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Asymmetrical interdependence in energy relations between the Russian Federation and
Baltic States: Effects of the Finnish LNG terminal and Balticconnector

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Introduction

The interrelations between the three Baltic states and the Russian Federation since the independence of Estonia, Latvia and Lithuania have not been entirely bilateral. The problem of energy security in the Baltics poses a serious dependency problem, whereas the geographical position of the Baltic states in terms of access to the West is a lucrative quality for the Russian Federation. Currently dependency on Russian gas accounts for about 5 billion cubic meters (bcm) a year for all three states (Dudzinska 2012: 1). The fact that the Baltic countries are not transit states for Russian gas to Western markets – only Lithuania is a transit state for Russian gas destined to Kaliningrad, makes identifying interdependency in Baltic-Russian energy relations difficult. Although the Baltic countries may not be transit states, their gas markets offer an interest for direct investment, as demonstrated by Russian involvement in the national gas companies and gas-powered plants such as KHPP, as well as the presence in the region of Russian companies like Itera (Grigas 2012:31).

The region's energy dependency is a product of what had been a tight interdependence during the Soviet period, therefore it is not astonishing that Russia would retain an interest in the energy policies of successor states that, after 1991, became transit corridors for its oil exports to Europe (Grigas 2012:34). Whereas the essence of this past interdependency has shifted radically to the point of negative interdependency – there still exists bilateral interrelations to the point that both agents of this relation benefit to some point. The neoliberal theory of interdependence is a particularly suitable theory in the context of energy relations. Keohane and Nye (1989) approach world politics from a perspective of complex interdependence. They define interdependence as 'mutual dependence': "situations characterized by reciprocal effects among countries or among actors in different countries" (Keohane and Nye 1989:8). It is evident that the Baltic states' partnership in the interrelation with the Russian Federation is not on par to make it fit with Keohane's and Nye's theory of complex interdependence. Due to the uneven dependencies between the partners the relationship should be viewed from the lens of asymmetrical interdependence (or even asymmetrical interconnection)

This paper seeks to validate the research question: if and how will the Balticconnector and LNG terminal have an impact on the current negative interdependence in Russian-Baltic energy interrelations. The term "negative interdependence" in the context of

international relations means that interdependence exists, but actors involved want to get away from each other. The interrelation is currently a necessity due to energy dependency in the Baltic region and Russian investments in the area. The source of negative interdependence is mostly due to the inadequate energy security in the region – therefore one would make the hypothesis that *the Finnish-Baltic interconnection will significantly alleviate the asymmetry reducing the Baltic states dependency on the Russian Federation, therefore tighter cooperation in Russian-Baltic energy relations will due to the Baltic region having reduced their sensitivity*. According to Nye (2011: 55), “being less dependent can be a source of power. If two parties are interdependent but one is less dependent than the other, the less dependent party has a source of power as long as both value the interdependent relationship.” In light of this reasoning the verification of the hypothesis lies within the analysis of empirical studies. By assessing the current state of asymmetrical interdependence in Russian-Baltic energy relations and making a temporal case study taking into account the Baltic and Russian energy relations until the terminal/connector and the Baltic-Russian energy relations with the terminal/connector.

The first part of the paper focuses on setting the theoretical framework for the thesis. It will include the explanation of the neoliberal theory of interdependence as well as the properties of asymmetrical and negative interdependence. The second chapter will apply the given theoretical framework to the Baltic-Russian interrelations. Dependencies of both parties will be brought out, as well as the depth of the current asymmetrical interdependency of energy relations. In the third and fourth part of this paper, empirical studies will be researched in order to fixate the development of asymmetrical interdependence in the Baltic region. Lastly, a temporal case study whilst applying the theoretical framework will be done in order to prove the hypothesis of this paper.

1. Theory of interdependence

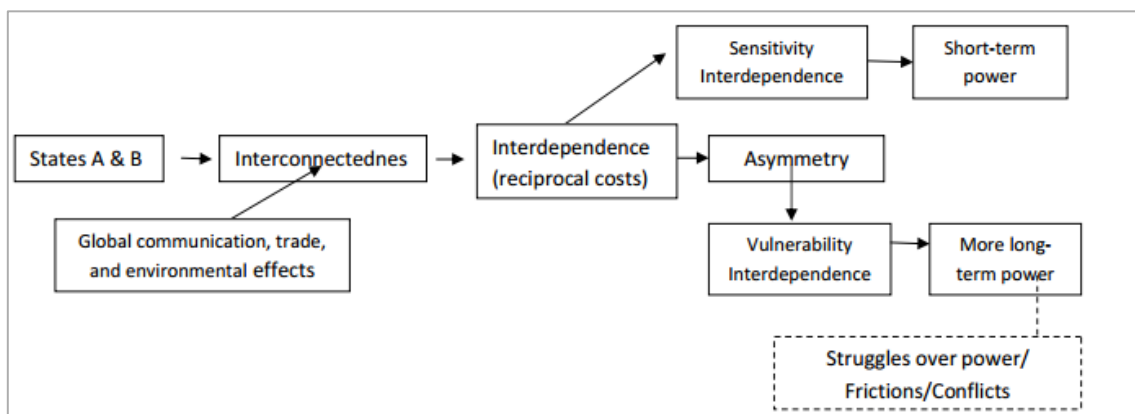
The theory of interdependence refers to situations where states or actors are determined by external events in a reciprocal relationship with other states or actors, jointly limiting their autonomy, or as Keohane and Nye have defined it “interdependence is ‘mutual dependence’: ‘situations are characterized by reciprocal effects among countries or among actors in different countries’ (1989: 8). In the same work, Keohane and Nye

have also mentioned that interdependence is created through the expansion of international transactions, insofar as the costs associated with them constrain political activity – while these relationships impose costs, the benefits may exceed them.

Before properly introducing the theoretical framework of theory of interdependence, it is necessary to fully understand what it really means. The meaning of interdependence is explained by David Baldwin (1980), where he states that interdependence can be traced back to Machiavelli’s dichotomy of “self-reliance” and “dependence”. He defines interdependence as “international relationships that would be costly to break” (Baldwin 1980: 484). McMillan (1997: 34) explains that “even though economic interdependence enlarges a country’s economic possibilities, it creates a matrix of constraints that most countries can influence only slightly, if at all.”

It is also important to mention that interdependence as a situation, where both agents are interlinked in a relationship which is mutually beneficial, does not exclude the possibility of conflict. Institutional neoliberalism, although oriented towards cooperation in international relations, rejects the interpretation of cooperation as the absence of conflict and vice versa; therefore the effects of interdependence are not always benign (Roşu 2013:13). When conflict is a possibility in the theory of interdependence then asymmetry in interrelations is just a manifestation of that. Asymmetry is fundamentally a function of scarcity, since the power of each actor is determined by the scarcity of the goods sought by the other actor (Jarblad 2003:41). Therefore, deriving from this line of thought there is inevitably asymmetry in interdependent relationships. The degree of the asymmetry is linked with the scarcity of those particular goods that an actor is in need of.

Joseph Nye (2007) has laid out a chart, which depicts the asymmetry in interdependence:



Graph 1. Joseph Nye's chart demonstrating the asymmetric nature of interdependence; based on "Understanding International Conflict" 2007

Here the principal evolution of the theory of interdependence is straightforwardly brought out. In order to further explain the theory it is necessary to examine two key notions in the chart: "sensitivity" and "vulnerability". According to Keohane and Nye, sensitivity is the extent to which one country is affected by the actions of another, whereas vulnerability is the extent to which a country can, by adopting policies, insulate itself from the costly effects of events that occur elsewhere (Keohane&Nye 1989: 12) In their work "Power and Interdependence: World Politics in Transition", Keohane and Nye state that "vulnerability interdependence is more important in providing power resources to actors, because with effective alternatives, sensitivity effects can be overcome. Vulnerability can take on a strategic dimension, as less vulnerable states can impose costs on others by exploiting their sensitivity". As to sensitivity interdependence, it can also pose problems for leaders of pluralistic political systems, when interdependence harms domestic groups that will subsequently seek protection from the government (Keohane Nye 1989: 13).

The neoliberal theory of interdependence, which in a state of equilibrium would a situation where both agents are mutually (and equally) dependant, is in reality in a constant state of tug of war. This means that states which are in an interrelation are always to some degree in an asymmetrical interrelation and this in long-term creates tension. Both agents want what is best for them, therefore it is necessary for them to escape a situation where one party is a subject of more intense vulnerability or sensitivity as their counterpart.

1.1 Asymmetrical interdependence

The theory of interdependence without a conception of power seems naïve or utopian. Keohane and Nye's answer to this shortcoming comes in the form of the concept of asymmetrical interdependence (Milner & Moravcsik 2009: 249). Robert Keohane's second major contribution to the international relations theory is that interstate power stems not from the possession of coercive power resources, but from asymmetries in issue-specific interdependence. Asymmetrical interdependence follows as such - the more resources on country possesses (or the less it needs), the stronger it is, conversely,

the less a country has of it (or the more it needs), the weaker it is (Milner & Moravcsik 2009: 249).

The theory of interdependence is not without conflict, as stated in the last chapter. Inconsistencies in power distribution deter each player from pursuing its interests in the interrelation, and therefore power asymmetry will act as a factor of systemic rupture (Roşu 2012: 21). Although agents of an asymmetric relationship may acknowledge the need for such a partnership, it is also important for the partners to maintain that mutual acknowledgment. According to Nye (2011: 55), “being less dependent can be a source of power. If two parties are interdependent but one is less dependent than the other, the less dependent party has a source of power as long as both value the interdependent relationship.” Therefore it is evident that the less dependent agent must portray the interrelation as a lucrative deal if there is a chance for such an agreement to continue.

1.2 Positive and negative interdependence

Interdependence may in its nature be in a state of equilibrium (total symmetry) or conversely asymmetrical, but the way how agents act in an interrelation is described by “positive” or “negative” interdependence. Robert Keohane sees positive interdependence (or reciprocity) as such – “exchanges of roughly equivalent values in which the actions of each party are contingent on prior actions of others in such a way that good is returned for good, and bad for bad.” (Keohane 1986: 8) Positive interdependence is a form of interrelation when both parties see the interaction as a beneficial arrangement. Therefore such interdependence forms a link between parties in which both are willing to be in a dependent situation. When asymmetries in an interrelation are surmountable and the relationship is beneficial for both parties then a positive interdependence forms.

As always, there are two sides to an issue, as Robert Keohane states in his work “Reciprocity in International Relations”, the requirement of rough equivalence in positive interdependence means that many relationships in world politics are not reciprocal (Keohane 1986: 8). Often interrelations are based on self-interest, where claims of reciprocity may be fraudulent hiding domination and exploitation. This creates a situation where asymmetries in a relationship become too evident that the parties wish to drift away from a dependent relation. Such a situation is referred to as

negative interdependence – it means that interdependence exists, but actors involved want to get away from each other (Belyi 2012).

The problem of negative interdependence arises when the interests of the parties vary inversely. This creates a situation where the “negative” aspect of the relationship obscures the essential characteristics of the interdependent relation – the shared interest in maintaining the relationship collapses (Tucker 1977: 97). This does not immediately mean that partners do not need their arrangement, but it would be more beneficial for them to find alternative options where the asymmetry (or non-beneficial agreement) of their interrelation could be reversed.

2. Applying the theory of interdependence to the Baltic region

In order to prove the relevance of this theory it is necessary to pin-point the merits of the theory of interdependence when applying it to the Russian-Baltic energy relations. The theory of interdependence has its variances ranging from the theory of social interdependence, economic interdependence, ecological interdependence and complex interdependence. The thesis of this paper will focus on economic interdependence, due to the fact that EU-Russia relationship’s interdependence really only exists in one area and that is the energy sector (Krickovic 2015: 4).

This paper seeks to research the economic cooperation between the Russian Federation and the Baltic states, more precisely how will an alternative gas market influence the current negative interdependence in Baltic-Russian energy relations. The theory of interdependence does not hold claim to be an open rejection of Realism but rather, the need to combine both Realism which stresses structure, with Liberalism which stresses have process (Omojarabi 2012: 3). This thought is portrayed by the fact that interdependence theorists have noted that when relations, particularly economic ones, increase, the use of military force and power balancing decrease (but remain important). Therefore, basing their thoughts on development, they argued that the decline of military force as a policy tool and the increase in economic and other forms of interdependence should increase the probability of cooperation among states (Beavis 2015).

Through model the neoliberal theory of “Complex Interdependency”, Keohane and Nye argue that the state centric approach of Realism within the international system is too simplistic and inadequate to be able to explain the distribution of power (Keohane&Nye 1989: 22). Therefore applying the theory of interdependence as the framework of this paper will provide an insight to the power-struggle in an asymmetrical energy relation. There are a few basic assumptions that the theory of interdependence provides and one of them is that bargaining tools are usable means of reaching an advantageous position in international relations, as well as that asymmetric interdependence between and among states is the determinant power in international relations (Omojarabi 2012: 9). These points are applicable to the current Russian-Baltic energy relations, where leverage is hold not by military force but by bargaining tools, such as the Russian Federation being the single natural gas market. The dominant position of the Russian Federation stems from the asymmetrical interrelations with the Baltic countries.

The theory of interdependence allows for a theoretical framework where interdependent or interconnected parties can be analysed through their economic cooperation. In order to prove the hypothesis of this paper within the framework of the theory of interdependence it is necessary to analyse how an alternative supplier would affect the current negative asymmetrical interdependency. The theory states that parties with high sensitivity understand their dependant situation and would like to seek alternative options to lower their dependence – in this case the Baltic states. Vulnerable states would like to strengthen cooperation because unilateral withdrawal would lead to unnecessary expenses - in this case the Russian Federation with its state owned gas firm Gazprom. Therefore, in order to prove the hypothesis of this paper, it is necessary to analyse how the Finnish LNG terminal and Balticconnector will influence the Baltic countries sensitivity, as well as to see if Russia will make concessions in order to keep its position in the Baltic gas market.

When tackling the issue of interdependence in the Baltic region between the Russian Federation and the three Baltic states it is necessary to focus on energy relations. As the theory of interdependence has been used in international political economy for some time now, linking the theory with Baltic-Russian energy relations is viable (Casier 2011: 497). Also for the sake of clarity, when applying the theory to the Baltic region, the three Baltic states will be viewed as a homogenous group, although granted, there are some differences in energy policies between Estonia Latvia and Lithuania.

Therefore in later analysis each state is examined individually to assess the effects that the LNG terminal and Balticconnector will have on the Baltic states' negative interdependence with the Russian Federation.

In order to apply the interdependence theory and to identify negative interdependence it is necessary to view the relationship between the Baltic states and the Russian Federation from both sides. In terms of the Baltic states the interrelation between the Russian Federation is straightforward – Russia is a giant economy, which supplies about 25-30% of total European Union oil and gas consumption and serves as an important motor for the economic growth (Molis 2011: 25). This and the fact that Russia is the sole provider of natural gas to the Baltics makes keeping the interrelation a necessity. Such strong dependence from one partner could rule out interdependence entirely but because the Baltic states were in a position of tight interdependence during the Soviet times, the Russian Federation has not lost interest in the three little gas markets that are the Baltic states.

It is difficult to imagine what three Baltic states could offer the Russian federation that would be of any significant relevance. In order for interdependence to apply, there needs to be mutual interest and exchanges of roughly equivalent value - be it symmetrical or asymmetrical. Otherwise the relationship would be mere dependency.

Gazprom is a joint-stock company, where the state is the controlling stake-holder, making it a national gas company. It is Russia's largest taxpayer and the largest company constituting about 10% of the country's yearly economic activity (Grigas 2012: 31). Therefore it is not far-fetched to assume, that Gazprom's investments are an emanation of the Russian Federation's strategy. In terms of investment strategy, Gazprom has openly stated that the Baltic states constitute one of the most important regions that the company targets (Gazprom 2004). Although these interests must be more politically driven since in 2011 the Baltic gas markets accounted for less than 3,2% of the volume of Gazprom's sales to Europe (Grigas 2012: 32). The fact that the Baltic states' gas market is of interest for direct investment is demonstrated by Russian involvement in the national gas companies and gas-powered plants such as KHPP, as well as the presence in the region of Russian companies such as Itera (Grigas 2012: 31).

Russia's involvement in the Baltic states' affairs is nothing new and because the proximity of all four states, relations (in this case energy relations) will always be

somewhat intertwined. Russia's energy policies focus among other issues on the expansion into the energy sectors of neighbouring states, often through acquisition of downstream assets – Gazprom has made aggressive bids for Baltic national gas distributors during the past two decades (Grigas 2012: 30). Due to this slow-paced acquisition, Gazprom has established ties to the Baltic gas distribution companies, which makes Gazprom also a significant player on downstream Baltic and EU gas markets (Grigas 2012: 32).

In the electricity sector Estonia's, Latvia's and Lithuania's grids are all linked to the post-Soviet, Eastern system and in the gas sector, all three countries have no option other than to import gas exclusively from Gazprom (Molis 2011: 5) – this puts the Baltic states into a situation, where they appeal to the Russian Federation as a cost-effective partner due to the fact that all necessary infrastructure is already in place.

The problem with being completely dependent on one country for gas supply is that it puts the non-dominant agent into a position where it can be strong-armed to make political or economic decisions which suit the dominant partner. The Kremlin has not hesitated to use energy as a tool of state's geopolitical influence especially in the former Soviet republics (Grigas 2012: 29). The factor of energy security is prevalent as long as the Baltic states can find an alternative to counter Russia's dominance in the Baltic gas market. On a smaller scale, an emergency alternative can be seen in the Inčukalns Underground Gas Storage in Latvia, which is the only significant storage facility in the region, serving primarily Latvia but also Lithuania, Estonia, and northwest Russia in the winter period (Spruds 2009: 228).

The Russian Federation's reliance on Lithuania for gas transit to Kaliningrad is a fine example of dependence, something that Lithuania has used in the past to negotiate gas prices with Russia (Drezner 1999: 217). Although Estonia is not considered to be a transit state for Russia the economic contacts have been considerable. Thanks to the openness of Estonia's economy, Russia has been able to use the railroads and ports of Estonia for the transit of energy carriers to Europe, even during times when access of Estonian goods to Russian market was restricted with high customs duties (Mäe 2006: 94). The fact that Estonia (also Latvia and Lithuania) are connected with Russia's energy systems is a reason for Russia's companies to get as much of the transit chain under their control as possible (Mäe 2006: 94). Therefore, the Baltic states might not be

the biggest transit states for Russia, but acquiring some transit chains in the Baltics may facilitate Russia's presence in the West.

The centralised gas sector in Russia and the attitude of the highest Russian officials towards energy affairs indicate that the politicisation of energy affairs will not cease in the foreseeable future (Molis 2011: 5). Although the Baltic countries' energy sector does not serve as a profitable venture (moneywise) for the Russian Federation, but in terms of solidifying its presence in the region and securing access to the transit systems of the Baltics, it is important for Russia to keep interrelations relevant and strong.

According to the research paper by Arunas Molis (2011) for the Institute für Europäische Politik, there are four main reasons why the Baltic region is the non-dominant partner in the Russian-Baltic asymmetrical energy interrelations.

1. Dependency on a single supplier
2. Absence of energy interconnections with the energy systems of Northern and Western Europe
3. Slow growth of renewable energy consumption
4. Low energy efficiency

All three Baltic countries are 100% dependent on Russia for its natural gas exports. This places these countries into a difficult position, where their energy security is severely compromised. According to the national statistics agencies of all three Baltic states, natural consumption in the year 2013 was as follows: Estonia – 678 million m³, Latvia – 1698 million m³, Lithuania – 2599 million m³.¹ The fact that the three Baltic states amounted to only 1% of Gazprom's 495,6 billion cubic meters of natural gas sold in 2010 (Pakalkaite 2012: 4) and Gazprom being almost the sole supplier of natural gas to the Baltic states, makes the Baltic region a very dependent region. This dependency is alleviated with the aforementioned interests of the Russian Federation in the Baltic region as well as due to the competitive character of gas supply. Despite the small size of the Baltic energy markets, Russia has increasingly understood the potential economic competition in the region and as a result Russia has provided 15% discounts for its natural gas deliveries to both Estonia and Latvia for 2011 (Koranyi & Spruds 2011: 5).

¹ Eesti Statistika, Latvijas Statistika, Lietuvos Statistikos Departamentas

Currently there is physically no gas pipeline uniting the Baltic states with Western or Northern Europe. As result of the Baltic region not being integrated to the Western gas market, the three countries are in further disadvantage due to the fact that Europe is moving toward hub-based prices. The Baltic countries are not connected to European gas markets and are not close to any hubs that would allow them access to gas at competitive market prices (Grigas 2012: 13). Therefore, as Koranyi and Spruds have stated in their work “Natural Gas and Energy Security in the Visegrad and the Baltic States” (2011) – limited infrastructure, supply and market liquidity have placed the Baltic countries, especially Latvia and Lithuania, high in the so-called vulnerability indexes. The lack of interconnections with Western Europe and the Russian Federation being the single gas provider in the region puts the Baltic states in a position, where they are vulnerable to unilateral gas-price changes. Even more so due to the fact that Gazprom has a stake in the form of shares in the local transmission system operations, which themselves hold dominant or near dominant positions in transmission, distribution and supply businesses in Estonia, Latvia and Lithuania (Pakalkaite 2012: 8). This position, where the Baltic countries are basically gas-islands in Eastern Europe solely dependent on the Russian Federation, is making the interconnectedness draw out to be rather asymmetrical. Therefore such an asymmetrical energy relation has put the Baltic countries into a predicament, where they face the challenges of liberalizing their gas-markets and finding potential gas-to-gas competition, which would make the sector and prices more competitive (Koranyi & Spruds 2011: 6).

The third and fourth point of Arunas Molis’ argumentation, why the Baltic countries are in an asymmetrical energy relation with the Russian Federation, is that the Baltics have slow growth of renewable energy consumption and low energy efficiency as well. According to the European Union’s energy portal (2009), it is expected that by 2020 the share of renewable energy resources in final energy consumption will be 23% in Lithuania, 25% in Estonia and 42% in Latvia. Although it is speculated that this prognosis is highly unlikely due to the high cost of renewable technologies, the lack of stable financial support system, little technological experience and an unsettled legal base (Piebalgs 2007: 8). Having a bigger share of renewable energy resources would give the Baltic states a local alternative to the current gas-situation. Although having alternative energy resources is not everything – the Baltic countries are facing a situation, where they struggle with low energy efficiency in buildings, transport sector and district

heating systems. Albeit, this energy inefficiency somewhat stems from the use of out-of-date Soviet technologies - insufficient investment and weak savings culture, as well as relatively low prices (compared to Western Europe), have discouraged more responsible consumer behaviour (Piebalgs 2007: 8)

The asymmetries in energy relations between the Baltic states and the Russian Federation are evident – one partner is more dependent on the other, whilst the latter has an option to strong-arm. The “negative” aspect of this interrelation comes to light with the fact that the Baltic countries are planned to be linked with an alternative source of gas via LNG terminal and Balticconnector. This is a good example of how strong asymmetry can deter one partner from the interdependency. In the case of the Russian Federation, the negative aspect of the interdependence is brought to light with the fact that Russia has for decades now pursued its energy policies around its former Soviet states. Agnia Grigas has stated in her work “The Gas Relationship between the Baltic states and Russia” (2012: 29), that Russian energy politics and policies can be displayed as a three pronged strategy, and one of the aspects of Russia’s energy policy is the re-orientation of energy transit to Europe away from old routes via former Soviet and Socialist European states, to new and more direct routes through Russian territory and ports, for example, Moscow is pursuing a strategy of making gas supply to Kaliningrad independent from transit through Lithuania.

Thus taking into account the previous facts about the interrelation between the Baltic states and the Russian Federation, it is fair to apply negative asymmetrical interdependence to the Baltic-Russian energy relations. The theory can explain (and even predict) the behaviour of said agents, therefore after the analysis of the temporal case study and with the aid of the theory of interdependence, an objective answer can be given to the research question of this paper.

3. Energy relations between the Russian Federation and the Baltic states

The Baltic states to this date rely on the Russian Federation for natural gas, all three are connected with Russia via multiple gas pipelines. These pipelines were built during the Soviet era and they serve their purpose even today. The Baltic region has not seen any

interconnections with Western Europe, as it seems that given the cost and the difficulty of achieving alternative gas supply routes to the Baltic countries, Russian gas has remained the only economic solution to date (Grigas 2012: 34). Whilst the Baltics are intertwined with Russia gas-wise, it is important to note that the Baltic countries do not form a homogenous region in terms of supply patterns. Each country has vastly different consumption rates due to population differences and industry sizes. Therefore, in order to establish an objective foundation for the case study – all three Baltic states’ natural gas import from Russia will be displayed in a five year period. Furthermore, it is important to note the current gas infrastructure (pipelines) and their capacity in order to determine the effect that the Finnish LNG terminal and Balticconnector will have on the Baltic region.

3.1 Estonia

Estonia compared to Latvia or Lithuania is relatively self-sufficient in terms of energy dependence. Natural gas accounts for slightly more than 10% of the Estonia’s primary energy balance. Estonia has achieved its relative independence from energy imports due to the countries attempts to promote its oil shale production (Koranyi & Spruds 2011: 5). Although natural gas makes up a small sector in Estonia’s energy balance, it is still vitally important for industry and thousands of households which rely on gas heating. According to the International Energy Agency (IEA), more than half of Estonian gas consumption is used in the transformation sector, primarily for heat generation, although the use of natural gas for electricity generation is extremely modest, at around 2% of total gas consumption (Energy Supply Security 2014: 165). Estonia (as does Lithuania) imports gas only from the Russian state gas company Gazprom. During the heating-period from May to October, Estonia is supplied with gas directly from Russia – from November to April, gas is supplied from Incukalns underground storage facility in Latvia (Energy Supply Security 2014: 165).

Estonia’s natural gas demand has varied during the last five years, mostly dependant on how cold the winter season has been or how the gas-dependent industry is fairing. In order to determine the gas-import norm from Russia it is necessary to portray the natural gas import trend on a bigger scale than one or two years. The following table shows Estonia’s natural gas import scale on a 12 year timescale - all volumes are

displayed as million cm³ (mcm). According to Statistics Estonia², the 2013 natural gas import volume was 678 mcm.

Period	Gas import, Eesti Gaas AS, million m ³	Gas import, AS Nitrofert, million m ³	Gas import total, million m ³
2001	789	76	865
2002	694	48	743
2003	741	106	847
2004	753	213	966
2005	780	216	997
2006	793	215	1 009
2007	796	207	1 003
2008	747	215	962
2009	634	20	653
2010	701	0	701
2011	632	0	632
2012	658	21	679

Graph 2. Estonia's natural gas import from Russia. Source: Estonian Electricity and Gas Market 2012 – Annual Report to the European Commission

Estonian natural gas import has remained relatively the same in the past few years, although there was a spike in the import trend between the years 2006 and 2007. The median based on 10 years of natural gas import is 838, 1 mcm. Estonia currently relies on three interconnections of gas pipelines – two with Russia and one with Latvia. The gas network in Estonia is 2, 314 km long, 878 km is used for transmission and 1,436km for gas distribution. The first station, which is interlinked directly with the Russian Federation – Värskä gas-metering station, is able to transmit about 4 million cm³ a day. The second pipeline link with Russia is in Narva, but this station is usually closed due to limits in maximum pressure on the Estonian border – it can be used only by special agreement with Gazprom and its maximum capacity is around 3 million cm³. (Energy Supply Security 2014: 167). Lastly, there is a gas pipeline connection with Latvia via Karksi station, which is able at maximum capacity to transfer 7 million m³ a day. Thus, Estonia's natural gas inflow at maximum capacity (not including Narva station) is 11 million m³ a day (Pakalkaite 2012: 7).

² Eesti Statistikaamet

3.2 Latvia

The Latvian Republic, like Estonia, does not have its own natural gas resources and all gas is imported from the Russian Federation. Natural gas plays an important role in Latvia's transformation sector in producing heat and electricity – overall, the share of natural gas as fuel in cogeneration plants is 93% and in heating plants, over 62% (Āboltiņš 2014: 8). Latvia, in terms of overall energy dependency, is in a weaker position than Estonia. The 2014 European Commission country report (2014:132) states that although Latvia's renewable energy consumption (mainly hydropower and biomass) compared to Estonia or Lithuania is the highest, around 35,8% of gross energy consumption. Albeit, this is a good factor, being almost twice as high as the EU average, Latvia's natural gas share in energy consumption is 30%. Latvia and Estonia share the same position, where there are no alternative suppliers or supply routes – the only interconnections (apart from Russia) are with Estonia and Lithuania.

Latvia, unlike Lithuania or Estonia, has an underground storage facility for natural gas in Incukalns. This storage system has the capacity to temporarily supply Estonia, Latvia and Lithuania for a few months. The highest capacity of the Incukalns Underground Storage Facility is 4,47 billion m³, of which 2,32 billion is active, or regularly extracted natural gas (Latvijas Gaze 2015). It is estimated that the active natural gas share in the storage facility can be increased to around 3,2 billion m³. This means that Latvia can actively extract natural gas for the Baltics and even Finland when necessary. The underground storage facility gives the Baltic countries some sense of energy security, but it is not a solution – all gas stored in the facility is still imported from the Russian Federation. In order to have a basis for later analysis of the Finnish LNG's effects on the Baltic countries, it is important to display the total annual gas imports from Russia. In the case of Latvia, imports vary mostly due to how much natural gas is left in the storage facility. The following table is based on information located on the Latvian Statistics Agency's website, all volumes are displayed as million cm³ (mcm).

Graph 3. Latvia's natural gas import from Russia. Based on information on Latvian Statistics Agency

	2006	2007	2008	2009	2010	2011	2012	2013
Natural Gas Import	1909	1645	1368	1742	1125	1755	1717	1698

Latvia's gas import (consumption as well) is considerably higher than Estonia's. Population differences and industry sizes are one factor, but Latvia unlike other Baltic countries has the untitled responsibility to store emergency gas in its storage facility. Latvia also sells gas from its wares during the heating season to both Latvia and Estonia. According to a statement by Latvijas Gas (2015) – Latvia is responsible for the injection of natural gas into the storage facility in the summer season to be able to supply Latvia, Estonia, north-western Russia, and Lithuania during the heating season. Latvia can by itself supply all three Baltic states with gas, because at maximum withdrawal the Incukalns Underground Storage facility can dispense 24 million cubic meters per day (Pakalkaite 2012:8). The Baltic countries consume annually nearly 5 billion m³ gas, therefore currently Latvia could cover their needs for a few months until the crisis would be resolved (Grigas 2012:10).

Latvia's natural gas pipelines are interconnected with Estonia, Lithuania and Russia. According to the European Commission country report (2014:138), in 2012, the total consumption of natural gas in Latvia represented about 43% of transmission capacity, which means that the gas delivery system is never over-loaded and can ensure a stable supply. Therefore, currently when Latvia is dependent on one gas supply entity and its infrastructure is at half the maximum capacity, it is possible that adding another supplier to the equation will not require any significant changes to gas pipeline infrastructure. The Estonian-Latvian interconnection in Karksi is bi-directional and can transfer 7 million cubic meters a day (mcm). The interconnection with Russia is in Korneti and is also bi-directional, although from Russia to Latvia it can supply 19 mcm a day, whereas in other direction only 13 mcm a day. Lastly there is the pipeline connection with Lithuania at Kiemenai, which can supply in both directions of about 5,2 mcm of natural gas a day (Pakalkaite 2012:7). The total capacity of natural gas supply to Latvia (taking into account that Russia is the only provider) is 19 million cubic meters a day, which compared to Estonia is 8 mcm a day more.

3.3 Lithuania

Lithuania is the biggest of the three Baltic countries, as well as with the largest population - more than twice of Estonia's. Therefore it is safe to assume that Lithuania's gas demand is also the highest. According to the European Commission's 2014 country report (2014:140), Lithuania's national gross energy consumption was based largely on

natural gas (37%) and oil (35%). Lithuania, like Estonia and Latvia, does not have natural gas resources of its own. Lithuania has a single gas interconnection with the Russian Federation, this pipeline runs through Belarus and via this line Lithuania imports most of its natural gas needs. Lithuania, unlike Estonia and Latvia, has a liberalised gas market, which means that customers are able to choose among gas suppliers – currently there are eight gas supply companies – this local competition is somewhat reflected on Lithuanian gas prices. The following table is based on information on Lithuania’s Official Statistics Portal and all volumes are displayed as million cm³ (mcm).

	2006	2007	2008	2009	2010	2011	2012	2013
Natural Gas Import	2976	3570	2999	2627	2981	3270	3078	2599

Graph 4. Lithuania’s natural gas import from Russia via Belarus. Based on information on Lithuania’s Official Statistics Portal

It is clear that the total natural gas import in Lithuania exceeds that of Estonia and Latvia even when combined. Lithuania has turned from a regional nuclear power into a largely gas consuming country all the while trying to address its energy security issues by the development of the Klaipeda liquefied natural gas floating storage and regasification unit terminal (Koranyi & Spruds 2011: 5). The floating LNG storage and regasification terminal started commercial operations on January 1st, 2015 (Gyurics 2015). With the completion of this facility, Lithuania became the first country in the Baltics to be able to import natural gas from alternative resources. According to an article by Klaipedos Nafta (2014), which is the operating firm behind the operation, 500 million cubic meters of gas are expected to be regasified during the first year of operation. Taking into account that Lithuania’s natural gas import in 2013 accounted to 2599 million cubic meters, then it becomes evident that currently the Klaipedos LNG facility is not having a strong effect on the gas dependence from Russia.

The floating LNG storage and regasification unit can at maximum capacity distribute around 4 billion cubic meters of natural gas a year, although it is limited to 2 billion cubic meters due to limitation in pipeline capacities between Latvia’s underground storage facility and Lithuania (Sytas & Adomaitis 2014). Furthermore, its operating

capacity is further halved due to a contract with Statoil, which obligates the oil-company to supply the Klaipėdos LNG facility with the minimum volume of liquid natural gas required for operation (Seputyte 2014). Although the terminal might work at minimal capacity, it is a start in balancing the asymmetrical energy relations between the Russian Federation and the Baltic states. In May 2014 Lithuania and Russia were undergoing gas price negotiations, which turned out to be a turning point in Lithuania's gas-dependency with Russia. The Russian supplier, Gazprom, agreed to reduce the gas price from the start of the year (2015) by more than 20% and Lithuanian officials say that this was prompted by the prospects of LNG imports (Sytas & Adomaitis 2014). This is an example where asymmetries are reduced and parties which beforehand were in a negative asymmetrical interdependency will find new possibilities to continue working together. In light of such behaviour, it is relatively safe to assume similar behaviour in case of the Finnish LNG terminal and Balticconnector.

4. The capacity of the envisioned LNG terminal and Balticconnector

The Baltic countries (with the exception of Lithuania) and Finland are undergoing multiple projects that will alleviate their current 100 percent natural gas dependence on the Russian Federation. Despite Gazprom's reluctance, hub-trading of natural gas is now expanding eastward (Bryza&Tuohy 2013: 5). According to a report by the International Centre for Defence Studies, governments in the Baltic region are working together with the European Commission in order to integrate the region's energy infrastructure with the rest of Europe by setting in place a regional gas supply, storage and transportation infrastructure separate from the Russian Federation. It is important to note that the project of linking the planned Finnish LNG terminal with the Balticconnector to Estonia (and Latvia) is only one of many envisaged plans in order to reduce energy dependency in the region. Matthew J. Bryza and Emmet C. Tuohy state in their report "Connecting the Baltic States to Europe's Gas Market", that the Baltic region includes three specific projects:

- The Gas Interconnection Poland-Lithuania (GIPL) pipeline project to help the Baltic states diversify their sources of natural gas supply

- Modernization, expansion, and ownership restructuring of the Inčukalns gas storage facility in Latvia and its pipeline connection to Estonia to eliminate Gazprom's ability to restrict the free flow of gas throughout the region; and
- An LNG terminal with a subsea pipeline connection to Estonia, which will diversify regional gas supplies and establish a large enough regional market to facilitate spot trading

This paper focuses solely on the plan of the Finnish LNG terminal and Balticconnector and their effects on the current negative asymmetrical interdependence in energy relations with the Russian Federation. Therefore in this chapter, technical capabilities of the LNG terminal and Balticconnector will be introduced in order to later analyse how the envisaged projects will alleviate the current asymmetries in energy relations.

4.1 The Finnish LNG terminal

The prospect of an LNG terminal in the Baltic region has been circulating in the governments of Finland, Estonia and Latvia since Gazprom cut off gas in January 2006 to Ukraine, the country through which Russia sends 80% of its exports to the European Union (Bryza & Tuohy 2013). Currently the proposed LNG terminal would supply Finland, Estonia, Latvia and through the Latvian Underground Storage facility Lithuania. The idea behind the terminal is not to eradicate Russia's gas imports to the region but to supply the countries with ample supply of natural gas to alleviate their 100% gas dependence. The additional gas inflow would serve as leverage in future gas-price negotiation with the Russian Federation as well as better the region's energy security. The optimal size of the said LNG terminal, as determined by a report done for the European Commission Directorate-General for Energy by Booz & Company, is defined by the utilized capacity and the effects it would have on seasonal modulation and the utilization of long-term gas contracts coming from other sources, such the Russian Federation.

According to the report "Natural gas pipeline between Finland and Estonia" (2014:83) – the LNG terminal concept includes a full-scale land-based LNG import facility, which located in Joddböle, Inkoo. The proposed LNG import terminal consists of a) LNG offloading facilities, b) LNG storage and c) a LNG vaporization and gas conditioning unit that connects with the onshore gas grid. The total output of the facility is expected

to be a minimum of 2 billion m³ of gas per year, although according to the report for the European Commission Directorate-General for Energy (2012:49) the maximum capacity could vary between 4-8 billion m³ of gas a year. The study also points out that utilizing the maximum capacity would not be optimal due to limitations in gas pipeline infrastructure, therefore the capacity is determined by its effects on seasonal demand needs (Booz & Company 2012: 48).

The idea of building a land-based LNG terminal has gained the attention of all three Baltic states and Finland. According to an energy policy report compiled by Agnia Grigas there are currently plans for a regional land-based terminal to meet the needs of the Baltic states and Finland (Grigas 2013: 80). According to Booz & Company’s analysis of costs and benefits of regional Liquefied Natural Gas solution in the East-Baltic area, the envisaged terminal should have a capacity of 4 billion cubic meters of gas a year (bcm/y) in order to expand supply options and to achieve security of supply (Booz & Company 2012: 5). According to the same report the minimum requirement for a LNG terminal for seasonal modulation is 2.5 bcm/y in the base case and 6 bcm/y in the high case. Although the recommended size for supply diversification and to have the possibility to supply the Baltic region with ample volumes of gas in times of peak demand is 4 billion cubic meters of gas a year (Booz & Company 2012: 68).

Country \ Year	2010 (Bcm/y)	2015 (Bcm/y)	2020 (Bcm/y)	2025 (Bcm/y)	2030 (Bcm/y)
Finland	4.8	4.8	4.8	5.0	5.0
Estonia	0.7	0.9	0.9	0.9	0.9
Latvia	1.7	1.9	2.0	2.1	2.1
Lithuania	3.1	3.3	3.2	2.9	2.9
Total	10.3	10.9	10.7	10.9	10.9

Graph 5. Projected base case demand for natural gas. Source: Booz & Company 2012 LNG Baltic Area Report

The previous table shows the base case demand in the Baltic region (including Finland) up to the year 2030. This is a basis on how to determine the natural gas needs of the area and by which an accurate assessment can be given to the viable size of the envisaged LNG terminal. In this case, only the base case demand has been taken into account and

therefore by the analysis of Booz and Company done for the European Commission Directorate-General for Energy the following is to be expected of the project:

Base case demand & 4 Bcm LNG:

- Russia could keep its dominant position, although fully exploiting LNG capacity it could be reduced up to 40%;
- Supply contracts would be utilized at the minimum quantity intake leaving enough flexibility in case of harsh winters;
- An LNG of 2.5 Bcm/y is the minimum size to cover seasonal modulation of the whole region.

Booz and Company's analysis undertook a simulation in which it was determined that in a base case demand the terminal will still be utilized at around 50% of its capacity and Russian gas contracts might be utilized at minimum quantity intake – the remaining LNG capacity could provide flexibility in order to respond to sudden high-peak demands (Booz & Company 2012: 6). According to the study of Booz and Company, the Inkoo project location, as currently proposed has a daily capacity of 19,2 mcm/d³ of which 7,2 mcm/d could be dedicated to serve Estonia, Latvia and Lithuania (Booz & Company 2012: 7).

4.2 Balticconnector

The Balticconnector is a planned natural gas pipeline connecting Inkoo, Finland with Paldiski, Estonia. The length of the offshore pipeline is about 81 kilometres and it is estimated to have a lifespan of about 30-50 years (Ramboll 2014: 5-6). According to the study by Matthew J. Bryza and Emmet C. Tuohy, the Balticconnector link to Finland is crucial to the commercial viability of any LNG terminal in the Baltic region (Bryza & Tuohy 2013: 9). It is necessary to take into account the natural gas demand of the Baltic countries separately, so for example Estonia with its modest natural gas demand of 0,7 bcm is too small of a market to ensure commercial viability of an LNG terminal alone. This remains true even if Estonia is connected to the markets of Latvia and Lithuania, where demands total only 4,8 bcm (Bryza & Tuohy 2013: 9). Therefore, if an LNG terminal is built in the region, it is necessary for it to be in a viable location in order to fully utilize its technical capacity. According to this logic, the LNG terminal should be

³ Million cubic meters a day

linked to the biggest regional market, which is Finland with a demand of 5 bcm a year and further link the terminal with the Baltic region due to which the combined market would be around 10 bcm a year. Hence, the Balticconnector would become a “sister project” to the Finnish LNG terminal that would grant security of supply to Estonia and would enable the supply diversification to the Baltic region (Booz & Company 2012: 7).

The idea of the Balticconnector is to connect the Baltic and Finnish gas grids to enable two-way gas flows between Finland and Estonia and further connect the entire Baltic region (Grigas 2013: 78). According to a report by the consulting firm Ramboll, the technical aspect of the Balticconnector capacity wise is around 2 – 2,4 bcm/year (2014: 5). The offshore pipeline will be equipped with a compress station at both ends to allow bi-directional flow, with the operational injection capacity of 7,2 million cubic meters of gas a day (Ramboll 2014: 5). The Balticconnector gas transmission system will ultimately consist of a single pipeline extending from the Incukalns gas storage facility in Latvia, through Latvia and Estonia to the Paldiski landfall point where an offshore pipeline will be routed to a landfall at Inkoo (Gasum 2011: 2).

5. Impact of the envisioned projects on the asymmetrical energy relations in the Baltic region

An analysis of the effects, which are brought upon the region by the Finnish LNG terminal and Balticconnector, is a viable method to determine the evolution of the current negative asymmetrical interdependence in energy relation between the Baltic countries and the Russian Federation. The current situation of the Baltic states has been explained beforehand, but in this chapter the impact of the envisioned projects on the asymmetrical energy relations will be analysed. It is necessary to determine how much influence these projects will have on the Baltic region’s natural gas demand and how it will shape the region’s negative interrelations with Russia.

The gas markets of Lithuania, Latvia and Estonia will be integrated with the market of Finland by the Balticconnector. This will improve the market feasibility considerably

for the LNG terminal. From a location point of view, Finland benefits from having the largest home market, as well as the relative closeness to the Latvian gas storage and the growing Lithuanian market (Ramboll 2010: 29). Currently the Baltic countries import all their natural gas from the Russian Federation, with the exception of Lithuania, which has been operational at minimum commercial capacity from January 2015 (Gyurics 2015). In order to assess the influx of natural gas that the Finnish LNG terminal can supply, it is necessary to point out the infrastructure capacities which link the Baltic countries. First of all, the LNG terminal with an output capacity of 19,2 million cubic meters of gas a day of which 7,2 mcm/d would be available to the Estonian, Latvian and Lithuanian markets (Booz & Company 2012: 7). The 7,2 mcm/d is linked with the Balticconnector's maximum daily technical capacity, annually the pipeline is able to supply the region with 2-2,4 bcm. Therefore the Baltic countries can be a subject of 7,2 mcm/d, which can completely supply Estonia's and Latvia's average daily natural gas demands. Currently, when taking into account Booz & Company's 2012 base-case natural gas demands, then Estonia's daily gas consumption would be approximately 1,9 million cubic meters a day and Latvia's 4,6 mcm/d (these figures are achieved when the annual consumption is divided by the average of total days in a year). This would make a total of 6,5 million cubic meters of gas a day for the two countries, leaving a 0,7 mcm for either the Incukalns underground storage facility or to be supplied to Lithuania in addition to its own LNG terminal's gas supply. Another factor which must be taken into account is the capacity of already existing pipelines linking Estonia, Latvia and Lithuania. In a previous chapter pipeline infrastructure technical specifications were mentioned and the current Estonian-Latvian bidirectional cross-point is able to transfer 7 million cubic meters of gas a day. Therefore it is not possible to directly route the natural gas from the LNG terminal to the Incukalns storage facility at maximum capacity, but it is necessary to control the flow or direct some of the gas directly to the Estonian market. The Incukalns underground storage facility, at current capacity of 3,2 bcm, is able to store the natural gas from the LNG terminal and as such, is able to resupply the area in times of peak demand. When Incukalns facility is fully stocked it is completely able to answer to Estonia's and Latvia's gas demands combined (which would amount to around 2,6 bcm annually). The surplus is a valid addition to Lithuania's existing LNG supply and imports from Russia.

The idea of the Finnish LNG terminal is not to eliminate the Russian Federation's

participation in the Baltic countries' gas market but to diversify the market. As stated in a report done by Pöyry Management Consulting for Elering – “Liberalisation of the Estonian Gas Market” (2011:69) – the purpose of this terminal is to provide a means of diversification and security of supply for the entire region, this means the LNG terminal will require a capacity of at least 2.5bcm/a, which could apply approximately 25% of regional demand. In the same report it is concluded that Russian gas imports will remain price competitive with imported LNG due to ample capacity in existing pipelines, so therefore it is unlikely that the envisioned LNG terminal would replace all Russian imports (Pöyry 2011: 69).

According to the report compiled by Pöyry Management Consulting, the presence of a LNG terminal will put the Baltic region in a better position to negotiate lower gas prices with Gazprom - this will result in lower gas prices for end-users and allow Estonia to buy higher gas volumes (Pöyry 2011:46). Similarly, Ramboll's report for Balti Gaas, stated that a new LNG terminal would give Estonia and the Baltic countries access to the world gas markets and thus to cheaper gas (Ramboll 2010: 22). This is supported by the fact that the Lithuanian floating LNG terminal gave Lithuanian officials somewhat of an edge in new gas-price negotiations because at the start of the year 2015 the Russian supplier, Gazprom, agreed to reduce the gas price by more than 20% and Lithuanian officials say that this was prompted by the prospects of LNG imports (Sytas & Adomaitis 2014). Furthermore, having several suppliers gives an option of switching contracts, which is particularly important for small and medium-sized enterprises as well as for domestic customers who are normally offered standard contractual terms and conditions by suppliers and are not able to negotiate their contracts on an individual basis. Therefore the ability to choose between alternative tariffs (offered by competing suppliers) is essential to the development of competition in these markets (Pöyry 2011: 121).

In terms on how these envisioned projects will alleviate the current energy relations between the Baltic region and the Russian Federation, it is important to take into account Russia's gas import relevance alongside the LNG terminal. The three Baltic countries total gas import from the Russian Federation in the year 2013 was in round figures 5 billion cubic meters. This means that the annual inflow of gas from the Finnish LNG terminal through the Balticconnector will contribute with maximum 2,4 bcm

annually. Therefore, when assuming that 5 bcm is completely imported from Russia, then the additional 2,4 bcm from Finland would reduce Russian share in the Baltic region's gas market to around 52%. It is important to note that it is highly unlikely that the Finnish LNG terminal would work constantly at maximum capacity, therefore it is more likely to assume that the terminal will only account for seasonal modulation and supply diversification. The Russian Federation gas dominance in the region will prevail, even with the Finnish LNG terminal, although this project (with the Balticconnector) will liberalise the Baltic gas market to the point where gas-price negotiations with Gazprom will no longer be unilateral. The region's sensitivity will be reduced, which by the terms of the interdependence theory means, that the cooperating agents will more willingly partake in their interrelations. The sense of energy security will prompt the Baltic countries to work more confidently with Russia, which means that the current negative interrelation will render to a positive reciprocal interrelation. Although asymmetries in energy relations will remain, the Finnish LNG terminal and Balticconnector will severely reduce the current 100% dependence on Russian gas. The fact that the Baltic region will have an emergency supply of natural gas will make the current situation where the Russian Federation is able to strong-arm decision-making in the region or have significant political leverage, obsolete.

Another factor, which must be implemented into this analysis, is the correlation between economic cost and political advantages which the current LNG-Balticconnector projects pose to the Baltic region. Due to the fact the Baltic gas market is small, around 5bcm annually (10bcm with Finland), it is difficult to make infrastructure projects profitable (and inviting for investors) because economic risk is inherent in such large scale projects such as the LNG terminal and Balticconnector. It is important to determine if the political advantage these envisioned projects' pose is enough to be worth the market risks that they create. It is clear that the current envisioned LNG terminal would create a hub-based trading region, which means that natural gas is imported from various sources. Therefore it is important to note that hub trading creates a context of anonymous gas trading, where origins of gas become opaque the economic risks involved are increased, although the political risks are reduced due to having multiple gas suppliers (Belyi 2013: 4). Irina Kustova has stated in her article "Bridging the Energy Islands", that since the Baltic States and Finland gas market accounts for modest 10 bcm/year, and "the market alone does not offer a good

return on investment”, it is essential to link these countries to the EU energy market partially at costs of the EU in order to guarantee diverse supplies (Kustova 2014). Therefore, for the sake of posterity it is important begin with projects that will connect the Baltic “gas islands” with the West because a development of diversified infrastructure allows for an opportunity to negotiate allegedly politically motivated gas pricing from Gazprom (Kustova 2014). Lithuania has set an example of how the LNG terminal would affect Russian-Baltic cooperation in terms of gas relations, according to a report by Emma McAleavy Lithuania’s LNG import terminal has enabled the country to reduce the price paid to Gazprom from US\$465/1000 m³ to US\$359/1000 m³, after negotiations in May 2014 (McAleacy 2015). This is a good example of behaviour when a partner feels vulnerable. In this case, Russia strives to keep its position in Lithuania’s gas market, even though the latter has invested in an alternative gas supply option. When making conclusions about the effects of the envisioned projects, it is important take into account this instance – the Russian Federation understands its position in the Baltic gas market and is not willing to lose its dominant stance, therefore we can presume that reducing factors to the Russian gas supply will prompt Russia to negotiate the conditions of the region’s gas contracts.

As far as the economic risk goes with the envisioned projects, the LNG terminal is supposed to be sold to the investors which would insure a pay pack of the investment costs. This signals that the shippers who privatize the terminal will be willing to internalize their expenses into the price (Belyi 2013: 3). This would create an uncertain future for the economic attractiveness of the LNG market in the region. The European Commission has also stated that the small gas market of the Baltic states is commercially unattractive for private investments, therefore, EU support is needed for the completion of the EU Internal Gas Market (Kustova 2014). Presently the Commission has ordered a feasibility study to determine the most suitable location for the Baltic region’s LNG terminal, which determined it to be either Finland or Estonia. This has lead CEF (Connecting Europe Facility) to cover up to 50% of funds, because EU funding has been recognized as viable boost for the development of infrastructure - to attract private investments and to secure project risks (Kustova 2014). Therefore, although there are economic risks when investing to hub trading LNG terminal in region with a small natural gas demand per annum, it is important for the European solidarity

to incorporate the Baltic “gas islands” to the Western gas grid and to reinforce the region’s energy security.

Conclusion

The main purpose of this paper was to assess the current negative energy interrelations between the Russian Federation and the Baltic states and to analyse the impact that the envisioned Finnish LNG terminal and Balticconnector would have on the region. The main question of the thesis was if and how the Balticconnector and the Finnish LNG terminal will have an impact on the current negative interdependence in Russian-Baltic interrelations. In order to achieve an objective answer to something that has not been built yet, it was necessary to have the most accurate base statistics in order to compare them with several research papers, which have been compiled to give an assessment to the LNG terminal and Balticconnector.

Firstly, it was necessary to set a theoretical framework, which works well with asymmetrical energy interrelations. Therefore, in this paper, the theory of interdependence was accompanied with the characteristics of “negative” and “asymmetrical” interdependence. This was done in order to better predict the impact of the envisaged projects on the Baltic region’s energy relations with the Russian Federation. The central thought of this thesis stems from Joseph Nye (2011): “being less dependent can be a source of power. If two parties are interdependent but one is less dependent than the other, the less dependent party has a source of power as long as both value the interdependent relationship.” The theory of negative asymmetrical interdependence in energy relations was applied to the Baltic region which in essence explains the current behaviour of agents who strive for different goals in their energy policies.

Secondly, statistical information was compiled to have an overview, how the three Baltic states currently depend on the Russian Federation’s gas imports. All three Baltic countries import data was directly sourced from respective statistics agencies. This gave later analysis a more objective basis in evaluating the impact of the envisioned projects. Furthermore, pipeline infrastructure technical capacities were displayed to have a better understanding on how an influx of natural gas from a third party will affect flow of gas in the Baltic region.

Lastly, an analysis on the impacts that the Finnish LNG terminal and Balticconnector will have on the region was done. The main purpose of this was to clarify how additional gas supply will affect energy relations between the Baltic countries and the Russian Federation. It was determined that after the completion of the Finnish LNG terminal and Balticconnector Lithuania, Latvia and Estonia will be integrated with the market of Finland, forming a single larger natural gas market, which makes a 4bcm LNG terminal feasible in the area. Furthermore, it was established that a 4bcm/y LNG terminal connected to the Baltic gas market would be able to supply ample volumes of gas in order to alleviate the regions asymmetrical energy relations. It was calculated that, when the Finnish LNG terminal and the Balticconnector were to work constantly at maximum capacity then Gazprom's share in the Baltic gas market would be reduced to around 52%.

The current negative and asymmetrical interdependence between the Baltic countries and the Russian Federation would see a turning point where partners would begin bilateral gas-price negotiations and Russia would lose its influential position in the region's natural gas market. The main conclusion is that the Finnish LNG terminal and Balticconnector, although being a significant source of alternative natural gas, will not make gas partnership with the Russian Federation obsolete, but would rather diversify the region's energy market. The Baltic countries would see a reduction in their current sensitivity in terms of energy relations, which translates into a new-gained energy security. This will make the energy partners, which currently see their future (in terms of energy relations) away from each other, strive to work more closely in order to maintain constant natural gas inflow to the Baltic region.

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Kokkuvõte

„Asümmeetriline sõltuvus Venemaa ning Balti riikide energia suhetes: Soome LNG terminali ja Balticconnector'i mõju”

Käesoleva bakalaurusetöö teemaks oli Balti riikide ning Vene Föderatsiooni vahelised energiasuhted. Peamine uurimisküsimus oli: kas ja kuidas mõjutavad planeeritud Soome LNG terminal ning Balticconnector Baltimaade ning Venemaa vaheliseid negatiivseid asümmeetrilisi energiasidemeid. Eesmärgiks oli hinnata kavandatud projektide mõju suurust, et oleks võimalik objektiivselt teha järeldus Balti-Vene energiasuhete tuleviku kohta. Töö käigus sätestati ka hüpotees: „Soome ning Baltimaadevaheline gaasi infrastruktuuri loomine leevendab oluliselt regiooni energia asümmeetrilisust, mis omakorda vähendab Baltimaade gaasisõltuvust Vene Föderatsioonist. Tänu sellele on oodata suuremat koostööd Balti-Vene energiasuhetes, kuna Balti regiooni tundlikus väheneb kavandatud projektide mõjul.“ Bakalaurusetöö jaguneb lihtsustatult kolme ossa: 1) teoreetiline raamistik ning selle sätestamine Baltimaade regiooni; 2) empiirilise osa, kus uuriti Baltimaade energiasõltuvuse mastaape Venemaast ning toodi välja Soome LNG terminali ning Balticconnector'i tehnilised omadused ning võimekused; 3) analüütiline osa, kus ajalise juhtumiuuringu ning teoreetilise raamistiku alusel oli võimalik teha järeldus Balti riikide ning Vene Föderatsiooni energiasuhete arengu kohta.

Teoreetiline raamistik baseerub Keohane ja Nye neoliberaalsel vastastikuse sõltuvuse teoorial. Antud teooria põhiideele, et partnerid on võrdselt vastastikuselt sõltuvuses, lisandub tõsiasi, et igasuguses majanduslikus suhtes tekib mingil hetkel jõulisem partner. See tekitab vastastikuse sõltuvuse ebavõrdsuse (asümmeetrilise partnerluse), mis tähendab, et üks partneritest on positsioonil, kus tal on võimalus dikteerida nõrgema osapoole otsuseid. Selleks, et teha järeldus Balti riikide ning Venemaa vaheliste energiasuhete kohta, oli vaja hinnata, kuidas hindavad mõlemad partnerid hetke olukorda ja kui tähtsaks nad peavad oma vastastikust suhet, et seda jätkata kui Venemaa

ei ole enam ainus gaasitarbija regiooni. See saavutati sellega, et uuriti kavandatud LNG ja Balticconnector'i mõju Baltimaade gaasitarbimisele ning kui palju vähendab see Vene Föderatsiooni osalust Balti gaasiturul.

Uurimistöö empiirilises osas selgitati Eesti, Läti ning Leedu energiasidemed Venemaaga ning uuriti, millises mastaabis kujunevad välja kavandatud LNG terminal ning Balticconnector. Kuna Vene Föderatsioonil on Baltimaade ning Soome gaasiturul täielik monopol, siis oli vaja selgitada millisel määral on antud riigid sõltuvuses Venemaast. LNG terminali ja Balticconnector'i omaduste uurimine aitas analüüsis selgitada, millist mõju nad omavad Balti riikide gaasitarnele. Analüütilises osas selgitati, et kõige optimaalsem LNG terminali puhul (tootemismahuga 4 miljardid kuupmeetrit gaasi aastas) oleks võimalik Venemaa osalus Balti riikide gaasiturul vähendada kuni 52% 'le. See kujutab endast olukorda, kus Baltimaad on saavutanud teatud energiajulgeoleku, mis lubab edaspidistel bilateraalsel gaasihinna nõupidamistel Venemaaga saavutada kokkulepe, mis ei ole Balti riikidele ettemääratud. Põhiline järeldus uurimistööst on see, et Soome LNG terminal ning Balticconnector pakuvad regiooni alternatiivset gaasi sissevoolu, kuid ei ühenda Balti riike otseselt Läänega ega likvideeri Vene Föderatsiooni enamusosalust regiooni gaasiturul. Sellegipoolest, projektide läbi viimisel saavutatav energiajulgeolek vähendab Balti riikide tundlikust, mis tähendab, et edaspidised koostöösidemed Venemaaga energia alasel on elujõulisemad.

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