

EU – Russia Energy Scenarios to 2025

Energy Security and Political Risk Management

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Abstract

The objective of this essay is to map the possible future scenarios of energy relations between the European Union (EU), the world's biggest energy market, and Russia, the world's largest producer.

The security of energy supply is essential to the functioning of the EU. Energy security, therefore, is a highly politicized subject that has divided European capitals for decades and will, *ceteris paribus*, continue to do so during decades to come.

The EU therefore needs to understand in which directions the energy relationship to Russia might evolve and what political risks might be associated with these directions.

To be able to meet this challenge I have utilized the scenario-based methodology employed by Royal Dutch Shell (Shell) in the making of the 'Global Scenarios to 2025'. I analyze the current state of relations and research the overall trends and critical uncertainties forming the future.

This leads me to present three plausible and contrasted futures which describe complex trade-offs between state, market and community forces and what implications they may have on EU's energy security. The scenarios can be used as a tool to understand energy security during the coming 15 years.

Key words: EU, Russia, Shell Global Scenarios, Energy Security, Political Risk Management

Words: 9983

Abbreviations

EU	European Union
IEA	International Energy Agency
CIS	Commonwealth of Independent States
NATO	North Atlantic Treaty Organization
LNG	Liquefied Natural Gas

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1 Introduction

The purpose of this essay is to explore the possible future scenarios of energy relations between EU and Russia. The focal question will be specified in-depth further on, but for the benefit of the reader I will provide a more generalized question:

How could major actors in the EU and Russia shape the future energy relations, given major trends in the international system?

The reasons I chose energy relation between the EU and Russia are twofold: First, in my opinion, it is the most important subject for ordinary citizens, market actors and states since the effects are immediate and far-reaching, second, it gives me a concrete setting where I can study the relationship through *de facto* events.

The subject will require me to study political change, a concept with intrinsic paradoxes and pitfalls¹. While the limitations of my approach (the possibility of sudden unpredicted change) might discourage, the excitement of studying such an important and highly politicized subject in constant motion is interesting.

In choosing my methodology I felt that mainstream international relations theories in general would not provide me with the toolbox I needed. The theories in general look mostly at one specific factor (norms, security, trade, culture), which makes them too narrow to be applied on the relationship as a whole; Realism/Neorealism fails to understand softpower, Liberalism and other economic theories usually ignores the security aspects and they both fail in a normative analysis. I also did not want to present an over-theoretized and utopian conclusion. With this in mind I redirected my efforts to search for a methodology with more practical applications.

I will use a scenario-based methodology, conceptualized at Royal Dutch Shell (Shell) used for their *Global Scenarios to 2025*. Three possible scenarios will be presented, named after their Shell counterparts; *Low Trust Globalization*, *Flags* and *Open Doors*. Each of these will be analyzed using the toolbox of the Shell-scenario approach.²

Normally the Shell Global Scenario approach is based on a team where the members all bring something to the table. The team is guided by a leader who is both chairman in the discussions and workshops as well as editor. This will be impossible to imitate in my one-man study, to work around it I try to incorporate a

¹ For an excellent discussion on the topic of change see Colin Hay, *Political Analysis – A Critical Introduction*

² *Shell Global Scenarios to 2025 – The future business environment: trends, trade-offs and choices*, Royal Dutch Shell, Albert Bressand editor, 2005

wide variety of academics with incrementally different conclusions to potentially broaden the spectrum and to increase expert knowledge in order to capture the more subtle nuances of the subject. My discussions with Dr. Albert Bressand, the former Vice President of Shell Global Business Environment and leader of the “Global Scenarios to 2025” team have also given me a precious opportunity to discuss both the methodology and the subject.

Using the Shell Global Scenarios will enable me to firstly give a broader and more comprehensive image of the evolvement of the energy relationship, secondly identify the mechanisms that will form the relationship, thirdly provide policy advisors with a tool allowing them to identify important developments towards favorable or unfavorable outcomes and fourthly, this risk management methodology was conceptualized by academics and used in an energy company to understand risk, i.e. it is more practically focused.

One of the issues of studying EU-Russia relations, especially in the energy sector, is that it, in my view, has become over-politicized, ideological and value based. Terms like “energy weapon” and “energy security” creates a polarization of the debate. I have tried to remain neutral in working with my thesis and instead try to use the polarization to my advantage.

Another implication has been to transform this mammoth of a subject into an object of study suitable for an undergraduate essay. Specific events not directly related to the subject, e.g. ‘the 2008 South Ossetian War’, could not be included due to the limited space at my disposal.

I found that the normal disposition in an essay of this kind did not provide the clarity I needed. My work will therefore progress chronologically; starting with the current ‘State of relations’ I establish the object of study. This is followed by an explanation of the ‘Theory and Method’, i.e. how I will study the object. I then study the object, ‘Energy relations’, using the toolbox provided by the theory. I use the results from the study to construct three plausible and contrasted ‘EU-Russia Scenarios to 2025’. I then summarize and provide the ‘Conclusion’.

2 State of relations

A comprehensive understanding of the past and the present is in order to present plausible futures.

2.1 Political relations

The political relationship to Russia has been diverging greatly between Brussels and major Member States during the latest decade. The prism has incorporated both criticism and praise, as well as integration and segregation.

For example, one of the most outspoken critics of the Russian intervention in Georgia and of the Russian foreign policy has been the Swedish Foreign Minister and former Prime Minister, Carl Bildt. The criticism led to a diplomatic schism between Sweden and Russia, something that can severely cripple countries economies. However Sweden is not dependent on Russian energy, a conscious security decision which gives Sweden the possibility to criticize some aspects of the Russian regime, for example the lack of democracy.

Sweden's 'relatively insignificant' geopolitical power is likely to leave the Russian regime unaffected, however if stronger states would attempt to affect some of the aspects of Russia's foreign and domestic policy, such as the authoritarian features of the government, positive change might take place.

While one can think that a dialogue consisting of criticism of some negative aspects of Russian politics, and policy punishment and encouragement in order to deal with these aspects would be in every EU country's interest, we can safely conclude that it is not. Two of the most important states in the EU, Germany and Italy, are currently building gas pipelines from Russia in cooperation with state-controlled Gazprom. They have, as of lately, refrained from openly criticizing questionable actions by the Russian government.

Although the West has traded with the Russian Federation for nearly 20 years it has been unable to impose western values through soft power. Why did the West miss this historic opportunity? First of all we can conclude that the West (the U.S. and the EU) focused most on rebuilding the Commonwealth of Independent States (CIS) countries. A two-step plan offered membership of NATO and EU in a two-step plan that focused on achieving immediate security and soft power change. While this achieved the desired effect, Russia was never fully included. In the unfulfilling Partnership and Cooperation Agreement of 1994, a plan for Russian membership of the EU was never an alternative, not even in the long-term. Therefore, instead of opting to turn Russia into a democracy

with western values, the EU left Russia outside, with its former satellite states now becoming allies of the West.

But was real policy change ever a goal? Although some states have opted for a policy change, the EU as a whole has not. After the break-down of the Soviet Union, the Russia that emerged was keen to become part of a “new Europe”. The contemporary view in Russia is that the reason this never materialized was the reluctance of the West to accept Russia as an equal partner. The place of Russia in the European Community after the Cold War was a highly contested issue, as Ralph Dahrendorf wrote in his *Reflection on the Revolution in Europe* from 1994 about the establishment of a European space:

*“The more difficult question is that of the place of the Soviet Union [...] so far as I am concerned, Europe ends at the Soviet border, wherever that may be”*³

The Partnership and Cooperation Agreement signed in 1994 did deepen the cooperation but did not pave the way for an eventual Russian membership in the union, much to Russia’s dismay.⁴ NATO created the NATO-Russia Council, which was an initial success, but today it has lost most of its significance, mostly due to the war in Yugoslavia in 1999.⁵

The competition in *Zwischeneuropa* derives from three important factors, according to Lukyanov:⁶

- Russia never found a niche for itself in today’s Europe and therefore want to create one for itself
- NATO has experienced an identity crisis since the end of the Cold War and established itself as a European security system
- Europe has been unable to match its economic and demographic might into geopolitical power and needs to establish a framework for further expansion.

If we look closely at the bulleted list we can identify a common theme, the lack of a common all-encompassing and comprehensive foreign policy framework. A framework that would have clarified the European objectives, acknowledged Russia and her might and provided a road-map for the relationship as a whole. The window of opportunity is now long gone, Russia managed to reassert itself and would profit less from a restricting framework than it is from its reactive politics.

The lack of said framework is the reason Russia could not find a niche, the reason for its identity crisis and the reason it could never transform its might into power. The lack of a comprehensive approach to foreign policy makes

³ Dahrendorf, Ralph, *Reflection on the Revolution in Europe*, p. 118 (Note that although the Soviet Union had ceased to exist he still uses it a term)

⁴ Lukyanov, “Rethinking Security in the “Greater Europe”” in *What Does Russia think*, p.57

⁵ *Ibid*, p.57

⁶ *Ibid*, p.57

communications with Russia difficult at best, decisions are taken on a more case-to-case basis, this one of the reasons why Russia's foreign policy has been almost purely reactive the last 20 years. A comprehensive foreign policy framework would be a first step, from which to draw a lowest common denominator.

The nationalistic and authoritarian regime in the Kremlin has centralized power, making the decision-making streamlined. The current regime draws much of its conclusions from the Cold War era, turning it into a zero-sum game actor.

*“Both EU and NATO have exhausted their potential for “light” expansion. Both organizations have entered an area of open rivalry, where they will inevitably meet with opposition from Russia ”*⁷

The countries that emerged after the break-down of the Soviet Union were weak and they consist of large minorities, of which Russians are the biggest, Russia has therefore continued to pursue a hostile and nationalistic foreign policy.⁸ An example is the justification of the invasion of Georgia 2008, where Russia's motive was the protection of Russians abroad.

2.2 Energy relations

When assessing the energy relationship between the EU and Russia the most important field is that of gas relationship, because of the market structure. When trading gas between two countries a pipeline that crosses physical territory between the countries needs to be constructed. When trading with oil bilateral connections like these are not necessary because of oil's open market structure. Therefore this study will, mostly, revolve around the gas relationship, simply because it is more problematic.

*Russia is the world's largest gas producer. The EU is the world's biggest gas market. The two are neighbors. Logically, the EU and Russia should have a well-developed energy relationship.*⁹

So why is this not the case? Gas relationship started in 1968, when a gas pipeline between the Soviet Union and Austria was completed. Since then energy has become a cornerstone in the EU-Russia relations, Russia being Europe's base load importer, Europe gets 28 % of it gas from Russia¹⁰ and Gazprom alone stands for 20% of the Russian annual budget, with Europe as its most profitable customer. The U.S. has always opposed this relationship on political grounds.

⁷ *Ibid*, p.57-58

⁸ *Ibid*, p.58

⁹ Barysch, Katinka, “Introduction”, in *Pipelines politics and power*, p.1

¹⁰ Kramer, Andrew E., “Gas Pipeline Drives a Wedge Between Europe”, NY Times, October 12 2009

Dmitri Trenin, Russian academic and the deputy director of Carnegie in Moscow, claims energy played an important role in preventing the West from anchoring Russia to the community of Western democracies. Russia was, according to Trenin, eager to modernize and westernize in the aftermath of the fall of the Soviet Union, but as he argues called off this integration with the West for two reasons: Mikhail Khodorkovsky's move to sell Yukos oil to American interests and the color revolution in two important transit countries.

Today, the color-revolutionaries have felt the effects of a troubling relationship with Russia, Ukraine through the two gas crises and Georgia through the Russian peace-keeping-mission in South Ossetia¹¹. Yukos is a part of Rosneft and Mikhail Khodorkovsky is currently in prison facing up to 20 years in prison. The 2008 South Ossetia War specifically has implications for the energy relations, geographically located in an energy rich area and because of the way it was it was motivated, performed and criticized.

The attempts to create a partnership between the EU and Russia is, and indeed has been, unbalanced in nature which in large part can be blamed on the EU and its inability to treat Russia as a partner. After a period of relative tranquility in gas relationships, the first signs of hostility between the two actors appeared in mid-2003 and coincided with a dramatic increase in oil prices. This hostility was manifested by both parties. The first officially hostile statement from Russia came in October 2003.

“The position of EU bureaucrats is wrong and unfair. We view this position as ‘arm twisting’. But Russia’s ‘arms’ are getting increasingly strong, and even such strong partners as those in the European Union cannot twist them.”¹²

While this does not imply a correlation between high energy prices and high tension between EU and Russia, recent work, however, both by policy-makers and academics,¹³ suggest an ever increasing strategic importance in the field of energy relations, identifying it as the biggest challenge to the EU. Energy security has been divisive, both internally in the EU and internationally in the relationships with EU's various partners, including Ukraine.

In studying energy relations an important point is that the EU is trading with two state-controlled companies Gazprom and Rosneftegaz (DETAILS AND REF). Gazprom is owned to 50,002% by the Russian government, divided between the Federal agency for Federal Property Management¹⁴ (38,373%), state-

¹¹ The Independent fact-finding mission writes “Russian forces undertook peacekeeping responsibilities both in South Ossetia and later in Abkhazia” (Independent International Fact-Finding on the Conflict in Georgia, p.14)

¹² Vladimir Putin, <http://www.kremlin.ru/text/publications/2003/10/53889.shtml> (in Russian), accessed 20 April 2008 quoted from Lukyanov, “EU-Russia – The partnership that went astray”, p.1108

¹³ E.G. “Energy Security – Europe’s New Foreign Policy Challenge”, “The EU-Russian Energy Dialogue – Europe’s Future Energy Security”, “Pipelines, Politics and Power- The future of EU-Russia energy relations”

¹⁴ Was formed March 9, 2004 by a presidential decree (Decree of the President of the Russian Federation – *On the System and Structure of Federal Executive Bodies*)

controlled Rosneftegaz¹⁵ (10,740%) and Rosgazifikatsiya¹⁶ (0.889%).¹⁷ Behind this complex ownership structure we find the amount of control placed in the Russian government.

“Gazprom not only has the ear of Kremlin, but also the keys to its offices.”¹⁸

The increasing importance of the analysis of energy security and strategic resources addresses many of the factors that are of great importance to the relationship as a whole. For example, while no official would ever mention a correlation between the Nabucco-pipeline¹⁹ and the 2008 South Ossetian War, the two are interconnected through the Russian and European policy objectives. EU’s second Green Paper specifically mentions the need for diversification²⁰, the objective behind the Nabucco-pipeline. Although Russia’s policy objectives are harder to penetrate, since they refrain from using policy frameworks, a conclusion shared by most academics is that Russia is keen to keep ‘Western interests out of the satellite states’. Pipelines represent hard politics and, if built, the Nabucco pipeline will represent a Russian policy failure.

¹⁵ Rosneftegaz is 100% owned by the Federal Agency for Federal Property Management according to statement of shareholder structures on Rosneft website. Note that Rosneft and Rosneftegaz are two different companies. Rosneftegaz owns 75.16% of Rosneft’s share and is therefore also state-controlled.
http://www.rosneft.com/Investors/structure/share_capital/

¹⁶ “The Russian open joint stock company OAO RosGazifikatsiya is the legal successor of the Head Directorate of Gas Industry Management of the Ministry of Housing and Communal Services of the Russian Federation. Today OAO RosGazifikatsiya is the owner of about 35% of Russian gas distribution organizations.”
http://www.carbon-reduction.de/oaos_ros.html

¹⁷ According to Gazprom’s website statement of shares: <http://www.gazprom.com/investors/stock/>

¹⁸ Truscott, Peter, *The Ascendancy of Political Risk Management and its Implications for Global Security and Business Investment*, 2006

¹⁹ The Nabucco-pipeline, previously known as the BTC-pipeline because of the cities it passes, Baku, Tbilisi and Ceyhan. The pipeline is an EU initiative aimed at diversifying energy imports and securing EU’s energy security.

²⁰ Commission of the European Communities, “Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy”, 2006, p.8

3 Theory and Method

The objective of the "Theory and Method" chapter is to give a brief but yet comprehensive explanation of the 'Shell Global Scenarios' approach in general and my adaptations of it to this specific case.

3.1 Theoretical approaches and Methodological consideration

*"(T)he analysis and interpretation of political change is one of the more difficult tasks that political analysts face. Change is complex, often unpredictable and invariably the result of a multiplicity of factors"*²¹

Scenario-based methodologies incorporate an array of different conceptualizations and approaches, their similarities lie in the presentation of plausible future realities, so called scenarios. The methodologies main application is in defense research or political economy and risk management, used around the world in companies trading with strategic resources or in generally unsafe areas.

The scenario-based planning found its first use in military strategy studies. The first known employment of scenario-planning was conducted during the Manhattan Project in order to map the effect of nuclear weapons.²² Herman Kahn was one of the first to find an academical use of the methodology, in his book *Thinking about the unthinkable* (1962) he utilized scenarios to research the probability of nuclear war. An important developer of scenario-planning was Pierre Wack, a French academic who developed scenario-planning into a business tool at Royal Dutch Shell (Shell) in the late 60s and early 70s. Scenario-planning was incrementally important for Shell during the oil shock in 1973-1974 since their team has conceptualized a similar turn of events giving them a possibility to make sense of what was happening. This greatly improved Shell's global position and has since been an integrated part of Shell's corporate philosophy rendering the Shell Global Scenarios (SGS) methodology four decades of diverse inputs from an array of talented academics.

²¹ Colin Hay, *"Political Analysis – A Critical Introduction"*, Palgrave, 2002, p.136

²² Truscott, Peter, 2006, p.12

“Documenting ‘best practice’ [...] must be qualified by the observation that energy companies tend to have bespoke approaches to risk management, reflecting corporate experience over many decades. The Royal Dutch/Shell Group’s [...] Global Scenarios method is widely regarded as the most individually developed approach to risk management.”²³

Shell is also highly exposed to “Russian risk” through the Sakhalyn Energy consortium. The Russian government has used Rosprirodnadzor (Russia's environmental protection agency) to halt work on pipelines, strengthening its negotiation position.²⁴ Shell’s trust in Russia’s need for LNG²⁵ has made it feel safe, although Gazprom has used its political leverage to assert a dominant position. All these factors is an indication that Shell has the need to understand “Russian risk”.

3.2 Shell Global Scenarios methodology

3.2.1 Description of the main ideas

The SGS methodology has evolved gradually through input and guidance from several prominent academics, this implies that there is an array of different approaches. Four Shell Global Scenarios presented between 1992 and 2001, for example, each presented two major scenarios; one which assumed TINA There Is No Alternative (to globalization, new technology and market liberalization) and one which assumed the opposite values, protectionism and nationalism (1992) and anti-globalization and affirmation of a prism of local values (2001). The scenario works did recognize state forces as a major force, expect for its positive or negative support of TINA.

This changed with ‘The Global Scenarios to 2025’ (GS25) that seeks to adopt to the uncertain and complex political and corporate climate we see today. The GS25 recognized state forces as a major driving force, making the analysis more comprehensive.

The GS25, created in 2005, is a complex and highly sophisticated machinery, capable of dealing with political change. However:

“The core of risk management best practice is about minimizing exposure to risk through the acquisition of knowledge about possible futures [...] it is important to note

²³ *Ibid*, p.143

²⁴ *Ibid*, p.25

²⁵ Liquefied Natural Gas, allows producer countries to reach a broader market, which does not necessitate transit through pipelines.

that all risk assessment models, whether qualitative or quantitative[...] are only as good as the quality of the input provided.”²⁶

The GS25 recognizes a dual crisis between security and trust in the wake of 9/11 and the Enron bankruptcy.

Trust, or rather distrust, between, on the one hand, investors and the public towards the market place, is highlighted by the Enron bankruptcy and the public's lack of faith in politicians and government. This trend has grown increasingly important since the methodology's employment in 2005, due mostly to the financial crisis and the wave of distrust it created and still creates.

These trends have only grown in importance. The escalation of violence in the Middle East, the wave of religious extremism, the inability to prolong START²⁷ between the U.S. and Russia, and the distrust of the financial crisis spreading both in significance and geography. Some of the geopolitical critical uncertainties in the GS25 were terrorism, the Middle East, nuclear proliferation, failed states and energy supply. These 'uncertainties' highlight growing fears of a "clash of civilizations"²⁸, the spreading of nuclear warheads and energy supply security.

3.2.2 Trilemma Triangle

The previous Global Scenarios highlighted "the interplay between market efficiency and the force of community" but as the GS25 points out "a third force needs to be acknowledged [...] coercion and regulation by the state"²⁹. The Trilemma triangle was created to capture a more complex world, and trade-offs instead of utopias is now the object of study.

3.2.3 Predetermined trends

To understand in which landscape the scenarios are to take place there is a need to identify predetermined trends, both global trends, such as the struggle between the U.S. and China, the Obama-effect and the on-going climate change initiatives, but case-specific trends also need to be identified.

²⁶Truscott, Peter, 2006, p.21

²⁷ Strategic Arms Reduction Treaty

²⁸ In one of the "insights" Albert Bressand interviews Giles Kepel Professor and Chair of Middle East Studies at the Institut d'Etudes Politiques in Paris, who among other things mention the relative importance of Neocons in Washington, i.e. Paul Wolfowitz and Albert Wohlstetter, and their fascination for Samuel Huntington's "Clash of Civilization and the Remaking of World Order". DEVELOP

²⁹ Shell Global Scenarios to 2025, 2005, p.35

3.2.4 Critical uncertainties

While the predetermined trends will be parameters to take into account in assessing the setting in which the scenarios are to take place, the critical uncertainties are the crossroads where the scenario's power trade-offs will shape the future.

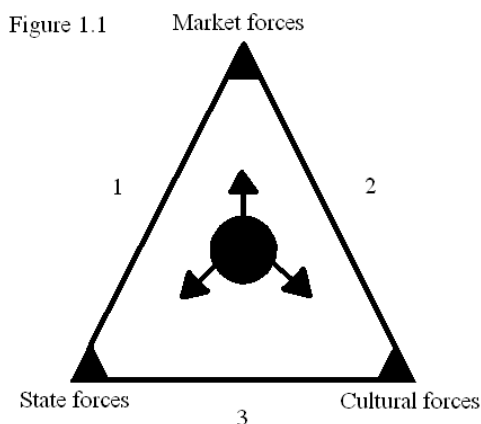
The case-specific critical uncertainties will be studied more in-depth. The EU 2006 Green Paper - A European Strategy for Sustainable, Competitive and Secure Energy identifies six priority areas, namely '*Competitiveness and the internal energy market*', '*Diversification of the energy mix*', '*Solidarity*', '*Sustainable development*', '*Innovation and technology*', '*External policy*'.

These priorities are the starting point, but I will add factors and re-organize internally. The case-specific critical uncertainties are: 'Interdependency and supply shortages', 'Diversification', 'Solidarity' and 'Innovation, technology and sustainable development'.

3.3 The academic application of a corporate model

3.3.1 Brief description/Plan

The methodology requires the identification of forces with certain intrinsic features. These forces are the main driving forces and they have to be inherently



contrasted in the sense that all can not be pursued at the same time. This is what the GS25 team calls 'two wins-one loss'.

*"While societies often aspire to all three objectives, the forces display elements of mutual exclusiveness – one cannot be at the same time freer, more conformant to one's group or faith, and more coerced."*³⁰

³⁰ *Ibid*, p.8

These forces, in turn, drive towards three different objectives.

In the apexes of Figure 1.1 we find plausible futures guided by only one force, utopias. What the study will focus on though are not these utopias rather it is the combination of forces that exists in point 1,2 and 3. These areas represents trade-offs, ‘two wins-one loss’, that are “acceptable to broader coalitions of actors than in the utopian world at the apexes”.³¹

3.3.2 Definition of driving forces

The three forces employed in the Trilemma triangle forces are forces of culture, state and market.

The forces of culture, or the forces of community, can be understood as the power of the public, interest groups, NGOs and the values that they might project on policy makers and market forces; their need for conformity and social cohesion as well as their need for justice and equality.

The forces of state can be understood as the state’s objectives, such as independence and security and the tools they use; regulation and coercion. State forces in this essay are used to describe Member States.

The forces of market can be understood as their objectives, prosperity and efficiency, and the means through which they are achieved; competition and market incentives. The market actors are investors, companies and customers.

3.4 Brief Scenario presentation

Given the conceptualizations and adaptations to apply a “theory of the world” to a specific case, a general idea of how the different actors and forces might behave in the three different scenarios will now be presented, the focal question is:

How could the Trilemma of prosperity, conformity and security objectives be resolved between EU and Russia in the field of energy relations, given major trends in the international system?

Although each scenario highlights the interactions between the two strongest forces, this does not mean that the third force or its actors withers away, rather that it “negotiates from a weaker position”³². The scenarios proposed in this essay share a lot of common characteristics with the GS25 Scenarios, although they are

³¹ *Ibid*, p.11

³² *Ibid*, p.45

more specific. Before providing a presentation of the scenarios, a brief description of the predetermined trends that will shape the coming years will be presented.

3.4.1 Predetermined trends

The relationship between the U.S. and China, the world's two biggest economies³³, will be essential to the world in 2025. The Economist recently conducted a special report on U.S.-China relations³⁴, arguing that although the U.S. still has superior economic and geopolitical power, the Chinese financial muscles, its almost unprecedented growth and its military build up will narrow the gap. A Carnegie Endowment predicted that the U.S. and Chinese economies would be on par by 2035³⁵. Presently the U.S. is still battling the effects of the financial crisis and China is increasing its foreign activities in, for example, Africa; the world's previous hegemonic structure is about to change.

The climate change initiatives, such as the 2009 Copenhagen Summit, are all part of the environmental trend, a trend that depends on dialogue and broader cooperation. As the debate regarding the climate change intensifies so will the pressure towards states and market actors to show initiative. In the IEA Scenarios to 2035, they conceptualize a scenario where collective state regulation might help achieve the climate change goals. This is done mainly by taxing emissions, giving market forces incentives to change to a greener energy mix.³⁶

Religious extremism is growing and in the wake of this growing force a wave of "cultural distrust" is emerging, highlighting fears of a "clash of civilizations". This fear is likely to result in an ever increasing wave of mistrust unless it is dealt with through the proper channels. It is beyond the scope of this essay to speculate further, but growing cultural differences and the mistrust that follows is an important trend to factor into the equation.

World energy demand is projected to increase with 1,5% annually to 2030³⁷ according to the International Energy Agency (IEA). According to IEA the world's remaining 'conventional' supply is now situated in a small number of countries, giving them increased "market power and ability to influence prices"³⁸.

Oil and gas prices are rising. They have nearly doubled in the EU over the past two years, with electricity prices following. This is difficult for consumers. With increasing global demand for fossil fuels, stretched supply chains and increasing dependence on

³³ World Bank 2009 Ranking, GDP PPP, based on 2008 figures, www.worldbank.org

³⁴ The Economist, Volume 393 Number 8654, Oct 24-30, 2009, p. 3-4

³⁵ Carnegie Endowment for International Peace, Policy Brief 61, July 2008

³⁶ IEA, World Energy Outlook, Executive Summary, 2009, p.8

³⁷ *Ibid*, p.4

³⁸ *Ibid*, p.7

*imports, high prices for oil and gas are probably here to stay. They may, however, trigger greater energy efficiency and innovation.*³⁹

One such innovation is the exploitation of so-called un-conventional gas, e.g. the shale gas exploitation in the U.S.⁴⁰

The Obama effect is one of the effects that will shape the coming years. The effect of the good-will that the world's only superpower managed to procure after the election of Barack Obama. While the election in 2004 revolved mostly around the candidate's ability to become Commander-in-Chief, the 2008 election focused on social policy improvements and a more humane overall policy, in short; change. For a world that disapproved with the American agenda the need for change and more ethical and cooperative foreign policy norms saw a global wave of hope emerging in the wave of the 2008 election.

3.4.2 Scenario 1 Low Trust Globalization

State regulation and market forces are the two dominant forces behind this scenario. The scenario is characterized by competition, regulation and low trust. Both States and market players often opt to operate in the lucrative grey zones, bypassing directives and ethical practice, thus creating an environment of low trust.

Market players put emphasis on safety and protection from the "misdeeds of others"⁴¹, mainly through the judicial system, which has its implications when dealing with an authoritarian regime. Therefore, the state is expected to provide the additional security to augment trust.

States opt to enhance, preserve and restore trust to the market. Cooperation between states is normally restricted to win-win situations, normally economic issues with low security implications.

3.4.3 Scenario 2 Open Doors

The forces of community and market are dominant in the *Open Doors* scenario. The scenario is characterized by a high level of trust built on long-term commitments and web-like interactions with diverse value inputs and verifications from third-party actors. The mutually shared values of free market and western

³⁹ Green Paper, 2006, p.3

⁴⁰ IEA, World Energy Outlook, Executive Summary, 2009, p.12-13

⁴¹ Shell Global Scenarios, 2005, p.51

values supply the base on which to enhance the communication between EU and Russia in 2025, on all levels of society.

Russia's now democratic system has injected trust in the relationship, which has led to integration and the dismantling of trade barriers.

Market players in the EU act on an integrated internal energy market and on the Russian energy market through the Russian ratification of the Energy Charter Treaty. The investments and the increase in trade this has led to further integration.

3.4.4 Scenario 3 Flags

The forces of community and state regulation are the dominant forces in the *Flags* scenario. The scenario is characterized by the community's fear of what is foreign and the State's security objectives which creates an atmosphere of distrust resolved through isolation and protection.

States act in an international system that they perceive as anarchic and therefore place security concerns first, this in turn becomes a self-fulfilling prophecy. A 'zero-sum game mentality' develops preventing integration and broad cooperation. Cooperation exists in loose coalitions creating a volatile atmosphere.

The public's fear of the unknown, the inherent differences between different groups in Europe (mainly differences between West and East) prevents integration and giving more power to nationalist groups.

4 Energy Relations

The “Energy Relations” chapter will present the in-depth analysis of the ‘critical uncertainties’ that will shape the scenarios. They can be understood as cross-roads where the forces will ultimately take different routes, inevitably contrasting the scenarios. REPHRASE

4.1 Predetermined trends

While media today will have you believe that Europe woke up to a bitter reality of Russian energy dependence in January 2006 as the issue of gas prices and transit costs between Ukraine and Russia created a temporary supply shortage. Others argue that it was as early as 2005 at the informal EU summit at Hampton Court.

The fact is that the EU has been both aware of the problem and actively sought to resolve it for many years, e.g. the trans European Energy Network Program (TEN-E) which was originally created in 1996 and has been ensuring that all members hold a sufficient amount of oil security stocks, it has been promoting energy efficiency, savings and development of renewable energy sources.⁴² Other important documents and efforts has been the Green Papers of 2000 and 2006 concerning energy and the Lisbon Treaty that suggest more cohesion in the field of energy.

Until recently individual Member State policy was the norm and the proper toolbox for community action did not exist. However, the implementation of the Lisbon Treaty will see two new improvements in this field that possibly might change the approach from individual to community action.

Firstly Article 122, commonly known as the ‘solidarity principle’, which does not solely revolve around energy but rather the solidarity of member states if “severe difficulties arise in the supply of certain products, notably in the area of energy.”⁴³

The other new addition is Title XXI Energy, which consist of Article 194 and bullet points four measures in the spirit of ensuring the well-being of both the environment and the internal market.

- a) Ensure the functioning of the energy market
- b) Ensure security of energy supply in the Union;

⁴² Christian Cleutinx and Jeffery Piper, “*The EU-Russia Energy Dialogue*”, Pipelines, Politics and Power- The future of EU-Russia energy relations, Katinka Barysch editor, Centre for European Reform, London 2008, p.25

⁴³ Article 122 of the Consolidated version of the Lisbon Treaty

- c) Promote energy efficiency and energy saving and the development of new and renewable forms of energy
- d) Promote the interconnection of energy networks

The efforts to promote nuclear and renewable energy articulated in the 2006 *Green Paper* are of course commendable but unlikely to change the dependency in the medium term. Although such efforts will ease possible effects of sudden price changes and “interdependency issues” the fact of the matter is that Europe is and will be increasingly dependent on gas imports since the domestic production will decrease. Europe also need gas-fired power plants to fulfill its goal to reduce its CO₂ emissions by 20% to 2020.⁴⁴ While the same guidelines, the so-called 20-20-20 (increasing energy efficiency by 20%, increasing renewable energy sources by 20% and reducing its CO₂ emissions by 20%). Germany might phase out its nuclear power plants which also might increase the need for imports.

The domestic EU production is decreasing, with both UK and Netherlands, which together account for three quarters of the domestic production, declining their output rapidly (especially in the UK).⁴⁵

- Domestic demand has been increasing and will continue to increase
- The output of the gas fields currently supplying the EU with gas is decreasing.
- To fulfill its commitments Russia is relying on both independent domestic producers and Turkmen gas.
- Russia has committed itself to several long-term contracts to 2026-2036⁴⁶, most likely these will be fulfilled by production from the Yamal field. Yamal is the last Russian field that has relatively easy access to the European market.

Given these facts, it is unlikely that Russia can continue to serve as a base load importer in the long-term (which Russia has rhetorically committed herself to) unless it invests heavily in exploitation of new fields, primarily located in Siberia, and construction of the necessary infrastructure. The question is if Russia has any intentions or means of doing precisely this.

4.2 Critical uncertainty – Interdependency and supply shortages

⁴⁴ Noël, Pierre, “Beyond Dependence : How to deal with Russian gas”, European Council on Foreign Relations, 2008, p.6

⁴⁵ *Ibid*, p.6

⁴⁶ *Ibid*, p.6

Exactly how dependent is EU on Russian gas? To ask this question, one must consider another question that many neglect to address, namely how dependent is Russia on exporting gas to the EU?

The critical uncertainty is whether these efforts will decrease the EU dependency on Russian gas and, if so, if that is a desired outcome?

The EU will have to increase its import volumes unless radical measures are taken. In this respect Russia would be the optimal supplier, disregarding all political aspects and considerations. However, it is unlikely that imported volumes will increase, due to several more or less challenging issues all of which needs to be addressed if the imports are to increase.

It is important to note that when we talk about dependency, some EU States are more dependent than others. Western European markets consume more but are more diversified while Eastern European markets consume less but are more dependent, the exceptions being Germany and Italy, both of which have invested heavily in Nordstream and Southstream respectively.

In EU15 there are three countries that fulfill more than 50% of their energy consumption through gas from Russia. These are the smallest gas markets in Europe.

The discussion of pricing disputes and supply disruptions can be seen as the biggest side-effect of interdependency. The term “energy weapon” is linked to the discussion of ‘energy security’, and is a term that divides the academic community possibly because of the assumptions of guilt and right/wrong that comes with it.

“Energy weapon” in this case is to be defined as a politically motivated supply disruption aimed at changing unwanted downstream consumer policy. The use of the “energy weapon” is contested and in any case some academics argue that transit countries use the “energy weapon” more than producer countries.

“In any event, an energy weapon can only be used once, in a suicidal strike which creates a temporary disruption for the consumer, but permanently cripples the producer. The Russians are not jihadis.”⁴⁷

It is important to note though that the term “energy weapon” might be misleading, weapon is a value-added word, in this context specifically implying an attack on Russia’s part.

Ukraine wants lower gas prices since 80% of Russian gas to EU goes through Ukraine. This is an important leverage for a poor country like Ukraine, but a danger to EU’s energy security. Presently the solution in the West is spelled diversification; transits through the Black Sea (Southstream), the Baltic Sea (Nordstream) and Turkey (Nabucco) are presently under way. Nordstream and Southstream will increase Russia’s leverage and possibly its willingness to use the “energy weapon”, since the effects can be limited to the first group of countries.

⁴⁷ Trenin, Dmitri, “Energy geopolitics in Russia-EU relations”, *Pipelines, Politics and Power- The future of EU-Russia energy relations*, Katinka Barysch editor, Centre for European Reform, London 2008, p.23

In 2005 Russia started pressuring the CIS-countries to pay a higher price for its gas, thereby abandoning its previously 'imperialistic' approach of heavily subsidized gas prices to former satellite states in place of a more business oriented approach. However, Belarus got a respite not to undermine Alexander Lukaschenko ahead of a poll and Armenia, a Russian ally, still benefited from lower prices than non-compliant Georgia and Ukraine. During the final days before handing in this essay another supply disruption seems imminent; the deteriorating relationship between Russia and Belarus has made them unable to prolong the existing gas relationship. The deteriorating relationship was the reason for Belarus refusal to acknowledge South Ossetia and Abkhazia.⁴⁸ Belarus subsidized price, 35,6% of Russia's normal export tariff, has provided Belarus with an important source of income through sales to other European countries.⁴⁹

These casualties certainly indicate that Russia uses this "energy weapon", or in this cases better defined as politically motivated supply disruptions due to pricing disputes, to affect the CIS and the Baltic countries policies. A report from the Swedish Defense Research Agency in 2006 identifies 55 politically motivated cut-offs since 1991.⁵⁰ The author, Robert Larsson, concludes that these gas cut-offs are mostly aimed at CIS and the Baltic countries. He divides states into three groups, the first group consists of former Soviet countries where cut-offs have been frequent. The second group consists of former Warsaw Pact members of who most are now EU and/or NATO members. Russia normally tries to avoid using its "energy weapon" against these states, but they have been affected through the cut-off of a third party (Poland gets affected by cut-offs to Belarus). The third group consists of Western countries, which had not been affected when the report was presented in 2006, Larsson suggested that political considerations on Russia's part prevented supply disruptions.

However, later that year, due to the integrated natural gas pipeline system, Western European countries like France and Italy experienced gas shortage when Russia cut the gas to Ukraine because of a price dispute.⁵¹

This might very well have been a "suicidal stroke", it left Western European countries freezing during a particularly cold winter, that of 2006, and changed the EU energy policy towards a more focused effort on energy security. In 2009 many countries were once again affected after a pricing dispute, Gazprom first wanted to raise price Ukrainian prices from 250 USD to 300 USD/1000 cubic meters, after Ukraine refused Gazprom raised the price to 418 USD saying that Ukraine had lost its window of opportunity. Trenin points out that Europe was never meant as collateral, they pay top price and the Russian budget is dependent on its gas and oil revenue's coming from the EU.

⁴⁸ Kramer, Andrew E., Oil Feud Reflects Growing Rift Between Russia and Belarus, Once Close Allies, NY Times, 5 Jan, 2010

⁴⁹ Kramer, Andrew E., "Russia-Belarus Oil Dispute Threatens Europe's Supply", NY Times, 4 Jan, 2010

⁵⁰ Robert Larsson, "Sweden and the NEGP" – A Pilot Study of the Northern Gas Pipeline and Sweden's Dependence on Russian Energy", the Swedish Defense Research Agency, June 2006, p.56

⁵¹ Robert Larsson, "Sweden and the NEGP" – A Pilot Study of the Northern Gas Pipeline and Sweden's Dependence on Russian Energy", the Swedish Defense Research Agency, June 2006, p.54-55

Let us note that opinions vary, not everybody subscribes to the idea of “Yesterday tanks, today oil”, as former head of Poland’s security service Zbigniew Siemiatkowski so succinctly phrases it.⁵²

4.2.1 Scenario approach

In a *Low Trust Globalization* world the issue of dependency on Russia is problematic but solved through risk mitigation tools, such as strategic reserves, LNG, commercial storage and increased interconnectivity of physical transportation infrastructure. This solves the immediate threat of possible supply disruptions since the large investments in the pipelines prevent abusive behavior. This is applicable for both producer and customer. The EU will put a lot of emphasis on enhancing its ‘customer rights’ as a response to the risk associated with interdependence.

In the short-term, pricing disputes can, and will probably, escalate to supply shortages in the pipeline through Ukraine. For Western Europe the construction of Nord and Southstream can be a potential short-term threat due to Ukraine’s possible unease when its greatest policy leverage towards Russia declines through the near completion of first of all, Nordstream. However, in a longer perspective Western Europe will most probably avoid supply shortages in this scenario because of Russia’s unwillingness to let pricing disputes with the West escalate and the diversified supply routes. Eastern Europe, however, will be more exposed to supply shortages since they will not affect Western European countries due to the diversification of supply routes.

The *Open Doors* scenario sees dependency as a two way street and the interconnection is not seen as a threat but rather a solution. A united EU manages to exercise customer demand through dialogue and discussion. The mutual dependency of EU and Russia is recognized which leads to a more comprehensive and long-term focus. Long-term issues such as exploitation of new fields are discussed in a more open manner with EU focusing much of its attention on allowing an open and competitive market.

In the *Open Doors* scenario pricing disputes might occur in the short-term leading to an increased focus on trust building. Long-term commitments, however, make short-term pricing disputes easier to deal with. Supply disruptions leads to short-term as well as long-term action. Disruptions in gas would increase price, through the economic principle of internalizing externalities.

The current level of dependency can not be accepted by states in a *Flags* world; independence is a guiding principle. Schisms between countries dependent and non-dependent of Russia are plentiful and divisive. The overall EU interdependency on Russian energy has decreased due to security concerns, replaced by state-encouraged investments on domestic energy, such as renewable and nuclear energy in line with the 2006 Green Paper goals. However some

⁵² Andrew E. Kramer, Gas pipeline drives wedge, NY Times

countries, notably Italy and Germany will likely have increased their interdependency on Russia due to the completion of their respective pipelines.

In the *Flags* scenario, opportunities to exploit leverage in a ‘zero-sum game manner’ are normally pursued. Responses to supply disruptions will vary between Eastern and Western Europe. Affected Western countries will in most cases respond bilaterally. However, an Eastern European alliance within the EU consisting of countries dependent on Russia might form, dividing the unity.

4.3 Critical uncertainty – Diversification

The critical uncertainty is how the issue of diversification is going to be dealt with?

The EU is promoting diversification to reduce the dependency on Russian energy, the main reason is energy security.

Another positive aspect of diversification, however, is the potential economic advantages. Daniel Gros, Director of the Centre for European Policy Studies, provides an example. He argues that Russia is a (quasi)monopolist in the gas field (Europe gets the lion’s share of its imported gas from Russia) and it would therefore be beneficial to diversify. He argues that:

”We start from the value of Gazprom’s sales to the EU, which amount to €30 billion annually. Assume that additional import facilities would allow EU consumers to negotiate a 10 percent price reduction with Gazprom. The return from such an investment would be €3 billion per annum. At a discount rate of 10 per cent, the net present value of a project which could force Gazprom to lower its prices to Europe by 10 per cent would thus be around €30 billion. This is a large sum – larger than the cost estimates of the various alternative pipelines projects that are being discussed today or the cost of constructing generous new LNG facilities in various member countries.”⁵³

Although this math is oversimplified it provides an interesting platform for further discussions. Diversification of imports could be an alternative that would lessen the Russian import implications. However, which countries could provide the EU with the quantities needed. As Peter Truscott concludes:

A highly visible symptom of the Western energy sector’s quest for alternative energy suppliers is the spread of extensive (and expensive) pipeline projects. [...] while these

⁵³ Gros, Daniel, ”The money benefits of diversification”, ”, *Pipelines, Politics and Power- The future of EU-Russia energy relations*, Katinka Barysch editor, Centre for European Reform, London 2008, p.80

projects can appear commercially sound on paper, some of them in fact potentially expose the Western energy sector to new political risks."⁵⁴

Diversification could also tie Eurasian countries closer to the West through the construction of pipelines. Joschka Fischer, the Princeton Professor, former German foreign Minister and former leader of the Green Party is one of the strongest advocates of the Nabucco pipeline, he also recently became the strategic consultant for the pipeline, which he is convinced is the solution to supply shortages such as the ones in 2006 and 2009. He also argues that the pipeline is a new beginning for the EU relations to the Eurasian and Central Asian region, including countries Turkey (an important transit country and aspiring member of the EU), Azerbaijan and Iraq (potential future energy exporters).⁵⁵

This however is clearly antagonizing Russia who seeks long-term commitments in order to safely make the necessary investment in oil and gas production that is needed to remain a base load importer.

*"In an ideal scenario, the EU should work out a strategic plan as to what kind of pipeline network it needs to ensure sufficient diversity of supplies. Once it has defined its priorities, the EU will find it easier to strike the necessary agreements with supplier nations and private sector companies. Europe also needs more investment in strategic gas reserves. The EU gas market would function much better if sufficient gas were always available in case of supply shortages. Given the strategic importance of well-functioning energy markets, European gas storage should be operated by an EU agency and its operation financed from the EU budget."*⁵⁶

4.3.1 Scenario approach

The *Low Trust Globalization* scenario sees diversification encouraged through the "policy and regulatory instruments" and is reached through the construction of new pipelines. Larger energy companies together with state funding create enormous transport monopolies. The large share of gas transiting Ukraine has been redirected through Nord and Southstream. A large coalition of Western European countries are partaking in the pipeline consortiums. While EU has a diversified energy mix it is just as exposed to risk, possibly more so, because it is now dealing with more unstable producer and transit countries.

In *Open Doors* diversification is achieved through market forces, not on the basis of state concerns. Market forces determine the energy mix based on profitability. Risk analysis is an integrated tool for business assessments in strategic resources and risk is internalized in the price. Diversification is not an objective that is actively pursued.

⁵⁴ Truscott, Peter, 2006, p.79

⁵⁵ Judy Dempsey, "Hoping for more than energy from a pipeline", NY TIMES December 22, 2009

⁵⁶ Pawel Swieboda, "Putting flesh on the bones of energy solidarity", *Pipelines, Politics and Power- The future of EU-Russia energy relations*, Katinka Barysch editor, Centre for European Reform, London 2008, p.42

Diversification is incrementally important to fulfill domestic security concerns in the *Flags* scenario. Diversification is also driven by a need to control production, meaning that domestic energy sources are preferred. Taxes and regulation changes consumer behavior to a more state-favored energy mix. Larger and richer countries will be more successful while smaller states will need to make concessions. *Flags* is by far the most costly scenario with the lowest growth.

4.4 Critical uncertainty – Solidarity

Possibly the most important critical uncertainty is whether the EU can unite and act in solidarity, a goal clearly highlighted in the 2006 Green Paper which concludes that the 21st century energy landscape requires solidarity and that “An approach based solely on 25 individual energy policies is not enough.”⁵⁷ In the absence of a unified approach towards Russia, EU is unable to meet the challenges presented.

*“(C)hoices made by one Member State inevitably have an impact on the energy security of its neighbours and of the Community as a whole, as well as on competitiveness and the environment.”*⁵⁸

The critical uncertainty in this case is if the EU States will act in solidarity, for example, if states will support one another in times of need?

A highly divisive subject is that of Nord and Southstream. Greatly improving energy security in the sense that a smaller proportion of the imported Russian gas goes through one transit country, Ukraine, it can according to many Eastern European countries increase the risk of politically motivated supply shortages due to lessened impact on the West.

Poland, for example, pointed out that these pipelines in no way lessens the EU energy dependency on Russia which is a goal specified in the EU Commission 2006 Green Paper, rather it, if possible, increases it. As Peter Truscott writes, regarding Germany’s initiative on Nordstream: “Germany may have ensured its own security of supply but it may also have inadvertently manufactured risk for others”.⁵⁹

What Germany and Italy is doing is to attempt to reduce their respective levels of political risk, this affects other countries in the region. In the case of Nordstream, the cost of bypassing countries such as Poland and instead placing a pipeline in the Baltic Sea bears heavy costs. The estimated cost of Nordstream is

⁵⁷ Green Paper, 2006, p.4

⁵⁸ *Ibid*, p.9

⁵⁹ Truscott, Peter, 2006, p.82

7.4 billion euros⁶⁰ at this point; environmental considerations might increase the cost. This clearly indicates the mistrust Germany feels towards countries in the region. Integration and cooperation can not be achieved through bilateral agreements in this manner.

The solidarity principle, Article 122 of the Lisbon Treaty, internalizes the solidarity in times of crisis, but it does not force the Member States to take any specific actions.

4.4.1 Scenario approach

The low trust in *Low Trust Globalization* limits solidarity and hinders integration. However, common approaches to low-risk integration projects with economic advantages are accepted and drive the EU towards closer integration.

In case of supply shortages or a sudden crisis, Member States will reluctantly attempt to aid one another.

Solidarity is a guiding principle for the EU in the *Open Doors* scenario which leads to a united approach to energy. The solidarity is based on the idea of a deregulated, open and competitive energy market. Aiding one another in times of crisis is internalized, and seen as a way of reducing sudden deteriorations in trust.

By uniting and openly discussing the future of energy relations much emphasis is put on dismantling of trade barriers. Russia is included in the dialogue in a far more comprehensive manner allowing both sides to openly voice their concerns.

The *Flags* scenario sees the low-trust combined with nationalism hinder solidarity. Ethnically diverse groups within the EU mistrust each other and divide the union, reducing its capabilities to respond to outside threats.

The image of several groups within the union is worsened by the media's urge to profit on the public fears. The lack of solidarity hinders the EU's ability to impose positive change both in Russia and in producer and transit countries.

Nord and Southstream are examples of how events might unfold in a *Flags* scenario leading to an escalation of mistrust. The solidarity principle will not be acted upon in the *Flags* scenario.

⁶⁰ According to Nordstream.com

4.5 Critical uncertainty – Innovation, Technology and Sustainable development

The critical uncertainty is whether the EU can reduce its imports and therefore its exposure to risk and develop in an environmentally friendly way through investments and breakthroughs in innovation and technology?

Although Europe is already one of the world's most energy efficient regions, it can go much further. In its 2005 Green Paper on Energy Efficiency, the Commission showed that “up to 20% of EU energy use could be saved: equivalent to spending as much as € 60 billion less on energy”, it also concluded that energy security would improve and creating close to a million jobs in related sectors.

The world community is seeing an extensive research increase in the field of energy. Renewable energy represents the biggest increase, but energy infrastructure improvements and energy efficiency improvement are all currently under way. One of the more impressive projects is the ITER advanced fusion tokamak currently being built in Cadarache in Southern France, encompassing seven diverse actors; EU, U.S.A, Russia, Japan, India, Korea and China. Producing its first plasma in 2018, this project has the potential to change the relationship between EU and Russia, and in fact the entire energy market in the long-term if proven successful. This joint venture can be seen as both an interesting example of global cooperation but also an example of mistrust; since no country can patent fusion technology no actor invest the necessary amounts by itself.⁶¹

Although major investments and projects in renewable energy are currently under way, my assessment is that no renewable energy source can overthrow the current status quo of increasing gas demand in Europe during the span of this study.

4.5.1 Scenario approach

In a *Low Trust Globalization* world, state regulation encourages companies to innovation and technology developments that increases energy efficiency and improves renewable energy sources. ITER is an excellent example, started through state initiative and driven by the low trust that makes it necessary for states to create formal contracts.

Open Doors market-centric view makes emission trading a good response to the issue of climate change. Research is not initiated by the state; rather it is performed by profit maximizing companies.

⁶¹ www.iter.org

In *Flags* energy efficiency is pivotal, since it can decrease dependency. Domestic resources are developed and encouraged through. Research is encouraged to improve security but withheld from 'outsiders' meaning groups that are not included in the homogenous group.

5 EU-Russia Scenarios to 2025

The critical uncertainties and the predetermined trends combined with the forces presented in the Trilemma triangle have all lead to the creation of three plausible and contrasted scenarios which will no be presented.

5.1 *Low Trust Globalization*

The forces at work and the description of the *Low Trust Globalization* scenario probably bring this scenario closest to the reality of today. However the trust in the *Low Trust Globalization scenario*, especially within the Union, is much lower than the EU of 2010.

In the *Low Trust Globalization* scenario, the EU insistence on political reform in Russia is not pursued actively and the external policy instead focuses on energy security combined with economic issues. An important objective is the deregulation of the Russian energy market that would allow European companies to own a larger share of Russian energy production.

The EU's Common Foreign and Security Policy is a powerful but scarcely used tool. Much focus is put on stability in transit areas and producer countries, human rights and environmental abuse is not the immediate focus. Energy security is synonymous with protecting domestic energy corporations and consortiums operating abroad.

Pipeline-building is extensive and one of many examples of the employment of risk mitigation tools. Another aspect of the low-trust is the diversification of source and of supply routes. Through diversifications and through pipelines, e.g. Nabucco, the EU is just as exposed to political risk as it was before if not more so.

5.2 *Open Doors*

With legislative power and full control over the only actors on the Russian market, the Russian government is in complete control. A free market can not exist unless the present government fully unbundles the control to market forces or if a regime change takes place. None of these events seems particularly likely, nevertheless a scenario that presupposes these events is of the essence.

Open Doors sees comprehensive policy frameworks and trust building long-term commitments as the basis of the external policy. The dismantling of trade

barriers is an area where progress is being made another is the overall economic integration through the increased trade and interconnection.

Interdependency and integration are emphasized and reached through market interconnectivity of the Russian and European market. Investments in the Russian energy market and increased trade are examples of exchanges between the EU and Russia that are built on mutual trust. The internal solidarity of the EU leads to a united approach which enhances the EUs customer rights.

The free market approach leads to enhanced efficiency and economies of scale. Problems are dealt with through cooperation and dialogue on an early stage, long-term solutions are preferred.

5.3 *Flags*

Nationalism and isolation is not characterizing of the EU today, but the trends are there, nationalist parties have acquired some power in several countries in the EU today. Unless dealt with these trends might lead to a reality close to what can be observed in *Flags*.

External policy in *Flags*, and most notably the relationship to Russia, is characterized by bilateral agreements. This approach means that costly solutions are employed to enhance security. Bilateral agreements are the norm when cooperation would bring economy of scale improvements. Countries that possess leverage such as favorable geographic positions or potentially lucrative infrastructure will use this leverage without concerns for any third party.

Much emphasis is put on domestic energy solutions, research and improvement in energy efficiency are employed through state regulation. This is in line with the overall objective of control and the fear of dependency.

Due to the lack of efficiency considerations this is the scenario with the lowest trade and the lowest level of trade. Security considerations are of greater importance than economic ones.

6 Conclusion

I have provided three distinct scenarios and through them a plausible explanation of change proponents in the relationship between EU and Russia during the years to come. The scenarios are based on trade-offs between two dominant actors, predetermined trends that will shape the world of 2025 and finally crossroads, critical uncertainties, that contrast them. This analysis can have multiple utilities, but it is mainly a source of reference and guidance.

I have provided three diverse answers to the focal question, the scenarios. The scenarios however, are not answers in the normal sense, rather they represent plausible answers or suggestions, the reality of 2025 will probably not be represented by any of the three scenarios but rather a mix of them. By acknowledging that the subject is in constant motion and that the future is intrinsically challenging to predict, the methodology instead focuses on the outlines, giving it a specific appeal.

This work does not give a specific answer to where the relationship is heading, but instead provides a map that focuses on identifying possible destinations and providing the ability to identify our general location and destination. This is specifically interesting to actors that have the ability to affect the future relationship through advise, policy or diplomatic contact.

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