

**CHINA'S ENERGY DIPLOMACY:
RESOLVING THE MALACCA DILEMMA**

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ABSTRACT

In order to maintain its economic growth, China's energy consumption has increased dramatically recently. The country's economic growth is the power base of the Chinese Communist Party, thus the efficient energy supply of China is a priority on the government's agenda to provide the growing tendency of the economy. Most of China's energy imports arrive to the country through sea lanes and the vulnerability of the Strait of Malacca threatens China's seaborne oil and gas imports and therefore the country's energy security.

The focus of this thesis is China's energy security and the encouragement of the land-based energy imports through pipelines as a possible alternative solution of the Malacca Dilemma. The research investigates the issue of the Malacca Dilemma through the lens of securitization theory of the Copenhagen School. Furthermore it applies policy and discourse analysis and introduces statistical figures and charts. The paper includes comparative case studies by investigating the Sino-Russian and Sino-Myanmar bilateral oil and gas pipeline agreements.

The thesis concludes that in order to reduce the risk of the Malacca Dilemma, the land-based energy imports via pipelines cannot fully replace oil and gas imports through sea lanes. The Chinese government should support regional energy cooperation instead of bilateral agreements, because a joint energy strategy can better reduce the vulnerability of China's energy security. For the long term, China should modify its energy strategy and encourage its domestic renewable energy sources to reduce its energy dependence on foreign energy imports which can further strengthen the country's energy security.

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Introduction

Energy is an essential asset for the survival of states. Unsatisfied energy demands, poor distribution of supply and unstable energy security can not only undermine the political system of countries but also obstruct their economic prosperity.¹ China's current national policies promote high levels of economic growth, transforming the country into a global factory, but this transformation has a high cost in terms of energy and environment. Energy is the main driving force for social and national economic development as well as the key to sustainable national development.² Not only is China's economy increasing rapidly, but also the country's energy consumption. To keep its economic growth engine running Beijing will need more energy from abroad, therefore energy security, energy supply stability and the safety of the energy import transportation is crucial to the Chinese government. Following along these lines, the main research question and the focus point of the thesis will be: *How does the Malacca Dilemma affect China's energy strategy?*

In 1993, China became a net oil importer country and since then its economy requires a huge amount of energy imports in order to satisfy the country's enormous energy hunger.³ Currently, more than 80% of China's energy imports from the Middle East and Africa are transported to China through sea lanes. China's overdependence on its seaborne energy imports can threaten its energy security.⁴ The most dangerous choke point of the energy

¹ Daniel Yergin, *The Quest: Energy, Security and the Remaking of the Modern World* (New York: Penguin Press, 2011). p. 264

² Sezer Özcan, "Securitization of Energy through the Lenses of Copenhagen School," *International Relations* 4, no. 4 (1998): 487. p. 11

³ Carrie Liu and Manoj Dorraj, "The Strategic Implications of China's Energy Engagement with the Developing World," In: Dorraj, *China's Energy Relations with the Developing World*, ed. Carrie Liu Currier, 1. edition (Bloomsbury Academic, 2011): pp. 6-7

⁴ Andrew S. Erickson and Gabriel B. Collins, "Pipelines versus Sea Lanes: Challenges and Opportunities for Securing Energy Resources," In: Dorraj, *China's Energy Relations with the Developing World*. p. 177

transport through sea routes is the Strait of Malacca, which – according to scholars⁵ – could be closed by the USA during a political or military conflict. The possibility of a U.S. led maritime blockade against Chinese oil tankers is low and therefore it remains only a fictive threat; however, the Malacca Dilemma has several real challenges and risks. The Strait is an ideal place for attacks on oil tankers by sea pirates and terrorists, or if a tanker was stranded it could easily block the route and paralyze maritime transportation in that region.⁶

China needs to seek alternative solutions to decrease the vulnerability of its seaborne oil imports. Recently, the Chinese government shifted its focus from the Middle East and Africa to its energy rich neighbor countries, such as Myanmar and Russia. As Beijing started actively promoting its energy diplomacy within the region, several bilateral energy agreements were signed and several pipeline projects were initiated such as the Russia-China, Myanmar-China or Kazakhstan-China ones. China started to encourage land-based energy imports through pipeline systems which would realize the country's energy diversity and resolve its Malacca Dilemma. If China plans to survive a contingent blockade of the Malacca Strait, the country should create a more complex pipeline system in order to supplement the potential energy deficit of seaborne transports. Therefore, although energy imports through pipelines can be a good complementary and back up supply, it cannot replace the entire energy import via sea lanes.

The purpose of this thesis is the analysis of China's current energy strategy and the country's possible alternative solutions to the Malacca Dilemma, which threatens China's

⁵ Lirong Wang, "International Piracy and China's Sea Lanes Security," *Journal of Contemporary Asia-Pacific Studies*, (6, 2009): 119-131 In: Wang, *Sea Lanes and Chinese National Energy Security*. p. 572; Christopher Len, "China's 21st Century Maritime Silk Road Initiative, Energy Security and SLOC Access," *Maritime Affairs: Journal of the National Maritime Foundation of India* 11, no. 1 (January 2, 2015): 1-18.

⁶ You Ji, "Dealing with the Malacca Dilemma: China's Effort to Protect Its Energy Supply," *Strategic Analysis* 31, no. 3 (September 19, 2007): p. 467

efficient energy supply. The base of power of the ruling Chinese Communist Party is the country's rapid economic growth, which is fueled by its oil and gas imports. An insufficient energy supply can strengthen the country's economic slowdown, which can undermine the Chinese government's political power. Hence, resolving the problem of the Malacca Dilemma is one of Beijing's priority security issues.

As it was mentioned, the research question of the thesis is: *How does the Malacca Dilemma affect China's energy strategy?* It is obvious that energy diversity is one possible alternative solution which is supported by the Chinese government. The analysis of the concept of land-based energy transportation generates a sub-question regarding China's energy security strategy which is the following: *What alternative solutions is China seeking and what will be the impact of these solutions?* In order to answer these questions the thesis investigates China's energy diplomacy on strengthening its land-based pipeline energy transport. The research analyzes the Sino-Russian and Sino-Myanmar energy cooperation and pipeline strategies. Both countries are crucial for Beijing strategically. In both cases there are numerous challenges and risks in forming energy cooperation. China's energy diplomacy towards its neighboring countries enormously influences the geopolitics of the region. Furthermore, not every single state within the region supports China's growing power in the field of energy and therefore Beijing needs to implement a cautious energy security strategy to solve its Malacca Dilemma by strengthening the land-based oil and gas pipeline systems.

This thesis is divided into five chapters. The first introduces the methodology of the research including the introduction of primary and secondary sources, policy and discourse analysis and also the case studies of the thesis. The second chapter is a literature review which includes the theoretical framework of the securitization theory of the Copenhagen School, connects the theory with the concept of energy securitization and examines the

challenges of China's energy security policy. The third chapter describes China's energy strategy, it includes Beijing's energy policy, presents the current energy mix of the country and analyses the risks of the Malacca Dilemma and its possible solutions. The fourth chapter investigates the Sino-Russian energy cooperation by introducing the two states' energy relations, the role of the Shanghai Cooperation Organization and their rivalry over the energy rich countries of Central Asia. The final chapter presents the Sino-Myanmar energy relations and examines the advantages and challengers of the mutual energy cooperation and describes the current democratization process in Myanmar and its impact on the relationship with China in the field of energy.

My aim in this thesis is to present China's energy strategy by analyzing the Chinese government's shift from vulnerable seaborne energy imports to more secured land-based oil and gas pipeline systems. In order to reduce the country's energy vulnerability, Beijing is strengthening its energy cooperation with the neighboring countries and while this process includes several risks and challenges, it is necessary to create a back-up supply if a calamity happened in the Malacca Strait.

Chapter 1–Research Methodology

This thesis examines how regional conflicts, in this case the Malacca Dilemma, affect seaborne energy imports which pose a potential threat on China's energy security. The Chinese government in order to reduce its dependence on energy imports through sea routes recently started to shift the focus to land-based oil and gas pipeline systems. The thesis is seeking the answer to the question: *How does the Malacca Dilemma affect China's energy security strategy?* An additional sub-question which is relevant to the topic is: *What alternative solutions is China seeking and how can China replace its sea routes with these solutions?* In order to answer these questions I am going to use the tools of quantitative and qualitative research. The study focuses on policy and discourse analysis, also contains qualitative research such as charts, figures and data related to the topic. The figures, charts and maps help to understand the complexity of China's land based and seaborne energy strategy.

My aim is to create a theoretical background within the Literature Review Chapter which will realize the theoretical considerations of China's energy security policy. I am going to examine China's energy strategy and the Malacca Dilemma's possible solutions through the lens of securitization theory. The theoretical framework uses the Copenhagen School's securitization theory and energy security is analyzed through the lens of this IR theory. The security approach of the Copenhagen School goes beyond the traditional military and political aspects of security and focuses on other dimensions, such as economic, social and environmental.⁷ Energy security should be securitized and has to be handled as a security

⁷ Barry Buzan, Ole Waever, and Jaap de Wilde, *Security: A New Framework for Analysis* (Boulder, Colo: L. Rienner, 1998). p. 16

issue; it has always been a priority on the state's political agenda and thus the theory of securitization is completely applicable to the examination of energy security.⁸ The analysis of China's energy security strategy through the lens of securitization theory is essential because - according to many experts⁹ - the recent Chinese economic slowdown has contributed to the dramatic oil price reduction in the international market, which indicates global political and economic effects with a serious security dimension. China's energy securitization strategy and its threats to it should achieve greater attention in the securitization aspect; therefore further research in this area is needed.

This paper includes discourse and policy analysis related to the topic. The primary sources contain documents and white papers regarding energy security from the Minister of Foreign Affairs of the People's Republic of China and articles from the Xinhua News Agency, which is the official news agency of the Chinese government. Furthermore, the thesis presents the sections which are related to energy security policies of the 12th(2011-2015) and 13th (2016-2020) Five-Year Plans of China. The official documents which are included in the research are available online. The Chinese documents and articles were translated into English by the author of this thesis. Secondary sources include articles from academic journals and chapters of academic books. The paper also contains some statistics (charts and tables), showing the volume of China's energy consumptions, imports and pipeline capacities, and are from the databases of the International Energy Agency (IEA),the

⁸ Barry Buzan, "New Patterns of Global Security in the Twenty-First Century," *International Affairs* (Royal Institute of International Affairs 1944-) 67, no. 3 (1991): 431–51, doi:10.2307/2621945. p. 432.

⁹ Zhang Chi, "An Assessment of the World Energy Strategic Situation," In: Institute for Strategic Studies, National Defense University of People's Liberation Army, ed., *International Strategic Relations and China's National Security* (World Scientific, 2015) pp. 335-337; Doug Nathman, "Crude Oil Prices In 2016: Made In China?," *Forbes*, January 20, 2016, <http://www.forbes.com/sites/dougnathman/2016/01/20/crude-oil-prices-in-2016-made-in-china/>. Accessed May 12, 2016

U.S. Energy Information Administration (EIA) and BP.¹⁰ All the referred charts, figures, tables within the thesis can be found in the Appendix 1 and Appendix 2 sections.

The final part of the thesis includes a comparative case study analysis based on the concepts of A. Bennett and C. Elman about “disconfirmatory case study”.¹¹ In order to ensure its energy security China strengthened its energy relations with Russia and Myanmar and shifted from seaborne energy imports to land-based pipeline transportation. Both of the case studies present the Chinese government’s shift from sea lanes to land-based routes to reduce the vulnerability of the country’s energy security. The case studies serve the purpose to present this change within China’s energy security strategy, to introduce the process of energy securitization and to analyze if the land-based pipelines are able to replace seaborne energy imports. The first case study analyzes the relationship between China and Russia and the second one examines the China-Myanmar relations related to energy supply. Given the extensive history of these relations the limitation of the time period is between 2009 and 2015. Historical background related to the countries’ energy security and within the examined time frame is also considered.

My hypothesis is that energy, imported through pipeline systems, can only be complementary to the seaborne energy imports and its capacity cannot replace oil and gas imports via sea lanes. To further strengthen its energy security China should support multilateral regional energy cooperation instead of preferring neorealist approach and bilateral energy agreement with neighboring countries. Finally, for the long term in order to create the securitization of energy, Beijing should reduce its dependence on foreign energy

¹⁰ IEA, EIA and BP databases and energy outlook briefs are available online. (<http://www.iea.org/> <http://www.eia.gov/> <http://www.bp.com/>) Accessed March 12, 2016

¹¹ A. Bennett and C. Elman, “Case Study Methods in the International Relations Subfield,” *Comparative Political Studies* 40, no. 2 (February 1, 2007): 170–95. pp. 174-175

imports. With the reduction of oil and gas imports from abroad the vulnerability of the energy security would decrease as well. Hence, China should support domestic energy producing methods and encourage the development of renewable energy resources.

Chapter 2 –Literature Review

The aim of this literature review is to better understand the complexity of energy security and to create a theoretical background to connect securitization theory with it. Furthermore, this section also introduces China's energy security policies through the lens of securitization theory.

The literature review first defines the term of energy security and investigates why it is important for nations to secure energy supply. Secondly, this section also introduces the debate between neorealist and neoliberalist approaches related to energy security. The third part contains the definition of the Copenhagen School's securitization theory and how it can be applied to the states' energy security policies. Finally, the literature review also examines China's energy security policy through the lens of securitization theory.

2.1 What is energy security?

Energy resources, such as oil or natural gas are the most precious assets of the 21st century. As Daniel Yergin argues, this is the century, where without oil there is no transportation and without electricity, or energy to generate electricity, there would be no technology development or Internet age.¹² Sufficient energy supply is also fundamental for countries to achieve economic growth and political strength within the international system. Therefore, as it is highlighted by Paul Roberts, today we live in a world which is absolutely dominated by energy.¹³ The lack of energy has increasingly become a priority issue at the

¹²Yergin.*The Quest*, op. cit. p.264

¹³Paul Roberts, *The End of Oil: OntheEdge of a Perilous New World* (A MarinerBook., 2005). p. 5

global level, gradually viewed as a threat to the nation sovereignty. The rising conflicts within energy regions, such as the Middle East or Central Asia, limited sources of supply and the state owned intervention into energy markets all support that the issue of energy has been considered as an existential threat to the security of the state.¹⁴

Energy security does not have one universal definition. The definition of energy security depends on economic, environmental, military or even geopolitical aspects. According to the International Energy Agency's (IEA) definition, energy security is the uninterrupted availability of energy sources at an affordable price. Moreover, IEA distinguishes long-term and short-term energy security. Long-term energy security usually deals with timely investments to supply energy in line with economic developments and environmental needs. In contrast, short-term energy security focuses on the ability of the energy system to react promptly to sudden changes in the supply-demand balance.¹⁵ Scott Victor Valentine emphasizes, it is also important to divide international and national energy security.¹⁶ On the international level global reliance on fossil fuels as primary energy resource can place all states into an extremely insecure position. From the national perspective, there are countries such as Saudi Arabia or Russia which are more secure in terms of energy supply than other states or regions.¹⁷

According to the international energy security analysis, energy security can be interpreted as a challenge of balancing the attributes of availability, accessibility and

¹⁴Özcan,op. cit. p. 11

¹⁵“Energy Security,” Accessed March 3, 2016, <http://www.iea.org/topics/energysecurity/>.

¹⁶ Scott Victor Valentine, “The fuzzy nature of energy security” in Benjamin K. Sovacool, *The Routledge Handbook of Energy Security* (Abingdon, Oxon : Routledge, c2010., n.d.).pp. 58-59

¹⁷Jonathon. Price, Kurt M. Campbell, and Aspen Strategy Group (U.S.), “The Global Politics of Energy,” 2008. pp. 11-12

affordability and sustainability.¹⁸ Yergin also argues that there are several dimensions related to energy security. He mentions the physical security dimension, which refers to the protection of the assets, technology and infrastructure, supply chains and trade routes. Another aspect describes energy security as a system containing national energy policies and international institutions in order to maintain the sufficient flow of energy supply.¹⁹ Andrew Phillips argues that there are three different considerations related to energy security. The first aspect is the perceived adequacy of supply of energy services for current and expected demand. The second group addresses efficiency, flexibility and adaptability of the institutions responsible for the distribution of energy resources related to the energy service. The third part includes the effectiveness and stability of the larger security order which supports energy services to trade worldwide.²⁰

Barry Barton claims, although energy security is hard to define because it has several dimensions, such as socio-economic, environmental and military, the key priority for every nation is the uninterrupted distribution of vital energy services.²¹ The increasing energy demands of developing countries, such as China and India can promote turmoil in the international energy markets. Other factors also add to the concern: instability in some oil-exporting nations, the price of imported energy, geopolitical rivalries, vulnerability of energy supply chain and intensifying tendency of resource nationalism. Protecting the stability of energy security is essential, because conventional oil production and the rapidly shifting

¹⁸Bert Kruyt et al., “Indicators for Energy Security,” *Energy Policy*, China Energy Efficiency, 37, no. 6 (2009): 2166–81. p. 216

¹⁹Daniel Yergin, “Ensuring Energy Security,” *Foreign Affairs* 85, no. 2 (2006): 69–82. p. 75

²⁰Andrew Phillips, “A Dangerous Synergy: Energy Securitization, Great Power Rivalry and Strategic Stability in the Asian Century,” *Pacific Review* 26, no. 1 (2013): 17–38. p.18

²¹Barry Barton et al., *Energy Security: Managing Risk in a Dynamic Legal and Regulatory Environment* (Oxford University Press, 2004). p. 72

global demand patterns make politicians fear a possible scramble for energy resulting in resource wars.²²

2.2 The debate on neorealist and neoliberal approaches

Theories from the field of international relations identify key regulations and patterns of interactions between the actors in the international system and to create different models to explain the nature of that particular interaction. Roland Dannreuther argues, despite the importance of energy in international relations the number of applications of IR theories which investigate energy-related conflicts and models of cooperation are limited.²³

The debate between neorealist and neoliberal theories within the field of IR has been the core scholarly dispute. Both theories have the same paradigm and both investigate the role of the state within the international system and the understanding of the international system's function. Although their questions are similar, they arrive at different conclusions related to the operation of the international arena.²⁴ Neorealism traditionally has been more related to security issues within international relations while neoliberalist approaches are linked to political economy. However, in terms of energy security, both of the theories are applicable.²⁵

Historically, neorealism is often seen as the dominant IR theory, according to the main classical realists, Edward H. Carr, Kenneth N. Waltz and Hans J. Morgenthau. These scholars

²²Ibid. p. 73

²³Roland Dannreuther, "International Relations Theories: Energy, Minerals and Conflict," *Polinares* 8 (2010): 1–24. p. 1

²⁴John Baylis, Steve Smith, and Patricia Owens, *The Globalization of World Politics* : *An Introduction to International Relations* (New York, NY : Oxford University, 2010, n.d.).p. 215

²⁵Ibid. p. 205

define the international system as anarchical, its main actors are the states and the structure of the system is basically determined by the distribution of power between the states.²⁶ According to scholars such as A. T. Mahan or Ronnie D. Lipschutz geopolitics is an integral part of neorealism.²⁷ This tradition, which combines geography with IR studies, reveals the spatial dimensions of state power. Moreover, it shows the influence and control of critical geopolitical territories.²⁸ Michael T. Klare summarizes the key assumptions of those countries who apply realism to energy security. Countries which are following their own national interests prefer resource nationalism, but as energy resources become vulnerable, the competition between states for the natural resources will increase dramatically. Furthermore, Klare also claims that in the future resource wars will be inevitable.²⁹

José-MaríaMarín-Quemada presents a similar concept that energy security can be achieved through bilateral agreements and therefore, in order to achieve the preferential supply agreement, competition and tension between states could arise in the field of energy security making the possibility of international cooperation a lot more difficult.³⁰ From the neorealist perspective, energy security is identified as a primary national self-interest which is realized through bilateral supply agreements. Finally, zero-sum logic disconcerts any kind of

²⁶Edward Hallett Carr, *The Twenty Years' Crisis, 1919-1939: An Introduction to the Study of International Relations*, Reprint of the 2nd ed. of 1946 (London: Macmillan, 1991); Kenneth Neal Waltz, *Theory of International Politics*, 1st. ed (New York: McGraw-Hill, 1979); Hans Joachim Morgenthau and Kenneth W. Thompson, *Politics among Nations: The Struggle for Power and Peace*, Brief ed (New York: McGraw-Hill, 1993).

²⁷A. T. Mahan, *The Influence of Sea Power upon History, 1660-1783* (New York: Hill and Wang, 1964). p. 12

²⁸Ronnie D. Lipschutz, *When Nations Clash* (New York, NY: HarperBusiness, 1989). p. 5

²⁹Michael T. Klare, *Rising Powers, Shrinking Planet: How Scarce Energy Is Creating a New World Order* (Oxford: Oneworld Publications, 2008). p. 23

³⁰José-MaríaMarín Quemada, Javier García-Verdugo, and Gonzalo Escribano, *Energy Security for the EU in the 21st Century* : *Markets, Geopolitics and Corridors*, Routledge Studies in Ecological Economics: 16 (London ; New York : Routledge, c2012, 2015., 2012)p. 43

multilateral cooperation. Following the neorealist view, states act according to their national self-interest to achieve energy security.³¹

Liberal traditions claim the importance of democracies and emphasize the fact that democracies are not willing to fight against each other, unlike authoritarian regimes, which are more likely to have confrontations.³² The liberal approach highlights an economic cooperation in the international system and supports a win-win situation instead of zero-sum game, which is preferable for realism.³³ According to Stephen D. Krasner and Robert O. Keohane the liberal institutionalist paradigm will further encourage the ‘spillover’ effect between the economic, social and political sectors.³⁴ A liberalist approach supports the promotion of regional and international energy institutions and organizations.

From the neoliberal approach, energy security can be realized through interstate cooperation and with the establishment of international energy institutions, such as the International Energy Agency. Interdependence guarantees the mutual cooperation between the actors of the international system.³⁵ Neoliberal theories support the political economic aspect and emphasize market-based solutions subject to competition which ensures the security of an energy supply. Providing absolute gains instead of relative gains, which are preferred by neorealist scholars, can further strengthen multilateral cooperation.³⁶ According to the neoliberal interpretation, states seek cooperation in order to achieve energy security. The neoliberal approach suggests that energy security can be realized through

³¹Brenda Shaffer, *Energy Politics* (Philadelphia: University of Pennsylvania Press, c2009, n.d.).p. 128

³²Bruce M. Russett, *Grasping the Democratic Peace: Principles for a Post-Cold War World* (Princeton, N.J: Princeton University Press, 1993). p. 54

³³Dannreuther, op. cit. p. 5

³⁴Stephen D. Krasner, ed., *International Regimes*, Cornell Studies in Political Economy (Ithaca: Cornell University Press, 1995); Robert O. Keohane, “The International Energy Agency: State Influence and Transgovernmental Politics,” *International Organization* 32, no. 4 (1978): 929–51.

³⁵Marín Quemada, García-Verdugo, and Escribano, op. cit. p. 76

³⁶Gal Luft, *Energy Security Challenges for the 21st Century: A Reference Handbook* (ABC-CLIO, 2009). pp. 341-342

interstate cooperation and with the establishment of international energy institutions, such as the International Energy Agency. Interdependence guarantees the mutual cooperation between the actors in the international system. Providing absolute gains instead of relative gains, which are preferred by neorealist scholars, can further strengthen multilateral cooperation. According to the neoliberal interpretation, states seek cooperation in order to achieve energy security.

2.3 Securitization of energy

Security Studies focuses on the military sector and examines the state, as a central actor, following the realist interpretations of security within the field of IR. Traditionally, classical security approach focuses on only the military dimension and it is impossible to broaden the concept to other various fields.³⁷ According to Miller, the ideology of security has always related to threats which can undermine state sovereignty. Territorial integrity and sovereignty symbolize the real values in traditionalists' state-centric concept.³⁸

An important contribution towards the widening concept of security in the multi-dimensional security approach was developed by the Copenhagen School.³⁹ Bill McSweeney highlights, in the early 1990s' a group of scholars started to work together under the Copenhagen School in order to emphasize human security over state security within the framework of Critical Security Studies.⁴⁰ The book called, '*Security: A new framework for analysis*', presents the core ideas of the Copenhagen School and it relies on two main

³⁷Özcan,op. cit. pp. 3-4

³⁸Benjamin Miller, "The Concept of Security: Should It Be Redefined?," *Journal of Strategic Studies* 24, no. 2 (June 2001): 13–42. p. 17

³⁹Özcan,op. cit. p. 5

⁴⁰Bill McSweeney, *Security, Identity, and Interests* : *A Sociology of International Relations*, Cambridge Studies in International Relations: 69 (Cambridge : Cambridge University Press, 1999, n.d.).p. 123

concepts: Barry Buzan's idea of sectoral analysis of security and Ole Waever's concept of securitization.⁴¹ Buzan claims that the main goal of securitization studies is to identify the following: who securitizes, on what issue or threat, for whom, why, with what results and under what conditions.⁴² Keith Krause and Michael C. Williams also argue that the security approach of the Copenhagen School goes beyond the traditional military and political aspects of security and focuses on other dimensions, such as economic, social and environmental. Furthermore the new concept not only considers states, as dominant actors of security, but it also accepts human beings and non-state actors as agents of security.⁴³

As mentioned earlier, energy is an essential asset for the survival of the states. Unsatisfied energy demands, poor distribution of the supply and unstable energy security not only can undermine the political system of a country but also can obstruct its economic prosperity. Within the process of securitization any public issue can be located on a spectrum ranging from the non-politicized category to the politicized one and from there to a higher securitized section.⁴⁴ An issue can be defined as securitized when it is perceived as an existential threat, which emphasize its urgency and importance. Energy security has always been the priority in the state's political agenda; therefore it is often a securitized issue whose importance is indisputable for most countries.

Buzan argues, energy security should be securitized and has to be handled as a security issue.⁴⁵ Following the Oil Crisis in 1973, the role of energy security became more important and the concept of energy security entered into the political level of international actors in the

⁴¹Buzan, Waever, and de Wilde, op. cit. p. 70.

⁴²Ibid. p. 71

⁴³Keith Krause and Michael C. Williams, "Broadening the Agenda of Security Studies: Politics and Methods," *Mershon International Studies Review* 40, no. 2 (1996): 229–54, doi:10.2307/222776. p. 230

⁴⁴Özcan, op. cit. p. 15

⁴⁵Buzan, op. cit. p. 432

21st century. Özcan highlights, the broadened security approach of the Copenhagen School energy securitization can be defined through multi-sectorial access. This includes different sectors, such as economic, social and military. Also it operates via different levels, like national, regional and international through a huge variety of actors, such as states, lobbies, non-governmental organizations or international institutes.⁴⁶ Overall, energy should be understood as an issue attached to several different sectors.

Finally, statistics of the IEA shows that the world faces major problems in producing sufficient energy to meet demand in the future. As the IEA World Outlook 2015 Executive Summary shows, the present global energy trends do not support the balance between supply and consumption, therefore it is unsustainable.⁴⁷ Moreover, according to the statistics, the number of people without electricity will increase to 800 million by 2030. Demand will pick up towards 2020, adding an average of 900 kb/d per year, but the subsequent rise to 103.5 mb/d by 2040 is moderated by higher prices and the market will rebalance at \$80/bbl in 2020, with further increases in price thereafter.⁴⁸ If the energy demand cannot be met with sufficient supply it can undermine the stability of the global energy market and can lead to political instability in countries worldwide. In order to avoid a possible outbreak of resource wars, the importance of energy security should be strengthened globally.

2.4 China's energy securitization concept

China is the world's greatest energy consumer; therefore its domestic energy policies play an important role in shaping the global energy market. Energy security is one of the

⁴⁶Ozcan,op. cit. p. 13

⁴⁷“IEA - World Energy Outlook 2015 Executive Summary,” <http://www.worldenergyoutlook.org/>. Accessed March 4, 2016

⁴⁸Ibid.

major drivers of China's political agenda and the Chinese government pays particular attention in forming energy policies in order to maintain sufficient energy supply so as to satisfy China's energy demand and to promote further economic growth. Kang Wu argues, the main focus of energy security within the economic aspect is to provide for China's economic development in the long-term.⁴⁹ The Chinese Communist Party (CCP) has been successfully maintaining the economic growth within the last few decades. The impressive economic improvement has been the CCP's legitimacy. Whether this economic development starts to decrease that can easily undermine the Chinese government's political power. Today, China's largest challenge is to maintain the economic growth by satisfying the huge amount of energy demand which is required for that. Hence, the security of energy supply became the state's priority issue.⁵⁰

According to Lixia Yao, in the field of energy China follows neorealist ideology rather than neoliberal. Realist perspectives, such as balancing power between the actors of the international system, following zero-sum logic and realizing national self-interest through bilateral supply agreements are the main patterns in China's energy policies.⁵¹ As Maximilian Mayer argues, although China is not member of the IEA, there is a constructive dialogue and cooperation with the international organization, which upholds the fact that China does follow some neoliberal idea on the international level.⁵² Although China is member of the Shanghai Cooperation Organization, Beijing still prefers to sign bilateral energy cooperation agreements with the other Member States. As former Chinese president, Hu Jintao claimed

⁴⁹Kang Wu, "China's Energy Security: Oil and Gas," *Energy Policy* 73 (October 2014): 4–11. p. 5

⁵⁰Ibid. p. 5

⁵¹Lixia Yao and Youngho Chang, "Shaping China's Energy Security: The Impact of Domestic Reforms," *Energy Policy* 77 (February 2015): 131–39. p. 131

⁵²Maximilian Mayer and Jost Wübbecke, "Understanding China's International Energy Strategy," *The Chinese Journal of International Politics* 6, no. 3 (January 9, 2013): 273–98. pp. 289-290

that the best way to ensure global energy security is to strengthen the dialogue and cooperation between energy exporters and the major energy consumer countries.⁵³

Besides an emphasis on greater international cooperation and the neorealist domestic energy policies, Beijing also relies on its major national oil companies (NOCs) to guarantee China's energy supply. Chinese NOCs are able to intensify domestic oil production and overseas oil export. Janet Xuanli Liao highlights, in 2013 China Petrochemical Corporation (Sinopec) and the China National Petroleum Corporation (CNPC) were ranked as the fourth and fifth greatest oil enterprises worldwide. The third largest Chinese national company is the China National Offshore Oil Corporation (CNOOC).⁵⁴ The Chinese state supports the investments of its national oil companies in oil producing countries by signing bilateral supply agreements with other national oil enterprises, such as the Russian Gazprom or the Saudi Arabian Saudi Aramco company.⁵⁵

Zhang Chi and Kang Wu emphasize, Chinese scholars and experts suggested different energy security strategic elements in order to form the country's national energy security strategy.⁵⁶ Most of the recommendations were implemented into the strategy plan, for example strengthening overseas investments by state owned oil companies, establishing a regional energy security system, forming a centralized government agency for energy management, regarding sea lane transport as an important element of China's energy security

⁵³“Hu Jintao's Address at the G8 Outreach Session,"

http://www.fmprc.gov.cn/mfa_eng/wjdt_665385/zyjh_665391/t264261.shtml. Accessed March 5, 2016

⁵⁴ Janet Xuanli Liao, “The Chinese Government and the National Oil Companies (NOCs): Who Is the Principal?,” *Asia Pacific Business Review* 21, no. 1 (January 2, 2015): 44–59. p. 44

⁵⁵ Zhang Chi, “China's Energy Diplomacy in Africa □ : The Convergence of National and Corporate Interests,” *China and Africa Development Relations*, China and Africa development relations. - London: Routledge, pp. 143-162, 2011. p. 144

⁵⁶ Zhang Chi, *The Domestic Dynamics of China's Energy Diplomacy* (World Scientific, 2015); Kang Wu, *Energy Economy in China: Policy Imperatives, Market Dynamics, and Regional Developments* (World Scientific, 2013).

and promoting renewable energy development and nuclear power.⁵⁷ Within the 12th Five-Year Plan (2011-2015) and 13th Five-Year Plan (2016-2020) the government put greater emphasis on energy security and the security of the sea route energy transportation.⁵⁸

The major energy transit routes go through the Indian Ocean and South China Sea from the Middle East and Africa towards Eastern Asian countries and China. Len argues that the global energy transport routes are vulnerable to disruption at key maritime choke points and such an incident can seriously affect global energy prices and generate supply shortages for many energy importer states.⁵⁹ The core chokepoints for China's seaborne energy trade are the Strait of Malacca and the Strait of Hormuz.⁶⁰ In 2003, former Chinese president, Hu Jintao publicly claimed that "certain powers" were bent on controlling the Strait of Malacca and threatening the security of the country's sea lanes of oil. This perception realized the term of "Malacca Dilemma".⁶¹ The Malacca Dilemma can threaten the stability of China's energy security, because Singapore, Malaysia and Indonesia can decide to shut down the sea route, under pressure from the United States. Moreover, according to Lirong Wang, the increasing tendency of piracy and terrorist attacks on the oil tankers in the Malacca Strait also endanger the security of sea transportation.⁶²

Chinese government strategies, in order to reduce the risk of sea lane energy transportation, should seek alternative solutions. As Lirong Wang and Christopher Len argue, there are several options for China to ensure its maritime lanes. First, the cooperation of the

⁵⁷Wu, op. cit. pp. 6-7

⁵⁸"China's Energy Policy 2012," Accessed March 5, 2016, http://english.gov.cn/archive/white_paper/2014/09/09/content_281474986284499.htm

⁵⁹Len, op. cit. p. 4

⁶⁰Will Clift, "Maritime Chokepoints: Key to Global Energy Stability, SUSRIS Saudi-US Relations Information Service," Accessed March 5, 2016, <http://susris.com/2015/04/14/maritime-chokepoints-key-to-global-energy-stability/>.

⁶¹Guy CK Leung et al., "Securitization of Energy Supply Chains in China," *Applied Energy* 123 (2014): 316–26. p.320

⁶²Wang, op. cit. p. 572

international and regional maritime security should be strengthened. There is a necessity for the countries of the region to jointly fight against piracy and maritime terrorism in the Strait of Malacca. This is one way to ensure the maritime transportation of China's energy security.⁶³ Secondly, the naval force of China, the People's Liberation Army Navy (PLAN), should be developed to deploy it in the interest of securing sea lane transportation. Strengthening the presence of the Chinese navy force on the South China Sea can be understood as a possible threat for the neighboring countries, especially because China recently has had a dispute with several countries over the islands of the South China Sea. Therefore, the deployment of the PLAN must be carried out with the cooperation of the neighboring countries, which are also interested in the protection of the maritime transportation.⁶⁴ Finally, new channels of energy transportation should be explored and emphasized. The diversification of the oil import channels should be achieved for the purpose of the establishment of the new path to break through the bottleneck of the Malacca Strait. To resolve the problem of Malacca Dilemma the country has to look for alternative energy transportation channels, open up land transportation routes and decrease the transportation dependence of the Chinese offshore energy lanes.⁶⁵

⁶³Ibid. p. 575

⁶⁴Len, op. cit. p.5

⁶⁵Wang, op. cit. p. 576

Chapter 3 –The energy security strategy of China

China's need for energy has been growing together alongside its rapid economic development. Currently the country faces various problems related to its energy supply and demand. Such issues as the risk of external energy dependency, the affordability of energy imports, the dominance of coal within the heavy industry, the improvement of energy technologies, conservation and energy efficiency are threatening the balanced and sustainable energy supply of China.⁶⁶

This chapter illustrates the current energy mix⁶⁷ presented by the country and its predicted energy tendency to the future. Also, it analyses the Chinese government's comprehensive strategy to increase the efficiency of energy supplies. Moreover, it examines the vulnerability of sea lanes, which are the main routes for the transport of crude oil to China, and introduces alternative solutions which might reduce the country's vulnerability and instead emphasize the idea of energy import diversification through the economic and energy strategy of "One Belt One Road".

3.1 China's energy mix

Today, the ongoing external energy dependence and vulnerability of energy supply is one of the country's greatest security dilemmas. Table 1 shows China's primary energy consumption data from 2010-2014 which proves the country's enormous energy

⁶⁶Jiang-Bo Geng and Qiang Ji, "Multi-Perspective Analysis of China's Energy Supply Security," *Energy* 64 (January 1, 2014): 541–50, p. 542

⁶⁷ "The term energy mix refers to how final energy consumption in a given geographical region breaks down by primary energy source. It includes fossil fuels, nuclear energy and renewable energy (biomass, wind, geothermal, water and solar)." Source of the definition's quotation: <http://www.planete-energies.com/en/medias/close/about-energy-mix> Accessed May 10, 2016

consumption.⁶⁸ At present, Beijing is ready to abandon the traditional economic growth model of Deng Xiaoping which is based on heavy energy consumption without any environmental concerns. The government intends to become less wasteful and supports the development of renewable and cleaner energy sources in order to break the coal-dominated industrial economy.⁶⁹

Figure 1 presents China's primary energy mix in 2013 and it is clear that coal dominates the energy mix. According to the data of the U.S. Energy Information Administration's (EIA) data, in 2012 coal represented the majority (66%) of China's total energy consumption.⁷⁰ Industrial use and power generation rely heavily on coal consumption. Table 2 introduces China's coal consumption in 2010-2014 according to the data of BP. China is rich in coal and it is the third largest coal reserves country after the USA and Russia.⁷¹ Most of the coal mines are located in the northern part of China, in water-poor areas, coal mining is a water-intensive sector. Because of China's water scarcity and infrastructure problems in that region, it is economically more profitable for the country to import coal from abroad instead of producing it. Hence, China became a net coal importer in 2007⁷² and started to stimulate the world coal prices with its significantly growing imports and as Figure 2 presents the majority of the imports are from Australia, Indonesia and Mongolia.

⁶⁸ All the referred charts, tables and figures can be found in the Appendix 1 and Appendix 2 sections.

⁶⁹ Jean A. Garrison, "The Domestic Political Context for China's Quest for Energy Security," In: Dorraj, *China's Energy Relations with the Developing World*, ed. Carrie Liu Currier, 1. edition (Bloomsbury Academic, 2011). pp. 38-40

⁷⁰ "U.S. Energy Information Administration's (EIA) International Analysis on China," Accessed April 15, 2016, <https://www.eia.gov/beta/international/analysis.cfm?iso=CHN>.

⁷¹ Andreas Goldthau et al., "TOO MUCH ENERGY? ASIA AT 2030," 2015, <http://www.svbenergy.com/s/Too-Much-Energy-final-online.pdf>. p. 27 Accessed April 15, 2016

⁷² Mikka Herberg, "Fuelling the dragon: China's energy prospects and international implications," In: Andreas Wenger, Robert W. Orttung, and Jeronim Perović, *Energy and the Transformation of International Relations: Toward a New Producer-Consumer Framework* (Oxford University Press for the Oxford Institute for Energy Studies, 2009). pp. 277-279

After coal, the second-largest energy source is petroleum oil which is nearly provides 20% of China's total energy consumption.⁷³ Oil supply is needed for the automobile industry, transportation and heavy industry. In 1993, the country became a net oil importer, which means that China's oil imports became higher than its volume of exported oil over the same period of time. Beijing's main suppliers are countries from the Middle East, Central Asia and Africa. Table 3 shows China's growing oil consumption tendency in 2010-2014. It is clear that China's rapidly increasing oil import dependence became a priority energy security issue, because an inefficient oil supply can undermine economic growth, threaten the CCP's power and risk social stability. In China's energy strategy the government controlled monopoly within the energy sector is essential in order to ensure a secured and efficient energy supply of the country. There are three national oil companies (NOC) in China which are responsible for the production, distribution and operation of the oil supply. These companies are: China National Petroleum Corporation (CNPC), China Petroleum & Chemical Corporation (Sinopec) and China National Offshore Oil Corporation (CNOOC). These national enterprises not only manage the domestic oil sector, but also their operations could be influential for the international energy market.⁷⁴

Table 4 presents BP statistics on China's natural gas consumption which is low comparing to its oil or coal consumptions. Only 5% of China's total energy consumptions come from natural gas.⁷⁵ Recently, the Chinese government has been promoting the use of natural gas instead of coal for cooking among Chinese residents. Natural gas is a good alternative option for coal, because it is a cleaner-burning energy source which has less negative impact on the environment. The government is on effort to promote natural gas and

⁷³“U.S. Energy Information Administration's (EIA) International Analysis on China.”

⁷⁴Herbergop.cit. in: Wenger, Ortung, and Perović, op. cit. pp. 272-274

⁷⁵ It is shown in Figure 1 (Appendix 1 section).

to further expand its gas pipeline systems to transport more gas from the gas fields in the northern part of China and from neighboring countries. Besides the support of the gas pipeline system, gas field exploration in the South China Sea and liquefied natural gas (LNG) imports from Malaysia and Australia are also encouraged.⁷⁶

Only 1% of China's overall energy consumption comes from renewable energy⁷⁷ and nuclear power.⁷⁸ Table 5 shows that China's renewable energy consumption is low even if we compare it to the European Union's consumption. It is obvious that China's energy sector is dominated by fossil hydrocarbon sources instead of non-fossil energy. It is also clear that renewable energy which mostly includes solar, wind and hydro power cannot fully satisfy the huge energy demand of the country. But the CCP emphasizes the importance of renewable energy as another possible complementary source of cleaner energy. The government promotes the use of renewable energy sources and it plans to open more nuclear power plants countrywide. The main goal is to further increase the share of renewable and nuclear power in the total consumption of China by 2035.⁷⁹

For the Chinese government, energy has a strategical importance. Centralized power, the strengthening role of Chinese NOCs and a growing emphasis on energy policies are necessary elements of a perfectly functional energy strategy.

⁷⁶Ibid. pp. 274-275

⁷⁷Hydropower is excluded.

⁷⁸“IEA - World Energy Outlook 2015 Executive Summary,” Accessed March 4, 2016, <http://www.worldenergyoutlook.org/>.

⁷⁹“BP Energy Outlook: China's Energy Insight,” *Bp.com*, Accessed April 16, 2016, <http://www.bp.com/en/global/corporate/energy-economics/energy-outlook-2035/country-and-regional-insights/china-insights.html>.

3.2 China's energy strategy

The greatest challenge for the energy sector of China is to mobilize energy supplies for the increasing energy demand of the economy. On the supply-side it is difficult for China to satisfy its petroleum demands. China needs to work out a better balanced relationship with the West, oil-rich countries and with the stakeholders of the Asia-pacific region. Moreover, the country's strategic petroleum reserve (SPR) capacity is insufficient. Currently coal dominates China's heavy industry, but because of its negative influence on the environment the government promotes complementary energy sources, such as nuclear or renewable power. Within coal, nuclear and renewable industries the greatest challenges are coal transportation, technology improvement, green energy development and efficient policy implementations.⁸⁰ Furthermore, the excessive dependence on imported crude oil, the vulnerability of the sea lanes and the political instability of the oil exporter countries in the Middle East and Africa can threaten the country's energy security.⁸¹ On the demand-side there are three big problems. The first is the excessive need for coal within China's industry. The second is China's scarcity of SPR and its energy import dependence. The last challenge is the unsafe sea routes, especially piracy attacks at the Malacca Strait.⁸²

In 1993, China became a net oil importer country; therefore the government launched the "going out"⁸³ strategy for its national oil companies. The reason behind this strategy was that China intended to expand its interest in oil exploration and production internationally.

⁸⁰Jenny Lin, *China's Energy Security Dilemma*, Accessed January 20, 2016, http://project2049.net/documents/china_energy_dilemma_lin.pdf. p. 2

⁸¹Ibid.p. 2

⁸²Ibid.p. 4

⁸³In Chinese: “走出去战略” [zōuchūqùzhànlüè]

CNPC has entered several foreign energy markets, for example in Sudan and Kazakhstan.⁸⁴ In the early 2000s, the CCP became concerned with the energy supply because oil import rates increased. China's refining capacity significantly improved in order to fulfill domestic oil demands.⁸⁵

China's energy policy has always served to promote the economic growth of the country by providing an efficient energy supply. The main sources of China's energy policy are provided in the "Five-Year Plan" (FYP) which contains the government's priorities related to the energy sector. Supporting the efficiency of the energy sector became strategically important when China needed to give up its energy self-sufficiency and became an energy importer country.⁸⁶ In the 2000s, as China's energy vulnerability intensified, it became clear that a more comprehensive energy strategy was needed.

In 2007, the State Council published a crucial "White Paper on Energy" document in order to emphasize the changing trend within the energy policies. This document highlights the importance of China's role in the global energy market and its responsibility for global energy security. Moreover it also stresses the necessity of international cooperation related to the energy sector, the promotion of energy conservation, the improvement of energy supply capacity and the intensification of energy technology development.⁸⁷

The 12th FYP (2011-2015) contained energy related policies as well. In 2012, the State Council published another white paper which was called "China's Energy Policy 2012". In

⁸⁴Gregory Gleason, "China, Russia, and Central Asia; Triangular Energy Politics," In: Dorraj, *China's Energy Relations with the Developing World*.

⁸⁵Zha Daojiong, "China's Energy Security: Domestic and International Issues," *Survival* 48, no. 1 (March 2006): 179-90. p. 180

⁸⁶Philip Andrews Speed, *Energy Policy and Regulation in the People's Republic of China*, 1. edition (Kluwer Law International, 2004). pp. 59-60

⁸⁷"White Paper on Energy" published by the State Council Office of the People's Republic of China, Accessed April 16, 2016. <http://www.china.org.cn/english/environment/236955.htm>

this document the government targeted the improvement of the rate of non-fossil energy should go up to 11.4% by 2015 for the national total primary energy consumption.⁸⁸ Another commitment from the government within the energy policy is that: “by 2020 non-fossil energy will account for 15% of its total primary energy consumption, and CO2 emission per unit of GDP will be 40-45% lower than in 2005.”⁸⁹ Although China does not always reach the targeted rate which is specified by the CCP in the FYP, there has been effort from the Chinese government side to take serious the environmental aspect of the energy sector. The main purposes of the 12th FYP in terms of energy were the same as it was in the previous plan. Within the document the CCP further encouraged the expansion of international energy cooperation, giving priority to energy conservation, larger dependence on domestic energy resources, promoting technology innovations and highlights the importance of environment protection.⁹⁰

The 13th FYP (2016-2020) was published in April, 2016. In this new strategy plan the final aim is still the adaptation and further development of new energy sources which leads to a more sufficient energy supply system.⁹¹ Environment protection is at the center of the plan. In order to reduce environmental damages a cleaner, safer and more efficient modern energy system is needed which is in line with the country’s economic and social development stability. The document highlights the importance of strengthening the utilization of clean and green energy, actively promoting the efficient use of natural gas, and improving the use of non-fossil energy sources. Moreover it also emphasizes the support of energy construction

⁸⁸ “China’s Energy Policy 2012” published by the State Council Office of the People’s Republic of China, Accessed April 16, 2016. http://www.gov.cn/english/official/2012-10/24/content_2250497.htm

⁸⁹ Ibid.

⁹⁰ Ibid.

⁹¹ Wang Wenma, “今年能源发展定调多个重磅文件将出台” [Energy Development's Tonesto be Set and Important Documentsto be IssuedThis Year] http://news.cnstock.com/news/sns_zxk/201604/3753938.htm Accessed April 16, 2016

projects in poor areas, expanding overseas gas and oil cooperation, strengthening China's energy strategic planning and actively participation in the international energy governance.⁹²

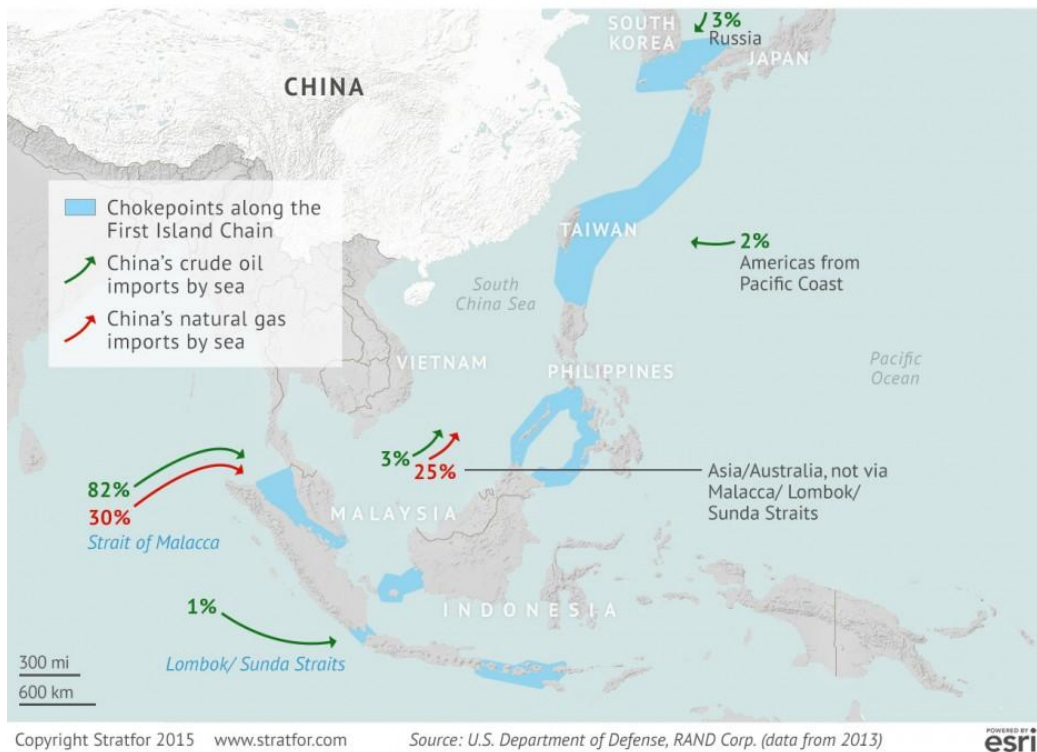
Overall, in the last decade energy policies achieved greater importance within China's Five-Year Plans. The Chinese government was committed to reduce the country's energy consumption and in order to support environment protection the dominance of coal within the industry had to be broken. But these efforts cannot be achieved at the expense of the economic and social development. Another crucial segment is China's energy import dependence. In order to lessen the country's addiction to foreign energy imports, the government encourages the exploration and production of domestic energy sources. Moreover, it also supports the promotion of renewable energy among the Chinese citizens. It is a good sign that the CCP is ready for changes and determined to implement its new energy policies, but it is a very slow procedure. To reshape China's energy strategy will take some time.

3.3 The Malacca Dilemma and its alternative solutions

The power of the Communist Party in China rooted in its economic growth and social stability, therefore satisfying energy needs is a priority issue for national security. Such dangers of the sea routes as sea piracy, terrorism or a potential blockade, risk the economic stability of China and thus the political power of the CCP.

⁹²Guo Xiaoping, "能源局：2016 年发布实施能源发展"十三五"规划,"[National Energy Administration to issue 13th Five-Year Plan's Energy Development Policy in 2016], http://www.cnstock.com/v_news/sns_bwkx/201604/3753390.htm Accessed April 16, 2016

CHINA'S IMPORT TRANSIT ROUTES AND MARITIME CHOKEPOINTS



Map 1 – Strait of Malacca

As it can be seen on Map 1, the Malacca Strait is a narrowed canal between Malaysia and Indonesia. It is strategically important for China, because all the crucial oil import routes (African, South Asian and Middle East) pass through it.⁹³ According to the Chinese government: “The one who controls the Malacca Strait and Indian Ocean, places an important role in China’s strategic energy channels, and can threaten China’s energy security.”⁹⁴

The term “Malacca Dilemma” was created by former Chinese President, Hu Jintao when he publicly declared in 2003 that there are “certain powers” that would like to control the Malacca Strait and thus risks China’s energy security.⁹⁵ The safety of the sea lanes of

⁹³Wang, op. cit. p.574

⁹⁴Ibidp. 572

⁹⁵ Leung et al., op. cit. p. 320

communications (SLOCs) is a non-conventional security and military issue, which can provoke further maritime clashes.⁹⁶

There are three possible threats related to the Malacca Dilemma. The first one is that currently the greatest risks for China's maritime transportation energy imports are sea piracy and terrorism. The narrow area of the Strait of Malacca is ideal for attacks on oil tankers, thus sea piracy and terrorism flourish in that region. Attacks on oil tankers can cause serious harms to the global energy market. Furthermore, piracy attacks in narrow canals, such as the Malacca Strait can be dangerous, because if a tanker is destroyed it can easily block the route and paralyze maritime transportation in that region.⁹⁷ The second problem is due to the posture of the Malacca Strait China's energy security is highly vulnerable, because the majority of the imported energy passes through that passage. China's energy supply and its economy can be paralyzed by blocking the passage of Malacca Strait. The USA as a super power could have the ability to close the Malacca Strait to weaken its Chinese rival. But the realization of a U.S. led maritime blockade against Chinese oil tankers is highly unlikely, and it remains a fictive threat.⁹⁸ The third risk is that China has several conflicts on the South China Sea and East China Sea with Japan and other ASEAN Member States, such as Malaysia, Philippines and Vietnam. The competition of territorial disputes regarding the Spratly and Paracel islands and its natural resources is a serious issue. China's involvement into this territorial dispute and the country's strong maritime boundaries have worsened the diplomatic relationship with the rival countries and strengthened the possibility of the blockade of Malacca Strait. All the maritime conflicts, in which China is involved, should be

⁹⁶ Ji, op. cit. p. 467

⁹⁷ Ibid. p. 471

⁹⁸ Ibid. p. 473

solved because deepening enmity might contribute the vulnerability of China's energy security.⁹⁹

Under the above mentioned circumstances, Beijing needs to seek alternative solutions in order to reduce the dependence on energy imports via sea lanes. There are two alternative solutions. The first one is the development of the PLAN to successfully secure these important energy transport sea routes. The second option is the construction of a land based energy transport system via pipelines.¹⁰⁰ The Chinese government is determined to protect SLOC from piracy and therefore the development of the PLAN is essential. The PLAN's improvement and the strengthening of Chinese navy force on the sea are viewed as threatening to the neighboring countries' national security. The growing power of the PLAN is risky for China, because of its maritime conflicts.¹⁰¹ The ASEAN countries oppose the PLAN's increasing presence in the East and South China Sea. Beijing defends the PLAN and claims that the Chinese navy's priority mission is the elimination of sea piracy and the protection of sea lanes.¹⁰² Even so, China should be more careful with the growing influence of its navy, because of China's involvement in several maritime conflicts the intensive developing process of the PLAN can be threatening to the ASEAN countries and it can further escalate maritime conflicts on the East and South China Sea.¹⁰³

New channels of energy transport are essential in order to reduce the dependence of energy imports through sea lanes. The support of land transportation can also be an alternative solution for the Malacca Dilemma. Currently, China shifted its focus from the

⁹⁹Wang, op. cit. p. 575

¹⁰⁰Ibid. p. 575

¹⁰¹Ji, op. cit. p. 476

¹⁰²TatsuKambara and Christopher Howe, *China and the Global Energy Crisis: Development and Prospects for China's Oil and Natural Gas* (Edward Elgar Pub, 2007). pp. 123-124

¹⁰³Len, op. cit. pp. 4-5

Middle East and Africa to Central Asia and Russia. China started to strengthen its neighborhood policy and actively promote energy diplomacy within the region. As it will be presented in the following chapters, there are several bilateral pipeline agreements, such as Russia-China, Myanmar-China, Kazakhstan-China. Although China's huge energy demand cannot be satisfied with land transported energy only, it can be a good complementary and back-up supply in case of calamity happening in the sea routes via the Malacca Strait. With the energy imported through pipelines, China's energy supply and economy would not be paralyzed in case of a sea blockade against the country.

Unfortunately, pipelines are more vulnerable to sabotage and military action than seaborne shipping. Moreover, the constructions of pipeline systems are far more expensive than oil tankers and transportation through sea lanes.¹⁰⁴ Even if Malacca Strait were closed by blockade or accident oil tankers could be diverted through the Sunda or Lombok Strait, which are between Indonesian islands of Java and Sumatra connecting the Java Sea to the Indian Ocean, with little disruptions in delivery. Pipelines are immovable and the exporting countries can disrupt flows and threaten China's energy efficiency to strengthen their own political or economic positions.¹⁰⁵

Despite the critique of the land based energy transportation, the Chinese government is determined to support not only a bilateral pipeline agreement but also to establish a wider, multilateral energy project, within the framework of the so-called "One Belt, One Road" initiative. President Xi Jinping's plan aims to revive the ancient Silk Road and transport oil from the Middle East directly to China along a supply chain which would be under strong

¹⁰⁴ Erickson and Collins, op. cit. in: Dorraj, op. cit. p. 179

¹⁰⁵ Speed, op. cit. p. 338

Chinese control from the start to the beginning.¹⁰⁶ As it can be seen on Map 2, the modern version of the ancient Silk Road can be divided into two parts: the Silk Road Economic Belt is designed to connect China's projects to Central Asia and further to the Middle East and Europe.¹⁰⁷ The other part, the 21st Century Maritime Silk Road, would expand towards the ASEAN region and promote further international cooperation related to energy and economy. The plan of the Belt and Road would be to encourage regional energy cooperation, promote economic prosperity and strengthen the mutual learning and understanding between different civilizations. The initiative focuses on efforts to jointly build secure and efficient land and sea routes for economy and energy transport and to connect major sea ports along the Belt and Road.¹⁰⁸

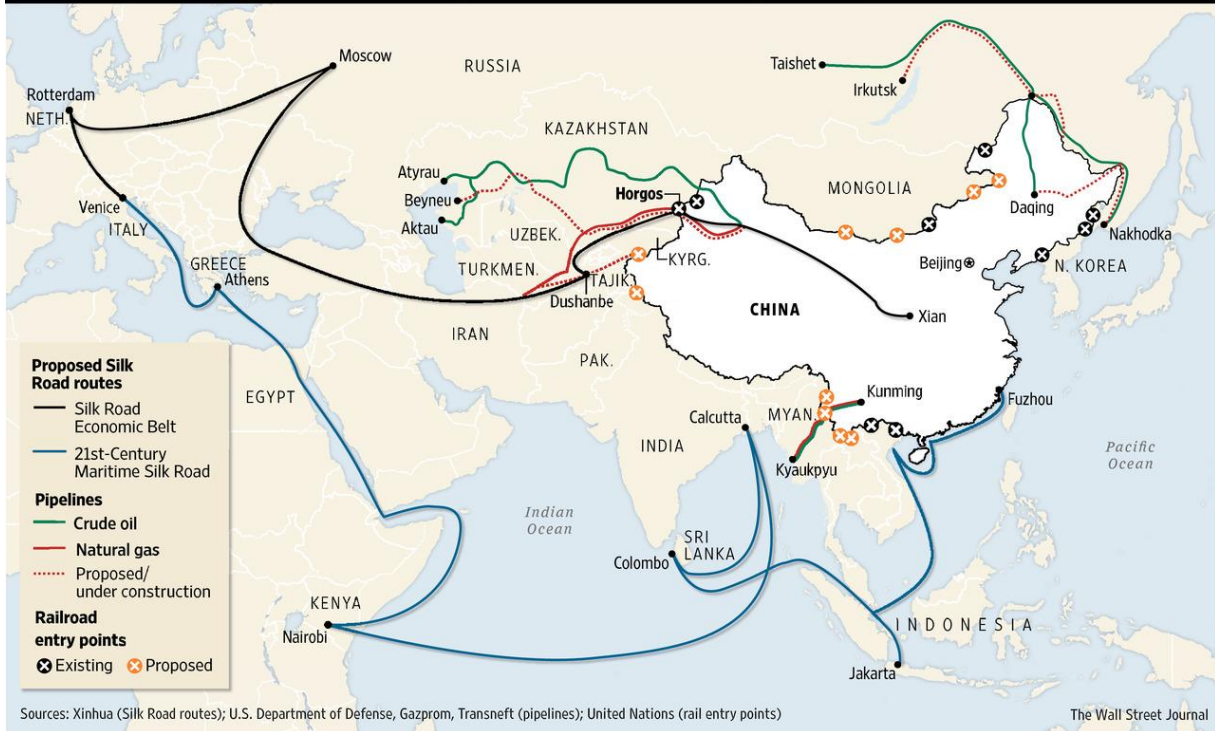
¹⁰⁶Ibid. p. 63

¹⁰⁷Jeffrey A. Bader, "How Xi Jin Ping Sees the World...and Why" (Asian Working Group, February 2016), Accessed April 17, 2016

http://www.brookings.edu/~media/research/files/papers/2016/02/xi-jinping-worldview-bader/xi_jinping_worldview_bader.pdf. p.12

¹⁰⁸"Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road," Issued by the National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People's Republic of China (March 28, 2015) Accessed April 18, 2016, http://en.ndrc.gov.cn/newsrelease/201503/t20150330_669367.html.

New Silk Roads | China is assembling new trade routes, binding other regions closer to it



Map 2 – “One Belt, One Road” initiative

Although the “One Belt, One Road” earned a close attention of the world and several countries support China’s idea on a common economic belt, there are states within the region, such as Japan or ASEAN countries which would like to hinder the growing Chinese economic influence.¹⁰⁹ It is clear that Beijing seeks for alternative solutions and supports the country’s energy diversification and encourages the shift from sea lanes to land based energy transportation in order to maintain the efficient energy supply. In its latest FYPs Beijing highlighted the strategical importance of energy and stated that through international energy cooperation a more environment friendly, mutually beneficial, safer and efficient modern energy system can be achieved.

¹⁰⁹Speed, op. cit. p. 342

Because recently the Chinese government's focus is on environmental protection, therefore the reduction of coal based energy resource is essential. China needs to increase its oil and natural gas imports in order to decrease the domination of coal within the energy mix. The majority of oil and gas supplies are transported through sea lanes which is vulnerable, especially the Strait of Malacca section where oil tankers are exposed to constant pirate attacks. In order to reduce the vulnerability of its energy security besides the development of PLAN China could also switch to land based energy transportation instead of sea routes. Beijing has the opportunity to achieve secured energy security and reliable energy supplies through pipeline systems. Hence, China needs to strengthen its relationship with energy resource rich countries within the region. The energy import through land based pipelines can supplement the energy supplies via sea lanes and also can decrease the vulnerability of its energy security.

Chapter 4 –Chinese-Russian energy diplomacy

Recently the Sino-Russian relations are developing in the field of energy. China needs Russia for its oil and gas imports in order to develop its own energy diversification and to decrease the vulnerability of its energy security, caused by the uncertainty of the Malacca Strait. Although traditionally Russia mostly focused on the Western European energy market, due to the economic sanctions which were implemented by the Western countries against Moscow for the annexation of the Crimean Peninsula in 2014, the country has started to pay more attention to the Asian Pacific market.

This chapter investigates the energy relations between China and Russia. It examines the relations of the countries through the lens of securitization theory, focusing on energy securitization. The first section analyzes the bilateral agreements between the countries, including the oil and gas pipeline construction plans and reveals the reasons behind their delays. The second part examines China's and Russia's role within the SCO and considers the two big powers relations toward the smaller Central Asian Member States of the Organization. The final section analyzes the changing dynamics within the energy sector of Central Asia and the struggle related to the control over the resource rich Central Asian countries between China and Russia.

4.1 Chinese-Russian energy relations

In 2014 Russia was the third largest fossil fuel producer, following China and the USA. It provided 12.7% of global oil and 16.7% of global natural gas output.¹¹⁰ Russia remained the

¹¹⁰According to BP statistics. "Russia's Energy Market in 2014," BP Statistical Review 2015, Accessed April 24, 2016, <http://www.bp.com/content/dam/bp/pdf/energy-economics/statistical-review-2015/bp-statistical-review-of-world-energy-2015-russia-insights.pdf>.

largest exporter of natural gas and the second largest exporter of petroleum. The country exported 69.5% of its oil and 34.9% of its natural gas production to abroad countries. Russia is the leading oil and gas exporter to Europe, accounting for 36.6% and 41.0% of EU respective energy imports.¹¹¹ The development of the Russian energy sector is determined by two elements. The first element is the improvement of developing the efficient use of energy in Russia and the second aspect is further investment into the energy production capacities and transportation.¹¹²

Although, traditionally Russia's greatest energy importer has been Europe, the European economic sanctions against Russia punishing its annexation of Crimean Peninsula has result in an isolation of Russia from the European energy market.¹¹³ Due to these sanctions in 2014, Russia lost European countries which were core energy importer and food exporter result in a negative effect on the Russian economy. Currently, Russia's focus is on the Asian Pacific energy market including strengthening the relationship with China.¹¹⁴

The first negotiations with China started in 1994 over the possibility of a Russia-China oil pipeline being built from Angarsk to Daqing which would become the core of the East Siberia–Pacific Ocean pipeline (ESPO). China needed a secure oil source country which was able to transport crude oil import through land routes in order to decrease China's energy vulnerability on the sea lanes; therefore China supported the idea of ESPO.¹¹⁵

¹¹¹ Ibid.

¹¹² Olga Garanina, "Russian-Chinese Relations: Towards an Energy Partnership" (St Petersburg, Russia: St Petersburg State University of Economics and Finance, 2007), Accessed April 17, 2016 <https://halshs.archives-ouvertes.fr/file/index/docid/260560/filename/pub07053.doc>. p. 6

¹¹³ Keun-Wook Paik, "Sino-Russian Gas and Oil Cooperation: Entering Into a New Era of Strategic Partnership?" The Oxford Institute for Energy Studies, 2015. p. 7

¹¹⁴ Thomas S. Eder and Mikko Huotari, "Moscow's Failed Pivot to China And How It Benefits Europe," *Foreign Affairs*, April 17, 2016, <https://www.foreignaffairs.com/articles/china/2016-04-17/moscow-s-failed-pivot-china>.

¹¹⁵ Erickson and Collins, op. cit. in: Dorraj, op. cit. pp. 183-184



Map 3 – East Siberia-Pacific Ocean pipeline (ESPO)

As Map 3 shows, according to the original plan, the pipeline would transport crude oil from East Siberia not only to China but also to Japan and South Korea. In the early 2000s the agreement was signed and the construction of the ESPO pipeline was started. The first section of the pipeline between Taishet to Skovorodino was finished in 2009. In 2011 Russia started to export crude oil to China via the ESPO pipeline. According to the predictions, the entire pipeline system will be finished in 2025 and will end on the Pacific coast, in an LNG-terminal near Nakhodhka.¹¹⁶ On the Russian side the state-owned pipeline monopoly called Transneft, which operates more than 70 thousand km of pipelines across the country, is responsible for the constructions. While on the Chinese side, CNPC is the responsible one. Transneft is planning to double the pipeline's capacity by 2020. Currently the capacity of the

¹¹⁶ Ibid. p. 184

pipeline is 600,000 barrels/day. It would be increased up to 1,000,000 barrels/ day by the end of 2016 and by 2025 it would be further increased up to 1,600,000 barrels/day.¹¹⁷

Besides oil, negotiations started in 2004 about the possibility of a gas pipeline project between Western Siberia and Northwestern China. Eventually, the agreement of the Altai gas pipeline was signed in 2006.¹¹⁸ However, the two countries could not agree on the price of the delivered gas. Gazprom, Russia's state owned gas company, tried to sell the gas at the same high price as European customers paid. Beijing intended to buy the gas at a lower price, claiming that Chinese customers do not pay the same price for the gas supply as Europeans.¹¹⁹ In 2013, the total natural gas consumption in China was 5,760 billion cubic feet, while in Europe it was 18,512 billion cubic feet.¹²⁰ Due to the disagreement over the gas price the Altai pipeline project was suspended.

In 2013-2014 the European sanctions against Russia negatively affected the country's economy. Russia stood to lose the European gas consumer countries, therefore President Putin was determined to transform Russia into a swing gas supplier between the Asian and European markets.¹²¹ In May 2014, Gazprom agreed to supply 38 billion cubic meters per year of gas from East Siberia to China for 30 years. The agreement for the eastern route of the Power of Siberia-1 pipeline was signed (Map 4 presents the routes of Altai and Power of Siberia-1 pipelines).

¹¹⁷Isabel Gorst, "Russia – Espo: Asia's Gain, Europe's Pain," *Financial Times*, February 19, 2014, Accessed April 22, 2016 <http://blogs.ft.com/beyond-brics/2014/02/19/russia-espo-asias-gain-europes-pain/>.

¹¹⁸Edward C. Chow and Zachary D. Cuyler, "New Russian Gas Export Projects – From Pipe Dreams to Pipelines," *Center for Strategic & International Studies*, n.d., July 22, 2015.

¹¹⁹Richard Weitz, "The Russia-China Gas Deal," *World Affairs* 177, no. 3 (October 9, 2014): 80–86.p. 82

¹²⁰EIA International Statistics, Accessed April 22, 2016

<http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=3&pid=26&aid=2>

¹²¹Paik, op. cit. p. 7

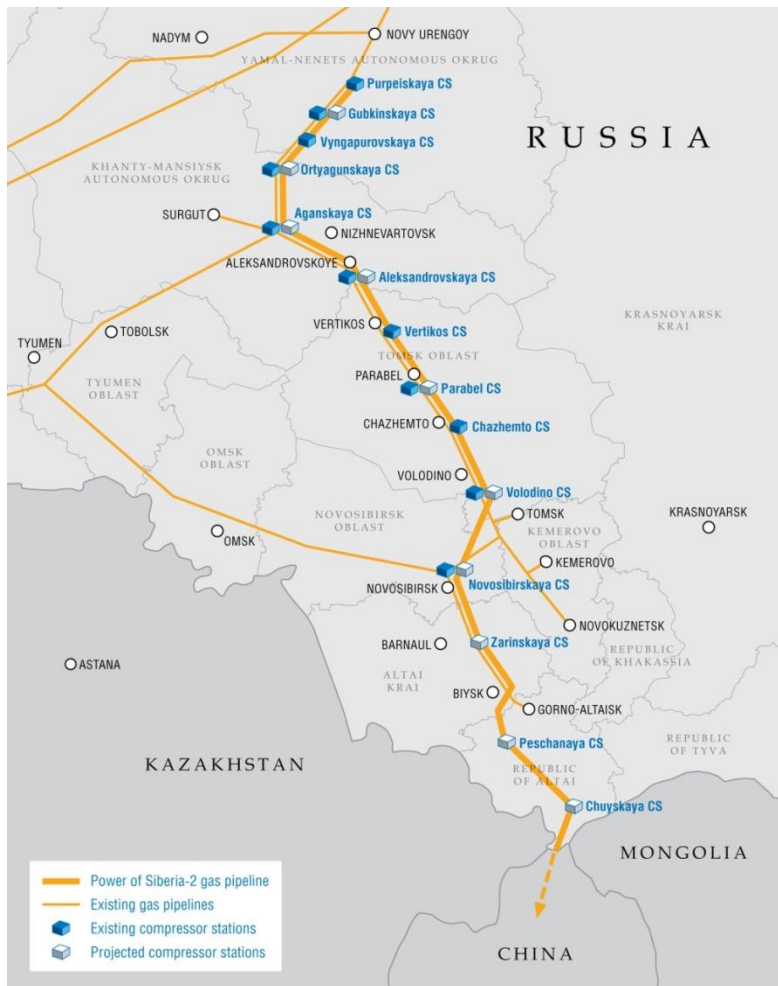


Map 4 – Altai and Power of Siberia-1 pipeline routes

In November 2014, China and Russia agreed to start the construction of the western route of the gas pipeline. Map 5 shows that this project is basically the same as the Altai pipeline project, but it was renamed as the Power of Siberia-2. The gas pipeline constructions estimated realization is between 2020 and 2025.¹²² Currently, due to the slowing economic growth and a decreasing gas consumption tendency of China, the construction of the Power of Siberia-2 project has been postponed for an indefinite period.¹²³

¹²²Ibid. p. 8

¹²³“Signing of Deal on Gas Supply Route to China via Altai Is ‘Postponed Indefinitely,’” *The Siberian Times*, July 24, 2016, Accessed April 22, 2016 <http://siberiantimes.com/business/investment/news/n0325-signing-of-deal-on-gas-supply-route-to-china-via-altai-is-postponed-indefinitely/>.



Map 5 – Power of Siberia-2 pipeline route

The reasons behind the delay of the constructions are that China is not interested in to build an expensive gas pipeline, because the country’s natural gas consumption provides only 5% of the total energy consumption and the Chinese economy is less dependent on the gas supply.¹²⁴ Furthermore, there are conflicting interests between the sides. The Chinese side is more interested in the eastern route (Power of Siberia-1) while Russia prefers the western pipeline project (Power of Siberia-2). For Russia the Western Siberian region is more developed and the infrastructure is better, thus it needs less investment to realize the pipeline.

¹²⁴ Marcin Kaczmarek and Szymon Kardas, “‘The Oil Friendship’: The State of and Prospects for Russian-Chinese Energy Cooperation,” *OSW Commentary, Center for Eastern Studies*, no. No. 197 (February 2016), <http://aei.pitt.edu/72887/>. p. 4

Also, with the Altai route Russia can combine the pipelines and can deliver gas not only to China but also to the European market. On the other hand, the eastern route needs more gas field exploitation and it requires more investment to improve and modernize the area.¹²⁵ In the Chinese aspect, the Altai route is not necessary, because the Western part of the country is supplied with gas by the Central Asian pipeline. The transportation of the natural gas from Northwestern China to the Eastern part is costly; therefore Beijing prefers the eastern route to provide the gas supply to the eastern part of the country.¹²⁶ The gas pipelines can still be implemented if both China and Russia agree to the projects.

There are several other obstacles in the Sino-Russian energy partnership. First, as mentioned before, it is essential for the countries to agree on the board gas and oil prices because it can determine future energy cooperation. Second, Moscow needs to invest in its oil and gas producing development, encouraging the modernization of the Northern region, supporting new field exploration and improving infrastructure and transportation. Without new field exploration Russia will not be able to deliver sufficient amount of oil or gas to China.¹²⁷ Third, the European market has always been the priority for Russia. Although, the European sanctions have had a negative impact on Russia, if European-Russian relations return to normal, Moscow might focus on Europe again instead of Asia.¹²⁸ Finally, Russia prefers resource nationalism and hence, its energy sector is state oriented. Chinese NOCs do

¹²⁵Lifan Li and Chengzhi Wang, “Energy Cooperation between China and Russia: Uncertainty and Prospect of Development,” *Russian Analytical Digest*, No. 163 (February 2015): 11–13. p. 11

¹²⁶Kaczmarek and Kardas, op. cit. pp. 4-5

¹²⁷Jean-Marie Holtzinger, “The Russo-Chinese Strategic Partnership: Oil and Gas Dimensions,” *The Quarterly Journal* 9, no. 4 (2010): 69–82. p. 76

¹²⁸Eder and Huotari, “Moscow’s Failed Pivot to China And How It Benefits Europe.” <https://www.foreignaffairs.com/articles/china/2016-04-17/moscow-s-failed-pivot-china> Accessed April 13, 2016

not have a chance to fulfil Beijing's "going out" policy, which supports Chinese oil companies to conquer foreign markets, and invade the Russian energy market.¹²⁹

4.2 The role of the Shanghai Cooperation Organization

In the early 1990s after the collapse of the Soviet Union, the relationship between China and Russia improved and the countries managed the border issues. With the end of the Soviet Union several new and independent Central Asian states were born. These newly independent Central Asian countries were rich in oil and gas which attracted China's interest. In order to extend its economic influence to Central Asia, China established the Shanghai Five group and strengthened the relations with the Central Asian region.¹³⁰ The members of the Shanghai Five were: China, Russia, Kyrgyzstan, Tajikistan and Kazakhstan.¹³¹ All the Member States signed the "Treaty on Deepening Military Trust in Border Regions" in 1996 and one year later the countries signed the "Treaty on Reduction of Military Forces in Border Regions".¹³² The main purpose of the Shanghai Five was to strengthen military cooperation within the region in order to settle border disputes and to reduce the presence of the "three evil forces", which are terrorism, separatism and extremism.¹³³ In 2001 the founding declaration of the Shanghai Cooperation Organization (SCO) was signed and Uzbekistan joined the original members of the Shanghai Five, thus SCO has six Member States. The core purpose of the organization was to protect the region's stability with closer military

¹²⁹Holtzinger, op. cit. p. 78

¹³⁰ "Russia's Role in the SCO and Central Asia: Challenges and Opportunities," in *Valdai Discussion Club* (Moscow, Russia, 2014). p. 12, Accessed May 2, 2016, http://vid-1.rian.ru/ig/valdai/SCO_eng.pdf

¹³¹ Weiqing Song, "Interests, Power and China's Difficult Game in the Shanghai Cooperation Organization (SCO)," *Journal of Contemporary China* 23, no. 85 (January 2, 2014): 85–101. p. 90

¹³² *Ibid.* p. 90

¹³³ Zhao Huasheng, "China's View of and Expectations from the Shanghai Cooperation Organization," *Asian Survey* 53, no. 3 (June 2013): 436–60. p. 439

cooperation and has been expanded to cultural, economic, energy and political aspects which became more important.¹³⁴

China is the most enthusiastic member of the SCO. Due to its economic power the country has the greatest influence on the SCO. The stability and development of Central Asia was important for China in order to reduce Islamic separatist aspirations, but currently China is willing to promote the Central Asian region's economic growth to strengthen energy cooperation between the countries. China needs the oil and gas resources of Central Asian countries to realize its energy diversification, improve land based energy transport and to avoid the overdependence on Russian oil and gas.¹³⁵ Currently, Beijing negotiates with Central Asian countries under the aegis of the Organization, but in the end, parties sign bilateral energy agreements. This proves the fact that China still follows the neorealist approach and prefers bilateralism instead of multilateralism. However, China supports the SCO transformation into a multilateral integration which provides a platform for joint cooperation with the Central Asian Member States in the field of economy and energy.¹³⁶ Furthermore, the Chinese government is determined to integrate the SCO members into a common economy through the "One Belt, One Road" project. China, as the implementer of the project could control the region's economic processes and encourage tighter energy cooperation.¹³⁷

Central Asia has been traditionally a sphere of interest for Russia and therefore Russian political influence has been always strong within the region since new Central Asian countries could not become fully independent after the collapse of the Soviet Union.

¹³⁴ "Russia's Role in the SCO and Central Asia: Challenges and Opportunities" op. cit. p. 13

¹³⁵ Huasheng, op. cit. p. 442 and p. 447

¹³⁶ Song, op. cit. p. 93

¹³⁷ Li and Wang, op. cit. p. 13

However, the presence of China and its powerful economy weakened Moscow's position within the region.¹³⁸ Currently, although China's economy is stronger than Russia's and therefore it attracts the small Central Asian countries interest economically, Moscow's political influence is still significant among the Central Asian governments. Russia joined the SCO in order to counter-balance Chinese influence and to prevent Beijing's further expansion.¹³⁹ Russia will not give up its sphere of interest and will not give up its control over the Central Asian energy market.

In 2006, Putin expressed his will to create the SCO Energy Club which could be a multilateral platform for the members creating conditions and policies for a stronger regional energy cooperation.¹⁴⁰ Moreover, this Club could balance the interests of energy consumers, suppliers and transporters. Most of the members of the Organization supported the proposal. Obviously, China, who prefers to sign bilateral energy agreements, opposed the Russian initiative. On the other hand, Moscow did not prefer the "One Belt, One Road" initiative. Although, Russia did not voice objection, Putin advocated an advanced integration of the Eurasian Union rather than the China led SCO. With the establishment of the Eurasian Union, Russia attempted to strengthen its relation with the Central Asian countries and suppress the Chinese economic influence.¹⁴¹ Under these circumstances, the rise of the Eurasian Union can threaten the stability of the SCO and it is possible that in the future the two institutions will compete with each other which can undermine the stability of the region.¹⁴²

¹³⁸ "Russia's Role in the SCO and Central Asia: Challenges and Opportunities" op. cit. pp. 21-24

¹³⁹ Song, op. cit. p. 86

¹⁴⁰ Galiia A. Movkebaeva, "Energy Cooperation Among Kazakhstan, Russia, and China Within the Shanghai Cooperation Organization," *Russian Politics and Law* 51, no. 1 (January 1, 2013): 80-87. pp. 85-86

¹⁴¹ Huasheng, op. cit. p. 455

¹⁴² Ibid. p. 456

The Shanghai Cooperation Organization was the only diplomatic channel for China to reach the Central Asian countries. The greatest benefiter of the SCO is China, because through the Organization it could expand its economic influence and improve the relationship with the Central Asian region in the field of energy. The SCO also helped to avoid a possible regional conflict between the two great powers, China and Russia.¹⁴³ But in order to transform the SCO into an advanced regional integration with a reliable platform for multilateral cooperation in the field of economy, energy, trade and culture, it is essential for China and Russia to become allies and stop the rivalry over the dominance of the Central Asian states. The two big powers would need to focus on the security, economic and political importance of the entire region instead of following their own national interests.¹⁴⁴

4.3 The “New Great Game”: Chinese-Russian rivalry on Central Asia

In the early 1990s when the Central Asian states which are rich in hydrocarbon resources became independent, the world largest energy consumers focused on relations with the region. The “New Great Game” refers to a rivalry between great powers for the control over the energy resource rich Central Asian territories.¹⁴⁵ China, Russia, USA, India and Japan all had the intention to achieve greater cooperation in the field of energy within the region. But the two key players were definitely China and Russia. Russia always had a strong political power within the region and recently China has achieved greater economic influence and strengthened its relationship with the Central Asian countries through the SCO. The three

¹⁴³Ibid. p. 459

¹⁴⁴GuoXuetang, “The Energy Security in Central Eurasia: The Geopolitical Implications to China’s Energy Strategy,” *China and Eurasia Forum Quarterly* 4 (2006): 117–137. p. 136

¹⁴⁵Lutz Kleveman, *The New Great Game: Blood and Oil in Central Asia* (London: Atlantic Books, 2003). pp. 2-3

Central Asian members of the SCO (Kazakhstan, Tajikistan, Uzbekistan and Kyrgyzstan) are small and economically and politically weak countries.¹⁴⁶ On one hand they are vulnerable to the two great powers' interests and on the other hand they need both Russia's and China's support for their economic and political development. The Central Asian region became the battlefield of the Sino-Russian rivalry.

Russia not only has huge geopolitical influence but also has an enormous economic stake in the Central Asian markets. As a big oil and gas producer country, Russia's intent is to control the other energy exporter Central Asian countries' supply, production, distribution and transport. Moscow also wishes to manage all future pipelines in the region.¹⁴⁷

Central Asian states welcomed China's interest towards the region in order to balance excessive Russian influence. Central Asia is a perfect source of energy supply for China. The geographical location and the possibility of direct transport of oil and gas via land-based pipelines makes Central Asian countries perfect energy partners for China. To deepen the energy cooperation, China financially supported the region's economy and sympathized with the authoritarian regimes of Central Asia.¹⁴⁸ China encourages accelerating the development of the SCO to provide a multilateral platform for energy and economic cooperation and to further expand the Organization and invites new countries, such as Turkmenistan, to join.¹⁴⁹

The Central Asian countries need Chinese investments to further improve their economy and energy sector and to become a more productive energy exporter. Moreover, the authoritarian regimes of the region would follow the Chinese political model to achieve

¹⁴⁶HaseneKarasac, "Actors of the new 'Great Game', Caspian Oil Politics," *Journal of Southern Europe and the Balkans* 4, no. 1 (2002): 15–27. p. 18

¹⁴⁷Ibid. pp. 18-19

¹⁴⁸Huasheng, op. cit. pp. 455-456

¹⁴⁹Xuetang, op. cit. p. 136

greater economic growth. On one hand, Central Asian countries use China to balance Russian power, on the other hand they do not want to become too dependent on China economically and become simply a natural resource supplier to Beijing.¹⁵⁰

Russia has lost its political power within the region because of the strengthening economic bond between China and Central Asia. Due to China's growing economic influence both oil and gas pipelines were constructed to provide an energy supply from Central Asia to China. Unfortunately, these pipelines deliver oil and gas directly to Northwestern China and exclude Russia. The growing number of bilateral pipeline agreements between China and the Central Asian countries has negative effects on the Russian economy and hinders the constructions of the Power of Siberia pipelines.¹⁵¹

Negotiations for a direct oil pipeline started in 1993 between Kazakhstan and China. In 1997 the construction of the project was agreed.¹⁵² The Kazakhstan-China pipeline was the first direct oil import pipeline system which is allowing the transport of energy supply from Central Asia to China. As Map 6 shows, it runs from the Caspian shore in Kazakhstan to Xinjiang province in China. The entire pipeline system was completed in 2009 and reached its full capacity in 2011.¹⁵³ The plan of the Central Asia-China gas pipeline was prepared by the Chinese side. In 2006, China and Turkmenistan signed a framework agreement for a long-term gas supply and the construction of the pipeline system. In 2007, Uzbekistan and China also signed an agreement about the construction and exploitation of the pipeline in Uzbekistan.¹⁵⁴ Map 6 also presents the Central Asia-China gas pipeline, which transports gas

¹⁵⁰Huasheng, op. cit. pp. 455-456

¹⁵¹Song, op. cit. pp. 88-90

¹⁵²Irina Ionela Pop, "China's Energy Strategy in Central Asia: Interactions with Russia, India and Japan," *UNISCI Discussion Papers*, no. 24 (2010): 197-220. p. 208

¹⁵³Erickson and Collins, op. cit. in: Dorraj, op. cit. pp. 181-182

¹⁵⁴Pop, op. cit. p. 208

from Turkmenistan through Uzbekistan and Kazakhstan to China. The pipeline operates since 2009 and transports natural gas to China since 2012.¹⁵⁵ Russia is excluded from both of the above mentioned pipeline projects.



Map 6 – Routes of Kazakhstan-China oil pipeline and Central Asia-China gas pipeline

One of the greatest obstacles of the Sino-Russian energy cooperation is China's growing economic influence within the SCO and in the Central Asian region. Chinese expansion threatens Russia's political power within the region and it generates competition between the two great powers. Beijing also tries to avoid depending too strongly on the Russian hydrocarbon resources. Due to the Central Asian gas and oil pipelines the Russian energy overdependence can be avoided. Moreover, the diversification of the energy imports between Russia and the Central Asian countries makes it possible for China to negotiate a

¹⁵⁵Ibid. pp. 209-210

cheaper gas price for the energy transport of the Power of Siberia pipelines. The role of the SCO is important regarding to the further development in the Chinese-Russian energy cooperation. Although China still prefers neorealist approach and signs bilateral energy agreements with the smaller and weaker Central Asian states, in the long term Beijing needs to work together with Moscow to evolve better and safer regional energy cooperation within the framework of SCO.

Although there are promising developments in the Sino-Russian energy cooperation, such as the operation of ESPO oil pipeline and the recent gas deals. However, there remain impediments to the bilateral strategical partnership in terms of energy. China's growing economic influence within the Central Asian region, China's leading role within the SCO and the disagreement regarding the price formula of the energy deliveries hinder plans for further pipeline constructions between the countries and slow down the Sino-Russian energy cooperation.

Chapter 5 – Sino-Myanmar energy diplomacy

Myanmar plays a key role in Beijing's plan to realize a secured land-based oil and gas pipeline route in order to satisfy Southwest China's energy demand and to improve its energy securitization. The Sino-Myanmar oil and gas pipeline project is mutually beneficial for both countries. On the one hand, it provides development for Myanmar in the fields of energy, economy, infrastructure and transport and on the other hand, it ensures an alternative energy source for China so that it can reduce its energy import through the unsecured Malacca Strait.¹⁵⁶

Although the cooperation between Beijing and Naypyidaw seems to be mutually fruitful, there are challenges and risks as well. The present democratization process in Myanmar influences the country's relationship with China. The new government's intension is to reduce the over dependence on Chinese investments and to attract foreign investments from the U.S., Japan and India.¹⁵⁷ Beijing is currently observing the political acts of the new government before it would further expand its economic influence within Myanmar. In the future, further improvement in energy relations between the countries will depend on the success of the current democratization process in Myanmar. This chapter is focusing on the relationship between the countries using the framework of securitization theory, concentrating on energy securitization. It will analyze the relationship between Myanmar and China by introducing the pipeline projects and presenting the benefits and challenges of the project while examining the new government's strategy towards China.

¹⁵⁶Hong Zhao, "China-Myanmar Energy Cooperation and Its Regional Implications," *Journal of Current Southeast Asian Affairs* 30, no. 4 (2012): 89-109. pp. 98-99

¹⁵⁷Yun Sun, "A New Era for China-Myanmar Relations?" *The Diplomat*, December 9, 2015.

5.1 The benefits of the Sino-Myanmar energy cooperation

In 1988 a new military junta came to power in Burma and formed the State Law and Order Restoration Council. Beijing maintained a close relationship with the military junta and the Burmese called the Chinese “paukphaw”, which means “brother” referring to the close ties between the two nations.¹⁵⁸ In the 1990s Western countries punished Myanmar and the junta because of its anti-democratic policies by economic sanctions which isolated the country from the international market. China protected Myanmar even within the United Nations and vetoed further sanctions against the country, in return Beijing expected closer energy cooperation with the military junta.¹⁵⁹

Myanmar largest natural gas fields, the Shwe Natural Gas Fields, are located in the Bay of Bengal near to the coast of the country. From 2001, Chinese NOCs began to become involved in gas field explorations in the Bay of Bengal. Moreover, CNPC earned a 12%¹⁶⁰ ownership in the Shwe Natural Gas Fields, therefore Chinese enterprises easily started to enter Myanmar’s energy sector.¹⁶¹ The appearance of Chinese NOCs in the Bay of Bengal generated geopolitical conflicts with Bangladesh and India, because these countries are afraid of the Chinese expansion and consider it as a threat to their national security. Despite the strengthening geopolitical conflicts, in 2004 negotiations started on the Sino-Myanmar oil and gas pipeline system, the bilateral agreement on the constructions was signed in 2009.

¹⁵⁸ Li Chengyang, “The policies of China and India toward Myanmar,” In: Alexis Rieffel, *Myanmar/Burma: Inside Challenges, Outside Interests* (Brookings Institution Press, 2010). p. 115

¹⁵⁹ Pak K. Lee, Gerald Chan, and Lai-Ha Chan, “China’s ‘Realpolitik’ engagement with Myanmar,” *China Security* 5, no. 1 (2009): 105–126. p. 102

¹⁶⁰ “The Burma-China Pipelines: Humanr Rights Violations, Applicable Law, and Revenue Secrecy” (Earthrights International, March 2011).

¹⁶¹ David I. Steinberg and Hongwei Fan, *Modern China-Myanmar Relations: Dilemmas of Mutual Dependence* (NIAS, 2012). p. 167

China's trans-Myanmar oil and gas pipelines

Pipeline's will bring 12 million tonnes of crude oil and 12 billion cubic metres of gas a year into China



Source: shwe.org

Reuters graphic/Catherine Trevethan

REUTERS

01/02/10

Map 7 – Sino-Myanmar oil and gas pipeline route

As Map 7 shows, the Shwe Gas Project ensures the gas transportation between the western coast of Burma and southwest China. It includes the construction of the pipeline, underwater pipes, offshore rigs and an onshore gas terminal. The Trans-Burma Oil Corridor provides for construction of a deep sea port and terminal in the Bay of Bengal, oil storage facilities and the oil pipeline which runs parallel with the gas pipeline from the port of

KyauPhyu to southwest China's Yunnan province.¹⁶² The gas pipeline was completed in 2013 with a maximum capacity of 12 billion cubic meters per year and the oil pipeline has been operating since 2014 with a maximum capacity of 240 thousand barrels per day.¹⁶³

Besides its obvious energy strategic values, the Sino-Myanmar pipeline project further strengthens economic cooperation and integration processes between the countries. Beijing and Naypyidaw are planning to construct a highway and railway to connect the Bay of Bengal with Southwest China. Hence, a corridor of economic development within the pipeline region is expected which could further improve the economic relationship between China and Myanmar.¹⁶⁴ The pipeline ensures stable revenues for the Myanmar government which can be used to improve the social and economic development of the Burmese people.¹⁶⁵

The project also helps Myanmar to decrease its dependence on investments from Thailand. Thailand has been Myanmar's largest investor but with the strengthening economic relations with China the overdependence on Thailand can be avoided. The pipeline project can also increase Myanmar's foreign exchange incomes and reduce its trade deficit with China.¹⁶⁶ Unfortunately, the majority of Myanmar's population does not possess electricity access; with the well-developed gas pipeline system the country can use oil or gas to empower its new power plants to expand electricity access among the citizens. Moreover, the

¹⁶²Shwe Gas Movement, "Corridor of Power: China's Trans-Burma Oil and Gas Pipelines," Accessed February 15, 2016, <http://www.burmalibrary.org/docs07/CorridorofPower-SGM-red.pdf>. p. 2

¹⁶³Ibid. pp. 2-3

¹⁶⁴Zhao, op. cit. p. 98

¹⁶⁵“中缅输气管道 5 月底可望输气驳斥所谓“抢夺”说” [Sino-Myanmar Pipeline Will Start Sending Gas in May] http://news.ifeng.com/mil/history/detail_2013_01/21/21414461_0.shtml Accessed May 6, 2016

¹⁶⁶Zhao, op. cit. p. 99

project could also attract more foreign investment in the energy sector which can further support Myanmar's economic growth.¹⁶⁷

China's greatest benefit from the Sino-Myanmar pipeline is that another alternative land-based pipeline route can ensure oil and gas supply for the country. With this new pipeline Beijing can further reduce its dependence on imported energy resources through the sea lanes. Although the oil and gas supply from the Myanmar pipeline cannot entirely replace the energy imports of the sea routes, it can decrease the vulnerability of China's energy security.¹⁶⁸ The gas comes from the Shwe natural gas fields of Myanmar, while the oil is shipped from the Middle East and Africa by oil tankers. The tankers are not going through the Malacca Strait; instead they head north into the Bay of Bengal where the oil is loaded into the new pipeline system. This shortcut reduces Beijing's reliance on the Malacca Strait route.¹⁶⁹ Currently, Beijing is working on the development of the poorer southwest region of China. The pipeline project can bring better economic prospects to its southwest Yunnan province. Furthermore, Beijing is planning to realize the economic corridor alongside the pipeline route with better transport and infrastructure to connect the Bay of Bengal with Kunming, capital of Yunnan province. Thereby China will get access to the Indian Ocean and can guarantee the safety of its energy imports through sea lanes bypassing the dangerous Malacca Strait section.¹⁷⁰ In order to realize this grandiose plan China needs to further improve its relationship with Myanmar and it is also essential to promote Myanmar's economic and social development.

¹⁶⁷ Nicholas Borroz, "Troubled Pipelines in Burma," *International Security Observer*, April 2, 2014, <http://securityobserver.org/troubled-pipelines-in-burma/>. Accessed May 11, 2016

¹⁶⁸ *Ibid.*

¹⁶⁹ Jacob Gronholt-Pedersen, "Myanmar Pipelines to Benefit China," *Wall Street Journal*, May 12, 2013, sec. Asia.

¹⁷⁰ Andre Wheeler, "The New China Silk Road (One Belt, One Road): Myanmar's Influence and Potential Benefits," *LinkedIn Pulse*, January 4, 2016.

5.2 The challenges of the Sino-Myanmar energy cooperation

In 2011 the control of the military junta in Myanmar weakened, allowing the people of the country to support a democratization process. The corrupt military junta did not use the sales of natural gas to improve the country but to purchase weapons and support illegal businesses. China had good relations with the members of the junta, thus when the political reforms started in 2011 anti-Chinese voices became louder.¹⁷¹ Due to the political reforms, Myanmar was able to reestablish its diplomatic relationship with the U.S. and the EU. An end to Myanmar's isolation can create an opportunity for the country to avoid the overdependence of China's influence.¹⁷²

In 2011 the announcement of Thein Sein, former president of Myanmar, shocked Beijing. He decided to suspend the Myitsone dam's construction which affected China's interests negatively.¹⁷³ Map 8 presents the location of the Myitsone dam.



Map 8 – Map of the Myitson Dam

¹⁷¹Shwe Gas Movement, “Corridor of Power: China's Trans-Burma Oil and Gas Pipelines,” op. cit. pp. 11-12

¹⁷² Lee, Chan, and Chan, op. cit. p. 109

¹⁷³ Ibid. p. 109

This project was not popular among the local people and several protests were organized against it. People were protesting against the project's negative environmental impact on the region and the exploitation of local labor by the corrupt Chinese enterprises.¹⁷⁴ The new government justified the decision based on public opinion which is currently the engine of the democratic reforms in Myanmar. Unfortunately, the anti-Chinese sentiment has negatively influenced the pipeline project. There are several local movements which protect local interests, lands, jobs and livelihood. The most well-known organization is the Shwe Gas Movement which often demonstrates against the Sino-Myanmar pipeline.¹⁷⁵ Moreover, the pipeline route passes through areas which are controlled by ethnic militias, such as the Kachin Independence Army (KIA) of the northern Kachin state which was in a civil war with the Myanmar central government in 2011. Due to these circumstances the armed protection of the pipeline has become expensive and risky.¹⁷⁶

Another important external influence which is affecting the current democratic reforms in Myanmar is India. Myanmar is strategically important for India to counter-balance China's rise within the Southeast Asian region and to strengthen its energy security. India and China are the two greatest energy consumer countries worldwide, thus a China-India rivalry over Myanmar's territories can be detected.¹⁷⁷ Strategically India has tried to prevent Myanmar's transformation into a Chinese satellite state. Delhi also fears the strengthening energy cooperation between China and Myanmar which can realize Beijing's purpose of controlling the Bay of Bengal and eventually of the Indian Ocean.¹⁷⁸ While China maintained a good relationship with the former military junta, India criticized the regime and supported Western

¹⁷⁴ Steinberg and Fan, op. cit. pp. 196-198

¹⁷⁵ Borroz, op. cit.

¹⁷⁶ Ibid.

¹⁷⁷ Zhao, op. cit. p. 103

¹⁷⁸ Renaud Egrettau, "India and China Vying for Influence in Burma – A New Assessment," *India Review* 7, no. 1 (March 12, 2008): 38–72. pp. 42-44

sanctions, therefore the negotiations of energy cooperation between India and Myanmar failed several times. Although China seems more successful in terms of energy cooperation with Myanmar, India is still the main shareholder of various oil and gas projects under construction in Myanmar.¹⁷⁹ Due to Myanmar's democratization, the energy cooperation between Delhi and Naypyidaw is getting more active which can undermine Beijing's intent to achieve direct access to the Indian Ocean. India is working to counter-balance Beijing's growing influence in Myanmar and within the region, and to prevent the PLAN's control over the Bay of Bengal and Indian Ocean which, as it can be seen on Map 9, threatens India's national security.¹⁸⁰



Map 9 – Bay of Bengal

The development of future Sino-Myanmar energy relations depends on the policies of the new government. The National League for Democracy (NLD) won the general elections of Myanmar in 2015 and the new government started its operation in March, 2016. The democratization reforms are welcomed by Beijing. It is important for China to have a

¹⁷⁹Ranjit Gupta, "China, Myanmar and India: A Strategic Perspective," *Indian Foreign Affairs Journal* 8, no. 1 (2013): 80. pp. 81-82

¹⁸⁰Egreteau, op. cit. pp. 42-43

politically and economically stable neighbor. China also understands that a unified Myanmar could solve the religious and border conflicts of the northern part of the country, because currently, these issues threaten the safety of the pipeline system.¹⁸¹

Although Myanmar's goal is to decrease the economic and political dominance of China, the NLD has to be careful with its counter-balancing strategy because China is still the major investor in the country. It would be a huge mistake to turn away from Beijing; without Chinese investors the country's economic growth would stop. Chinese NOCs are still among the major stakeholders in Myanmar's energy sector. Beijing is demonstrating cooperative intention and friendly gestures towards the new government and is determined to realize the economic corridor between the Bay of Bengal and Kunming. In order to maintain good energy cooperation Beijing needs to regain the trust of the Burmese. For the new government public opinion matters and if anti-Chinese sentiment continues to grow among the people, China might lose its prevalent economic and political influence in Myanmar.¹⁸²

¹⁸¹Sun, op. cit.

¹⁸²Dhruva Jaishankar, "Myanmar Is Pivoting Away from China," *Foreign Policy*, June 15, 2015, <http://foreignpolicy.com/2015/06/15/myanmar-burma-is-pivoting-away-from-china-aung-san-su-kyi-xi-jinping-india/>. Accessed May 12, 2016

Conclusion

The vulnerability of China's energy supply chain can be viewed as the priority national security issue of the country. China's economic growth is fueled by its sufficient energy supply and an economic development has become the base of power of the current Chinese government. Insufficient energy supply and ineffective energy security policy can undermine the entire political system of China. Barry Buzan argues that securitization theory can be expanded beyond military dimension and can be adopted in the field of socio-economy, environment and energy. An issue can be defined as securitized if it is recognized as a potential threat to the nation's safety and it indicates to prioritize the issue. Energy security has always been the priority in the state's political agenda and thus it can be a securitized issue with inevitable importance.¹⁸³

China applies a neorealist approach to its energy security strategy. Michael T. Klare emphasizes that China prefers resource nationalism, national interests and bilateral energy agreements. In the neorealist view, states act according to their national interests and advocate zero-sum game instead of multilateral cooperation and win-win situation. As energy resources become vulnerable the competition for energy imports between states increases and it is getting more difficult to maintain a sufficient energy supply chain.

Currently, more than 80% of China's energy imports transport through sea lanes, thus the country heavily relies on seaborne energy imports. Due to the dangers of the Malacca Strait section of the sea routes, China's energy security is vulnerable and in case of a blockade within the Malacca Strait, Beijing could easily run out of energy supply which

¹⁸³Ozcan, op. cit. p. 15

would affect its economy negatively. Currently, the government's purpose is to reduce its dependence on sea lanes and emphasize land-based energy transportation. This tendency is seen within China's 12th and 13th Five-Year Plans and within Beijing's grandiose "One Belt, One Road" strategy as well. There are several bilateral energy agreements and pipeline constructions between China-Russia, China-Kazakhstan and China-Myanmar. Beijing's further plan is to expand its oil and gas pipeline systems within the region, to realize its "One Belt, One Road" strategy and to create a coordinated energy security policy, controlled by the Chinese government.

In my thesis I considered the Malacca Dilemma poses a major threat for China's energy security and its influences on the government's energy strategy over a long term. As an alternative solution to the Malacca Dilemma, the government has started to focus on strengthening its energy relations with the neighboring countries and promoting land-based energy imports through pipelines. Unfortunately, China cannot fully replace seaborne energy imports with the pipelines because the maximum capacities of the pipelines are still not enough to take over the role of the oil and gas imports from the Middle East and Africa via sea lanes. Moreover, Xi Jinping's "One Belt, One Road" plan which was announced in 2011 created geopolitical conflicts because several countries in the East Asian region were afraid of China's energy and economic hegemony and therefore they refused to support the creation of a Beijing led economic belt.

The comparative case study of this thesis analyzed the energy cooperation between China-Russia and China-Myanmar. The former examined the energy relations between two big powers, while the latter introduced China's neorealist approach towards a smaller, economically and politically unstable country. Russia is one of the major energy producer countries while China is one of the greatest energy consumers worldwide. Although for

Beijing Russia is a crucial energy partner, because of Moscow's strong resource nationalism, it is not easy for China to promote its "going out" policy that supports Chinese NOCs to enter foreign energy markets. Because of this major obstacle, Chinese-Russian energy relations are characterized by distrust, which explains the disagreement on the price of the imported natural gas and the postponement of the gas pipeline constructions. Furthermore, due to China's growing economic influence in Central Asia, which is traditionally Russia's sphere of interest, geopolitical rivalry can be detected between the two big powers. For example, the energy resource rich Central Asian countries take advantage of China's economic power and use it to counter-balance Russia's political influence. In the long term, multilateral energy cooperation under the aegis of the SCO would be beneficial for the Member States and China should give up its bilateral approach and instead should encourage regional energy cooperation.

Myanmar is China's strategic partner in the southwest. The country is rich in natural resources, such as hydropower and natural gas, and signed several bilateral energy agreements with China. The Sino-Myanmar pipeline ensures an energy supply for the southwestern region of China. Beijing's purpose is to create an economic corridor along the Sino-Myanmar pipeline improving the economic level of the underdeveloped southwest provinces in China. With the realization of the economic corridor Beijing will achieve entrance to the Bay of Bengal and to the Indian Ocean. Strong Chinese presence over the Bay of Bengal could serve as a possible solution of the Malacca Dilemma, because the oil tankers from the Middle East and Africa could bypass the Strait and energy imports could be secured. India, as the main competitor of China in Myanmar, has the intention to reduce China's overwhelming power within the energy sector and economy of Myanmar. India is working to counter-balance Beijing's growing influence in Myanmar and to prevent Chinese

domination over the Bay of Bengal and Indian Ocean which threatens India's national security. In 2015, democratization process started in Yangon with the establishment of a new government, National League for Democracy which aims to become more independent by reestablishing diplomatic relations with the West and it aims to decrease dependence on Chinese economic and political influence in Myanmar. But at the same time the country cannot fully abandon China, because Chinese investments are necessary for the country's economic development. The future of Sino-Myanmar energy relations highly depends on the policies of the new government.

Overall, the Malacca Dilemma threatens China's energy security strategy and the government is seeking alternative solutions in order to reduce the country's vulnerability. Supporting land-based energy transportation through pipelines within the region is one possible solution. Unfortunately, gas and oil imports through pipelines are not an ideal option for a long term. The construction of pipelines is not only an expensive project, but the maintenance and armed protection of these immovable structures generates further expenditures as well. Moreover, energy exporter countries can suspend or reduce oil and gas flows in order to enforce their political or economic power. China should modify its energy strategy and encourage its domestic renewable energy sources to reduce its energy dependence on foreign energy imports. The Chinese government should support regional energy cooperation instead of bilateral agreements, because a joint energy strategy can reduce the vulnerability of China's energy security. In order to achieve a more complex picture of China's energy securitization process, more extensive research would be necessary in reference to China's "One Belt, One Road" initiative, on Beijing's energy diplomacy towards other energy resource rich countries in the region (such as Iran) and finally, on the People's Liberation Army Navy's development and its maritime strategy.

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Links of maps:

- Map 1 – Strait of Malacca: https://www.stratfor.com/sites/default/files/styles/stratfor_full/public/main/images/choke_points_china_asia_1.jpg?itok=YM_CaY_- Accessed May 10, 2016
- Map 2 – “One Belt, One Road” initiative: https://si.wsj.net/public/resources/images/P1-BR865_CAPEC_16U_20141107194517.jpg Accessed May 10, 2016
- Map 3 – East Siberia-Pacific Ocean pipeline (ESPO): <http://i1.wp.com/www.geopiplitics.com/wp-content/uploads/2014/04/1657461950.gif> Accessed May 10, 2016
- Map 4 – Altai and Power of Siberia-1 pipeline routes: <https://irussianality.files.wordpress.com/2014/11/chinagas2.png> Accessed May 10, 2016
- Map 5 – Power of Siberia-2 pipeline route: <http://www.gazprom.com/f/posts/59/990512/sila-sibiri-2-en.jpg> Accessed May 10, 2016
- Map 6 – Routes of Kazakhstan-China oil pipeline and Central Asia-China gas pipeline: http://www.russia-direct.org/sites/default/files/field/image/pipelines_625.jpg Accessed May 10, 2016
- Map 7 – Sino-Myanmar oil and gas pipeline route: <http://2.bp.blogspot.com/-ul6dEIzB1Dc/UfaK0gnQy7I/AAAAAAAAAFzE/mCC3-WFSWwg/s1600/China++Myanmar+Oil-Gas+pipeline.gif> Accessed May 10, 2016

Map 8 – Map of the Myitson Dam:<http://www.rfa.org/english/news/myanmar/myitsone-01062014173251.html/myanmar-myitsone-map-updated-jan-2014.jpg> Accessed May 10, 2016

Map 9 – Bay of Bengal: <https://mygoldenbengal.files.wordpress.com/2014/05/bay-of-bengal-7-flagsmaps-20330.jpg?w=640&h=637> Accessed May 10, 2016

Appendix 1 – Charts and Figures

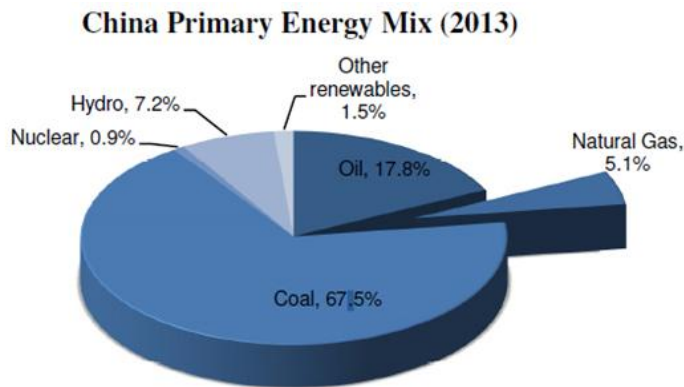


Figure 1 – China Primary Energy Mix (2013)

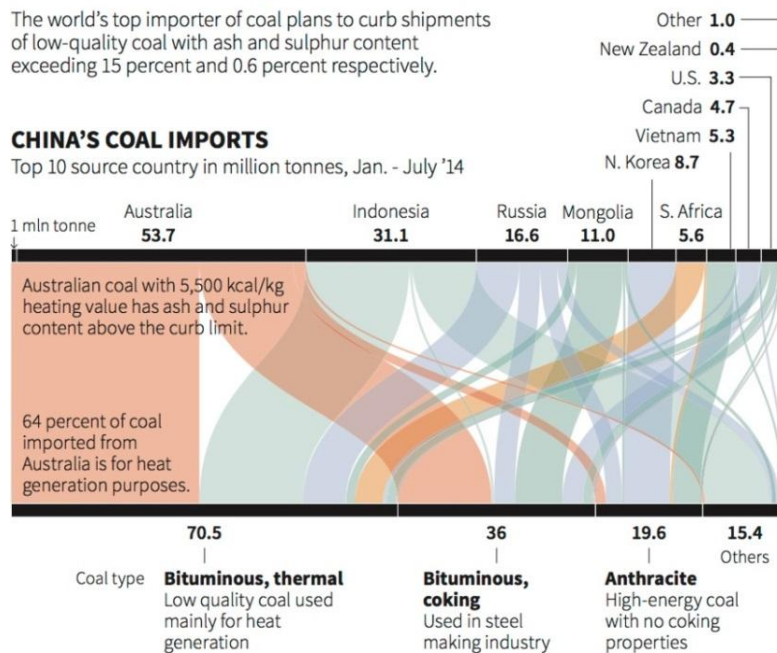
Source: BP Statistical Review of World Energy 2014 <http://www.crystolenergy.com/wp-content/uploads/2014/10/China-Primary-Energy-mix-2013.jpg> Accessed May 10, 2016

China coal imports

The world's top importer of coal plans to curb shipments of low-quality coal with ash and sulphur content exceeding 15 percent and 0.6 percent respectively.

CHINA'S COAL IMPORTS

Top 10 source country in million tonnes, Jan. - July '14



Sources: Reuters; Coal Marketing International

F. Chan, 04/09/2014

REUTERS

Figure 2 – China coal imports – top 10 source countries in January-July 2014

Source: <http://blog.thomsonreuters.com/wp-content/uploads/2014/09/china-coal.jpg> Accessed May 10, 2016

Figure 3. Russia's crude oil and condensate exports by destination, 2014

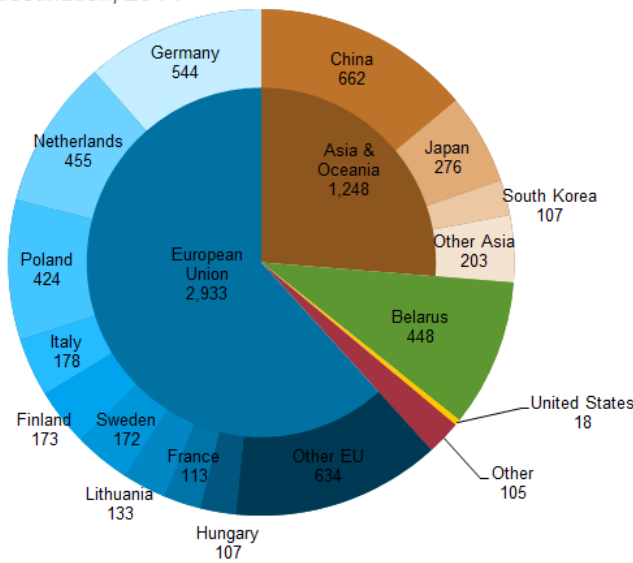


Figure 3 – Russia’s crude oil and condensate exports by destinations

Source: <http://www.oilandgas360.com/wp-content/uploads/2015/10/EIA-Russian-Crude-Oil-Exports-by-Destination.png?e04f2c> Accessed May 10, 2016

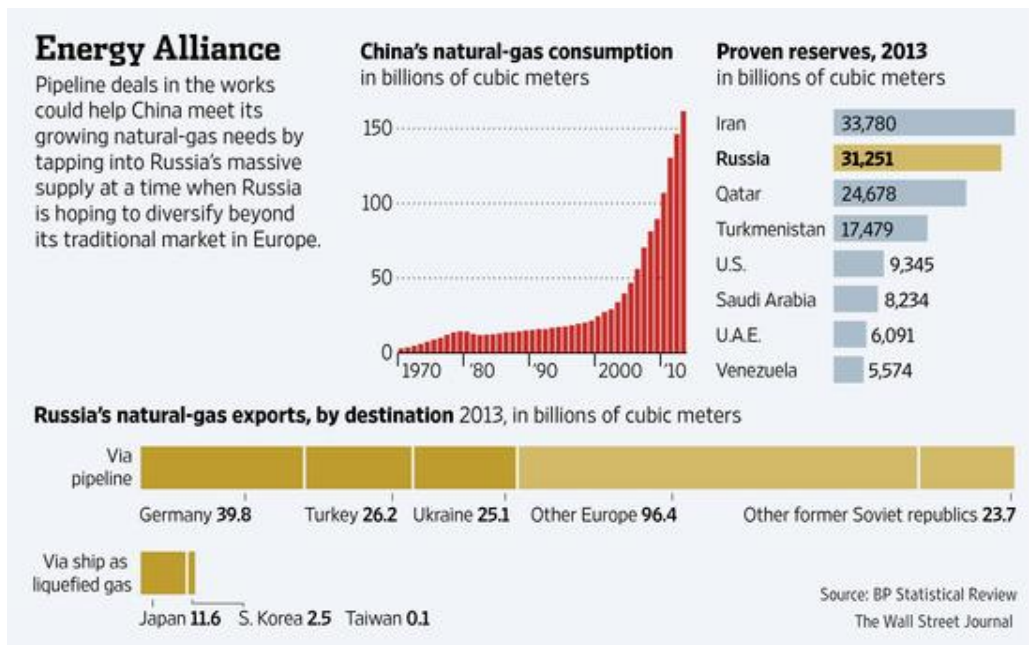


Figure 4 – Russia’s natural gas exports by destinations

Source: https://si.wsj.net/public/resources/images/WO-AU392_RUSCHI_G_20141110184845.jpg Accessed May 10, 2016

Appendix 2 – Tables

Primary Energy Consumption*- BP Statistical Review of World Energy 2015							
Million tonnes oil equivalent	2010	2011	2012	2013	2014	Change 2014 over 2013 (%)	2014 share of total (%)
China	2471.2	2679.7	2794.5	2898.1	2972.1	2.6%	23%
Total Asia	4642.9	4895.5	5069.1	5212.3	5334.6	2.3%	41.3%
Total World	12110.8	12408.3	12586.1	12807.1	12928.4	0.9%	100%

*In this review, primary energy comprises commercially-traded fuels, including modern renewables used to generate electricity. Oil consumption is measured in million tonnes, other fuels in million tonnes of oil equivalent.

Table 1

Source of Table 1-5: <http://www.bp.com/content/dam/bp/pdf/energy-economics/statistical-review-2015/bp-statistical-review-of-world-energy-2015-full-report.pdf> Accessed May 10, 2016

Coal Consumption*- BP Statistical Review of World Energy 2015							
Million tonnes oil equivalent	2010	2011	2012	2013	2014	Change 2014 over 2013 (%)	2014 share of total (%)
China	1740.8	1896	1922.5	1961.2	1962.4	0.1%	50.6%
Total Asia	2416.3	2590.8	2659.3	2729.5	2776.6	1.7%	71.5%
Total World	3611.2	3777.4	3798.8	3867	3881.8	0.4%	100%

*Commercial solid fuels only, bituminous coal and anthracite (hard coal), lignite and brown (sub-bituminous) coal, and other commercial solid fuels. Excludes coal converted to liquid or gaseous fuels, but includes coal consumed in transformation processes.

Table 2

Oil Consumption*- BP Statistical Review of World Energy 2015							
Thousand barrels/day	2010	2011	2012	2013	2014	Change 2014 over 2013 (%)	2014 share of total (%)
China	9266	9791	10231	10664	11056	3.3%	12.4%
Total Asia	27766	28808	29914	30415	30856	1.2%	33.9%
Total World	87867	88974	89846	91243	92086	0.8%	100%

*Inland demand plus international aviation and marine bunkers and refinery fuel and loss. Consumption of biogasoline, biodiesel and derivatives of coal and natural gas are also included.

Table 3

Natural Gas Consumption*- BP Statistical Review of World Energy 2015							
Billion cubic metres	2010	2011	2012	2013	2014	Change 2014 over 2013 (%)	2014 share of total (%)
China	110.5	134.9	151.2	170.8	185.5	8.6%	5.4%
Total Asia	571.6	612.2	647.6	665.3	678.6	2.0%	19.9%
Total World	3193.7	3265.3	3345.8	3381	3393	0.4%	100%
*Excludes natural gas converted to liquid fuels but includes derivatives of coal as well as natural gas consumed in Gas-to-Liquids transformation. The data above represents standard cubic metres (measured at 15°C and 1013 mbar) and annual changes and shares of total are calculated using million tonnes of oil equivalent figures.							

Table 4

Renewable Energy Consumption*- BP Statistical Review of World Energy 2015							
Million tonnes oil equivalent	2010	2011	2012	2013	2014	Change 2014 over 2013 (%)	2014 share of total (%)
China	13.1	24.6	33.8	46.1	53.1	15.1%	16.7%
European Union	68.6	82.8	97.8	109.7	118.7	8.2%	37.5%
Total Asia	39.3	53.7	66.4	82.5	94.2	14.2%	29.7%
Total World	168	205.6	242.9	283	316.9	12%	100%
*Based on gross generation from renewable sources including wind, geothermal, solar, biomass and waste, and not accounting for cross-border electricity supply. Converted on the basis of thermal equivalence assuming 38% conversion efficiency in a modern thermal power station.							

Table 5