



Lifelong Learning Programme



EMPOWERING EUROPE

Energy, Security, and Environment



università degli studi FIRENZE



Empowering Europe: Energy, Security and Environment



Preface

The School of Political Science of the Università degli Studi di Firenze is pleased to present the fifth newsletter of its new course on the fields among energy, environment and international relations at European level.

The course "Energy, Environment and European Security" aims at presenting a comprehensive analysis of the issues of energy, environment and European policy from a strong multidisciplinary perspective, as this new course encompasses three different disciplines (Energy Economics, Environmental Economics and International History).

The course, entirely taught in English, is part of the graduate program in International Relations and European Studies.

Lecturers are Rossella Bardazzi, Maria Grazia Pazienza, and Alberto Tonini, associated professors at the School of Political Science. Being part of the Lifelong Learning Programme, the course has been awarded as a Jean Monnet Module by the European Union in order to enlarge and deepen the field of European integration studies. This funding support is used to finance both incoming professors (seminars and visiting professors from other countries) and short exchange periods for students interested in research on energy issues (incoming and outgoing).

This newsletter is intended to stimulate the debate on energy issues and to promote the activities, which have been proposed during the entire course, to the international academic and non academic network.

This fift issue focuses on a cycle of lectures held by different guests on different energy topics such as the German energy transition and the energy issues in the Arctic Region.

Practical information and links close the newsletter.

Disclaimer

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

The reports included are made by University of Florence's students and are summaries of the lectures held by our guests.





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The German Energy Transition and Renewable Energy

Ulrik Lehr, Institute of Economic Structures Research (GWS), Osnabrück, Germany

Germany is one of the most developed countries in the world and its economic system needs energy in order to operate. Germany's demand for energy accounts to about 30% for transport sector, 26% for residential sector, 26% for industry and the rest is consumed by services and agriculture sector. Energy consumption may also be broken down by energy carrier. Oil is the most used energy carrier (35%), followed by natural gas and electricity (25% respectively). On the other hand, renewables cover about 6% of the total energy demand, followed by hard coal (3%). However, electricity in Germany is produced with different sources; the most important one is coal and lignite whereas nuclear entered in the '70s and reached the maximum in electricity generation in 1997 with 35,4% of the total electricity produced through nuclear fission.

In Germany, there were four different companies which were monopolies in their areas. During the '90s monopolies went under attack by economists and electricity generation and transportation were liberalized and deregulated. However, has the deregulation been a good news or bad news for the environment? Actually, utility companies are natural monopoly because the sector is characterized by sub-additivity of cost due to high fixed costs, decreasing average



cost, increasing returns to scale (economies of scale) and high market entry costs. The deregulation, i.e. the separation of production and transport grid, entails lower prices, and higher competition but it may also implicate costs to the environment. In fact, it may lower environmental standards since competition obliges companies to compete on prices and that may bring to use more polluting energy sources. The overall question is: are low energy prices a good environmental signal? Do we want energy to become cheaper in order to let people use a larger amount of it? Or do we need to let energy be more expensive in order to let consumers decide and weight the utility to switch on a light or not?



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Therefore, the signal effect of prices is very relevant to let people save energy. Thus, letting energy be more expensive or not depends on what the state wants to achieve. Renewables complicate the picture since the marginal cost to produce the next unit of energy is zero as renewables don't have marginal costs. The only costs they have are the construction and maintenance costs. So. renewables are basically zero marginal cost technology and that

complicates selling on the market the energy produced through this technology. Thus, what is the price? Given such a difficulty, regulation is necessary. Germany has supported all renewable energy technologies (wind, biogas, geothermal, photovoltaic, small hydro, large hydro, etc.) instead of promoting only one source of renewable as Spain has done with wind electricity generation.

Moreover, the Renewable Energy Sources Act (EEG) has been quite successful. The regulation grants a priority in connection to the grid systems for general electricity supply or installations generating electricity from renewable energy sources. The law makes sure

<u>Figure 1</u> Industry prices without taxes and fees: Germany ranges in the middle



Industry prices without taxes and fees: Germany ranges in the middle

that RES-facilities are connected properly, i.e. no red tape and no obstacles from grid operators. The transmission, distribution and purchase of such electricity by the grid system operators have the priority in order to make sure that electricity from RES is paid and not wasted. The EEG has regulated tariffs as well and organized burden sharing since there exists a nationwide equalization scheme for the quantity of electricity purchased and paid. The electricity produced by RES costs more than others but must be bought by companies which don't want to bear the additional cost of this mechanism. Therefore, consumers must pay the difference of the tariffs. That is calculated as the delta



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between the spot market prices and renewable energy prices. Everybody pays a bit more on renewable energy in order to sustain the system. Nowadays, Germany has a large share of energy produced by renewables. However, when the sun shines during the summer in Germany there is no sustained need of energy since air conditioning is not so common and consumption is not high during this season. Then, the market price of electricity is almost close to zero. In such a case, the operator pays the difference between the market prices and tariffs set by the authorities to sustain renewables and such amount is very large.

Despite such an incentive system, a large share of electricity generation is still dominated by fossil fuels. However, in the last years, share of renewable energy contribution increases and the total electricity consumption compared to 1990 has not changed so much.

As for industry prices without taxes and fees,

Lifelong Learning Programme doesn't seem to be the remedy to decrease prices. Regarding nuclear energy, from 1956 to 1969 several nuclear research centres were founded in West Germany. In 1972 the Biblis A reactor was built and led to the world's largest reactor with 1200 MWe. In 2000, the government signed an agreement with the electricity companies to phase out the utilisation of nuclear energy in a structured manner. In 2010, the Federal government decided that for a transitional period, nuclear energy should remain an indispensable part of the mix. So, the operating lives of the 17 nuclear power plants, determined by the amount of electricity allowed for production, were extended by granting further electricity production rights an additional 12 years on average.

After Fukushima disaster, the debate on nuclear energy has fuelled all over Europe and Germany as well. Nuclear power plants have been disclosed to the public not only as plants of



5 of 22



Target in %

In terms of

primary energy

Trend

Share of renewables In %

School of Political Science

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energy production but also as centres of energy consumption. In fact, nuclear plants need energy for cooling, pumps, checks and so on. Thus, European countries reacted differently. Most of them underwent through a stress test phase but with no other consequences. Part of these tests checked if there was enough backup power to cover different eventualities that may lead to a disaster.

Belgium, France and Switzerland decided to shut down old nuclear power plants. UK, Sweden, Poland and Czech Republic planned new nuclear power plants and UK started to subsidize nuclear power substitutes. Finally, Germany and Italy decided to phase out and not to phase in, respectively.

Given that nuclear power plants will be no more in use used in Germany in the future, this

Figure 3

As shown in Figure 2, Germany has decided to set very high targets. As for power consumption compared to 2008 figures, it should decrease to 75% of the 2008 amount and the share of renewables should increase to 80% within 2050. In that year, gross energy consumption will be the 50% of that consumed in 2008.

However, energy efficiency has been supported for many years but its effects have led to different results. Although energy efficiency is high on the political agenda, there are implications leading to some undesired effects. For example, consumers may be lead to use more than usual their efficient devices. Such behaviour is the rebound effect. A car that consumes less petrol may be used more intensely since at the same costs the consumer may drive more kilometres. That entails that it is not possible to achieve the forecasted amount of

must country accurately plan its energy system. In order to balance the phasing out of nuclear energy, Germany will increase renewable energy and efficiency that is the cheapest "source" of energy that a country may exploit. Increasing efficiency is an important requisite to raise the share of renewables. Since renewable source cannot grow to infinity, it is necessary to push energy demand down.

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Energy Efficiency measures **Energy efficiency measures** Energy savings Investment Crowding out? Reduced energy Higher demand for Lower energy Costs for investors expenditures non-energy products imports Higher "Improved" balance Negative impact on croecond mic **Higher production** Price increases of trade energy industry investments? GDP effect



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energy savings due to a behavioural change . As a consequence, the rebound effect eats a lot of energy savings. Moreover, another aspect arises: the no-regret efficiency potentials. For households the no-regret period is much longer than for industry. That entails different behaviours for each sector.

Despite these issues, renewable energy had a highly successful year in 2011. Germany reached an all time high in new capacity. Moreover, prices for photovoltaic technology fell down thanks also to the fact that China became a large producer in such a technology. Finally, about 400,000 people in Germany worked in the renewable technology industry. Such a picture was supported by a feed-in tariff that financed the sector and led to a success story in terms of deployment even though public discussion on costs and disputes on financing mechanism arose.

However, to see where the development of renewables is going, it is necessary an economic evaluation and that is where economic modelling comes into action. One of the main drivers of economic effects on renewables is the production of wind turbines, photovoltaic modules and inverters. Moreover, other drivers may be installations and investments; development, innovation and research; prices and additional costs; additional exports and less fossil fuels imports. Also for efficiency, there are similar drivers with some differences. In fact, a lot of efficiency growth comes from construction and building sector.

Thus, the macroeconomic model analysis takes into account all these drivers in order to design a scenario, i.e. the definition of different developments, which leads to the conversion in monetary impulses (e.g. electricity prices, investment differences) and results in macroeconomic effects and evaluation in topdown models. Figure 3 shows how energy efficiency measures generate GDP effect.

Regarding the simulations, two scenarios are built up: the reference and the *energiewende* scenarios. The former includes business as usual hypothesis whereas the latter includes additional measures per sector with the identification of the market best solutions, additional costs/investments and efficiency increase. Both scenarios have constant framework conditions, i.e. population, temperature, import prices.

Models can be used as database, projection tool and analysis tool. Regarding projections, it is pivotal to define which data change and what will be different in the future compared to the reference case. Finally, it is necessary to change variables (e.g. investment in renewables, imports, exports, etc.) to measure their quantitative effects and understand their importance on the final results.

PANTA RHEI is the model used to understand and evaluate the effects of energy policies at GWS, a privately funded think-tank and consultancy institute. PANTA RHEI is based on official statistics, with a bottom-up approach and with data sets based on historical time-series with no neoclassical general equilibrium. Such a model is suitable for simulation of direct and indirect effects, especially counterbalancing effects, and results are net after all adaption processes. The structure of the model is shown in this page.

According to this model, the Energiewende will lead to moderate positive effects. Additional



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According to this model, the Energiewende will lead to moderate positive effects. Additional climate mitigation measures in terms of

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renewables and energy efficiency produce positive impacts on the economy. Energy efficiency and renewable energy lead to more and better jobs. Especially in economic difficult times, it pays to invest in renewables and energy efficiency because the returns are calculable and certain.





Energy balance, satellite balance, energy prices

Economic core

Energy module



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Energy Issues in the Arctic Region

Justiina Dahl, European University Institute, Florence, Italy

Since its discovery, nobody has owned the Arctic region which is located about 400 nautical miles north of Greenland and the northernmost islands of Canada and Russia. Although the water and seabed close to shore belong to the coastal States, the surface, water column, and at least some of the seabed of the central Arctic Ocean belong to all humanity.

During the Cold War, the US and the Soviet Union were present in the area with their nuclear submarines and their bombers and the region was field of contrast and confrontation between the two superpowers. However, with the Soviet Union collapse, a more peaceful and cooperative approach emerged in 1990 when the two superpowers negotiated a maritime boundary in the Bering Sea, Bering Strait, and Chukchi Sea.

In 1996, the US, Russia, Canada, Denmark, Norway, Sweden, Finland, and Iceland (the socalled Arctic countries) created the Arctic Council as an intergovernmental forum to discuss issues that fell outside the military and security sectors.

However, recently the climate change has reshaped the Arctic area leading to concerns on its environmental stability. The GHG (greenhouse gas) emissions have led to permafrost instability and melting causing the further emissions of methane from morasses.

Higher average temperatures have led to a dramatic sea-ice drop which have permitted to

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ships to navigate in larger areas of the Arctic. This has also given the chance to reduce the costs and length of the route between Asia and Europe and has facilitated the exploration and extraction of natural resources as well.

The combination of melting sea-ice and high oil



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prices has raised concerns about possible struggles for Arctic territory and resources. In 2007, Russia planted a titanium flag on the seabed of the North Pole declaring "the Arctic is Russian". As elsewhere in the world, the territorial seas of Arctic countries extend twelve nautical miles from shore. Within that band. coastal States have extensive regulatory powers over foreign shipping and absolute rights over fish and seabed resources. Within 200 nautical miles. in the exclusive economic zone, coastal States have fewer powers over shipping but

absolute rights over fish and seabed resources. Beyond 200 miles, coastal States lose their rights over fisheries but they may have rights over the seabed if they are able to demonstrate scientifically that the ocean floor is a "natural prolongation" of their landmass.

As stated above, the Arctic region has a very unstable equilibrium under the perspective of both natural and governance issues. As for the latters, it may be argued that governance of the Arctic may be divided in geographical terms in national, regional, and international. Certainly, States have the highest power for enforcement of rules of conduct on the area and each State has regulations and guidelines that may be applied to Oil and Gas (O&G) extraction in Arctic coastal

Figure 1 UNCLOS framework



States. Instead, regional institutions as well as international institutions may have soft law instruments in order to conciliate the national interests of the eight Arctic States.

The United Nations Convention on the Law of the Seas (UNCLOS) provides a framework where the Arctic States may play their national and economic interests. In fact, this convention sets the legal foundations for marine environmental protection and controlling marine resource exploitations in all the world's oceans, including the Polar seas. As you may note from Figure 1, each coastal State has rights and responsibilities on five different zones of national jurisdiction: internal waters (total sovereignty), territorial sea (almost total sovereignty), contiguous zone



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(almost total sovereignty), the exclusive economic zone, and the continental shelf.

As a consequence, five coastal States (Canada, Denmark/Greenland, Norway, the Russian Federation and the US) have exclusive rights to exploit fisheries, mineral, hydrocarbons and energy resources within their 200 nautical miles, i.e. their Exclusive economic zone. Moreover, each State has the right to harvest mineral and non-living material in the subsoil of its continental shelf to the exclusion of others. The continental shelf is defined as the natural prolongation of the land territory to the continental margin's outer edge, or 200 nautical miles from the coastal State's baseline. whichever is greater. A State's continental shelf may exceed 200 nautical miles until the natural prolongation ends. However, it may never exceed 350 nautical miles from the baseline; or it may never exceed 100 nautical miles beyond the 2,500-meter isobaths (the line connecting the depth of 2,500 meters).

Lifelong Learning Programme In case the continental shelf extends beyond 200 nautical miles, a State is required by UNCLOS (Article 76) to make a submission to the Commission on the Limits of the Continental Shelf (CLCS). This submission sets out the coordinates of the outer limits of the shelf and is accompanied by technical and scientific data to support the claim. The Commission assesses the limits and data submitted by the coastal State and makes recommendations. The outer limits of the continental shelf established by a coastal State based on these recommendations are final and binding.

On regional terms, there exists the Arctic Council which is a high level intergovernmental forum established in 1996 that followed the 1991 Arctic Environmental Protection Strategy. The Arctic Council has a rotating chairmanship (every two years), a permanent secretariat in Tromsö, Norway, and convenes every six months somewhere in the Chair's country for a Senior Arctic Officials meeting. Instead, a ministerial-



level meeting is held once every two years. The Arctic forum is a high level assembly aimed to provide a means t o promote cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic



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indigenous communities and other Arctic inhabitants on common arctic issues, in particular issues of sustainable development and environmental protection in the Arctic. Moreover, it oversees and coordinates the programs established under the AEPS on the Arctic Monitoring and Assessment Program (AMAP); conservation of Arctic Flora and Fauna (CAFF); Protection of the Arctic Marine Environment (PAME); and Emergency Preparedness and Response (EPPR). To better understand the organization of the Arctic Council, Figure 2 shows the framework of it.

Given an overall view on Arctic and its governance, it is necessary to understand the Russian point of view on this area since Russia is the biggest and most populated territory in the Far North. Studying the Russian case is important given that the Russian Arctic constitutes two-thirds of the total Arctic region wealth. There were 61 large oil and natural gas fields discovered by 2013 and 43 of those were in Russia. Finally, about 20% of Russia's GDP and its total exports are generated in the Arctic Circle. For these reasons studying and understanding the Russian presence in the Arctic is pivotal to interpret the actual relationships between the Arctic countries. 2

Russia has a continental shelf of 6.2 million km², of which 4 million are considered to be of potential interest for O&G production. According to Russia's Ministry of Natural Resources, onethird of Russia's initial gas resources and twelve percent of its oil resources are located on the continental shelf. This corresponds to 13.5 billion tons of oil and 73 trillion m³ of natural gas. Of this, two-thirds should be located in the Barents and Kara seas. Twenty major oil and gas provinces and basins have been discovered on the Russian shelf, 10 of which have proved oil and gas reserves. The largest Arctic sedimentary basins are the East Barents, South Kara, Laptev, East Siberian and Chukchi basins. The majority of local resources (around 94% of the total) have been found in the western part, while the hydrocarbon potential of the eastern part, along the slope and in the deep Arctic basin, is mostly regarded as inferred or contingent. Gazprom and Rosneft are the only two companies allowed to receive new licenses to explore Russia's continental shelf. These two companies hold also the majority of licences. However, a number of Russian private companies are interested in participating

in the Arctic shelf and are lobbying for liberalization of access to shelf projects.

Despite the big opportunities offered by Russian Arctic areas, there exist obstacles that include low levels of exploration, high investment risks, high exploration and development costs due to remote locations, a poorly developed infrastructure, an unattractive and unstable fiscal regime and high government take, a bureaucratic system of State management and issuance of user rights for offshore resources, and an insufficiently developed legal framework not adapted to the specifics of offshore activity.

Moreover, despite the size of Gazprom and Rosneft, capital may become a dramatic constraint for both in commencing a new phase of expensive and high-risk offshore development. Both have a relatively large debt that complicates more such explorations and development.

Russia needs cooperation in geopolitics as well since its lack of technology. A big amount of oil



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drilling technology used in Figure 2 Russia is, in fact, imported from the West. In addition. offshore activities are a new domain for Russian O&G industry that necessitates the support of moreadvanced technological partners, especially for Arctic exploration where the extreme conditions require a very advancedtechnology which is almost entirely imported from Western companies. The Prirazlomnove oil field (started a decade behind schedule in April 2014) and the Shtokman gas field (postponed until further notice in 2012) are the proof of such a difficulty in exploiting Arctic resources. Furthermore, as stated above, another limit is the debt constraint that holds back Russia's energy industry. In fact,

according to IEA only for the maintenance of actual production levels Russian O&G industry needs to raise around \$900 billion over the next 25 years.

As a consequence, Russia is stuck between the desire to exclude and to conduct a patriotic and Great Power policy and its extreme need to cooperate to exploit its resources. Such a scenario may lead to the will to maintain control over strategic issues for sovereignty purpose but the need to foster foreign participation for the exploitation of its strategic energy resources.

Now that we have explained the governance of the Arctic and the point of view of the biggest actor of the region, i.e. Russia, it is time to deal



with politics and the political side of the Arctic. The approach is new and takes into account four parts of politics: policy, polity, politicking and politicization. Taking into consideration Weber's definition of power, the latter is some paradigmatic source but anything can be turned into a power share. Power is also a medium of politics through which somebody can act politically. Finally, it may be argued that politics is similar to distribution of power shares. In fact, politics through power shares focuses on relationship between different types of power shares, different manners of distribution between them and the relationship between the same types of power shares. Thus, it may be



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declared that politics is striving for and deciding what to do with new power shares.

The processes of creating new power share in politics are four: politicization, politicking, policy, and polity.

In order to talk about an issue as a shared problem, it needs to be politicized. In order to let politics enter into force it is necessary to design a specific issue as political. This process may be named as politicization. That has to be more than a declaration and must include indicators for the forms of politicking that are opened up. Moreover, politicization includes detecting the political potential of some existing shift, changes, and processes.

The improvisation and taking advantage of the details of the on-going situation with a duration and rhythm of its own may be defined as politicking. It is asking not only what should be done but also how to do it with no necessity in terms of being concrete. Politicking examples are practicing at debate clubs and campaigning for votes before an election.

Instead, polity is a temporalized space that has been politicized and commonly accepted as political. It is the metaphorical space that demarcates the "political sphere" from other spheres. It is a complex in which power shares are divided into legitimate and illegitimate ones. Certain power shares have gained privileged positions; others have faded away and appear as anachronistic while attempts to create new ones are viewed with suspicion. Example of polity may be the parliamentary regime that has the government-opposition game and specific calendar of elections.

In order to better understand this framework, Figure 3 explains how politicization, politicking, polity, and policy interact.

For politicization, it may be said that the Arctic is rapidly emerging as a major playing field in world politics. As stated above the attention on this area has risen in the last years, and this region has been woken up again and is now rapidly emerging with full force on the world stage.

The main drivers of change are essentially three: global warming, technological advances, and a global scarcity of vital natural resources. The first cause permits to humans to access the areas in the Arctic Ocean that were unreachable few years ago. The second cause has impact on extraction activities and communications technology. Finally, an increasing global scarcity of vital natural resources forces humans to explore wilder and more unreachable areas. Moreover, to these causes they must be added an interest and will to exploit the Arctic by financial sectors and countries.

Future economic activity in the Arctic may concern raw material exploitation. In fact, the warming of the Arctic waters will both open up more of the Arctic to fishing vessels, as well as lead fish stocks to migrate further north. In addition, oil and gas have become mapped with greater certainty and they will likely generate a large increase in O&G exploitation in the Arctic. Finally, but not for its importance, there could be the chance to deal with a maritime transformation with the likelihood that the Arctic will emerge as one of the key global Sea Line of Communications which will let commercial vessels reduce their routes for Europe and Asia.

In fact, as stated in the International Northern Sea Route Programme (INSROP), a substantial



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increase in international commercial shipping is feasible in economic, technological and environmental terms. Main hindrances are political and economic since Russia should establish a stable, and competitive tariff regime to upgrade and maintain an adequate infrastructure for such a new sea route.

In 2009, another assessment on the Arctic Marine shipping led by Canada, Finland and the United States came to the conclusions that gaps in hydrographical data exist for significant portions of primary shipping routes and this entails a lack to support safe navigation. Moreover, there exists the need for the same suite of meteorological and oceanographic data, products and services as in other oceans, plus comprehensive information on sea ice and icebergs to let vessels navigate in the Arctic with safety. Finally, current lack of marine infrastructure in all but a limited number of areas, coupled with the vastness and harshness of the environment, makes conduct of emergency response significantly more difficult in the Arctic. So, as already stated Russia is crucial for the Arctic region. However, Russia is a particular actor as well. In fact, Russian leadership and its political system have demonstrated clear nonchalance with issues that Western societies take seriously, i.e. liberal governance and environment protection.

To sum up the politicization of the Arctic, it may be argued that the Arctic is rapidly emerging as a major playing field in world politics. Its raw material exploitation, and maritime transportation are a new horizon of chances. Among all the Arctic States, Russia may be the main shared problem given its leadership and political system that are different from the others. Finally, there exist specific forms of politicking opened up that concern supranational universal values, such as prioritizing protection of the environment against the modern hard national values, the same basic interests and a way of doing business and a liberal governance and environment protection.



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Exchange Programmes Reports.

Experiences of Exchange students.

RUSSIAN STUDENTS VISITING THE UNIVERSITY OF FLORENCE



Pervushin Nikolay, Novosibirsk University, Russia.

In March 2015 I have participated in the exchange program at the University of Florence. I have studied for 1 month under the Program «International Relations and European Studies». I have attended such disciplines as «EU Public Policies», «ICT Policies», «Security Studies» and «European and International Relations: linguistic analysis». I found that all these subjects were rather useful. «ICT Policies» and «Security Studies» were especially interesting for me.

This year I am receiving a master's degree in economic sociology and mentioned above

disciplines are really close to my specialization. It is very important to think about new communication technologies. They change social reality but most of us don't think about it and most of us don't know how processes are gone. We use Internet, it changes us, our practices, patterns of behavior and world pictures, but we don't know how it works if we are speaking about technological, economic and political aspects of technologies. So, professor Giorgio Natalicchi has clarified some of these aspects and has given a lot of food for thought. Also, I must mention his method of teaching. It's not just a lecture - it is a kind of a show with a lot of questions, jokes and discussion. This style brings student's attention and involvement.

In addition to this, some words about campus must be said. In my opinion, it is well equipped and convenient. The library seems to be an ideal place for educational process. Professors, students and

staff are polite and responsive. So, the campus gives a mood to study.

gives a mood to study. Also, Florence is a European



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cultural center which keeps intellectual traditions of Renaissance. I think it is one of the most beautiful cities in the world. I was impressed by the quantity of masterpieces that are concentrated close to each other. Piazzale Michelangelo and Loggia dei Lanzi are my favorite places in Florence. They are magnificent. However, there are not only artifacts of Renaissance, but there are original models of contemporary art too.

Summing it up, this trip gave me a wonderful experience and many impressions which are unforgettable. Also, now I understand how European educational model runs. In addition to this, I have practiced in the use of Italian which I have studied for 2 years. I am thinking about receiving Phd-degree and may be will return to do it in Italy.

<u>Anastasiya Pirotskaya, Novosibirsk University,</u> <u>Russia</u>

My name is Anastasia, I am 23, and I am from Russia, Novosibirsk.

In March I was lucky enough to participate in the student exchange program and to study International Relations in the University of Florence.

First of all, it was really interesting and exciting for me to study in absolutely new atmosphere. In spite of the fact that in my home university I study sociology, I have found some interconnections between these two fields of study, which was actually really helpful to better understand some disciplines that I have finished in my university.

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Apart from the studies in class, there were a lot of "studies" in galleries and museums, because I couldn't help but visit all the most famous culture establishments. Especially my passion is museums of modern art, and I couldn't just walk by those in almost every city that I've visited in Italy.

The large part of my stay in Italy was traveling. I managed to visit Pisa, Bologna, Venice, Milan and Rome. Pisa and Bologna are really nice and calm small campuses. But for me, Venice and Milan remain the most beautiful cities in which I would like to stay longer. I remember Venice as a charming and adorable city, located on the islands, which is absolutely amazing. Even though I've heard about this magical city, I was extremely excited when I saw it with my own eyes. I think the smell of fresh water follows me still when I think

of Venice. I also loved Milan for the atmosphere of freedom and fun of a big and modern city, and at the same time I was amazed by the greatness of its monumental but still very graceful cathedral. Also I visited the Russian-Italian day there, which is significant, because it means the friendship between our





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Another remarkable part of my time in Italy was

_ifelong _earning Programme its cuisine. When I think of Italian pizza, pasta, lasagna, tiramisu and other dishes and sweeties, I almost lose my mind and I want to come back even harder.

All in all, I must say that this was an amazing experience that brought me a lot of new impressions, knowledge and inspiration. I hope that someday I will visit Italy and Florence in particular, again, because I want to show all the glory and spirit of this country to my family and friends.

ITALIAN STUDENTS VISITING THE MOSCOW INSTITUTE OF INTERNATIONAL RELATIONS (MGIMO)

Giuliano D'Acunzo

I really enjoyed my period of stay at MGIMO especially because of the vibrant and cross-cultural





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environment of the university. Being a guest student at MGIMO gave me the opportunity of meeting people from cultures I would have hardly met otherwise, such as Mongolian, Kazakh and Uzbek.

The university complex, modern and wellequipped, is located in the quiet periphery of Moscow, just 10 minutes metro from the centre of Moscow. The many courses offered in English and the high level of English proficiency of students and professors witness the intention of the University to become international and attract more and more students from abroad. Also I was impressed by the kindness of the staff delegated to our acceptance. Russian language may be an asset, especially in dealing with the dormitory staff and to have access to a broader literature in the library. Notwithstanding the number of Russian authors publishing in English is always increasing and the European Law centre offers access to many international journals.

Undoubtedly my experience in Russia is a a valueadded to my Master degree path and to the elaboration of my thesis. I therefore warmly suggest other students to undertake this experience.

Maria Luena Collini

My experience at MGIMO for my research thesis has been absolutely positive.

First of all I want to spend few words thanking my professors of the course Energy, Environment and European Security that offered me this amazing opportunity.

I stayed in Moscow for 12 days and as soon as I arrived I realized that I had many things to do in

such a short time.

A woman in charge of managing the international dorm welcomed us at the University.

She was really kind and available with me and my colleague Giuliano, even if we couldn't speak in Russian and she didn't know English.

In my point of view, the only frustrating aspect was the language barrier.

Indeed I don't speak Russian and just students and few professors know English.

But moving on, professor Kaveshnikov, Head Chair of European Integration Studies at the MGIMO, gave me an essential help.

Indeed he provided me with several contacts of important professors and influential people, whom I could interview concerning my research's theme.

Meeting these professors and having a talk with them was a very enriching experience.





Learning Programme

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Also the European Centre at the MGIMO was crucial for my research thesis.

By all means, the librarian of the European Centre was always ready to help me with the University's database and available books.

Summarizing my experience, this study program enriched me in several ways.

First of all, I gained a deeper perspective of the issue. Bearing in mind that my research thesis concerned the Russian point of view, Moscow and the MGIMO were the perfect location for my research.

Second, living for 12 days at the international dorm was a perfect way to socialize with MGIMO's students and to know better several different cultures.

Third, I enjoyed the city in my free time, especially when my Kazakhstan roommate guided me.





Empowering Europe: Energy, Security and Environment

Upcoming in 2016, by Springer

European Energy and Climate Security - Public Policies, Energy Sources, and Eastern Partners

R. Bardazzi, M.G. Pazienza, A. Tonini (Eds.)

As energy is becoming one of the crucial concerns in the EU, this volume provides an indepth analysis and interdisciplinary perspective on European energy security. Given the multidimensional nature of energy security in terms of physical availability, affordability and geopolitical security, it bring together authors from different background pursuing a distinctly multidisciplinary approach. The authors' different perspectives correspond to three sections of the book: international relations, which focuses on Eastern EU partners; energy economics; which highlights the current unconventional hydrocarbons revolution and its impact on EU energy and climate strategies; and public policy, which analyzes EU policies in the context.

Table of contents

1. Enhancing Energy security in Europe: strategic partners, new sources and public policies. (R.Bardazzi, M.G. Pazienza, A.Tonini) Part I - EU and Eastern Energy Partners: some key issues. 2. EU Commission and the European Energy Diplomacy: an Historical Appraisal (Alberto Tonini). 3. A link of steel. Western Europe-Russia gas pipeline network in the post-Soviet era (Matteo Verda). 4. Turkey as Energy Hub for Europe (Nursin Guney) 5. Russia's oil dilemmas. Production: to go north-east or to go deep? Exports: is a compromise between westward and eastward directions possible? (Valeriy Kryukov). Part II – Unconventional hydrocarbons: new



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patterns and impacts on Europe. 6. Game Changer:

Industrial Impacts of the Shale Gas Revolution in the US (Douglas Meade). 7. Shale fuels: the solution to the energy

conundrum? (Virginia Di Nino, Ivan Faiella). 8. Does the

Trade-off Between Energy Security and Climate Change

Protection Matter? The Canadian sands case (Laura

Castellucci). Part III - Public policies as a tool to

strengthen European energy and climate security. 9.

Rationales for a revisited European energy technology policy

(Sophia Ruester). 10. German Energiewende - quo vadis?

(Ulrike Lehr, Christian Lutz). 11. Taxing Energy Use: Patterns

and Incoherencies in OECD Energy Taxation (Michelle

Harding, Chiara Martini, Alastair Thomas). 12. Public policies

and Energy mix in Italy: where do we stand? (Rossella

Bardazzi, Maria Grazia Pazienza)

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