis-a-vis the state, but it would also deprive the state of a foreign policy weapon for eventual use.

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[65] See „Communication from President Prodi, Vice President De Palacio and Commissioner Patten to the Commision" on The EU-Russia Energy Dialogue, [May 2001, (SEC/01/712) available at http://www.europa.eu.int/comm/energy_transport/en/lpi_en_3.html.

[66] See Margarita M. Balmaceda, "Domestic Contradictions and Foreign Policy Levers: The Domestic Background to the Role of Energy in Russia's Relations with the 'Near Abroad'" paper presented at the 2001 convention of the British Political Science Association, Manchester, England, April 10-12, 2001, manuscript.

[67] M. Balmaceda, consultations at the Energy and Transport Directorate, European Commission, Brussels, July 2001.

[68] M. Balmaceda, consultations at the Energy and Transport Directorate, European Commission, Brussels, July 2001.

4.1 The Meaning of the Energy Charter and the Energy Dialogue for Concrete Actors

The Energy Charter has different implications and meanings for energy producers, energy importers and transit countries in Eurasia. An essential condition of the Energy Charter as well as of the EU's internal energy market initiative is assuring Third Party Access (TPA) to the gas and electricity grids. The idea is that, at first, grid or pipeline owners would be allowed access to other grids; later, third parties would be included.[69] Yet theoretical Third Party Access by itself does not mean anything if, physically, there is only one pipeline linking a consumer to a single producer through a single pipeline. In other words, without a real network in place "the full potential of third party access cannot be realized; "[70] therefore, it is important to connect the various companies' pipeline networks, that is, to create a "network of networks." The EU has tackled this issue in a two-pronged way. First, by starting a program to improve gas and electricity links, including in CEE and Russia, in order to (1) connect isolated gas transmission networks and (2) to increase transmission, reception and storage capacities, needed to make possible the diversification of supply sources and routes for natural gas.[71] Second, through the regulations and principles included in the Energy Charter.

Russia

Despite the fact that some provisions of the Charter could help provide capital to the Russian energy sector and help Russia in some of its own transit difficulties - for example with Ukraine[72] -, there are important political and economic reasons why Russia - and in particular some weighty energy interest groups - continues to oppose the Energy Charter.

In the first place, there is the issue of TPA. As an energy exporter itself (with proved gas reserves, for example, that amount to 34.4% of the world totals), by granting transit to producer countries such as Kazakhstan, Uzbekistan and Turkmenistan, Russia would give importing countries new possibilities and, thus, "feed" its own competition.[73] Moreover, maintaining a stronghold over energy transit possibilities for former Soviet states has been a foreign policy instrument the Russian government has been reticent to relinquish.

More generally, Russian gas production and export companies oppose TPA because they feel (accurately) that it will lead to short-term gas-to-gas competition, in their view destroying the basis for long-term contracts with foreign costumers. Many Western gas suppliers share the same view. The security of long-term markets, the argument goes, is necessary because of the larger investments and „sunk costs" required to set up a gas pipeline system - typically multi-billion dollar investments - and

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69 See Matlary, op. cit., pp. 46-48.
70 Matlary, op. cit., p. 52.
71 Paul K. Lyons, Energy Policies of the European Union (London: EC Inform (a Business Intelligence Report), 1994), p. 76.
72 Indeed, Russia itself reportedly threatened to invoke the Energy Charter's provisions in one of its disputes with Ukraine over transit charges in the Druzhba pipeline. See Clarck, op. cit.
73 See Rainer Liesen, "Transit Under the 1994 Energy Charter Treaty," in Journal of the CEPMLP, Vol. 3 No. 7, CEPMLP, University of Dundee, p. 4. Available at www.dundee.ac.uk/cepmlp/journal/html/article3-7.html.

because of the larger commercial risks involved. (In other words, „who would invest in a 3 billion dollars pipeline, if competitors may also be allowed to ship their gas through this pipeline?“) So from this perspective, TPA, by reducing the security of long-term markets, would actually lead to higher gas prices, as the gas companies would have to include the commercial risks of allowing TPA to their pipelines in their cost calculations.[74] (But as we shall see below, as the very nature of the “standard gas contract” may change, the feared scenario may not materialize exactly in this form - the new scenario may be even less desirable for the gas companies, but for different reasons.)

In Russia, monopoly gas exporters with strong ties to the state - and a huge role in the budget, - such as Gazprom, have made an even larger public relations use of such concerns, arguing that gas-gas competition, leading to lower gas prices in the European market, and to reduced revenue for Gazprom and the Russian budget,[75] could threaten Russia’s national interest as well.

In addition, it must be kept in mind that the Energy Charter also includes important provisions concerning not only transit, but also opening the energy sector to foreign investment, an issue that has been a major problem in relations with Russia[76] (this is discussed above under “energy dialogue”).

The processes set into motion by the Energy Charter and the EU-Russia Energy Dialogue have been reinforced by other trends in Russia’s relations with Western institutions, with important effects for the energy relationship with CEE. This especially concerns demands from international financial institutions for changes in export duties on oil and gas, and for the reorganization of the Russian gas sector. Changes in the export duties on oil and gas had an effect by severely limiting Russia’s institutional breathing space and flexibility for offering special energy trade conditions to specific CEE countries in exchange for political favors. For example, in the case of gas trade with Slovakia under the Russian-friendly Meciar regime (until 1998), Russia was able to offer lower, „special for Slovakia“ prices by waiving (or reducing) the export duties on gas exported to that country. Yet because of its February 1996 agreement with the IMF, Russia committed itself to reducing the export customs duties on oil and gas. This had several effects concerning energy trade with CEE: first, as it was no longer possible to further reduce the export duties for one specific country, giving (politically motivated) lower prices to a country such as Slovakia became impossible.[77] The agreement had even broader effects in the case of the Czech Republic, as it led to a fall of gas prices in the European gas market, which made possible an attractive offer by a Norwegian company and opened the door to the diversification of Czech gas supplies.[78]

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74 For a review of this argument, see Estrada, Moe and Martinsen, op. cit., p. 88.

75 M. Balmaceda, consultations at the Energy and Transport Directorate, European Commission, Brussels, July 2001. See also declarations by Aleksandr Miller, new (as of June 2001) Chairman of Gazprom in Handelsblatt, June-July 2001.

76 See the text of the Energy Charter, Energy Charter Secretariat, The Energy Charter Treaty and Related Documents (1997).

77 On this topic, see Alexander Duleba, in Margarita M. Balmaceda, On the Edge: The Ukrainian-Central European-Russian Security Triangle (Budapest: Central European University Press, 2000) and Alexander Duleba, ‘Slovakia. Pursuing an Eastern Agenda’, Transition 2, No. 19 (20 September 1996).

78 See Weichsel, op. cit., p. 88.

Another central demand of international financial institutions vis-á-vis Russia has been the dismantling of Gazprom's monopoly and the division of the company. Should this take place and lead to real competition in the Russian gas export market, this could have significant effects on the CEE countries.

Transit Countries

The Energy Charter contains several positive elements for transit countries such as Ukraine. In particular, it seeks to protect transit from political disputes, which would increase transit revenues by increasing security. According to experts such as Opitz and von Hirschhausen, this could significantly increase revenue for countries such as Ukraine, especially when combined with an international concession-based management of their pipeline system.[79]

Central and East European Importers

TPA has proved a highly contentious issue in the relationship between local energy companies and the EU. Local gas import and supply monopolists - especially in CEE - often oppose TPA because, given the fact that they are bound by long-term contracts to gas suppliers (Gazprom), they fear that giving consumers[80] choice and allowing other companies to supply them would make them face large loses.

In the short term, discussions around TPA have provided ample opportunities for the finding (and articulation) of common interests between local interest groups and Gazprom. For example, in the Polish case, the government - under heavy lobbying from national gas monopolist PGNiG[81] and in a situation where, due to weak institutional structures in foreign energy policy-making, the company was taking a leading role in preparatory work for negotiations with the EU - asked for a deferment concerning the gradual liberalization of the gas market.[82] Although the request was ultimately withdrawn after the EU refusal to consider it, it clearly shows an area of possible common interests between Gazprom and the local gas monopolist. Certainly, it would have been in Gazprom's interest to delay the liberalization of the Polish gas market, as it would have helped keep it as a "captive market". But it was not even necessary for Gazprom to lobby PGNiG to pursue this position in official negotiations, because it was also in the interest of PGNiG as well to keep the monopoly. At the same time, Gazprom's long-term interests may favor liberalization, as it would increase Gazprom's

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79 See Petra Opitz and Christian von Hirschhausen, "Ukraine as the Gas Bridge to Europe?: Economic and Geopolitical Considerations" Institute for Economic Policy Research and Policy Consulting Working Paper No. 3 (October, 2000), available at www.ier.kiev.ua/Eng/WP/WP3Eng.htm. Others (Watin Grais and Kangbin Zheng, "Strategic Interdependence in European East-West Gas Trade: A Hierarchical Stackelberg Game Approach," Energy Journal Vol. 17 (1996) No. 3) have also argued that even a small increase in security of transit and thus of fixed transit costs (a 10% reduction) could generate about $ 35 million in extra profit for Ukraine yearly.

80 First large-volume „elegible consumers," then all consumers.

81 M. Balmaceda, consultations at the Energy and Transport Directorate, European Commission, Brussels, July 2001.

82 See the official document by Poland's Komitetu Integracji Europejskiej, "Poland's Negotiation Position in the Area of Energy," available at www.ukie.gov.pl/cona/snen/14en.pdf.

possibilities of creating vertically-integrated structures in the CEE countries, and of including these countries in its fast-developing processes of vertical integration.[83]

Full application of the Energy Charter, including the opening up of the Russian energy industry, would mean that in a possible future the CEE states could continue to buy „Russian" gas, but from a variety of Russian and non-Russian companies. It should be noted, however, that the kind of long-term, „take-or pay" contracts that are typical in the gas industry would in practice delay the effects of such a change. (On the future of „take-or-pay contracts" see below.)

Such developments would have important implications for the ability of the CEE states to *manage* their dependency on Russian energy, a dependency that - as we can see from 1989-2000 trends - is not likely to go away despite largely symbolic diversification measures. Dependence on „Russian" gas may continue, but, as pointed by some gas market experts, „physical diversity of supplies" may actually be less important than „contractual diversity" - which could be understood not only in terms of geographical diversity of suppliers, but also diversity in terms of concrete supplying companies.

4.2 New Trends in EU Energy Thinking and Policy: Establishing a Real Gas Market

In addition to the specific EU requirements applicable to the candidate countries and the Energy Charter, there are several new trends in EU energy thinking and policy that could come to affect the system of gas trade in Europe as a whole, and also the gas trade relationship between the CEE states and Russia. Some of these trends, still at the level of discussion, are the following:

1. Desire to establish an „independent" price for gas; i.e., abolishing the link between oil and gas prices[84]

Currently, the „reference prices" for oil and gas are established in different ways. The reference price for oil is established „independently" through supply and demand, but no such „independent" price of gas exists. Reference gas prices are calculated according to a quite complicated equation based on the price of *oil* for a certain previous period of time – with the basic assumption being that gas and oil are competing and mutually replaceable fuels. What this means is that the reference prices for gas do not fully reflect the demand and supply of *gas*, but of *oil*. Several problems with this pricing method are becoming increasingly apparent, especially because - largely due to increasing environmental restrictions on CO_2 emissions and the resulting need to move away from oil towards cleaner fuels, such as gas - oil and gas can no longer be considered mutually replaceable.

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[83] I am indebted to Volker Weichsel for this comment. Gazprom's attempts to gain control of Hungary's Borshod petrochemical company, among others, witnesses to Gazprom's attempts at extending its vertical and horizontal integration processes into CEE. See Károly Csabai and László Vida, "Bonyolult képlet," Hetilap Vilaggazdaság 23 September 2000, pp. 138-140.

[84] This is an idea the European Commission has been toying with (at first quite unsuccessfully) since 1990. See Matlary, op. cit. p. 58.

2. Desire to move away from long-term, „take-or pay“ gas contracts as the accepted form of gas trade

Currently, - in part because of the large investments and „sunken costs“ implied in the building of gas pipelines - the most common form of gas supply contract is through long-term contracts where the importing company commits itself to paying for a certain amount of gas, regardless of whether it ultimately uses it or not. The EU's idea is that, as the whole system of gas pipelines is open to various suppliers as a result of the dual liberalization of the internal energy market and Energy Charter processes, the preconditions for much more fluid gas trade will be there, eliminating the need for long-term „take-or-pay“ contracts. (We must keep in mind that "take-or-pay" clauses have been a central - and also much debated, as in the case of Gazprom's 1996 "deal of the century" with Poland[85] - part of Gazprom contracts with the CE states.)

3. Desire to establish a „real gas *market*“

Establishing a "real gas market" would mean a move towards the establishment of spot gas trading in „gas trading hubs“ where gas supplies from several suppliers meet and a real demand-and-supply competitive pricing may take place. What this would mean is that, increasingly, gas prices would be set, not by long-term contracts, but by competitive markets.

Any move towards spot gas trading would also have important implications for price transparency - not an unimportant issue considering that lack of price transparency is one of the biggest problems faced by the CEE states seeking to diversify their energy supplies. (Price secrecy benefits the gas exporting companies, which are able to negotiate with various buyers without these knowing what possibly lower prices that company has offered to other buyers.)

4. Desire to end the practice of „destination clauses“ in gas contracts

Currently, many of Gazprom's contracts include „destination clauses“ which prohibit the receiving country from re-selling the gas purchased from Gazprom to other countries. Added to „take-or-pay contracts," „destination clauses“ make it impossible for a domestic gas company to find a way to resell gas if the amount of gas contracted from Gazprom on a long-term basis turns out to be too large. Moreover, such contracts are in clear violation of existing EU legislation on the internal market, which prescribes free trade within the Union.[86]

Putting together these four initiatives, what is important from the point of view of the European Commission is the need to move towards gas prices that are determined by *markets*, not by contracts.

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[85] In 1996, Poland and Gazprom signed a contract providing for the delivery of 250 bcm of gas to Poland over a 25-year period. Critics pointed out that the deliveries would be much in excess of Poland's needs: (14 bcm per year as opposed to 6.5 in the mid-1990's) thus making it more difficult for Poland to search for alternative supplies. (See Margarita M. Balmaceda, "Economic Relations and the Ukrainian-Central European-Russian Triangle," in M. Balmaceda (Ed.), On the Edge …, op. cit.). Currently (2001), Poland is trying to seek a way to get out of the "take-or-pay" clauses in the contract.

[86] M. Balmaceda, consultations at the Energy and Transport Directorate, European Commission, Brussels, July 2001.

5 Effects on the CEE Countries' Energy Relations with Russia: Breakthroughs and Possible Contradictions

Having examined the CEE states' energy situation and the policy instruments available to the EU in the region, this section will analyze how these are likely to affect the CEE countries' energy situation in the medium term, as well as their energy relationship with Russia. European Union policies will have an effect through three main issue areas: "energy mix" issues, changes in the transit situation, and possible changes in the system of gas trade in Europe.

5.1 Environmental Policies and the CEE "Energy Mix"

EU energy and environmental standards can touch the CEE countries in four ways: (1) in terms of broader changes in the economy; (2) in terms of the effects they would have once membership is gained and these standards are fully implemented; (3) in terms of the CEE moving towards these standards in order to qualify for EU membership; (4) in terms of incentives offered even for countries outside the first-round „Associated countries" group, as environmental standards are already tied to much of the EU financial aid given to Central and Eastern Europe.[87]

A first source of increased energy demand will be generally increasing living standards. Currently, and despite lower energy efficiency levels, average energy consumption in the CEE region remains significantly (35%) lower than the European Union average, "reflecting the current lower standards of living in this region."[88] One implication of this is that, as the Central and East European countries become EU members and their standards of living increase, per capita consumption may increase at a faster rate than energy efficiency, leading to increased energy import needs.

Not only is total energy consumption likely to increase, but European Union environmental standards have important effects because they imply constraints in the types of "energy mixes" available as real options to the CEE states. These constraints are, basically, that (1) coal use needs to be reduced; (2) the share of nuclear power cannot be increased, and (3) alternative energies are not yet commercially viable.[89]

The additional gas demand in CEE will come from a variety of areas but, in particular, from the replacement of environmentally unfriendly lignite-based electricity generation by gas-fired generation.[90] This will come as a result of these countries adopting EU's environmental directives concerning CO_2 emissions, and other environmental regulations. In practice, these constraints will push the CEE countries towards a higher relative (and absolute) reliance on gas, which for all practical

87 See Matlary, op. cit., p. 68.
88 1999 Annual Energy Review, p. 122.
89 Estrada, Moe and Martinsen, op. cit., p. 90.
90 See Ian Wybrew-Bond, „Setting the Scene," in Robert Mabro and Ian Wybrew-Bond (Eds.), Gas to Europe: the Strategies of Four Major Suppliers (Oxford: Oxford Institute of Energy Studies/Oxford University Press, 1999), p. 22.

purposes currently (with the exception of the Czech Republic) means reliance on Russian gas (see Table 9). In the Czech Republic, as a result of decreases in the use of coal, natural gas consumption has increased by 30% since 1993, from 7.33 bcm in 1993 to 9.55 bcm in 1999.[91]

Table 9: Projections on Gas imports requirements (in bcm), 1991-2010

Country Year	1991	2005	2010
Poland	**5.9**		**8.6-17.0**
Hungary	**5.4**	**8.0-8.7**	**8.9-10.5**
Slovakia	**6.3**	**8.3-10.9**	**8.1-9.9**
Czech Republic*	**5.8**	**12.76**	**13.63**

* Figures for the Czech Republic calculated on the basis of overview graph from "Energy Policies of the IEA Countries: Czech Republic: 2001 Review" Sample Table, Table 2, available at iea.org/public/reviews.
Source: Estrada 1995, op. cit. pp. 196-197.

Table 10: Actual Gas Consumption in bcm/year

Country Year	Poland	Hung.	Czechoslovakia	Slovakia	Czech
1989	**13.05**	**11.83**	**12.77**		
1990	**12.09**	**11.15**	**15.06**		
1991	**11.29**	**11.12**	**14.27**		
1992	**10.56**	**9.88**	**11.63**		
1993	**11.12**	**10.53**		**4.95**	**7.33**
1994	**11.12**	**10.61**		**5.8**	**6.73**
1995	**11.77**	**11.52**		**7.73**	**8.07**
1996	**13.11**	**12.82**		**7.5**	**9.28**
1997	**13.11**	**12.20**		**7.24**	**9.42**
1998	**13.45**	**12.26**		**7.1**	**9.42**
1999	**12.51**	**12.37**		**7.05**	**9.54**

Source: Data calculated from: U.S., Energy Information Administration, International Energy Database, Table 1. 3 World Dry Natural Gas Consumption, 1980-1999, available at www.eia.doe.gov/pub/ international/iealf/table13.xls. Original data provided in billion cubic feet (bcf) in whole numbers.

[91] Data converted from "Czech Republic Country Analysis Brief," at www.eia.doe.gov/emeu/cabs/czech/html. Original data provided in billion cubic feet (bcf).

Whether these countries will be able to deal successfully (i.e., to afford) this higher and more expensive (compared with domestic energy sources such as coal) dependence on gas imports will to a great extent depend on their general trade relationship with the West and their ability to earn hard currency. (Indeed, in the first years after the change of political system this was one of the reasons why the shift to world-level energy prices hit these countries especially hard, as their industrial products were generally not competitive in the world market.[92]) As shown by Weichsel, this link between energy imports from Russia and the trade relationship with the West was also clear in the case of the Czech Republic, as the country's negative balance of payments at the time of important energy supply decisions basically excluded any decision that would have led to an increase in gas imports from Russia which, by aggravating the negative balance of payments, could have threatened economic stabilization and, with it, Western integration as well.[93]

5.2 Transit and the Possible New System of Gas Trade in Europe

In addition to increased gas use, new trends in EU energy thinking could have significant long-term effects for the CEE states. These possible effects can be clearly seen if we consider how gas market liberalization, electricity market liberalization, and Third Party Access are interrelated and can affect energy relations with Russia.

How are the issues of TPA, gas market liberalization and electricity market liberalization related? Under *gas market liberalization* many consumers would - for the first time in history - have the right to choose between several gas suppliers. This is related to *electricity market liberalization* because some of the largest gas consumers are electric power plants.

Let us see this interplay in practice, using the case of Poland as an example (see Figure 1). A power-generating plant using 0.5 bcm gas/year would now (under electricity market liberalization) be able to make independent supply decisions and (under gas market liberalization) would have the choice to be supplied by any of a number of gas suppliers, including suppliers from other states. For this right to be exercised, the principle of TPA needs to be put into practice, as the gas from the other supplier needs to be allowed to transit through pipelines owned by the local gas monopolist (in our hypothetical case, Poland's PGNiG). Liberalization of the gas sector is related to the liberalization of the electricity sector because (1) a large - and growing - number of electric power plants use gas to produce electricity and (2) in order to facilitate competition and for individual power plants to be really able to make a choice as to where their fuel will come from, it is necessary to separate the different operations (production, distribution, etc.) in the electricity sector.

EU proposals concerning the (1) move away from long-term contracts and towards spot gas markets, (2) de-linking of gas and oil prices and the moving towards the establishment of an independent gas

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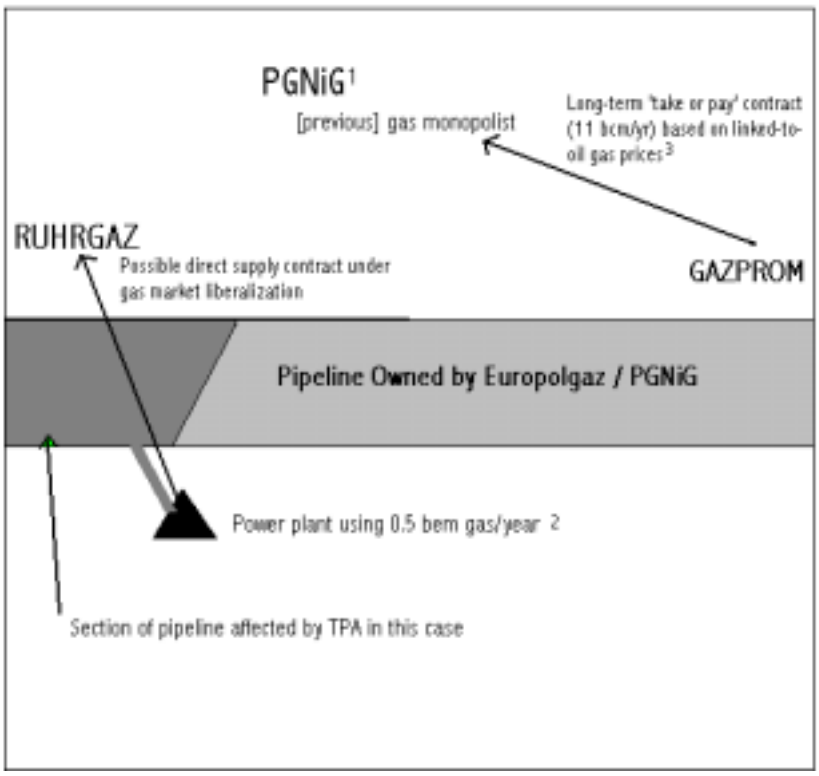
[92] See Astrid Sahm, Transformation im Schatten von Tschernobyl. Umwelt- und Energiepolitik im gesellschaftlichen Wandel von Belarus und der Ukraine (Münster: LIT, 1999), p. 16.

[93] See Weichsel, op. cit., p. 72.

Figure 1:



[1] Under Conditions of gas market liberalization, PGNiG could face hardship, as it is still bound by a long-term 'take or pay contract with GAZPROM, but may lose domestic customers for its gas, as under gas market liberalization many consumers would - for the first time in history - have the right to be supplied by another gas supplier. Article 25 of the Gas Directive provides for such a situation saying that the right to TPA of a pipeline may be limited under some circumstances if the previous monopolist faces hardship due to long-term gas import contracts still in force. (But these provisions should not be used too often, the whole purpose of the directive is to create incentives for gas spot trade, for example, for PGNiG to dispose of its "surplus" gas by re-selling it to another market.)

[2] Power plant using 0.5 bcm gas/year now (under electricity market liberalization) be able to make independent supply decisions and (under gas market liberalization) would have the choice to be supplied by any of a number of gas suppliers, including supplies from other states. For this right to be exercised, the principle of TPA needs to be put into practice, as the gas from other supplier needs to be allowed to transit through pipelines owned by PGNiG.

[3] EU proposals concerning the (1) move away from long-term contracts and towards spot gas markets, (2) de-linking of gas and oil prices and the establishment of an independent gas price and (3) an end to destination clauses in gas contracts would significantly change the nature of gas contracts themselves.

price and (3) putting an end to destination clauses in gas contracts, would significantly change the nature of gas contracts themselves.

So far we have treated the electric power plants as purely domestic players, but this is not fully accurate. In fact, one important factor that should be taken into account when we analyze the foreign energy relationships of the CEE states - concerning both Russia and Western Europe - is that „the long-term goal of the CEE countries is to expand trade in electricity;“[94] i.e., exports to Western Europe. (This is made possible by surplus electricity production capacities in these countries, a new phenomena starting in the 1990s and related to the fall in domestic demand.[95]) When dealing with the question of the CEE countries' desired electricity exports, we also need to keep in mind that these exports are very important for these countries to be able to attain *positive trade balances* and thus, among other results, be able to afford gas and oil imports from Russia.

The technical preconditions for such exports already exist - Poland, the Czech Republic, Slovakia and Hungary have been connected (their electric grid synchronized) to the Western European UCTE electricity network since 1995. However, there might be political issues at stake - were these countries to really increase their electricity exports to western Europe, „a tough price battle" could be expected, as not only the CE countries but also Russia and Ukraine are also interested in exporting electricity.[96] Moreover, the EU itself also has excess electricity capacities (which has already led to falling electricity prices in the wake of liberalization).

In this area, some interested deals have also been made possible by special conditions of the transition period – for example, the importation of cheap Ukrainian electricity to Hungary made possible by special barter deals supplying Ukrainian power plants with Russian raw materials, and orchestrated by Hungary's well-connected minister of Industry during the socialist period, László Kapoly. Kapoly, who has made a fortune arranging the barter of coal from Russia to Ukraine, producing cheap electricity - according to unclear environmental standards - in Western Ukraine, and then reselling this electricity to Hungary at a huge profit, hopes to be able to export this to Western Europe as well.[97] The scheme is more complicated than would appear at first glance, because, given the fact that Ukraine is not a member of the UCPTE, the electricity produced does not satisfy Hungarian electricity grid standards. To overcome this problem, Kapoly was able to accomplish a complex political as well as technical feat: to get a small area in Ukraine to become isolated from the rest of the Ukrainian electricity system and produce UCPTE-standard electricity. This might be a perfect example of new types of entrepreneurs using old contact networks to profit from the special conditions of the double "transition plus integration" period. At the same time, it is an example of new types of integration taking place between different levels of EU candidates, taking advantage of the

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94 von Hirschhausen, Kreibig and Opitz, op. cit., p. 33.

95 See Wilhelm Riesner, „Energiewirschaftliche Situation in Mittel und Osteuropa," in Energiewirtschaftliche Tagesfragen Vol. 50 (2000) No. 4 p. 246 and von Hirschausen in Economic Bulletin p. 37.

96 Christian von Hirschhausen, Uta Kreibig and Petra Opitz, op. cit., p. 38.

97 On this project see Attila Oszabo and Eva Vajda, "Guruló rubelek II," ["Rolling roubles, II"] Elet es Irodalom 25 February 2000, and **"**Szenmosó mese," ["A Coal-washing Fairytale"], Cash-Flow, 2000 No. 4 (April 2000).

"comparative advantages" offered by each country, even when in some cases these are dubious advantages, such as more relaxed environmental standards.

6 Conclusion

Third Party Access and other Energy Charter clauses provide the CEE states with new possibilities in terms of managing their dependency on foreign energy. Yet neither membership in the EU, nor EU-wide TPA and liberalization of the domestic energy market, taken by themselves, is likely to improve the CEE countries' energy situation until there is a real liberalization of the *Russian* energy export market as well. Without further - and often socially costly - investments in infrastructure and energy efficiency, these countries' total energy dependence on Russia will not diminish. On the contrary, other trends inherent to the EU integration process will lead to significant increases in the CEE state's dependence on Russian gas. But - given *real* competition, - a liberalization of the Russian market may lead to at least a degree of contract diversification, which would be highly desirable.

Whether one emphasizes its positive or negative aspects, the EU (and, more generally, Western European) side of the Central and East European energy question is important to understand, because it provides great part of the framework in which local energy elites also dealing with Russia move, the framework within which they formulate their preference structures and, ultimately, their effects on policy.

The conclusions reached in this paper, in turn, lead to two further research questions, which are worth exploring in future research projects.

To really substantiate the conclusion that liberalization of the Russian gas export market would have a positive effect on the energy situation of the CEE countries, we need to compare the current situation in that area with that in the oil sector, where Russian oil trade has been partially liberalized notwithstanding heavy state control over Transneft, the export pipeline monopolist. Has the lack of a monopolist such as Gazprom and the relative liberalization of the oil sector in Russia decreased the vulnerability of the CEE economies?[98] Further research is also needed to test whether the argument concerning the positive effects of liberalization in the Russian gas market would also hold for countries in a much more precarious payments situation, such as Ukraine and Belarus.[99] Similarly, further research is also needed on the different strategies pursued by Russian oil and gas companies in different Central European and CIS countries.

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[98] On the concept of „vulnerability," see Robert O. Keohane and Joseph Nye, Power and Interdependence (New York: Harpers and Collins, 1989), pp. 44-45, and Ibid, "World Politics and the International Economic System," in Fred Bergsten, The Future of the International Economic Order (Lexington, Mass.: Lexington Books, 1973), esp. p. 122.

[99] For a divergent view see Astrid Sahm and Kirsten Westphal „Power and the Yamal Pipeline," in M. Balmaceda, J. Clem and L. Tarlow (Eds.), The Belarus Factor: Implications for Russia, Central-East Europe and the West (Cambridge, MA: Harvard University Press, forthcoming 2001).

At a more theoretically-oriented level, interesting research questions also emerge in the area of interest groups and policy-making in post-Soviet type societies. Given the crucial role of interest groups in the bringing home some of the contradictions of the double "transformation plus integration" process, more work is needed towards understanding the role of interest groups in the post-Soviet world. These theoretical insights should take account of how (temporary) institutional vacuums may affect the level of opportunities created for interest groups and their ability to deal directly with international-level actors such as the EU.[100]

The case analyzed in this paper also helps us revisit the question of integration alternatives in Central and Eastern Europe. The European integration (and integration negotiation) process may open the window for a confluence of interests between Gazprom and local interests groups, supporting the same goals although not necessarily for the same reasons. (In this respect, we should keep in mind that „Deregulation does not necessarily imply a ‚rolling back of the state,' or of the [European] Commission's role,"[101] or less points of access for interest groups.) For some local interest groups, it may be beneficial to continue close relations with Russia in one particular area, but without giving up the general framework provided by the EU.

At the beginning of this paper we noted three possible responses by countries felt left behind by the process of integration into Western institutions: making-do with a "weaker" integration, attempting to accommodate to Western criteria followed by re-trial, and searching for alternative integration possibilities. Some of the situations we have observed in this paper lead us to believe there might be a fourth possibility, especially open at the level of interest groups in *specific sectors of the economy*: continuing close relations with Russia in one particular area, but without giving up the general framework provided by the EU and actually exploiting it for their own purposes.

7 Literature

General Literature

Andersen, Svein A. 2000. „European Integration and the Changing Paradigm of Energy Policy: The case of natural gas liberalisation." ARENA Working Papers WP 99/12, 15 Aug. 2000.

Balmaceda, Margarita M. 2001. "Domestic Contradictions and Foreign Policy Levers: The Domestic Background to the Role of Energy in Russia's Relations with the 'Near Abroad'." Paper

[100] For a view of this link as related to the new systems of interest intermediation arising in the European Union, based on the case study of Denmark, see Niels Chr. Sidenius, „Business, governance structures and the EU: the case of Denmark" in Beate Kohler-Koch and Rainer Eising (Eds.), The Transformation of Governance in the European Union (London: Routeledge, 1999).

[101] Matlary, op. cit., pp. 45-46.

presented at the 2001 convention of the British Political Science Association, Manchester, England, April 10-12, 2001. Manuscript.

Balmaceda, Margarita M. 2000. "Energy Interest Groups, Energy Privatization and Energy Relations With Russia: Cases from Central-East Europe." Paper presented at the VI World Congress of the International Council for Central and East European Research, Tampere, Finland, July 29-3 August, 2000. Manuscript.

Balmaceda, Margarita M. 2000. "Economic Relations and the Ukrainian-Central European-Russian Triangle," in *On the Edge: the Russian-Ukrainian-Central European Security Triangle*. Ed. Balmaceda, Margarita. Budapest: Central European University Press.

Botzian, Rudolf. 1998: „Gesamteuropa: Starkstromnetze und politische Vernetzung," Stiftung Wissenschaft und Politik, Arbeitspapier KA 3079, August 1998.

BPAmoco, *Statistical Review of World Energy*. Available at www.bpamoco.com.

Csabai, Károly and László Vida. 2000: "Bonyolult képlet" ["Complicated Equation"] *Hetilap Vilaggazdaság* 23 September 2000: 138-140.

Chandler, William. 2000. *Energy and the Environment in Transition Countries*. Boulder: Westview Press.

Clark, Bryan. 1998. „Transit and the Energy Charter Treaty: Rhetoric and Reality." *Web Journal of Current Legal Issues* (in association with Blackstone Press Ltd.). Available at www.webjcli.ncl.ac.uk/1998/issue5/clarck5.html

D'Anieri, Paul. 1999. *Economic Interdependence in Ukrainian-Russian Relations*. Albany: State University of New York Press.

Doré, Julia and Robert de Bauw. 1995. *The Energy Charter Treaty: origins, aims and prospects*. London: Royal Institute of International Affairs, International Economics Programme.

Duleba, Alexander. 1996. "Slovakia. Pursuing an Eastern Agenda", *Transition* 2, No. 19 (20 September 1996)

Duleba, Alexander. 2000. "The Slovak-Ukrainian-Russian Security Triangle," in *On the Edge: the Russian-Ukrainian-Central European Security Triangle*. Ed. Balmaceda, Margarita. Budapest: Central European University Press.

Estrada, Javier, Arild Moe, and Kare Dahl Martinsen. 1995. *The Development of European Gas Markets.* Chichester, UK: John Wiley & Sons.

Grais, Watin and Kangbin Zheng. 1996. "Strategic Interdependence in European East-West Gas Trade: A Hierarchical Stackelberg Game Approach." *Energy Journal* 17 No. 3: 61-84.

Grabher, Gernot and David Stark. 1998. "Organizing diversity: evolutionary theory, network analysis and post-socialism." In *Theorising Transition.* Eds. Pickles, John and Adrian Smith. London: Routeledge.

Gowans, I. 1997. „Trans-European Energy Networks: The EU and Countries of Central and Eastern Europe." *Energy in Europe* 26.

Gray, Dale. 1995. *Reforming the energy sector in transition economies: selected experience and lessons*. World Bank discussion paper 296. Washington: World Bank.

Grigorev, Evgenii. 2000. "U nas est' dengi, u Rossii est' energosyr'e," ["We have money, Russia has energy raw materials"], *Nezavisimaya Gazeta* 9 December 2000: 6

Lambert, P. 1997. „The European Union and the Gas Sector," *Energy in Europe* 26.

Hirman, Karel. 2001. “The Position of the Visegrad Countries in Energy Relations between Russia and the EU. ” *Slovak Foreign Policy Affairs* 2 No. 1: 82-96.

Liesen, Rainer. 1997: “Transit Under the 1994 Energy Charter Treaty,” *Journal of the CEPMLP* 3 No. 7, CEPMLP, University of Dundee.
Available at www.dundee.ac.uk/cepmlp/journal/html/article3-7.html.

Lyons, Paul K. 1998: *EU energy policies towards the 21st Century*. Elstead, Surrey: EC Inform.

Mabro, Robert and Ian Wybrew-Bond. (eds.) 1999: *Gas to Europe: the Strategies of Four Major Suppliers*. Oxford: Oxford Institute of Energy Studies/Oxford University Press.

Matlary, Janne Haaland. 1997. *Energy Policies in the European Union.* New York: St. Martin’s Press.

Foders, Federico and Ingrid Shikova (e.a.). 1993. *Energy and transitition : the case of Bulgaria* (Kiel working papers 575. Kiel: Kiel Institute of World Economics.

Müller, Friedemann and Susanne Ott. (eds.) 1996. *Energy and the Environment in Central and Eastern Europe: A Cliff Hanger with Differences*. Ebbenhausen: Stiftung Wissenschaft und Politik.

Müller, Friedemann and Susanne Ott. (eds.) 1998. *Bridging Divides – Transformatíons in Eastern Europe: Connecting Energy and the Environment*. Baden-Baden: Nomos Verlag.

Nagy, P. No date. „Energy Cooperation between the EU and Central and Eastern Europe in the non-nuclear Field,“ *Energy in Europe* 25.

Opitz, Petra and Christian von Hirschhausen. 2000. “Ukraine as the Gas Bridge to Europe?: Economic and Geopolitical Considerations.” Institute for Economic Policy Research and Policy Consulting Working Paper No. 3 (October, 2000).
Available at www.ier.kiev.ua/Eng/WP/WP3Eng.htm

Oszabo, Attila and Eva Vajda. 2000. “Guruló rubelek II,” [“Rolling rubles, II”] *Elet es Irodalom*. 25 February.

Palánkai, Tibor and András Deák. 1999. “EU Enlargement and the Hungarian-Russian Economic Relations,” Paper prepared for the conference “The Enlargement of the European Union and Russia’s Priorities,” Moscow, 15-16 October 1999. Manuscript.

Stern, Jonathan P. 1995. *The Russian natural gas "bubble": consequences for European gas markets*. London: Royal Institute of International Affairs.

2000. “Szenmosó mese.” [“A Coal-washing Fairytale”] *Cash-Flow* 4. April.

Riesner, Wilhelm. 2000: „Energiewirtschaftliche Situation in Mittel und Osteuropa,“ *Energiewirtschaftliche Tagesfragen* 50 No. 4

Sahm, Astrid. 2001. “Integration, Kooperation oder Isolation? Die Ukraine und Belarus´ im Vorfeld der EU-Osterweiterung,“ *Osteuropa* 11/12: 1391-1404

Sahm, Astrid. 1999. *Transformation im Schatten von Tschernobyl. Umwelt- und Energiepolitik im gesellschaftlichen Wandel von Belarus und der Ukraine*. Munster: LIT.

Sahm, Astrid and Westphal, Kirsten. 2002. „Power and the Yamal Pipeline,“ in *The Belarus Factor: Implications for Russia, Central-East Europe and the West*. Eds. Balmaceda, Margarita, James Clem, and Lisbeth Tarlow. Cambridge, MA: Harvard University Press.

Sidenius, Niels Chr. 1999. „Business, governance structures and the EU: the case of Denmark.“ In *The Transformation of Governance in the European Union*. Eds. Kohler-Koch, Beate and Rainer Eising. London: Routeledge.

Szergényi, István. 1997. *Európai Energiapolitika -- Magyar Energiapolitika* [European Energy Policy – Hungarian Energy Policy]. Budapest: Integrációs Stratégia Munkacsoport.

Tews, Kerstin. 1999. *EU-Erweiterung und Umweltschutz: umweltpolitische Koordination zwischen EU und Polen.* Leipzig : Leipziger Univ.-Verl.

Tews, Kirsten. 2000. „EU-enlargement and environment.“ In *The EU and the Eastward Expansion* (Sammelband zur gleichnamigen Tagung in Prag, September 1999). Ed. Srubar, Ilja. Konstanz.

Touscoz, Jean. 1997. „The Role of the European Union in the Framework of the Energy Charter Treaty.“ *European Foreign Affairs Review* 2 No. 1.

Ukrainian Center for Economic and Political Studies named after Olexander Razumkov. 2001. “Integration of Ukraine’s Fuel and Energy Complex With the Energy Sector of the European Union.“ *National Security and Defence* 2.

von Hirschhausen, Christian. 2000. “Gas sector restructuring in Ukraine: Analysis of import dependence, price formation and socio-economic effects.” Manuscript.

von Hirschhausen, Christian, Uta Kreibig and Petra Opitz. 2001. „The Power Sector in Central and Eastern Europe: More Competition Needed in the Run-Up to EU Membership.“ *Economic Bulletin* (German Institute for Economic Research, Berlin) 38 No. 1 (January).

Weichsel, Volker. 2000. *Wesintegration and Rußlandpolitik der Tschechischen Republik*. M.A. Thesis, Munster: LIT.

World Bank. 1999: *Hungary: On the Road to the European Union*. Washington: World Bank.

Zhiznin, Stanislav Zakharovich. 1999: *Energeticheskaya Diplomatia*. Moscow: Nauchnaya Kniga.

Zlatev, V. 2000: „Balkanskii geopoliticheskii uzel: energeticheskie aspekty,“ *Politiia* 3 (17). Fall.

European Union and related Documents

Energy Charter Secretariat. 1997: *The Energy Charter Treaty and Related Documents*

EU, European Commission. 1998. *Economic foundations for energy policy: the shared analysis project* Luxembourg : EUR-OP.

EU, European Commission, 1995. *For a European Union energy policy : Green Paper* (text based on doc. COM(94) 59 final, 11.1.1995) supplement to *Energy in Europe*; available at: http://europa.eu.int/en/comm/dg17/green%5Fen.pdf

EU, European Commission. 2000: *Opening up to Choice – Launching the single European Gas Market*. Luxemburg: Office of Official Publications of the European Communities.

EU, European Commission. 1997. „The external dimension of trans-European energy networks: Communication from the Commission to the Council and the European Parliament.“ Luxembourg: EUR-OP.

European Union, Directorate of Energy and Transport. 2000. *Towards a European strategy for the security of energy supply : Green Paper* . Brussels: European Commission.

European Union. 2000. *European Union Energy Outlook to 2010*.

Energy in Europe. 2001. *2000 Annual Energy Review.*

Energy in Europe. 2000: *1999 Annual Energy Review.*

International Energy Agency. 2001. *Energy Policies of the IEA Countries: Czech Republic: 2001 Review*.