GEORGIA AND EUROPEAN ENERGY COMMUNITY

THE CHALLENGES OF EU INTEGRATION

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Contents

Introduction

The aim of this article is to increase awareness of society and decision makers regarding the advantages and the benefits of European Energy Community for the European integration process and purpose for Georgia to join it. The study analyses the legislative framework of European Energy Community, implementation mechanisms and the experience of South-East Balkan countries and Ukraine. It describes the strengths and weaknesses of the Community and its influence on the European integration process.

The study touches upon the situation in the energy sector of Georgia, consistency of laws and regulations of energy and environment sectors with those of the European Energy Community. Given the complexity of the issue this study does not cover all the directives in details, as well as the recommendations refer only to main trends, not to specific activities.

Executive Summary

In 2014 Georgia signed the Association Agreement with EU, thus committing to reforms in energy and environment sectors, including the third package of the EU energy law[1]. The association agreement implies that Georgia becomes a member of the European Energy Community.

Georgia was invited to join European Energy Community already in 2006[2]. But the cooperation did not happen. Georgia received the observer status in 2007. In November 2010 President of the EC invited Georgia to officially apply for Energy Community membership. "This will contribute to further deepening of our relations and Georgia's attractiveness for investments in the energy sector"[3]. There was full silence in response to this invitation until 2013 – the subject has not been discussed not only on the government level, but has not been featured in public discussions either.

In January 2013 Georgia filed a formal application for accession to Energy Community. In 2014, prior to signing the Association Agreement talks between Energy Community and the Georgian government started with the view of signing the Agreement before the end of October 2014. The talks aimed at developing the action plan and the timeline for harmonization of Georgian law with European energy regulations and other relevant environment laws; the Action plan might propose the deadlines, different from those set forth in the Association Agreement[4].

However the talks, by the end of 2014 ended to no avail. Regardless, public demand and parliamentary discussions on the issue, Ministry of Energy did not give any explanation as to not sign the agreement. In Spring 2015 Ministry of Energy made a statement about resumption of the talks with Director General of EC energy department on signing the EU Energy Agreement[5].

The study shows that the government, both the previous and the current, does not realize the importance of joining European Energy Community for reforming the energy sector and attracting the investments in this sector on the one hand, and acceleration of the European integration process – on the other.

Currently the Georgian society is not aware of the advantages of accession in European Energy Community and this process is not perceived as an essential part of European Integration.

Entering European Energy Community and development of appropriate legal framework in Georgia will enhance:

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[1] http://eeas.europa.eu/georgia/pdf/eu-ge_aa-dcfta_en.pdf

[2] http://dfwatch.net/the-trans-caspian-pipeline-a-strategic-opportunity-44400-28623

[3] http://www.radiotavisupleba.ge/content/georgia-and-european-energy-community/24742516.html

[4] The association agreement will activate the additional note, which involves almost all the directives in energy sphere, provided Georgia joins European Energy Community

[5] http://www.energy.gov.ge/show%20news%20mediacenter.php?id=440&lang=geo

- Creation of a modern and competitive energy system, its sustainability and the customers' increased rights (strong, independent regulatory authority, transparency and expenditure-based tariffs, unbundling and network accessibility);
- Increase transparency and cut down corruption in the sector;
- Sustainability of energy system to internal and external factors;
- Harmonization with European legislation on environmental protection and its implementation;
- Creation of sustainable low-E green energy system, which will contribute to safe delivery – reducing energy consumption through the introduction of renewable energy and energy – efficient systems;
- Investments in the energy system from European and other investors, including the European Investment Bank, which will boost employment, particularly in renewable energy and energy-efficiency sectors;
- Play an important role in implementation of the Association Agreement in long-term perspective, lead to Georgia's integration in pan-European energy market.

It should be mentioned, that having Georgia among its members of the Energy Community, the EU will have to respond adequately to Russia's actions on Georgia's occupied territories". Russia is conducting illicit acts in the occupied regions of Georgia (building a pipeline in Tskhinvali, extracting oil from Abkhazia's continental shelf), thus grossly violating international law. In the case of Georgia's accession to the European Energy Community, discussing and addressing these issues will become a direct obligation of the EU"[6].

One of the main problems, to be solved with Georgia's accession in Energy Community, is the creation of transparent and accountable energy sector. Signing agreements between Georgian public institutions and private companies, as well as the process of issuing licenses and permits by competent authorities are closed for wider society. Particularly evident it is when it comes to privatization[7] or/and building new energy facilities, when most favorable conditions are created for certain companies in exchange for certain benefits.

It should be noted that even after signing the association agreement the deplorable practice of government contracting with various companies continues. At the same time, in almost all cases, the government is in talks over tariffs (in the case of both, existing and new generating facilities) that humbles role of Georgian National Energy and Water Regulatory Commission[8]. This will have an adverse effect both in terms of further rapprochement with the European market. Likewise, it may create a substantial threat to the further growth of the sector, as considerably as the income derived from it.

Moreover, it is argued that "Georgia's investment framework may be contributing to a negative feedback loop of reinforcing both Russian investments and driving away strategic investors. There is reason to believe that the results of the Georgian-Russian investment relationship have contributed to a reinforcing cycle of corruption, weakened regulatory oversight, loss of transparency, and the creation of governance shortcomings that have led to a loss of strategic investors"[9].

It has been underscored that corruption environment of Georgia is not unique. The accession of South-East European countries did not completely solve the problem, but the introduction of transparency and common market rules contributed to the identification of the problem and the development of mechanisms to solve the problem (see South-East Balkans and European Energy Community).

The study demonstrated that the institutional and legal framework of Georgia not only is not consistent with the requirements of the European Energy Community, but is far behind them. This may adversely affect the further development of the sector.

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[6] http://www.osgf.ge/files/2015/Publication/Energetika_WEB.pdf

[7] Paul Rimpley, 2013, "to whom belonged Georgia in 2003-2012", Transparency International Georgia

[8] http://www.greenalt.org/webmill/data/file/publications/memorandumebi_da_xelshekrulebebi_analizi.pdf

[9] Russian Investments in Georgia's Electricity Sector: How Georgia's Institutional Framework Encouraged High Levels of Russian Investment , Courtney Doggart, USAEE-IAEE WP 09-035, December 2009

The country will need quite some efforts to ensure activation of the EU basic energy directives by: maintaining accurate energy statistics, constructing new energy facilities, unbundling of transmission systems, introduction of transparency and competition in the market, non-discriminatory access to the network, increased supply security, the promotion of renewable energy sources, development and implementation of energy efficiency National Action Plan etc. It is important that the role of regulatory commission is reinforced with regard to market functioning and trans-border trade.

The existing legal framework does not regulate the whole range of actions, executive agency does not have relevant roles and duties for environmental regulation, especially in the industrial sector. There are no appropriate technical regulations and the developed projects do not meet the requirements of integrated pollution prevention and control directives, as well as those of environmental impact assessment directives. In a range of cases there is no competent body to issue permits and carry through further control and monitoring.

It is important that environment protection instruments are widely introduced when implementing projects and programs in the energy sector, to carry out both environmental impact assessment and strategic environmental impact assessment. Full range of activities needs to be resolved, competent bodies need to be vested with appropriate functions and responsibilities for environmental regulation, prevention, control and monitoring.

Given the EU accession perspective, short term, medium term and long term energy policy shall be developed to ensure the compliance with the commitments under the Association Agreement. The consistent implementation of reforms in energy sector is important. This reform implies economic, as well as environmental and social dimensions, as required under European Energy Agreement. Cost-effectiveness analysis prior to each decision, as well as wide public debate are very important, as this will allow to create sustainable and secure energy system on the basis of consensus.

Chapter 1. Georgia and the EU

Georgia aspires to integrate with the EU and to finally become a member of the bloc, and it serves as a red line in all political negotiations[10]. Since 2004 Georgia is a part of the EU's European Neigbourhood Policy [11], and in 2014 it successfully signed Association Agreement[12] with EU that defines the framework of cooperation and reforms agenda in political, trade, social, cultural and security sectors. Association Agreement also includes Deep and Comprehensive Free Trade Area (AA/DCFTA) that establish the free trade regime between Georgia and EU. Based on signed agreements the priorities for the next three years 2014-2016 were agreed between Georgia and EU in form of Association Agenda[13].

The Association Agenda represents continuation of cooperation of Georgia and EU under ENP, as well as its initiative Eastern Partnership, that has been launched in 2009 between the EU and six eastern neighbors.

In parallel, in January 2013, Georgia requested full membership in European Energy Community. In February 2014, just prior to signature of Association Agreement the negotiations between the EC and Georgian government was initiated with the purpose of signing the treaty by the end of October 2014. The negotiation aimed to define the action plan and timeframes in terms of harmonization of Georgian legislation with the European energy-regulating and other relevant environmental law that may be different from the timeframes defined by the Association Agreement.

The signature of the Association agreement involves also the commitment of Georgia to ensure harmonisation of Georgia's legislation with EU acquis also in the energy sector. The Association Agreement assumes that Georgia will join soon the Energy Community. Therefore the article 218, that defines the relationship with the Energy Community Treaty, stress that in case of the conflict "between the provisions

[10] N2026 Resolution of Georgian Parliament, 28 March, 2003.

[11] http://eeas.europa.eu/enp/index_en.htm

[12] http://www.eu-nato.gov.ge/en/eu/association-agreement

[13] http://eeas.europa.eu/georgia/pdf/eu-georgia_association_agenda.pdf

of this Chapter and the provisions of the Energy Community Treaty or the provisions of the Union legislation made applicable under the Energy Community Treaty, the provisions of the Energy Community Treaty or the provisions of the Union legislation made applicable under the Energy Community Treaty shall prevail to the extent of such conflict". Therefore, in order to implement the energy chapter, "the preference shall be given to the adoption of legislation or other acts which are consistent with the Energy Community Treaty or are based on the legislation applicable in the Union". The ANNEX XXV of the Association Agreement, underlines that the "Georgia undertakes to gradually approximate its legislation to the following EU legislation and international instruments within the stipulated timeframes" and lists all directives for harmonization. The implementation of each of the directives is conditional, in ways that while the "at directive's provisions shall be implemented in accordance with the timeline agreed by Georgia in the framework of the Energy Community Treaty. Should Georgia's accession to the Energy Community Treaty not become effective within two years of the entry into force of this Agreement, a proposal for a timeline will be submitted to the Association Council no later than three years after the entry into force of the this Agreement"[14].

The EC has been ready to sign the Energy Community Treaty with Georgia in 2014. However, the negotiations were halted without any result by the end 2014. The clear explanation why almost agreed agreement was not signed has not been granted by the Ministry of Energy, despite the numerous calls from Civil Society and organized Parliamentary hearing. In spring 2015 the Ministry of Energy of Georgia reported that it has been resumed negotiations with DG Energy to sign the European Energy Community Treaty[15].

1.1 The EU's energy security in neighboring countries

The EU developed a number of special programs already early nineties, that are actively seeking the development of both oil and gas, as well as electricity grids in EaP and Central Asian countries, in order to exported energy resources of the region to the EU itself.

The energy security concept has emerged in recent years as one of the cornerstones of the EU's foreign policy, primarily in order to diversify the bloc's energy supply sources. It includes support for numerous oil and gas pipelines and supply routes in the Caspian sea region to ensure diversification of supply whilst avoiding Russia.

As a result, and via the support of the International Financial Institutions (World Bank, EBRD and etc.) as well as special EU programs such as INOGATE, over the last decade European companies have ensured the development of a number of oil and gas fields and pipelines in the Caspian region. Included among these are the Baku-Tbilisi-Ceyhan oil pipeline, the South Caucasus Gas Pipeline and the development of the Azeri-Guneshli Ghiraq Oil field. Further plans include the Nabucco gas pipeline[16], the flaghship of EU energy policy for number of the years but never materialized, the White Stream pipeline[17] and etc. The EU's recent flagship project, The Trans-Adriatic Pipeline, also plans to bring natural gas to Europe from the Shah Deniz offshore gas field in Azerbaijan[18]. Combined these projects make up the Southern Energy corridor of the Trans European Energy Networks.

In addition, the EU is promoting and backing the export of electricity[19] from the neighbourhood countries through already existing transmission lines, as well as by promoting the construction of new ones, despite the evident "lower environmental and social standards of the generating facilities"[20]. Programs such as the

[14] http://eeas.europa.eu/georgia/pdf/eu-ge_aa-dcfta_en.pdf

[15] http://www.energy.gov.ge/show%20news%20mediacenter.php?id=440&lang=geo

[16] The European Commission, with the support of some member states, has been seeking to build the ambitious and expensive Nabucco project tthat proposes to deliver gas from Turkmenistan and Azerbaijan (if built,potentially even from Iraq and Iran) via a 3,000 kilometre pipeline stretching from a hub in Turkey, bypassing Russia, through Bulgaria, Romania and Hungary into Austria

[17] The White Stream project was conceived in 2005 and is a key component of the EU Southern Energy Corridor to transport gas from Azerbaijan and other countries in the Caspian region via Georgia directly to countries on the western side of the Black Sea (Romania, Ukraine) and onwards to markets in central and eastern Europe. The pipelines will cross the Black Sea at depths in excess of 2,000 metres, using advanced proven technology. http://www.gueu-whitestream.com/main.php?id=1

[18] The Trans-Adriatic Pipeline, planned to stretch from Greece via Albania and the Adriatic Sea to Italy, is part of the Southern Gas Corridor, a chain of projects meant to bring natural gas to Europe from the Shah Deniz offshore gas field in Azerbaijan

[19] http://www.eu-energy.com/fs-import-final.pdf

[20] IBID

Trans-European Networks are allowing and even encouraging electricity exporters to benefit from loopholes and differences in environmental standards and to increase electricity export from the neighbourhood countries into the EU. It is recognised that "Although there are some clear advantages in producing electricity locally there will always be regions in Europe, which could be net exporters of electricity due to a concentration of renewable-energy resources, such as hydro[21]". In addition, it is clearly recognized that "To facilitate such exports, transmission systems need to be maintained and built, however this must only be done when environmental and social standards comply or are in line with those in the EU[22]".

In the case of Eastern Partnership and Central Asian countries, the EU is developing a number of special programs that are actively seeking the development of both oil and gas, as well as electricity grids, that could potentially be exported outside of the region to the EU itself.

The enlargement processes in 2004 and 2007 plays important catalyzing role in development of EU's Energy policy. New member states were significantly depending on Russia's energy supply and energy security challenges becomes part of political agenda. EU ensured formalization of own internal energy policy, as well as elaborated comprehensive external energy policy. The work represents priority for EC during 2004-2007. The major instrument for implementation of this policy was European Energy Community established in 2006 specifically for western Balkan countries.

In analogue, the Eastern Partnership Initiative program, established in 2009, defines the energy security as one of its major cornerstone. EaP aims to further acceleration of political association and further economic integration between the EU and the six partner countries, through bilateral and multilateral tracks, through creation of the forum on free trade, visa free regime and energy security.

As it is seen, the Energy Security was represented one of the major priorities both for bilateral as well as multilateral dimensions. According to Joint Declaration[23] "The Eastern Partnership aims to strengthen energy security through cooperation with regard to long-term stable and secure energy supply and transit, including through better regulation, energy efficiency and more use of renewable energy sources".

The EaP Platform 3 energy security in 2009-2011 and 2012-2013, along with the regulatory framework and approximation of energy policies, includes "development of electricity, gas and oil interconnections and diversification of supply[24]". The activity includes support to projects of common strategic importance in oil, gas and/or electricity that have a direct and substantial impact along the energy security of at least one EU member state and one partner country. Platform 3, together with INOGATE, will ensure the presentation and review of the projects in the presence of the International Financial Institutions (IFIs)[25]. The Existing EU instruments, such as the Neighbourhood Investment Facility (NIF), the Eastern European Energy Efficiency and Environment Partnership (E5P), and the Eastern Partnership Technical Assistance Trust Fund (EPTATF) also consider possible financing sources for given strategic projects.

1.2 Georgia's benefits after Joining the EEC

Georgia was invited to join the EEC already in 2006[26]. But the cooperation did not happen. In 2007 Georgia received the observer status. In November 2010 the EC President encouraged Georgia "to formally apply for accession to the Energy Community. This would enable further deepening of our relations and reinforce Georgia's attractiveness for energy investments"[27]. There was full silence in response to this invitation until 2013 – the subject has not been discussed on the government level, and it has not been featured in public discussions either.

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[21] IBID

[22] IBID

[23] of the Prague Eastern Partnership Summit, Prague, Czech Republic, May 07, 2009

[24] http://eeas.europa.eu/eastern/platforms/index_en.htm

[25] http://ec.europa.eu/energy/international/eastern_partnership/doc/approved_work_

[26] http://dfwatch.net/the-trans-caspian-pipeline-a-strategic-opportunity-44400-28623

[27] http://www.radiotavisupleba.ge/content/georgia-and-european-energy-community/24742516.html

During private discussions the Ministry and government representatives referred to two main factors:

1) Implementation of the EU third package might have threatened the supply of optional and additional gas through a South Caucasus pipeline under the transit agreement;

2) Operation of vertically integrated companies in the energy and gas sectors is a barrier for Georgia. The long-term memorandums Georgia negotiated with them directly contradicts EU principles[28].

Yet, this has never been officially put forward.

Georgian government, both the previous and the current, do not realize the importance of joining European Energy Community for reforming the energy sector, and attracting the investments in this sector on the one hand, and to accelerate the European integration process – on the other.

Non-transparency in the Energy sector, and weak legislative framework, promote elite corruption, driving away strategic investors.

European integration instrument

The energy sector is a basic one for the EU in terms of its expansion. In its 2014 report with regard to the expansion achievements and challenges, the EC underscores that "The Energy Community, which aims to expand the EU's energy acquis to enlargement and neighborhood countries, should be further strengthened in the light of the EU's security of supply concerns. This should be achieved by further promoting energy sector reforms in the participating countries, while also supporting the modernization and sustainability of their energy system and their full integration in the EU energy regulatory framework"[29].

Currently the Georgian society is unaware of the benefits of EEC accession. Consequntly, it is not involved in the debate on EEC, and not perceived it as an integral part of European Association.

The EEC accession and introduction of appropriate legal framework in Georgia would enhance:

- Creation of a modern and competitive energy system, its sustainability and the customers increased rights (strong independent regulatory authority, transparent and expenditure-based tariffs, unbundling and networks accessibility);
- Increase transparency and cut down corruption in the sector;
- Sustainability of energy system to internal and external factors;
- Harmonization with European legislation on environmental protection and its execution;
- Creation of sustainable low-E green energy system, which will contribute to safe delivery – reducing energy consumption through the introduction of renewable energy and energy-efficient systems;
- Investments in the energy system from European and other investors, including the European Investment Bank, which will boost employment, particularly in renewable energy and energy-efficient sectors;
- Play important role in implementation of the Association Agreement in long-term perspective, will contribute to Georgia's integration in pan-European energy market.

It is noteworthy that having Georgia among its members of the Energy Community, the EU will have to respond adequately to Russia's actions on Georgia's occupied territories. Russia is conducting illicit acts in the occupied regions of Georgia (building a pipeline in Tskhinvali, extracting oil from Abkhazia's continental shelf), thus grossly violating international law. In the case of Georgia's accession to the European Energy Community, discussing and addressing these issues will become a direct obligation of the EU"[30].

[28] http://www.osgf.ge/files/2015/Publication/Energetika_WEB.pdf

[29] http://ec.europa.eu/enlargement/pdf/key_documents/2014/20141008-strategy-paper_en.pdf

[30] http://www.osgf.ge/files/2015/Publication/Energetika_WEB.pdf

Corruption in Energy Sector

One of the basic challenges of the accession in the EEC is the creation of transparent and accountable energy sector.

Although Georgia has achieved some success in the fight against petty corruption in 2004-2012, the problem in energy sector remains and is quite serious[31]. E.g. The EC 2011 report on the implementation of European neighborhood policy in Georgia states, that there are a number of serious concerns, including, so called elite corruption among high rank officials, non-transparency of procurement and privatization processes, weak accountability about the command of reserve funds, violation of property rights and lack of transparency in Georgian media space[32]. In general Georgian analysts claim that most of Georgian business is still under the control of government officials and persons, close to political circles persons… we can say, that there is very little public information about the ownership of different business sectors and media and it would be difficult to say anything. Both, local and foreign observers are concerned about "elite corruption" in the country[33]. Similar concern is expressed in the US State Department's report of 2010 "On Human Rights Situation in Georgia"[34].

According to Experts, weak and non-transparent energy sector is a high risk-factor for involvement of external forces, it reduces competition and the opportunity to create new jobs. This may gain the country a reputation as an unreliable partner in terms of implementation of trans-border and transit projects[35].

Corruption in Georgian energy sector manifests itself in different forms and at different levels. There are few examples of "petty" corruption when citizens keep records and pay electricity charges[36].

So called elite corruption, which is the result of bad management and weak legislation, creates the greatest harm. The contracting process between Georgian public authorities and companies, as considerably as the procedure of issuing permits and permits by competent authorities is closed for the broader public. Therefore, the corruption manifests itself during privatization[37] and/or construction of new energy facilities, when most favorable conditions are created for one or another company in exchange for certain benefits (e.g. Financing certain political campaign, or enrichment of certain individuals). Since 2004 there have been occasions when laws were quickly adopted only "to meet the interests of friendly" business[38].

Transparency is a big problem when it adds up to drafting contracts and arrangements. Suffice to mention 2008 Memorandum on transfer with the right of management of the Enguri to Inter Rao ES, which remains secret until today.

Privatization carried out in 2006 in energy sector contradicted to the EU regulations, requiring that generation and distribution facilities shall not be sold in one package. This is quite difficult to explain, because the EU Georgia ENP action plan clearly required rapprochement with the EU internal market. Besides, according to Ministry of Energy, the EU regulations require separate accounts for generation and distribution, but not their separate functioning[39]. It is interesting, that as a result of tender the winner company "Energo-pro-Georgia" owns electricity generating (15 medium and small hydro power stations and Gardabani gas power station) and distribution facilities and covers 70% of Georgia's territory.

It should be mentioned that even after signing the Association Agreement perverse practice of concluding contracts with different companies continues. And almost in all cases Georgian government is negotiating tariffs (on the existing and new generation facilities), which diminishes the role of a regulatory

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[31] According to Transparency International 2011 report on Corruption Perceptions Index of 183 countries, Georgia ranks 64, and according to 2014 report – 50; https://www.transparency.org/cpi2014/results

[32] http://www.easternpartneship.org/publication/2011%C2%AD06%C2%AD21/2011%C2%ADenp%C2%ADprogress%C2%ADreports

[33] http://carnegieendowment.org/files/georgias_choices.pdf

[34] http://www.state.gov/j.drl/rls/hrrpt/2010/eur/154425.htm

[35] http://dfwatch.net/the-trans-caspian-pipeline-a-strategic-opportunity-44400-28623

[36] http://www.2tv.ge/ge/news/view/86432.html

[37] Paul Rimpley, 2013 "Whom belonged Georgia to in 2003-2012" Transparency International Georgia

[38] http://greenalt.org/wp-content/uploads/2013/11/Energy_project.pdf

[39] See more details in chapter 4

commission[40]. This will have a negative impact in terms of, rapprochement with European internal market and may threaten further development of energy sector and the incomes thereof[41].

Moreover, it is argued that "Georgia's investment framework may be contributing to a negative feedback loop of reinforcing both Russian investments and driving away strategic investors. There is cause to think that the consequences of the Georgian-Russian investment relationship have contributed to a reinforcing cycle of corruption, weakened regulatory oversight, loss of transparency, and the foundation of governance shortcomings that have contributed to a loss of strategic investors"[42].

It has been underscored that corruption environment of Georgia is not unique. The accession of South-East European countries did not completely solve the problem, but the introduction of transparency and common market rules contributed to the identification of the problem and the development of mechanisms to solve the problem (see South-East Balkans and European Energy Community).

Creation of competitive market

Competition policy reform is one of the basic requirements of Georgia-EU Agreement on Deep and Comprehensive Free Trade Agreement (DCFTA). Pursuant to Georgia-EU Association Agreement an efficient antimonopoly law needs to be developed and an effective authority to regulate competition be created. The competition regulatory agency, founded in January 2012 existed only nominally, then it underwent the reforms and started operating 1 October 2014.

Pursuant to the changes introduced in the law in 2014, the functions of the Agency were expanded and it can initiate independent study of any market segment in the case where there are signs of competition restriction. The agency is entitled to stop the abuse of a dominant position in the market by companies that have such a position, and to impose appropriate penalties on the offender in case of violation of the law. Pursuant to para 1 of Article 33 of the Law on Competition, In cases of Abuse of Dominating Position or restriction of competition the economic agent shall be subject to the fine, no more than 5 per cent of yearly turnover for the previous fiscal year.

Merely it's remarkable, that according to the Law all economic agents shall be subject to fine, "with the exception of the economic agents of the regulated sphere of economy". Such agents are commercial banks, and companies working in electronic communications and energy sectors. This is a violation of EU competition policy because no single sector should be outside the supervision by competition agency. At the same time market regulation and competition policy are two different areas of action and should be distinctly distinguished. According to the experts Georgia failed to meet this EU requirement on this stage[43].

Juncker plan – European Energy Union

In Autumn 2014, Jean-Claud Juncker, the EC new President, set the creation of the so called Energy Union as a priority for next five years, which implies the establishment of a fully integrated and competitive European energy market, development of uniform policy in relation to third countries. Creation of strategic investment fund of 21 billion EURO is planned. The European Investment Bank will give out 67 billion EURO for energy projects with a total value of 300 billion EURO[44].

Currently the proposal is under discussion. It is noteworthy that the proposal for creation of the Energy Union stresses the need for closer cooperation between European Energy Community and the EU Mediterranean partnership with the EU Neighborhood Policy countries.

The secretariat of the European Energy Community underscores the fact that the EU energy union shall become a pan-European union in order to facilitate the creation of pan-European single internal market[45].

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[40] http://www.greenalt.org/webmill/data/file/publications/memorandumebi_da_xelshekrulebebi_analizi.pdf

[41] http://dfwatch.net/the-trans-caspian-pipeline-a-strategic-opportunity-44400-28623

[42] Russian Investments in Georgia's Electricity Sector: How Georgia's Institutional Framework Encouraged High Levels of Russian Investment , Courtney Doggart, USAEE-IAEE WP 09-035, December 2009

[43] http://eugeorgia.info/ka/article/146/konkurenciis-saagento-bankebs-eleqtronuli-komunikaciebis-da-energetikis-sferoshi-moqmed-kompaniebs-ver-daajarimebs

[44] http://ec.europa.eu/priorities/energy-union/index_en.htm

[45] http://www.euractiv.com/sections/energy/european-energy-community-energy-union-312451

Chapter 2. European Energy Community

2.1 The Aim of European Energy Community

The European Energy Community since 2007, aims to „to extend the EU internal energy market to South East Europe and beyond on the basis of a legally binding framework in energy and related areas". Therefore, it incorporates 25 laws in its legal framework that cover gas**,** electricity, and security of supply, renewable, oil, energy efficiency, environment, competition and statistics.

The general objective of the Energy Community is to create a stable regulatory and market framework in order to:

- Attract investment in power generation and networks in order to ensure stable and continuous energy supply that is essential for economic development and social stability;
- Enhance security of supply;
- Improve the environmental situation in relation to energy supply in the region.

In the medium term, the Energy Community aims at creating an integrated energy market across the region which allows for cross-border trade, guarantees energy supply and takes into consideration climate and social aspects[46].

History

The Energy Community Treaty (ECT) has been planned as a legal tool to initiate the integration of the prospective EU members from western Balkans into EU internal market, in the energy sector[47]. Through the establishment of the Energy Community, the EU took the initiative to start the process of integration of South-Eastern European (SEE) country's energy infrastructure across the SEE region and EU's internal energy market. The Community officially has been set up in 2006, and Treaty provides binding legal and regulatory framework for signatory countries to ensure transposition and implementation of the relevant pieces of EU energy acquis. Since Energy Community Treaty enters in a force (2006) it represents an international organization based in Vienna, Austria.

The ECT deliberately follows European Coal and Steel Community to produce a pan European sectoral market on the basis of EU energy regulations including Non EU countries.

Nowadays ECT has eight contracting parties (Albania, Bosnia and Hertsogovina, Kosovo, the FYR Macedonia, Moldova, Montenegro, Serbia and Ukraine) and the European Community. Bulgaria and Romania were members of ECT until 2007 and Croatia until 2013.

Members have the independent voting rights, and they are committed to implement core EU energy directives as well as three articles of EU competition law. Members as well commit to create independent regulators and transmitting institutions to decartelize energy markets and to fight corruption.

After Ascending the EU the parties join the group of participant countries in ECT. The Participation in Energy Community is open for any EU Member States (MS) which means that they may be represented and discussed in the energy community institutions without voting[48]. There are 16 participant MS in EC (Austria, Bulgaria, Croatia, Cyprus, Czech republic, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Netherlands, Poland, Slovenia, Slovakia, Sweden, UK).

States can also join the ECT as observers with possibility to become the members later. There are four countries with the status of observer –Armenia, Georgia, Norway and Turkey.

[46] http://www.lexology.com/library/detail.aspx?g=4dab152d-6fb4-4c25-979b-f26776426604

[47] Regional Energy Initiatives: MedReg and the Energy Community, By Carlo Cambini, Alessandro Rubino, 2014

[48] It should be mentioned that Bulgaria, Romania in 2007 and croatia in 2013, after accessing the EU, ceased their participation as a contracting parties and becoming participants.

Initially, the ENC geographic focus was western Balkans through providing a framework for financial aid in energy networks, and prepare the country for eventual EU membership, through sectoral regional integration. Later, the concept the ECT was evolved (to promote export of EU energy policy to non EU countries more generally), and in December 2009 Energy Community Ministerial Council decided on the accession of Moldova and Ukraine. With the decision," the geographical concept of the Western Balkans, with which the process was linked initially lost its validity [49]". With Moldova and Ukraine become the contracting party in 2010, the organization becomes the legal tool for EC to export its internal market norms, rules and institutions not only among the enlargement but also neighboring countries.

ECT has been entered in a force for 10 years, expiring on 1 July 2016[50]. There are ongoing renegotiations of the treaty between contracting parties and the EU

2.2 ECT Implementation Mechanism

The Contracting Parties with the adoption of the ECT, taking legally binding commitments to adopt core EU energy legislation. The focus of the Energy Community's work is to implement core EU energy legislation in the areas of gas**,** security of supply**,** oil**,** renewable energy**,** energy efficiency**,** environment**,** competition and statistics.

The Energy Community contracting parties enjoy the same treatment and rights as EU member states. Energy Community members are entitled to propose new legislation, which is binding on all members, including the EU.

There is ongoing evolvement also treaty's asquis through incorporation of new sectors or update / replacement of older acts. „This ensures that the Energy Community Contracting Parties keep pace with EU developments and continuously align their regulatory frameworks in the energy and related sectors to those of the EU"[51].

The EU directives and regulations binding by ECT should be implemented by the countries within the designed timeframe. E.g. In the area of renewable energy, an equally challenging task was set the implementation of directive 2009/28/EC by 1 January 2014, with ambitious binding targets to be implemented by contracting parties by 2020. If a country has the problem to follow the timeline, it can request the delay of implementation through a specific procedure (see the Case-Study 2, example of Ukraine).

"The ECT is not the static Treaty, it's evolved and updated through introduction of new sectors and/or directives, that ensures development of EEC participant countries energy policy along the development of EU energy policy, and by this way parties permanently harmonize their regulatory frameworks in energy and related sectors with relevant EU legislation"[52].

In 2011, the Ministerial Council adopted the shift from the European Union's second to the third package of internal market legislation[53]. The directives and Regulations comprised by the third package supposed to be implemented by 1 January 2015.

[49] IBID

[50] Energy-community.org

[51] Energy-community.org

[52] For detailed information for ECT binding directives and regulations please visit www.energy-community.org

[53] The **European Union's Third Energy Package** is a legislative package for an internal gas and electricity market in the European Union. Its purpose is to further open up the gas and electricity markets in the European Union. It entered into force on 3 September 2009.
Core elements of the third package include ownership unbundling, which stipulates the separation of companies' generation and sale operations from their transmission networks, and the establishment of a National regulatory authority (NRA) for each Member State, and the Agency for the Cooperation of Energy Regulators which provides a forum for NRAs to work together.

In 2012 the Ministerial Council also adopted the EU acquis on emergency oil stocks and statistics[54]. The successful incorporation of all these pieces of EU legislation is a token of the ambition of the Energy Community Contracting Parties to keep pace with development in the European Union.[55]

2.3. Governance structure of EEC

The Ministerial Council is the highest decision making body of the Energy Community and consists of ECT parties. It's responsible for achievement of treaty objectives. It takes place once a year. The meeting of the Ministerial Council prepared by the Permanent High Level Group (PHLG) that meets generally four times a year and is closely involved in the Energy Community's day-to-day work.

The Energy Community Secretariat is the only permanent institution of the Energy Community. It is responsible for administering the day-to-day activities and reviewing the proper carrying out of the duties of contracting parties. In conformity with Article 67 of the Treaty the Secretariat prepares an annual report on its findings.

The EC has Regulatory Board (ECRB) that consists of national energy regulators. It advises the Ministerial Council or the Permanent High Level Group on the details of statutory, technical and regulatory rules and issues Recommendations on cross-border disputes involving two or more Regulators, upon request of any of them;

In addition, EEC has four advisory Fora which serve as discussion platforms for different stakeholders, including non-state actors, in the area of electricity, gas, social issues and oil.

It should be stressed that strong and flexible institutional backing enables the EEC to develop the efficient regulatory framework, while the monitoring and assistance offered by the Secretariat is quite thorough. According to the evaluations, secretariat not only supports in preparation and publication of annual implementation reports, but also prepares the detailed road maps, assisting with legislation drafting, organizational workshops for exchange of experience and best practices[56].

Chapter 3. EEC - EU's tool for further European Integration

3.1 The assessment of EU's external governance mechanisms effectiveness

The EU institutions itself could not the transfer its legislation to shape the non-member states' energy agenda and provide benefits. Therefore the assessment of EU's external governance mechanisms effectiveness in the energy sector through EEC gives very interesting material for analysis, as the membership in EEC rewards countries in different ways.

According to the expert assessment, "in contrast to accession conditionality and markets, external through networks is characterized by more symmetrical influence. Two closely related mechanisms of EU influence are possible: on the one hand, networks and communication can trigger rational processes of learning and persuade third states of the legitimacy of EU policies. One the other hand, communication can trigger socialization processes where third states update their norms and beliefs as they start seeing EU policies as appropriate rules"[57].

[54] Council directive 2009/119/EC of 14 September 2009 imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products.

[55] https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/2178178/EC_Legal_Framework_WEB.pdf

[56] Exporting the Energy Aquis: the External Agenda Shaping power of the EU, Kai Schulze, Energy Policy Making in the EU: Builiding the Agenda, London, Springer, 2015

[57] Energy Policy Making in the EU: Building the Agenda, J.S.Biesenbender,&K.Schuze, 2015, London, Springer

Accession Conditionality - is that decisive factor or not?

The most clear and visible case of EEC success relates to the potential candidate countries, where the EU has legal force, and in this case the accession perspective is a decisive factor[58]. While the accession conditionally is effective and visible, it's not an automatic outcome if acknowledged that energy is not a high priority in the accession process of South Eastern and Eastern Europe.

As researchers underline, "the markets and investments can offer important incentives for third states to comply with EU law. "The incentives created through markets provides the number of trades related benefits, so for them "aligning energy policies with EU law may actually outweigh the costs."Therefore, the "potential beneficiaries lobby for placing EU energy policies on domestic agendas"[59].

Eg. Croatia has been rather quick in aligning its energy policies with EU requirements and actually closed energy chapter of the accession negotiations in 2011. Considering that Croatia has been an accession candidate since 2004 and part of a stabilization and association agreement since 2001, accession conditionality seems to have influenced Croatia's energy policy agenda. According to experts finding, membership in EEC has a positive impact on the speed of Croatia's adjustment, especially in comparison with the slow progress of Bulgaria and Romania[60].

Albania, Montenegro and Serbia make significant progress in adoption of Energy policies even before becoming official candidate countries, in contrasts with The FYR Macedonia and Croatia. Moldova adopts Gas markets, biofuels and energy saving directives, while Ukraine adopts Oil stocks, Gas markets, even there are not open prospects for countries in terms of membership[61].

The example of Turkey, another candidate country is interesting. Turkey actively participated in the negotiations of the treaty, but last moment decide to get observer status. The main concerns were related to the environment, competition and the external energy trade policy in the treaty[62]. However, Turkey is partly transposed and advanced the EU energy acquis, but the real compliance has never been monitored as it is for other Energy Community contracting parties[63].

Researchers underline that "Membership of the Energy Community would set Turkey on a direct path toward implementation of the required reforms, including the necessary monitoring of the reform process to ensure transparency and competitive market conditions[64]" It would also give Turkish companies the possibility to participate in EU institutions tenders on equal terms with EU member state companies[65].

Markets and Trade

Another mechanism is the investments that actually represent the major reason for the EEC establishment in early 2006, " the creation of an investor friendly framework in the Western Balkans". "The alignment with the EU energy law promises to provide a more attractive environment for investors, raising the incentives for adopting EU energy policies in those countries in need of investments"[66].

The investments and financial support in case of aligning with EU energy legislation can be related to the environmental dimension of energy policy, by bringing in the required technologies to alleviate environmental problems or improve energy efficiency.

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[58] IBID

[59] IBID

[60] http://eu.boell.org/en/2014/06/10/europe-after-eastern-enlargement-european-union-2004-2014

[61] Secretariat, 2014 Annual Implementation Report of the Acquis under the Treaty Establishing the Energy Community, www.energy-community.org

[62] http://www.icis.com/resources/news/2015/02/19/9862489/energy-community-representatives-to-monitor-turkey-s-energy-markets/

[63] According to Januz Kopac, director of the Energy Community Secretariat, in 2015 organisation will send representatives to Turkey to collect pieces of legislation with regards to the opening of the market, its transparency and competition conditions;

[64] http://www.hurriyetdailynews.com/turkey-as-a-member-of-the-energy-community.aspx?pageID=449&nID=78744&NewsCatID=396;

[65] Actually there is three ways for Turkey's integration in the EU's energy market: through Energy Community membership, by opening and embedding the EU's Energy Chapter into its laws, or through a new path, the Energy Union. While the Energy Union is still underformation, the reopening of the EU Energy Chapter which requires the harmonisation with EU energy policies is problematic, as Cyprus had blocked it.in a pas;

[66] Energy Policy Making in the EU: Building the Agenda, 2015 edited by Jale Tosun, Sophie Biesenbender;

The implementing the targets set under the EEC treaty, not to speak about transposing all energy package of EU's legislation, is really a costly exercise (e.g a conservative estimate says that Serbia alone will spend €10,5 billion on it. This is roughly one fourth of the Serbian GDP[67].) However, as experts underline, the meeting of the environmental and climate standards of the EU is not only a challenge, but also an opportunity. Data shows that every euro invested in reaching EU environmental standards brings €17 in environmental and health benefits. Limiting pollution not only pays off and is a prerequisite for accession, but most importantly, it also saves lives[68].

In the context of energy security, the role of the markets and investments should not be underestimated as they can also contribute to the real improvement of security of supply by diversifying the sources for energy imports and production, along with energy efficiency.

Communication and Socialization

The EEC and its institutions are horizontally lined. The board of regulators, Advisory Fora and thematical workshops are non-hierarchical venues, which are suited to influence national agendas via socialization and/or persuasion. The diffusion of professional knowledge via "technical", expert network with Advisory fora, that includes not only energy specialists, but also non state actors and other stakeholders create important and well functioning information network, shares best practices, policy relevant knowledge and ideas.

Therefore, providing the an institutionalized infrastructure for the exchange of information and policy learning represents the advantages for neighboring countries and gives them the instruments to solve domestic problems more efficiently[69].

EEC - lessons learned and response Strategy

The commission report 2011 on the Energy Community acknowledges two main shortcomings: (1) lack of implementation (gap between legal commitments and implementation in practice); (2) little impact on investments[70].

As a response strategy the Commission committed to ensure that in case of EU candidate or potential candidate countries „the level of national implementation and enforcement of the relevant Energy Community acquis will be considered decisive in the negotiations for accession to the European Union"; EC will also examine „how to better link bilateral financial assistance to the respect of commitments under the Energy Community Treaty, especially in case of a persistent breach by a Contracting Party, in line with the recommendation made by principle, the European Commission will examine the European Parliament in its Resolution Towards a new Energy Strategy for Europe 2011-2020, adopted on 25th November 2010".

In addition, the Commission underlines that Contracting Parties' compliance with the acquis should be assessed not only basis of the transposition of legislation, but also on effective implementation and enforcement, that would lead towards the allocation of additional financial support, also through the other IFIs.

The Commission stressed the importance to continue „the implementation of the Third Internal Market Package and the directives on Renewables and Energy Efficiency, as a means to speed up integration of the region in the single European energy market", and support contracting parties in coordination with the Energy Community Secretariat with specific advice „in the form of implementation programs, priorities and possibly gradual adoption of the acquis", ensure creation of „The attractive investment environment" for Energy community members through „coordinated investment strategy", "with special efforts to be made on price and tariff reform with due attention to the protection of vulnerable consumers, to the removal of administrative burdens and the establishment of an independent Regulatory Authority, which guarantees transparency of the market and non-discriminatory treatment of the market participants. "The

[67] http://www.euractiv.com/sections/energy/coal-overshadows-eu-membership-prospects-western-balkans-314028;

[68] IBID.

[69] http://kops.uni-konstanz.de/bitstream/handle/123456789/3992/WorkingPaper2009_02.pdf?sequence=1

[70] REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL under Article 7 of Decision 2006/500/EC (Energy Community Treaty), 2011

EC has stressed that „The Contracting Parties need to develop efficient energy welfare systems and targeted subsidy schemes". Meanwhile, the price of inaction according to the commission is „increased energy intensive, lost welfare, lost economic growth, a degraded environment and health impacts".

The Commission will also assure the optimization of available EU funding for the members of Energy Community, in a line of European Union Energy Strategy 2020 and prioritize the projects that enhance European Union's security of supply, e.g. Through new interconnects at the borders, should receive the same attention and policies as intra-EU projects.

The Commission underscores that the Environmental and Climate Criteria become more straightforward in Energy Community and it will pay special attention how the contracting parties are so called core Environmental directives of Energy Community.

The Commission recommends extending the Energy Community Treaty beyond 2016. As follow up, in 2014, the process of the revision of treaty starts and would be finalized by mid 2015. The process involves the intense consultation with contracting parties and different stakeholders, with two rounds of public consultations.

The recommendations proposed by the High Level Reflection Group (HLRG) through a recommendations report, have to be overall assessed positively[71].

According to HLRG report, while the Energy Community should be recognized as most successful energy policy framework for EU energy external policy, after 8 years of EEC functioning, a number of promises are not fulfilled, including: complete reforms of the markets' structure, the introduction of cost-reflective prices, creation of a favorable and predictable investment climate, regional market integration or elevation of environmental standards. The absence of an enforcement mechanism, and of adequate built-in support to Treaty implementation are among the main explanations. "The HRLG also pointed that the environmental part of the Treaty should be strengthened through the integration of a number of the EU core environmental directives, including directives on industrial emissions, on ambient air quality, on environmental liability, on strategic environmental impact assessment and etc[72].

The HRLG stress that to address that shortfall, "a reform of the Community's legal, procedural and institutional set-up" is needed.

However, the final draft text of the treaty proposed by the Commission in March 2015, allows the countries of the Energy Community to fall behind on EU energy, environmental and climate standards. E.g. It claims that "it would be too difficult for Energy Community countries to transpose the EU's Air Quality directive[73].

According to the CSO representatives, there is also need to ensure that as a result of the Treaty revision that would be increased role of the Energy Community Institutions and particularly Secretariat, including increased human resources in the environment and social fields[74].

[71] https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/3178024/Energy_Community_HLGR_Report_FINAL_WEB.pdf

[72] It propose to incorporate the following directives in Energy Community Treaty:

- Chapter II of directive 2010/75/EU on industrial emissions and Chapter IV also for existing plants,
- directive 2008/50/EC on ambient air quality;
- directive 2004/35/EC on environmental liability;
- directive 2001/42/EC on strategic environmental impact assessment;
- directive 98/70/EC relating to the quality of petrol and diesel fuels and amending Council directive 93/12/EEC as adapted by directive 2009/30/EC;
- directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading, It should be noted that all these directives are part of EU Georgia Association Agreement;

[73] http://seechangenetwork.org/southeastern-europe-deserves-a-better-energy-future-and-now-is-the-time-to-ensure-it-happens/

[74] IBID

Chapter 4. EU directives and Georgia's Institutional and Legal Environment

Relations between Georgia and the EU gained in momentum after signing the association agreement. EU-Georgia Association agreement and its core part a Deep and Comprehensive Free Trade Area (DCFTA) aims to deepen political and economic relations between Georgia and the EU and to gradually integrate Georgia into the EU Internal Market.

In this chapter, we will describe Georgia's institutional and legal environment in comparison of EU directive's requirements on energy and environmental sector, as well as will try to analyze, what are the major problems and how to address them.

The EU member states shall have a five-level legislative structure: European law (comprises the directives and regulations), basic laws of the state, decrees, decisions of regulatory authority and other agreements (e.g. agreement on accession to the network, an agreement on the use of the electric power system etc.).

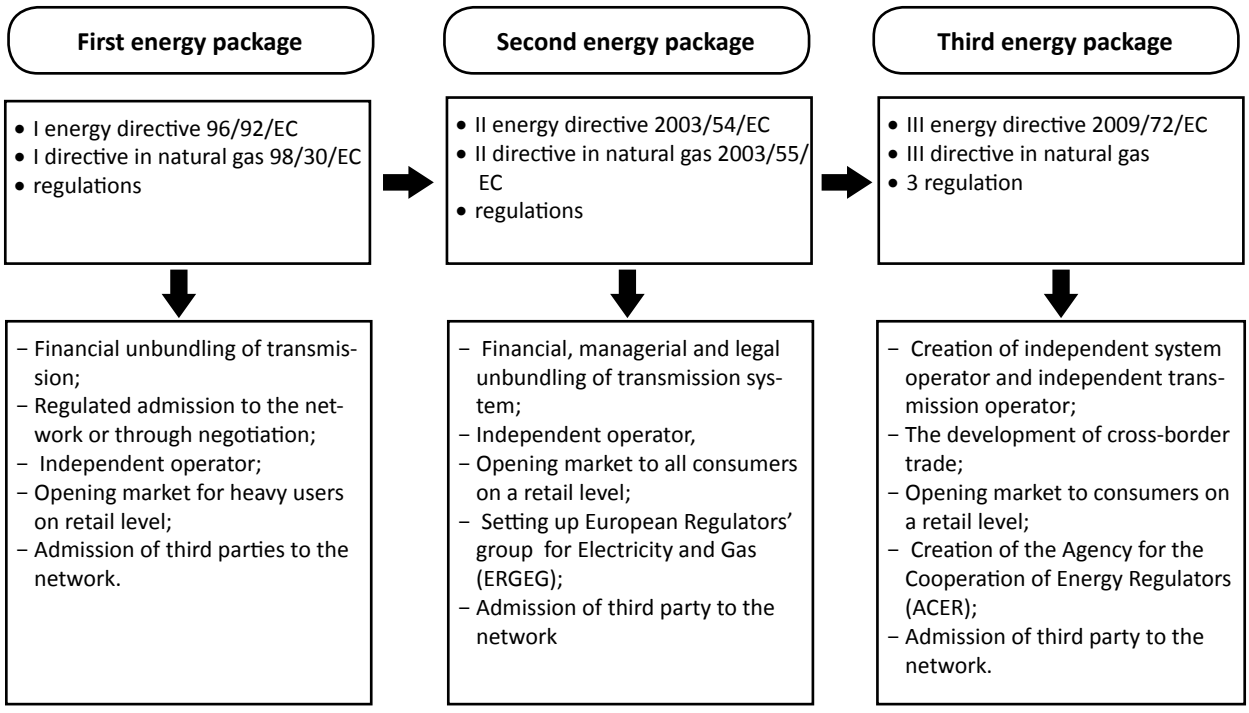
A directive is the EU legal instrument that applies to all member states. The directive only indicates the goal and the legal status to be achieved. Member states choose themselves how to reach the goal within the deadline set forth in the directive. A directive is a guidance document, and although it is not a regulation it contains detailed description of the requirements that the state's energy system should meet. Besides, the directives in given European state shall be translated into national legislation.

In the process of liberalization of electricity markets European states applied different approaches proceeding from their market structures, since implementation of the directive requirements is related to the difficulties. Established on the characteristics of each commonwealth, some may require to allow exceptions [3].

Market liberalization process in Europe took place in stages. European Commission developed three packages of market liberalization directives. The first one was adopted in 1996, the second one – in 2003, and the third one #2009/72/EC on electricity and gas markets was adopted on 19 September 2007 and entered in force 3 September 2009.

Energy packages, adopted by the EU aim at creating integrated European energy market, property division, regulation, cross-border cooperation and the issues of market opening.

The below image shows all three energy packages and their primary requirements.



The third package was offered to the EU member states in order to address the problems in the market and requirements for the activities identified under the directives were gradually tightened.

4.1 The Electricity and Gas price transparency in Georgia

Requirements of directive 2008/92/EC of the European Parliament and of the Council of 22 October 2008 on concerning a Community procedure to improve the transparency of gas and electricity prices charged to industrial end-users

The directive proposes to ensure transparency of gas and electricity prices charged to end-users, through setting up the European Procedure on dissemination of prices of energy. The procedure is necessary, insofar as this information enables consumers to select between different energy and also between energy sources. Also, transparency of energy prices ensures a healthy competition in the domestic market and well-set up procedure.

directive 2008/92/EC replaced previous directive 90/377/EEC on 29 June 1990 with the same title, which underwent several significant alterations during the years.

Pursuant to the directive in force the EU member states shall guarantee that the tasks that provide industrial end-users with gas and electricity communicate the following information to the Statistical Office of the European Communities (Eurostat):

- The prices and terms of sale of gas and electricity to industrial end-users;
- The price systems in use;
- The breakdown of consumers and the corresponding volumes by category[75]

In states where the sale of industrial energy accounts for more than one company information on the procedures, framing gas and electricity prices is to be communicated by an independent statistical body. The prices reported must be the prices paid by industrial end-users in accordance with the categories defined in Annex I and Annex II of the directive, on the basis of range of annual energy consumption[76].

These prices are collected twice per year (January and July) and reflect average prices paid by industrial end-users during previous 6 months. They are to be expressed in national currency per gigajoule (for gas) and per kilowatt-hour (kWh) (for electricity). These prices must include all charges payable except initial connection charges. Three levels of costs are to be provided:

- The price excluding taxes and levies;
- The price excluding VAT and other recoverable taxes;
- The price including all taxes, levies and VAT.

These data, drawn up in conformity with the methodology described in Annex I and Annex II shall be sent to Eurostat and the competent authorities of the Member States within two months. On the basis of these data Eurostat shall publish each May and each November, in an appropriate form, the prices of gas and electricity for industrial users in the Member States and the pricing systems used to that end. Once a year the Commission shall deliver a summary report on the performance of this directive to the European Parliament, the Council and the European Economic and Social Committee.

In addition to the above mentioned:

- Once every two years, information about data collection system shall be communicated to Eurostat;

[75] Industrial end-users may include other non-household consumers

[76] Annexes to 2008/92/EC ANNEX I Gas prices (j),(n), ANNEX II Electricity prices (j),(o).

- Once per year, together with the January price reporting, information about the factors affecting the prices shall be communicated to Eurostat;
- Once per year, together with the January price reporting, the rates and method of calculation as well as a description of the taxes levied on sales should be reported to Eurostat;
- Once per year a breakdown of electricity prices into their main components shall be communicated to Eurostat.

Keeping in mind that the cost paid by industry for the energy is one of the components which determine its competitiveness and should therefore remain confidential, the system used by Eurostat ensures that transparency is not an obstacle to confidentiality.

In particular, Eurostat shall not disclose data which might, by their nature, are subject to commercial confidentiality. Such confidential statistical data transmitted to Eurostat shall be accessible only to officials of Eurostat and may be applied solely for statistical functions. They may be published in an aggregated form which does not enable individual commercial transactions to be identified.

On the basis of information collected by Eurostat, proceeding from the situation in the internal market, the Commission shall, where appropriate, make a decision on appropriate actions or other proposals.

The current situation

The three distribution companies are active in the Georgian wholesale market – "Telasi", "Energo-pro-Georgia" and "Kakhetis energodistribucia", whose marginal rates for consumers, including industrial end-users, have been set by independent regulatory bodies (Georgian National Energy and Water Regulatory Commission). In conformity with the latter's Regulation # 20 of 18 September 2008, retail consumer has the right to buy electricity both from distribution licensee and from a small power station along the basis of duly made an agreement on electricity procurement. The number of such power stations in Georgia, according to the ESCO official web-page, reaches 47. Due to the confidentiality reasons, it is not possible to get accurate information about the tariffs agreed in direct contracts between the consumer and producer. Nevertheless, there is an evidence that the number of such contracts is small due to the different reasons. In future, in view of electricity market further liberalization, the number of direct contracts will probably increase and the tariffs be settled. Hence, while implementing directive 2008/92/EC special attention should be paid to the accuracy of data presented by distribution companies to "Saqstat"[77]. Currently the information on electricity sold under direct contracts accumulates with Electricity System Commercial Operator (ESCO), which utilizes these data to balance electricity market. The possibility its participation in statistic data collection process, at least with the aim to compare the data, needs to be searched.

More than 37 companies are active in the natural gas supply activity, however, most of them are owned by Socar Gas Georgia (Socar Gas), which occupies 35% of the market.[78] In accordance with Order No. 69 of 25 September 2007 of the Georgian Minister of Energy "On the settling and partial settling activities in the gas supply", the gas supply activities for legal persons (commercial sector) is deregulated, i.e. Is not subject of regulation from the side of GNERC. This, of course, causes diversity of procurement prices for industrial consumers. In contrast with electricity sector, in that respect is no commercial operator in the gas sector and there is no effective system of control over direct contracts, which causes problems in gathering data about prices. It may be advisable that GNERC, which receives quarterly and annual reports from gas suppliers, somehow engages in this process. If the reporting forms will be amended properly, in line with 2008/92/EC directive requirements regarding the prices for end-users, GNERC will easily detect inconsistencies in reports presented by gas distribution companies to the statistics office. It is noteworthy that pursuant to the Law of Georgia on Electricity and Natural Gas "the methodology approved by the Commission and tariffs set under this methodology shall protect consumers from monopoly prices" (Article 43.1.a). The existence of monopoly supplier (Socar-Gas), which is not subject to settling, contradicts to this demand. Consequently, it should be the GNERC function to control this aspect.

[77] National Statistics office of Georgia - www.geostat.ge

[78] Georgian Energy and Water Supply Regulatory Natioanl Commission report of 2014., p. 74

Basic problems and Challenges

As mentioned above, the number of industrial end-consumers, enjoying the right of direct electricity procurement from deregulated power stations is really low. This has a range of subjective reasons (shortcomings on legal, regulatory and management levels) analysis of which is beyond the scope of this article. Add to this a virtual absence of competition in the sale of electricity to consumers (three influential territorial distribution companies instead of independent retail suppliers) and it will become clear that at this stage submission of the data to Eurostat, as required by the directive 2008/92/EC would be rather symbolic than of practical value.

It should be noted also that recently the number of direct consumers (whose yearly consumption is above 7 million kWh) in the electricity market decreased. In 2006-2010 there were 10 direct consumers, whereas today only 5 have remained. The rest buys electricity from distribution companies. There are two vertically integrated undertakings in Georgia – "Telasi" and "Energo-Pro-Georgia" owning generation facilities, distribution network and carrying out supply activities too; i.e. market transparency is only symbolic.

The situation in the gas system is worse, as the number of direct consumers is limited. Basic distribution companies – "Socar Georgia Gas" Ltd and "Saqorgas" (former "Itera" distribution companies, owned by Socar), and "Kaztransgas" Ltd. The small distribution and supply companies, they fully depend on large basic distribution ones. According to article 1 (1.2) of Natural Gas Market Rules[79] order, to resolve relations between natural gas providers, transmission and distribution licensees and direct consumers. However, para 4 of the same Article further specifies that "the relations shall be settled by these rules and in accordance with equality and freedom will principles provided for in Georgian law, except for the cases when the supplier or/and the licensee have a dominant position in the market". This is a clear manifestation of inequality.

On the other hand, "Natural gas supply and consumption rules" approved by GNERC, also settles relations between natural gas providers and distribution licensees (Article 30). It also offers guarantees for unhindered access to the marketplace of new suppliers to secure a competitive environment for gas supply (Article 4, para 26). But medium and small suppliers, who buy gas from the above big distribution companies, cannot compete with the latter's subsidiaries.

How to comply with directive Requirements

Taking into account the requirements of directive 2008/92/EC Georgian government (Ministry of Energy) must develop and implement data compilation system to be presented to Eurostat and create an appropriate legal framework (develop legal instruments) to reflect the directive requirements.

Gas and electricity supplier companies shall be obliged the prepare the data according to 2008/92/EC directive requirements and present to the National Statistics Office of Georgia (Saqstat) and to GNERC. Besides, Saqstat shall develop a form and standards of cooperation with gas and electricity supply companies. Work out reporting methodology for undertakings, supplying gas and electricity to industrial end-consumers.

Saqstat and GNERC shall participate in international cooperation with regard to prices statistics as provided in 2008/92/EC directive.

Given the importance of accurate price statistics for proper development of retail markets the law may provide for administrative liability for presenting incorrect statistics.

Ministry of Energy of Georgia and GNERC shall ensure changes in market regulations to eliminate relations between monopoly supplier and a consumer, and destroy non-transparent environment in this sector.

[79] No 114 , 29.12.2006, of the Minister of Energy of Georgi

4.2 Electricity Market

Below we will discuss the directive 2009/72/EC of 13 July 2009 on common rules for the internal market in electricity and regulation 714/2009 on conditions for access to the network for cross-border exchanges in electricity, implementation of which is a compulsory condition under the Association agreement.

So called third package of directives establishes common rules for the generation, transmission, distribution and supply of electricity, together with consumer protection provisions, with a view to improving and integrating competitive electricity markets in the Community. It lays down the rules relating to the organization and functioning of the electricity sector, open access to the market, the criteria and procedures applicable to calls for tenders and the granting of authorizations and the operation of systems. It also lays down universal service obligations and the rights of electricity consumers and clarifies competition requirements.

Beneath are the requirements under the directive and the illustration of respective situation in Georgia:

- **For the construction of new generating capacity**, member States shall adopt an authorization procedure, which shall be conducted in accordance with objective, transparent and nondiscriminatory criteria. Details of the tendering procedure shall be printed in the Official Journal of the European Union at least six months prior to the end date for bids. Tender specifications shall contain a detailed description of the contract specifications and of the procedure to be followed.

In parliamentary law to ease the building of new generating capacities in Georgia, the government took a resolution which sets down the procedures for conveying the interest in the construction, possessing and controlling the power places. Ministry of Energy announces tender on expression of interests on a specific project and/or at the initiative of an investor a project is deferred in. After the expression of interests a memorandum shall be signed between the Georgian government, "Electricity Systems Commercial Operator" and the winner of the tender. The Memorandum represents the parties' agreement on cooperation. Essential condition for the construction, ownership and operation is the annual sale of 20% of generating electricity on the domestic market for 10 years after commissioning the power works.

Terms of memorandum vary from case to case and not recorded in any law. E.g. It refers to cost of sales within the country. It is unclear what the criteria for the offer are. Therefore, the existing expression of interest procedure is not in fully transparent and competitive and needs further improvement and reflection of appropriate initiatives in the jurisprudence.

- **Three basic options of Unbundling of transmission systems: unbundling transmission system owners, designation of transmission system operators and assignment of independent system operators;**

In the Georgia designation of transmission system operator takes place on the basis of "Georgian State Electricity System" (GSES). But there are two more transmission companies operating in the state ("Saqenergo" and "Energotrans" Ltd.), that own high-voltage transmission lines. Hence it is not clear how the system operator is going to be designated.

- One of the requirements to the transmission system operator is to prepare **network development 10 year plan.** It should be mentioned that GSES has drafted its 10 year growth plan and in April it will be presented to regulatory commission;
- Granting and managing third-party approach on a nondiscriminatory basis, which also implies secure and quality transmission and environment protection. Nondiscriminatory access by third parties shall be guaranteed except for the case when it lacks the necessary capacity to meet technically and economically justified criteria. New users and generation undertakings in Georgia, when connected to the network, often have to upgrade part of the distribution network and infrastructure change. Although Regulatory commission has set a strict price for connection to the network, there is no other regulation assigning rights and obligations of the parties in order to avoid the subjective approach by distribution companies to new users and generating undertakings;
- **Designation of distribution system operator**, which may be functioning under transmission system

operator if it has not enough own resources. Legal and functional unbundling is compulsory when it has more than 100 000 consumers and/or is a small isolated system. We possess no independent distribution system operators in Georgia. All network operators are suppliers at the same time, which violates the following requirement of unbundling the activities;

- **Unbundling of transmission and distribution systems from generation and supply sectors.** The main objective is that the interests of all stakeholder are observed as to avoid any conflict of interests. There are problems in Georgia in this regard too. In particular, "Energo-pro-Georgia" Distribution Company, (which supplies electricity to 75% of Georgian population) owns 1 thermal power plant, 9 medium-size hydro-power-plants and 2 small hydro-stations. Besides, it represents foreign investment;
- **Market opening** for promoting competition in the internal electricity market. All large non-household consumers should have free choice. In Georgia market is open for the users consuming over 3 million kWh a year. Pursuant to Georgian parliament Resolution on basic lines of energy policy, in 2017 market will be open for 1 million kWh consumers [4]. However, the openness of the market does not work in practice. Number of direct consumers, reduces each year, and the main reason is non-existence of the comparatively cheap energy supplier. As market rules require, the cheapest energy first goes to distribution companies and direct consumers often rely only on carrying electricity, and its price, especially in the winter period, exceeds the sales price set by a regulatory commission. In order to avoid a risk of unnecessary expenses companies do not consider necessary to remain direct user;
- **Upgrading distribution network,** the existence of so called intelligent network and accounting system. Transmission network in Georgia is being renovated. However, complete modernization requires huge investments. One of the prerequisites for transferring to the retail market is the introduction of so called "smart" meters on wholesale level. Nowadays the meters all qualified undertakings participating in the Georgian market (distribution companies, direct consumers, generation licensees, and small power-stations) have been replaced by so called "Alfa" meters, which allows for half-hourly transfer of data to upper level control and accounting automatic system. If some consumer decides to register as direct consumer, he will have to install this meter bay as an initial investment;
- **The regulatory authority shall** help to achieve high standards of universal and public service in electricity supply, contributing to the protection of vulnerable customers. This shall include e.g. Postponement of payment, etc. In this regard the regulatory authority has set so called social tariffs, however, this may be regarded as harmful practice of manipulating tariffs. This is not an efficient tool, especially when it comes to protection of socially vulnerable population. Moreover, there often are cases when solvent population enjoys these benefits;
- **The European Commission** believes Energy policy documents of member states are of strategic importance. Energy deficit in member states necessitates developing of action plan or/and other appropriate documents. Energy policy has been developed in Georgia, which is submitted to the Parliament for consideration and approval; work on energy strategy is well underway and has to be completed at the end of this year;
- **The increasing role of regulatory authority in the management of internal market.** There is some progress in Georgia in this matter; in particular regulatory body has been reckoned new function of market monitoring. Activities need to be enhanced in this regard so that the independence and professional level of the regulatory body is increased, since a strong regulatory body constitutes grounds for long-term stability and the improvement of investment climate. It is noteworthy that Georgia, meets EU basic requirement – independence of regulatory authority, which is provided in the directive;
- **Facilitate cross-border cooperation** to secure supply of all energy sources at competitive prices. It is necessary to develop specific mechanisms of compensation for the excess of transmission and set harmonized principles for cross-border trade prices and distribution capacity. Georgia has separate document for relations with each neighbor state. Among them are agreements with Turkey on cross-border trade and interconnection, providing for capacity distribution on new Black Sea transmission line. Significant projects were implemented during recent decade in terms of developing cross-border contacts, including the Black Sea regional transmission line, within which Gardabani - Akhaltsikhe, Zestafoni - Akhaltsikhe and Akhaltsikhe -Turkey border lines were rehabilitated/constructed and 500 kW substation (with DC insert) was constructed. Also,

construction of transmission trunk line with Azerbaijan was finished, and construction of "Kazbegi" transmission trunk line with Russia is underway. Rehabilitation and restoration of high-voltage sub-stations are permanently carried out to ensure uninterrupted and reliable provision of electricity;

- **Establishing the European Network of Transmission System Operators (ENTSO-E).** This organization elaborates and establishes network codes, ensures coordination of network operations. Turkey joined this organization last year on the status of associated member, because Turkey is not a member of either EU or European Energy Community. Georgia will have to make a lot of effort to achieve this. Notably, Georgia needs to introduce the regulations, which apply in Turkey's relations with ENTSO-E member states, at least on Georgia-Turkish border area. Network regulations have been implemented in Georgia and its four chapters were adopted.

On that point is ongoing work on remaining two chapters. Cross-border trade (electronic auction) and next day planning mechanisms using web platform were implemented. Implementation of the directives is a time-consuming process, accompanied by many problems. In the case of Georgia these are:

- First of all Georgia has no land border with EU member states. However, it is possible to export electricity via Turkey;
- Existence of vertically integrated undertakings in power sector and the memorandums and as signed by the government with the undertakings which conflicts with the EU principles. In addition, under the memoranda signed with power stations under construction, power distribution for export to Black Sea transmission line is planned for many years ahead, whereas in EU member states cross-border power distribution is never planned for more than one year;
- The issue of power supply to Georgia's conflict areas. More the 45% of Georgia's power generation accounts for Enguri and Vardnili power plants, located in conflict areas, which creates a threat to unimpeded and secure electricity supply;
- The EU allows certain member states (with small, isolated, depended on one supplier system, or/ and where implementation of any provision prevents system operation, or/and may cause serious economic and financial losses) to apply for exemption from certain obligations. In particular this refers to unbundling, third party admission, open market requirements etc.

Out of a large range of recommendations, the following are important to be implemented in Georgia:

- Establishment of market model adjusted to Georgian conditions, to meet competition and unbundling requirements resulting in market liberalization and transparency. Development of laws and regulatory instruments regarding market rules (rules of mutual settlements and balancing), and commercial (use of the system, connection and agreement on support services) and technical (transmission, distribution rules) regulations. Besides, the improvement of the existing legislation is needed;
- Increase the role of the regulatory commission, in particular in terms of market functioning and cross-border trade;
- Develop support/system services market (balancing, reserve capacities, frequency regulation etc.) Which is a prerequisite for secure and quality electricity supply;
- The establishment of such level of transmission and distribution components of tariffs as to insure smooth operation of transmission and distribution network;
- The implementation of effective measures to protect the interests of vulnerable population;
- Encourage renewable energy generation and enhance energy efficiency, supporting activities;
- Develop incentive mechanism for additional capacity building, including both, the additional cost of electricity produced, and tax incentives and competitive tenders announced by the government.

It should be underscored that electricity market liberalization in Europe took place in stages, which required three packages of respective energy directives. Georgia will have to pass all these stages, needed for final reforming. However, thorough evaluation of such decisions, scrutiny of each requirement's cost-effectiveness need to be carried out prior to making specific steps to their implementation.

4.3. Oil and Gas Markets

Natural gas market

The main purpose of European regulat**o**ry documents in the oil and gas sector, that the Georgian energy legislation should be to harmonized with, is the creation of a single liberal energy market with the agreed tariff to facilitate the cross-border movement of hydrocarbon resources, free trade under maximum transparency conditions, unimpeded and non-discriminatory admission of third parties to the existing infrastructure, and each country's, as well as common energy security. directive 2009/73/EC establishes common rules for the transmittal, distribution, supply and storage of natural gas. One of its primary goals is to support competition at common internal European market, as well as cross-border energy links incentive, non-discriminatory, transparent, common tariffs in the long term view.

Article 3 of the directive provides that Member States shall ensure, on the basis of their institutional organization, achieving a competitive, secure market in natural gas, and shall not discriminate between those undertakings as regards their rights or obligations. Deviation from this clause of the law is permissible only provided that competition rules are not broken.

The only effective instrument for ensuring competitiveness, according to the directive, shall be unbundling of transmission systems and transmission system operators from other infrastructural activities, for both, local and other states' undertakings (see. Articles 9 and 11 of the directive). Unbundling implies effective delineation of activities in the fields of transmission and distribution of the areas working on the basis of competition principles (like activities associated with both the retail and wholesale trade: production, delivery, import), which should exclude discrimination in a competitive market.

Compliant to the directive third package three models of unbundling are considered: **Ownership unbundling**; designation and functioning of Independent system operators **(ISO)** and Independent Transmission Operators **(ITO).** Under certain circumstances, states may make a choice between them:

- In case of ownership unbundling model, vertically integrated undertakings will have to alienate gas pipelines that are in their possession. Manufacturers and suppliers will have the full right to decide to whom, how, and at what price to sell the pipeline. However, in this case the manufacturers and suppliers will not have the right to own a major stake, to appoint a member of the governing body (board), etc. at Transmission System Operator Company;
- In case of **ISO** model suppliers still can own transmission infrastructure, but the decisions about operating, maintenance and investment planning shall be entrusted to another – independent company. And Vertically Integrated Undertakings' basic task will be to ensure fundraising and meeting investment commitments. It is the liability of independent operator company to operate transmission system, technical maintenance, planning and investments mobilization. The ISO option shall be subject to approval by the Commission and the government of an appropriate state;
- In case of **ITO** model Vertically Integrated Undertakings can own and operate the networks, but the control of all the activities related to the operation of networks shall be carried out through another undertaking, to take all the decisions independently. The Supervisory Body shall be in charge of the owner's financial interests, monitoring of the implementation of agreed program, not interfering with the day to day activities of the transmission system operator.

Transmission System Operator shall enjoy effective decision-making rights, independent from the vertically integrated undertaking, with respect to assets necessary to operate, maintain or develop the transmission system; recruit the personnel (who shall have no financial interest in Vertically Integrated Undertaking); shall not joint real estate (office) or IT system in common with any vertically integrated undertaking; Transmission System Operator is obliged to invite independent auditor.

The directive also deals with the introduction of compulsory standards with regard to admission of third parties to the gas storage facility and improvement of the legal framework of operation in the retail market; Implying increased transparency and improvement of consumer protection rules (Articles 3.6 and 41), ensuring the possibility of opening the market and vendor selection (26.3) and an increase of the role and powers of regulatory authorities.

ACER (Agency for the Cooperation of Energy Regulators) and ENTSO-G (European Network of Transmission System Operators (gas)) have been established which contributes to the coordination and harmonization of relevant issues, develop and implement uniform commercial and technical codes and safety standards. Similar to market models of developed European states, transmission and distribution of natural gas are controllable and wholesale supplies of natural gas – deregulated[80]. According to Georgian legislation distribution of natural gas and its supply are different types of activity, although the distribution licensee is not prohibited from engaging in the supply. Hence, distribution licensees, at the same time, are market suppliers, which complicates competition and inclusion of an alternative supplier in this market sector.

Pursuant to the EU directive 2009/73/EC, when more than 100 000 consumers are connected to the distribution network, distribution and retail supply companies shall be independent entities and they shall be separated. There are three licensees of such distribution in Georgia: "Kaztransgastbilisi", Ltd., "Socar Georgia Gas" Ltd. and "Saqorggas". Under the EU directive other 24 licensees in natural gas do not need such separation of supply and distribution.

The expediency of promoting competitive market principles is declared in the Law of Georgia "On Electricity and Natural Gas" (see. Article 1). However, there are no commitments or mechanisms of achieving this goal in this or any other law or regulation.

According to preliminary estimates the implementation of this directive in Georgia requires serious preliminary work. Different articles of the directive will affect the functions and activities of the Ministry, regulatory authority, Georgian Oil and Gas Corporation (GOGC), Gas Transmission Company (GTC), subsidiaries of leading international companies (SOCAR) working in this sector, "Kaztransgastbilisi" and other players. Besides, as mentioned above, the structure of the local market, basically meets, except some nuances, the directive requirements. Presumably, basic changes will affect distribution companies (SOCAR subsidiaries and Kaztransgas Tbilisi), whose activities – distribution and supply - will be carried out by two independent entities, separated from each other at least on legislative level: distribution system operator, who will be isolated from retail (and wholesome) supply, and a retail supplier (the exception applies to the above mentioned undertakings with more than 100 000 consumers).

The directive allows for certain privileges for new member states. This refers also to the cases when a state is not directly linked to another member states' networks and more than 75% of supplies are carried out by one supplier, although this may cause additional energy security risks. In addition, when building new infrastructure, high risk investments will either prevent the inflow of capital or will increase the competition conditions, like it happens in case of South Gas Pipeline. Also, in order to secure derogation, unlimited competition conditions shall be safeguarded, and the regulatory authority shall make decisions, taking into account supply security and market trends (as it is in Georgian market, when SOCAR, under terms of a single contract for gas supplies, provides seasonal consumption balancing services too).

Regulation (EC) #715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions of access to the natural gas transmission networks

Among the objectives of the Regulation is the establishment of third-party unimpeded and nondiscriminatory access services, the determination of transparency requirements, objective technical and economic criteria for third-party access and related dispute resolution.

It is implied that the adjustment of tariffs should facilitate cross-border trade and the transmission system operator, as well as regulatory authorities should try to change the structure and the principles to achieve consistency of non-uniform tariffs.

It is impossible, without detailed scrutiny[81], to conclude on how smoothly this regulation could be implemented in Georgia, and how much time it would take. In particular this refers to the articles, according to which in determining the tariffs the actual costs, including the investment component, and transparency, as well as compliance with best international practice should be taken into account. As is well known tariffs in the Georgian natural gas market are often determined on the basis of memorandas

[80] Retail supplies are deregulated only for consumers from commercial sector

[81] See: On Approximation of Georgian Legislation with the EU Energy Acquis, Report, 2013 by Irma Kavtaradze an d Marina Guledani

between the government and gas companies. These memorandas also provide for seasonal supply and consumption balancing, and other terms, which are conditioned by not only economic parameters, but also by considerations of energy security and other technical, social and political factors.

In terms energy resource supply Georgia is isolated from Energy Cooperation member states. It has no common border with any of these states and hence no direct contacts with them. Besides, the existing infrastructure, designed for only one-way gas flow, makes it impossible, at this stage, to benefit from it, as is the case with member states, directly connected to a single network.

"Gazprom" - Russian gas exporter national monopoly - which, by its technical capabilities can be the largest gas supplier to Georgia, frequently uses gas as an instrument for political influence. In particular, for Armenia, where gas is supplied through Georgia, tariffs are much lower than market price. This makes goods produced in Armenia, including electricity, much cheaper thus making our economy uncompetitive. Diplomatic relations with Russia are broken off because of its 2008 military aggression and annexation policy. Therefore, participation in Russian single internal market is out of the question. Georgia gets from Russia only 10% of total consumed gas as compensation for transit to Armenia (about 90% of Georgia's total requirement and 100% of "socially vulnerable"[82] population's requirement are met with Azerbaijani gas.). In all probability, this trend will continue in the future.

Most of Azerbaijani gas supplies is implemented on the basis of the memorandum and the agreement between the Georgian government and SOCAR Azeri state gas company. SOCAR subsidiaries own most of Georgia's distribution networks (in fact everywhere, except in Tbilisi) and they also prevail in retail supply. SOCAR owns all gas-main pipeline Azerbaijan, through which gas is supplied to Georgia. However, ignoring the current gas supply pattern and full-scale liberalization with a view to convergence with the European market would need good preconditioning, as it may cause some significant problems related to energy security, as well as create problems with our strategic partner – Azerbaijan. This issue needs in-depth scrutiny and, then, appropriate steps with due consideration of the legitimate interests of all stakeholders.

Gas supplied through the SCP pipeline on the basis of Option and Additional Gas Supply contracts by international Shah Deniz international consortium, plays important role in terms of guaranteed satisfaction of the market social sector and restrain on the monopoly in the local market. Option and Additional gas contracts were signed in 2001-2003 on the basis of present and forecasted market conditions. The contracts were signed on mutually beneficial conditions. In particular, the Georgian side virtually abandoned taxes required by law, thus ensuring energy security of the country and guaranteed supply of gas to socially vulnerable consumers. Today annual option and additional gas supply are 700-800 m^3, which is 35-40% of total consumption in Georgia. According to the agreement with SOCAR this amount of gas is passed to Azerbaijani side for further supplies, adjusted to fluctuations of seasonal needs.

For energy security and de-monopolization of the marketplace, and to guarantee gas supply to socially vulnerable population, it would be advisable that Georgia requests derogation rights in matters, related to SCP pipeline. In particular, it is desirable that Georgia demanded exceptions in relation to existing transit-related sales contracts and/or rights of non-proliferation of this standard for the projects, regulation of which is beyond its competence.

As a outcome of preliminary analysis, it can be said that Regulation 715/2009 requirements may be introduced in Georgian legislation after 2020 – that is when launching of Shah Deniz 2nd phase design capacity supplies to Turkey and Europe is planned. Also, by then Georgia will already possess a strategic reserve storage facility, on which they are already working.

[82] This includes total population; also thermal power plants, owned by different local and international companies.

Oil and Petroleum Products

directive 94/22/EC 30/06-1994 on the conditions for granting and using authorization for the prospection, exploration and production of hydrocarbons

The directive establishes a common framework for granting authorization and management of prospecting, exploring for and producing hydrocarbons for member states. The primary aim is to ensure transparency of all the operations related to granting authorization and its availability to all entities, having appropriate financial and expert capacities. The directive requires that the granting of authorization is established on the declared criteria. It also imposes restrictions and requirements, justified by national security and public safety; financial contribution to be fixed in such a way as not to interfere in the management of entities and to be used in a non-discriminatory way, monitoring the activities of entities only to the extent necessary to ensure their compliance with obligations.

Georgian legislation basically complies with these requirements, in particular pursuant to the Law "On Oil and Gas" access to prospecting is granted only to the blocks announced by Oil and Gas Agency on the basis of the terms of public tender. However, some minor innovations, including those of technical character, have to be reflected in the Law "On Oil and Gas" and in the bylaws (e.g. "National regulation of oil and gas operations"). In particular, under Georgian law, a notice inviting applications to participate in a competition is published 45 days before the end date for the applications, whereas the directive requirement is 90 days interval between the day of the month of publication of the proclamation in the Official Journal of the European Communities and the deadline. Overly, the criteria to determine the winner, have to be published before or after the announcement of the rivalry, but prior to taking off the procedure.

The directive, in contrast to the Georgian legislation, permits granting authorization without initiating a tender in exceptional cases, for example to the holder of an authorization for a contiguous area, in reasonably justified cases.

Pursuant to the directive one of the main criteria is the applicant's technical and financial capability, whereas in Georgian reality the amount of proposed financial compensation is determinative for making the determination. It is likewise needed to inform unsuccessful companies, on their request, about the causes of their bankruptcy.

Georgian legislation should also reflect the commitment of member state authorized agency (Oil and Gas National Agency) to publish and present to the European Commission its annual reports, including the information on the updated assessment of reserves.

directive 2009/119/EC imposing an obligation on Member States to maintain minimum stocks of crude oil and/or petroleum products

This directive sets down rules aimed at insuring a high level of security of oil supply in the Community through reliable and transparent mechanisms based on solidarity amongst Member States, maintaining minimum stocks of petroleum petroleum and/or petroleum products and putting in place the necessary procedural means to dispense with a severe deficit.

The basic requirement of the directive is that the total oil stocks held at all times within the Community for their benefit correspond, at the rattling least, to 90 days of average daily net imports or 61 days of average daily inland consumption, whichever of the two amounts is more outstanding.

Given the specificity of the country (Georgia has neither strategic repository, nor any oil refinery and thermal station operating on liquid fuel), one of the ways to implement the directive would be to oblige the retail and wholesale suppliers of petroleum products to ensure appropriate stocks. Most likely it will require them to make additional investments in these stocks, which in turn will reduce the operational storage capacity.

If the directive is enforced in such a way, legislative changes and appropriate steps by the companies will be asked. Besides, these activities will cause slight, but still increase of the price, which is why consultations

with companies engaged in this business would be advisable. Appropriate state monitoring is necessary. The possibility of building a storage facility by the state should also be thoroughly studied before taking final decision.

4.4 Energy Efficiency

One of the reports of the International Energy Agency (IEA) states, that energy efficiency is "the primary source of energy" in the world; investments in energy efficient technologies save more energy, than several power stations can generate. This "primary source of energy" plays important role in substitution of fossil fuels and the fight against climate change.

By shortest and simplest explanation energy efficiency means using less energy for specific services. E.g. fluorescent light bulb is more energy efficient than regular glowing light bulb, because it consumes less energy to produce the same light quantity. Similarly, energy efficient stove consumes less fuel than a conventional one, and the heat produced is just the same.

The benefits of energy efficiency could be listed in 5 main points:

1. It helps to save money;
2. It contributes to the development of economy;
3. It is environment-friendly;
4. It leads to further strengthening of energy security;
5. It improves quality of life.

It is easily known that energy efficiency activities save consumers' finances by cutting down the quantity of consuming energy and, respectively its total cost. At the same time implementation of energy efficiency activities and the savings therein support the economic growth of the whole nation. They also contribute to job creation and are the basis for innovations, because one of the prerequisites for the introduction of energy efficient technologies is the creation and development of nonexistent hitherto technologies.

One important factor with energy efficiency is the environment. Energy saved is one of the prerequisites for reducing pollution since it is well known that release of pollutants (greenhouse gases) accompanies the use of fossil energy resources in social and commercial, and transport sectors. Energy efficiency also increases security level by reducing the country's dependence on external energy sources, and, finally, energy efficiency improves quality of life by creating home comforts.

According to the World Bank data, demand for energy is increasing annually by 2%. This accounts mainly for the developing countries, like China and India. However, advantageous investments in existing technologies can reduce this growth by 0.7%, which means a daily saving of energy equivalent of 64 barrels of oil. Energy saving is possible in commercial, as well as social and transport sectors.

Due to the above factors developed countries pay increased attention to energy efficiency. Internationally, environmental protection and reduction of greenhouse gases is the main priority as this is linked with the fight against climate change. In this regard the EU directives, which shall be implemented within the Association Agreement of Georgia with the EU, are especially important for Georgia. These are:

- directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 **On energy end-use efficiency and energy services**
- directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 **On the energy performance of buildings**

- directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 **On energy efficiency**

Let's have a brief look at each of them:

The purpose of directive 2006/32/EC on energy end-use efficiency and energy services is to enhance the cost-effective improvement of energy end-use efficiency. To this end it calls member states to provide the necessary indicative targets as well as the mechanisms, incentives and institutional, financial and legal frameworks to remove existing market barriers and imperfections that impede the efficient end use of energy.

The directive, basically, applies to energy distribution and retail sales. Basic target indicator is the national indicative energy savings within NEEAP[83], calculated using appropriate methodology. In this matter the directive imposes a special role of public institutions and public procurements. Public institutions shall undertake the following:

- Develop and implement financial measures to support energy saving;
- Purchase energy efficient technologies and transport means;
- Purchase energy efficient product.

Besides, the states shall establish independent public service or agency to monitor the Action Plan implementation process. The states shall ensure that energy distributors, distribution system operators and/or retail energy sales companies provide information to final customers on energy efficiency programs. States shall ensure that final customer are provided with individual meters and the billing based on actual energy consumption, presented in clear and understandable terms, comparisons of current energy consumption with consumption for the same period in the previous year and contact information from which information may be obtained on available energy efficiency improvement measures.

Another important directive touches on energy performance of buildings (directive 2010/31/EU on the energy performance of buildings). First of all it should be noted that buildings consume much more energy than other sectors of the economy. According to the World Bank information Buildings account for 34 % of total energy consumption, which is more than in industry and transport sectors. Within the EU similar figure equals to 40%. Therefore, reduction of energy consumption plays important role in reaching the goal of EU energy strategy i.e. achieve the objective of reducing by 20 % the Union's energy consumption by 2020.

The directive requires from member states to develop methodology to calculate the energy performance of buildings, which includes, in addition to thermal characteristics, other factors such as heating and air-conditioning installations, hot water supply, indoor air-quality, adequate natural light and design of the building etc. Minimum energy performance requirements shall be reviewed every five years and, these requirements may differ for old and new buildings. These requirements shall not apply to buildings officially protected because of their special architectural or historical merit, buildings used as places of worship, temporary buildings etc.

By 31 December 2020, all new buildings shall be nearly zero energy buildings and new buildings occupied and owned by public authorities shall meet these requirements already by 31 December 2018. Besides, a system of certification of the energy performance of buildings shall be laid down to include the energy performance of a building and recommendations for the cost-optimal or cost-effective improvement of the energy performance. When buildings or building units are sold or rented out, the energy performance certificate is shown to new tenant/ buyer and mentioned in an advertisement.

One of the main prerequisites of implementation of the directive is the development of building code on a national level. It is noteworthy that most of the developed countries adopted building code in 1970-yes and they have undergone serious changes since then. Energy efficiency of buildings in Europe and the USA has improved by 60% since. Developing countries started drafting of the respective codes in 1990-IEs, but economic and institutional barriers were deterrent to this process. Building codes become especially

[83] National Energy Efficiency Action Plan

important against the background of incomparably large amount of construction and the enormous potential of energy efficiency. Already available technologies allow reducing buildings' energy consumption by 30% by 2030[84]. Energy saving potential is particularly high in developing countries and countries with transition economies.

The most recent directive regarding energy efficiency is that of 25 October 2012 – directive 2012/27/EU of the European Parliament and of the Council on Energy Efficiency, which, over time, will repeal directive 2006/32/EC. Under the directive, countries are required to use energy more efficiently at all stages of the energy chain from its production to its final consumption.

The directive underscores that the world is facing unprecedented challenges resulting, on one hand from increased dependence on energy imports, and, on the other hand the need to limit climate change to overcome the economic and environment problems. Previous directive failed to reach its goal and the need for additional arrangements arose in order to reach the 20 % reduction of energy consumption by 2020 throughout the EU. The directive allows the states to set an indicative national energy efficiency target, based on either primary or final energy consumption.

The new directive underscores the importance of well-established energy audit system and exemplary role of public bodies' buildings. The public sector is required to purchase new technologies and to renovate its buildings so to meet the minimum energy performance requirements. Besides, it requires from the states that they promote the availability of high quality, energy audits to all final customers and to strengthen the incentive mechanisms thereto. Member States shall also develop programs to raise awareness among households about the benefits of such audits through appropriate advice services. The States shall encourage training programs for the qualification of energy auditors in order to facilitate sufficient availability of experts. Big enterprises are required to carry out energy audit every 4 year.

The Association Agreement with Georgia does not include specific timing for implementation of this directive. The timeline should be defined in the framework of negotiations on the accession of Georgia to the energy association or, if the accession does not take place within two years, new timing shall be presented to the Association Council in the third year after signing the agreement.

What is the situation in the country in terms of government programs to support energy efficiency and what barriers will Georgia have to overcome when implementing the directive requirements.

First of all Georgia is one of those exceptional states where there is no energy efficiency law or a uniform energy law to comprehensively address this issue. Draft law developed in 2008 with the WEG support was not adopted by the government. The efforts of Ministry of Energy to include energy efficiency in Building Code did not produce results either. The law "on Electricity and Natural Gas" - basic law governing energy sector – provides that one of the functions of the Ministry of Energy is to develop a single government program to improve the efficiency of consumption and to monitor its implementation. However the importance of energy efficiency is not explained. According to a 2014 preliminary document of energy policy– "Development and Implementation of a Common Approach to Energy Efficiency" – energy efficiency shall be one of the key policies. Another document – "Social-economic Development Strategy of Georgia 2020" – provides that energy efficiency will be enhanced and relevant legislative mechanisms will be drawn up in accordance with international and European norms". But this is just a formal part of the issue. In order to implement the directive appropriate programs and action plans need to be developed.

Georgia so far has not developed target energy efficiency national indicators and the action plan, although 8 big cities, including Tbilisi[85], have signed the Covenant of Mayors[86]. By their commitment, Covenant signatories aim to meet and exceed the European Union 20% CO2 reduction objective for which they develop Sustainable Energy Action Plans (SEAP). To date only four cities (Tbilisi, Batumi, Gori and Rustavi) have such plans. Sources of financing are not defined, and given the tight budgets, they hope only for donor funding.

[84] Energy Sector Strategies to Support Green Growth, 2014 course

[85] Tbilisi (2010), Batumi (2011), Rustavi (2011), Kutaisi (2011), Gori (2012), Poti (2012), Zugdidi (2013) and Telavi (2014) - www.eumayors.eu

[86] The Covenant of Mayors is the mainstream European movement involving local and regional authorities, voluntarily committing to increasing energy efficiency and use of renewable energy sources on their territories

Practically, there are no professional energy services companies; their supporting financial or other mechanisms are not in place either. There is no energy audit system and no official document has been developed so far to establish the buildings' energy audit procedures.

Energy efficiency measures are being introduced spontaneously, using only market mechanisms. Insulation of buildings, use of energy saving bulbs and other consumer electronics has become part of the practice, but without proper government support the process is moving forward very slowly.

Installation of individual meters for electricity consumers has been going on for years and is still not finished. According to Georgian National Energy and Water Supply Regulatory Commission (GNERC) 2015 report the statistics of consumers without individual meters is as follows: "Telasi" – 8,9%; "Energo-Pro-Georgia" – 8,8%; "Kakhetis energodistribucia" – 18%;

Introduction of stepped electricity tariffs in 2006 may be considered as one of the factors encouraging energy efficiency but in that time the real value of rates almost halved and its encouraging function works only for the poorest segment of population. If the government decides to refuse the harmful practice of backing tariffs, and given significant increase in energy consumption and imports, we should expect a significant increase in tariffs too, which will be a heavy economic burden on the population. It is today that the maturation of the existing potential gains in importance.

As for energy efficiency of buildings, this demand of the directive in Georgia shall be nailed down by law on Construction Activities, but there is nothing said about energy efficiency there. There is no formal requirement for certification of buildings, no standards and no institution to work in this respect. Currently, Ministry of Economy of Georgia is developing a draft code of "Spatial layout and construction". Articles 108 and 109 of its preliminary version deal with insulation and energy efficiency of buildings and use of renewable energies.

It is noteworthy that the EBRD has announced a tender for consultancy services to support the development of an energy efficiency action plan of Georgia, as well as government arrangements to enhance energy efficiency of buildings.

Conclusion

Due to the nonexistence of state vision of energy efficiency and the appropriate policy, it is impossible to get economic, energy, environmental, social, technological and political benefits of energy efficiency.

A basic impediment to introduce energy efficiency in Georgia is the nonexistence of understanding of its importance by the government, which is an exceptional case in the region and among more or less developed countries.

It is significant that the government develops laws, effective institutions, financial mechanisms, action plan and its monitoring system; assures a free market environment to sustain energy efficiency. Firstly, the government shall develop energy efficiency national policy to define a common fabric for all the above systems. Effective utilization of current and future donor projects and international assistance, which can be picked up through Green Climate Fund is real important in this issue.

Trainings and other educational activities for energy auditors, managers, construction sector representatives and service providers would also be supportive of the advancement of this processes. Information campaigns for raising awareness on energy efficient technologies and energy saving arrangements are necessary, because introduction of energy efficiency improves living standards and contributes to economic development and the creation of a secure environment.

4.5. European Energy Community and Environmental Law

The energy community aims to create a common energy market between the EU and some of its neighbors. It likewise proposes to expand the EU internal energy policy to South East Europe and the Black Sea area. It represents the key *driver for energy and related environmental policy in the region.* This includes the obligation for member countries to implement EU environmental law and renewable energy targets.

Environmental regulations

Binding regulations are[87]

- The Environmental Impact Assessment directive (1985/337/EEC), deadline 1 July 2006;
- The Sulfur Content of Liquid Fuels directive 1999/32/EC, deadline 31 December 2011;
- The Large Combustion Plants directive 2001/80/EC, deadline 31 December 2017;
- Article 4 (2) of the Wild Birds directive, deadline 1 July 2006;
- The Industrial Emissions directive 2010/75/EU (for new plants), deadline 1 January 2018;
- The Integrated Pollution Prevention and Control (IPPC) directive 2008/1/EC.

Encouraged, but are not mandatory:

- The Kyoto Protocol;
- The Industrial Emissions directive 2010/75/EU (for existing plants).

According to the EU Georgia Association Agreement the Environmental Impact Assessment directive should be implemented over three years of the signing of the agreement, the sulfur content of Liquid fuels directive in two years. For a full implementation of the Wild Birds directive, the agreement sets deadline in eight years, whiles the Article 4, should entry into the force in five years after signature.

The analysis of directives clarifies that Georgian Environmental Legislation does not comply to the related directives of the European Union. Therefore, it's important that the government of Georgia, starts harmonization of Energy Community treaty environment part, as it also in meantime represents the part of the Association Agreement.

It's important, that the Georgia based its economic development on sustainable development agenda and ensures the strategic assessment of plans and programs.

In addition, in Georgia existings law frameworl does not regulates the full spectrum of activities, while executive authorities has no functions and responsibilities for environmental regulation, especially in industry sector, the technical regulations does not exists and developed projects does not comply with Integrated Pollution prevention and Control, as well as environmental impact assessment directives. Moreover, often there is no competitive authority that would ensure the issuance of permits, controls and monitoring in a number of areas.

Georgia has no legislation towards Climate Change, therefore it's important not only to elaborate legislation, but also to increase the human resources in this direction.

In addition, the budgetary contributions necessary for implementation of each law should be clearly calculated and prescribed in national budget law. It's important that costs-benefits analysis established for the assessment of all environmental laws.

It's important to ensure the participatory planning and decision making process for elaboration of any policy, legislative or regulation documents on environmental matters, as well as to ensure public involvement during its implementation. Public participation in decision making represents the requirement of the EU Georgia Association Agreement, as well as represents Georgia's commitment for implementation of the Aarhus Convention on "Access to information, Public Participation in decision making and access to Justice on environmental matters".

[87] https://www.energy-community.org/portal/page/portal/ENC_HOME/AREAS_OF_WORK/Obligations/Environment

4.5.1 Environmental Impact Assessment directive

directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment

The European Union adopted an Environmental Impact Assessment directive in 1985. It was amended three times since then – in 1997, 2003 and 2009. Finally the directive and its three amendments were codified by directive 2011/92/EU of 13 December 2011.

The Environmental Impact Assessment directive seeks to reveal and analyze possible environmental impacts; identify possible harms before launching the activities; ensure that resources are used appropriately and efficiently. The directive lays down rules for the EIA procedure. The following is a description of the stages of an EIA[88]:

1. **Screening: In** the screening phase, the competent authority has to decide whether an EIA is required or not[89];

2. **Scoping:** The scoping phase serves to identify potential significant environmental impacts that need to be analyzed in detail. The scoping exercise is to be undertaken by the project developer;

3. **Environmental Impact Statement (EIS):** The environmental impact statement is to be prepared by the developer who may subcontract this task. The environmental impact statement includes;

    - A description of the project;
    - An outline of the main alternatives;
    - A description of aspects of the environment likely to be significantly affected by the project (needs to include human beings, fauna, flora, soil, water, etc.);
    - A description of the likely effects of the project on the environment resulting from the existence of the project;
    - A description of potential mitigation efforts;
    - A non-technical summary;
    - An indication of unknowns or difficulties (if any).

4. **Consultation:** Member States have to consult with relevant environmental authorities and with the public. Information on the development consent, the decision for requiring an EIA, and EIA reports have to be made available to the public;

5. **Decision-making:** In this phase the competent authorities have to evaluate the application for development consent, taking into account the EIS as well as the outcome of public commentary.

Unfortunately national legislation is largely divergent from Environmental Impact Assessment directive 85/337/EEC. Current Georgian legislation does not recognize the screening and scoping phases, while according to the EU directive, these phases are of utmost importance for preparation of an EIA report.

The list of activities that mandatorily requires EIA under the Georgian legislation is also incompliant with the list of activities defined under the EU directive. As a result of legislative amendments implemented over the past years, the mentioned list does not include a number of activities, which are likely to have significant adverse and irreversible effects on the environment or human health, including oil and gas exploration.

Furthermore, the Georgian legislation does not envisage individual discussion of those activities, which are not included in the list, but can have adverse effects on the environment. In addition, unlike the EU directive, Georgian legislation does not define those criteria, which will define whether an EIA is required.

[88] European Commission, 2007;

[89] Annexes 1 and 2 of the directive compile projects for which an EIA is either compulsory or voluntary, based on individual Member State decisions. Projects listed in Annex 1 require an EIA. Projects listed in Annex 2 can be subjected to an EIA based on individual Member State decisions.

Georgian legislation provides for exempting an activity from an obligation of carrying out an EIA. The similar provision is included in the EU directive too; however, the difference is that this definition is extremely general in Georgian legislation and enables interpretation. The EU directive specifies that it may be appropriate in exceptional cases to exempt a specific project (completely or partially) from the assessment procedures and if this happens, the public should be informed about the reasons of making exceptions; furthermore, the possibility of carrying out other assessments should be discussed. The Georgian legislation does not provide any such requirements. Furthermore, unlike EU directive, Georgian legislation does not provide for timely access to information and public participation in the decision-making.

The EU directive on EIA states that the decision needs to take into account the opinions expressed by the public concerned. In addition, public consultations should be held at various phases of the EIA process. Unlike EU directive, the current Georgian legislation makes impossible timely and full public participation in a decision-making process.

The EU directive largely focuses on EIA in case of possible transboundary impacts on the environment. The Georgian legislation does not regulate this issue and thus it is not in line with the requirements set out in the EU directive. It should as well be noted that Georgia has not so far signed the Convention on Environmental Impact Assessment in a Transboundary Context.

The Startegic Environmental Impact Assessment directive

The strategic environmental Impact assessment (2001/42/EC) directive will likely become the part of the European energy treaty after 2016, the directive is quite important instrument and almost all parties agree that it should become the part of ECT.

The European Union adopted Strategic Environmental Assessment (SEA) directive in 2001. The SEA directive lays down the procedure for undertaking an environmental assessment of plans and programs. Its objective is to provide for a high level of protection of the environment by requiring assessing the environmental consequences of certain plans and programs being likely to have significant effects on the environment. The SEA directive allows for the identification and possible prevention of adverse environmental impacts throughout the formal decision-making process and unlike the EIA aims to also consider alternative options to the suggested one[90].

In terms of Strategic Environmental Assessment procedures, Georgian national legislation does not ensure convergence with the relevant EU directive. Presently, the Georgian legislation does not envisage Strategic Environmental Assessment while developing various plans, programs and policy documents. Respectively, public participation in this procedure is not determined. It should be noted that before 2006, under the Law on Environmental Permits, various plans and programs were subject to EIA procedure and accordingly, they ensured public participation in the process of developing these documents (although this provision has never been put in practice). As a result of legislative amendments introduced in 2006, the mentioned plans and programs were removed from the list of activities subject to EIA procedure. Thus, today there is no legal mechanism available to enable the public concerned to participate in the process of developing plans, programs and policy documents. Will allow to create sustainable and secure energy system on the basis of consensus.

Protection of wild birds

Article 4 (2) of directive 79/409/EEC on the conservation of wild birds requires that Energy Community Member States take conservation measures for migratory species bearing in mind their need for protection along their migration routes.

This directive covers the protection, management and control of wild birds, their eggs, nests and habitats. This relates to migratory species in the EU countries. Execution of this directive shall protect wild birds from deliberate killing or capture. The directive places great stress on the protection of habitats for endangered as well as migratory species, it bans trading or any commercial operation in birds.

The directive deals with two basic issues – protection of the habitat and the population management,

[90] European Commission, 2007;

control and performance. Article 4 also provides for the creation of special protection areas for species vulnerable to specific changes in their habitat and creation of a legal framework for the protection of migratory birds.

Although there is no specific law on protection of wild birds in Georgia, there are rules of law, fully consistent with the directive, including: Law on Animal Protection, Law on Red List and Red Book of Georgia; at the same time Georgia is implementing the directive in the framework of protection of wetlands and the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Nevertheless, in order to bring the directive into full conformity with the law, certain legal changes are necessary, first of all with the view of meeting the requirements of Article 4 (2), which provides for protection of migratory species along their migration paths.

Currently hunting of migratory birds is allowed in Georgia. Besides, there is a tradition of falcon domestication and hunting with it on the Georgian Black Sea coast. The mortality of migratory Raptors resulting directly from hunting and trapping ranges between 1,500 and 3,000 birds during the autumn migration[91].

Some other significant fact is that in the planning of energy projects, protection of wild birds is not duly regarded. E.g. In 2010 EBRD financed Paravani hydro-power station and linked to its transmission line. The project ran immediately on the African-Eurasian flyway (migration corridor) of more than 255 species of migratory fowl. They traverse the territory of Georgia in places of wintering and then get backwards. Because of the birds sensitivity to tight obstacles (e.g. Wires) there is a danger of clashes with transmitting antenna/wire[92].

After appealing to EBRD project complaint mechanism, their experts concluded that construction of transmission line "may deliver an impact on migratory species of regional and global significance" and that the EIA document shall present a more comprehensive in-depth analysis, using international experience of bird protection.

Sulfur content of fuel

Currently the requirements of directive 1999/32/EC relating to a reduction in the sulfur content of fuels are not consistent with Georgian standards.

In 2009 some higher standard for sulfur in fuels was introduced in Georgian legislation, but it still falls short of the directive requirements.

According to the directive member states shall take all necessary steps to ensure that as from 1 January 2003 heavy fuel oils are not used if their sulfur content exceeds 1,00% by mass.

The directive requires fuel quality monitoring by sampling and analysis, on the basis of which member states shall by 30 June of each year supply the Commission with a short report on the sulfur content of fuels. On the basis of these reports the Commission shall annually submit the report to the European parliament.

In accordance with the Order by Prime-Minister of Georgia on 26 December 2014[93], starting from 2015 sulfur content in petrol shall not exceed 50 mg/kg, and from 1 January 2017 – 10 mg/kg. Sulfur content in Diesel oil from 2014 until the end of 2016 shall not exceed 200 mg/kg, and from January 1, 2016 – 150 mg/kg[94].

It is remarkable that there is no permanent monitoring on the side of the state in Georgia. Respectively, frequent are cases when investigative journalism and/or independent studies reveal high levels of sulfur content[95].

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[91] http://www.econatura.nl/wp-content/uploads/2014/08/S095927090100017Xa1.pdf

[92] http://greenalt.org/wp-content/uploads/2013/11/Paravani_geo.pdf

[93] https://matsne.gov.ge/ka/document/view/2659605

[94] https://matsne.gov.ge/ka/document/view/2659509

[95] http://www.palitratv.ge/akhali-ambebi/sazogadoeba/45350-45350-ra-satsvavi-iyideba-saqarthveloshi-ukontrolo-khariskhi-da-dabindzurebuli-haeri.html

The only institution, stating that it monitors fuel quality is the Union of Oil Importers. The scope of its activities includes "permanent monitoring of fuel quality and prices in the fuel market with further providing objective information to the population"[96]. Nevertheless, the results of quality monitoring are not available to the public.

Oil companies do not publish their data either. Pursuant their official web pages, the fuel in trade net complies with Euro 5 standard.

Full harmonization of national law with the directive is very important, as well as setting up regulatory system and granting monitoring functions to relevant authority. Informing the public about standards of sulfur content in diesel and petrol fuel is essential.

Large Combustion Plants

The directive calls for the reduction of emissions of acidifying pollutants, particles, and ozone precursors, control of emissions from large combustion plants (over 50 MW) regardless the type of fuel they take in.

There is only one thermal power plant in Georgia whose rated thermal input equals greater than 50 MW – it is Gardabani thermal station. Currently 250 MW gas thermal station is under construction in Gardabani. Besides, the Georgian Energy Group plans to build a number of thermal stations with thermal input of 150-300 MW[97].

The "Law on Air Protection" developed by the Ministry of Environment and Natural Resources in 1999 was the first attempt to harmonize our laws on environment with European directives and regulations.

One of the objectives of the law was to gradually introduce and enforce the EU standards on the territory of Georgia (Article 3, Para 2).

The "Law on Air Protection" in its 1999 wording (Article 60, para 1"g") provided for the adoption, before 1 January 2000, by Presidential Decree "On planning and implementing the activities to harmonize environmental standards in Georgia with those of the European Union". This statutory act has never been developed in Georgia.

And, it was the Article providing for the adoption of such a statutory act that was removed from 2007 wording of the Law. Besides, a range of Articles, providing for harmonization of environmental standards in Georgia with those of the European Union had been removed. The official reason for the exception of these items from the law are hitherto unknown[98].

The Georgian legislation imposes limits for discharges into the air for different pollution sources. But in reality, air quality indicators in Georgia are the same as were in 1980-is and are not consistent with the EU Standards and World Health Organization. Today air quality indicators –the maximum permissible concentration of certain substances in the air is lower than in the EU countries[99].

The Kyoto Protocol

Georgia ratified UN Framework Convention on Climate Change(UNFCCC) on 29 October 1994 and has accessed to the Kyoto Protocol on 16 June 1999. Therefore, Georgia already fulfilled this EEC Treaty requirement in this respect. Following this Georgia has committed itself to the implementation of the relevant provisions and concrete policies and measures to reduce greenhouse gas emissions, especially in the energy and heavy industry sectors.

Georgia, as a Non-Annex I party to the UNFCCC can participate only in Clean Development Mechanism. The current Competent Authority (CA) designated for Climate Change is the Ministry of Environment

[96] http://www.oilnews.ge/

[97] www.gig.ge

[98] http://www.greenalt.org/webmill/data/file/publications/REPORT_GEO_FEB2012.pdf

[99] IBID

and Natural Resources. Georgia also implements its commitments towards Convention and prepares the National Communication reports[100].

The Climate Change is closely connected with air pollution control and integrated pollution control. Today Georgia has no legislation that would be in compliance with EU Climate Change law.

Integrated Pollution Prevention and Control directive (IPPC)

The purpose of the integrated approach towards pollution control is to achieve prevention or reduction of emissions in the air, water and land, including measures concerning waste management, in order to achieve a high level of protection of the environment.

The Law on Environmental Permit that Law adopted in 1996 and abolished in 2007 was based on the directive principles. Despite that the Law on Environmental Impact Permit (2007) reflects some provisions of Integrated Prevention and Control directive, in general its principles in general not applied in Georgian legislation[101].

The directive applies the Prevention and Polluter pays principle, while the permit is granted only in case if certain environmental requirements are observed and if the enterprises commit themselves to ensure the prevention and reduction of any type of pollution caused by them.

EU directive on Integrated Pollution Prevention and Control (IPPC), which is built on so called "integrated" approach and requires the use of the best available techniques as a condition for issuing pollution permit. Integrated approach means that air pollution should not decrease in one point at the expense of increasing pollution of air or other environmental components (water, soil) in other points. Best Available Techniques (BAT) means the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole. However, according to BAT approach, such techniques should be available on the market and their purchase should not result in an unjustified economic burden for an entrepreneur[102].

The competent authority shall grant a permit containing conditions guaranteeing that the installation complies with the requirements of this directive or, if it does not, shall refuse to grant the permit. The conditions of the permit shall contain the emission limits of pollutants; measures of protection of soil, water and air; emergency measures; measures to minimize long-distance or trans-boundary pollution; monitoring of emissions and other appropriate measures. The permit conditions shall be reviewed periodically and changed by the competent authority if necessary.

The public shall be informed about the permit issued, permit conditions and further changes to the permit conditions; as well as about the justification of decisions made and the results of public involvement. In case of the projects with trans-boundary effects, this information must be supplied to the neighboring countries. The member states shall also ensure that the interested parties are able to appeal against the decision on issuing a permit in court. The monitoring data defined by the permit conditions shall be available to the public.

The Georgian law on Environment Protection, in its General terms part mentiones the Integrated Control system of environment

The Law on Environmental Protection establishes general framework for environmental protection and useof natural resources and regulates legal relations between state institutions and physical and legal entities in this sphere. Article 4 (m) includes definition of "Integrated system for pollution control"- as a system for the regulation of the environmental pollution which is based on integrated (complex) control

[100] The second national communication report was adopted by UNFCCC secretariat in 2010, there is ongoing work for preparation of third national communication report.

[101] http://pdf.usaid.gov/pdf_docs/pnaea394.pdf

[102] http://www.greenalt.org/webmill/data/file/publications/REPORT_GEO_FEB2012.pdf

over the pollutionof water, land and atmospheric air - the components able to accumulate pollution. This definition differs from the similar definition in directive, as it does not clearly declare the main principle for integratedpollution control – cooperation between more than one competent authorities. Article 35 defines general requirements for the Environmental impact permit, and Article 36 includes general requirements for implementation of environmental impact assessment, which are in line with Articles 5 and 6 of the directive[103].

Case-Study 1.South East Balkan's and Energy Community

Energy is already one of the biggest segments in the economies of South East Europe (SEE). The governments of the countries employ wider plans for its further expansion, despite the fact that as in any transition countries the infrastructure should be upgraded and/or replaced. Managing energy investment is an existential challenge for the states of South East Europe in many ways. The ageing energy generation infrastructure needs to be decommissioned within the next decade and the challenge will be how to replace it. Investments in energy should operate in a context shaped by the region's gradual integration into the European Union.

The region for power production relies heavily on two sources of power, coal and hydropower. Some states, such as Albania, are over-reliant on hydroelectric power and are vulnerable to erratic and possibly declining precipitation due to climate change. Others like Kosovo have the dubious blessing (or the resource curse) of dirty and energy inefficient lignite coal, capable of devastating effects on air quality and health.

Both coal and hydropower have serious impacts on health, on biodiversity and eventually access to water resources. Both energy sources at times result in the resettlement of local populations. In Serbia alone the health and social costs of coal combustion are estimated at up to EUR 4.99 billion annually, while a World Bank study puts health costs in Kosovo due to air pollution - mainly from lignite combustion - at around EUR 100 million annually, with 835 early deaths per year. Climate change is starting to affect fluctuations in energy production from hydropower in the region, while agriculture-based communities downstream of new hydropower developments are affected by lower water levels.

The region overall is dependent on imported oil and natural gas - mostly for heating and transport needs - although gas infrastructure does not exist in Albania, Kosovo and Montenegro. The development of further gas infrastructure is promoted by the Energy Community among others, who sees it as a way to diversify the region's energy supply.

The Balkan Countries join the European Energy community since its establishment. According to the submissions of the Balkan countries to the EEC, they planned to attracted EUR 28.8 billion in energy investments from 2012 to 2020. It represents an increase in electricity generation capacity by approximately 64 percent from 2009.

However, till now despite the number of progressive steps taken by countries under the auspices of Energy Community, it's very difficult to assess the Balkan countries experience overall as success. The major challenge is to ensure the investments in the energy sector in accordance of rule of law, "that supports the business environment, providing legal certainty for economic operations and stimulating investments, jobs and growth". In terms of good governance and rule of law it encounters the struggle against high-level corruption, a "serious concern in many enlargement countries".

According to experts, Croatia is the only regional actor with a chance of handling large-scale investment properly based on its own lessons learned and rigorous process of EU accession. However, it also still far from the ideal; due to the poor planning and public participation schemes, the decision making processes is not give possibility to develop the best suited energy projects.

It should be stressed that while the lion's share of energy investments come from EU-based companies, it does not create an automatic safeguard against corruption per se.

[103] *Assessment of Compliance of the Georgian Laws and Legal Provisions with the Energy Community Treaty, USAID*

The cases of HEP TLM and INA-Mol corruption scandals has been quite painful exercise for Croatia. In 2012 court convicted then Prime Minister I.Sanader for taking bribes of 10 million EURO from Hungarian Oil company MOL, in exchange to give MOL dominant position in the Croatian Oil company.

Another corruption case again involves prime minister Sanader; Croation energy provider HEP agrees to provide the TLM factory in Croatia and Aluminiji Factory in Bosnia Hertsogovina, with electricity at below market price. The State Presecutor alleged the Prime Minister Sanader for taking up to 1.5 million EURO from former subsidiary of Daimler with links with Aluminiji, which promised favorable supply to TML This investigation and court case is still pending.

The problems with transparency, corruption, good governance and proper planning is also glowing in neighboring Serbia, that is officially acknowledged candidate country for EU membership. The corruption allegations around Serbia's state electricity company EPS have resulted in arrests, while perceived corruption in Kosovo and Montenegro's energy sectors has led to street protests. Experts claim, that „there is substantial "smoking gun" evidence of high-level corruption in the energy sector in Albania and Bosnia and Herzegovina as well, but the higher up the political ladder the media or public investigations aim, the less likely they are to end in prosecutions."

Another problem that hurts the Balkan countries progress is that their energy planning system does not based on up-to-date analysis of real needs available, rather based on overestimated energy demand growth predictions, without taking into account energy efficiency potential and demand side management.

According to estimations „The need for investment is mainly being interpreted by regional governments as a need for more of the same infrastructure that currently exists - coal and hydropower - with inadequate attention paid to putting energy savings and energy efficiency first. This is evident in the projects proposed in late 2012 by the Energy Community Contracting Parties as potential Projects of Energy Community Interest, in which the generation projects are composed almost entirely of coal and hydropower".

It should be also stressed that many projects been planned for decades. e.g. the Vardar hydropower cascade in Macedonia, having been planned since before 1932, when it was rejected as unacceptable.

Overall, despite the very positive steps undertaken by countries under auspices of EEC , including the setting the clear targets for renewables, more work is still to be done. E.g. itself the renewable targets proposed by countries could be considered as quite modest set from a beginning by Balkan countries. Therefore, the performance of some of the countries looks quite good, like in case of Croatia, that generates 168% of energy from renewable sources compared with its 20% target.

However, expert point that while „all of the Western Balkan countries have accepted binding RES targets under the Energy Community Treaty for 2020" „the speed of change however is slow." In general, „Up to 2020 countries are mainly planning to invest in the renewable energy technologies with which they have the most experience, in particular small and large hydro power." According to EU Commissioner for Climate Action Connie Hedegaard "support for energy efficiency and renewable sources is lagging" and questioning the fact „that European Development Institutions are spending 32 times more on fossil fuels than renewable energy sources not related to Hydropower".

According to the report „Invest in Haste, Repent in Leisure" „the Fossil fuels account for 36 percent of all IFI energy financing in the region, or EUR 597.3 million, with hydropower receiving EUR 310.1 and renewable sources just EUR 18.5 million, or 1 percent". In addition, study reveals that „Energy efficiency, which has a high potential to address energy poverty in the region and prevent new environmentally-impacting infrastructure, makes up only 17 percent of the IFIs' energy portfolio, or EUR 288.8 million".

The copying and pasting of the old schemes, investments in fossil fuels -mainly coal, raise high level concerns, especially taking into account, that Balkan countries express their agenda to become the part of EU. From that prespective, they should be committed also to an EU's decarbonisation agenda and long term climate goals. Not accounting the EU's mid-term 2020 and long-term 2030 and 2050 goals by the Balkan governments may become problematic during the EU integration.

E.g. In 2015 Serbia extended the industry's right to heavily pollute air, soil and water till the end of 2020,

instead of 2015, and decided to go ahead with a loan of about €600 million from China, for a new coal power plant unit called Kostolac B3. European Parliament takes very strong stand towards Balkan countries. The parliamentary resolution adopted in March 2015, stress that EU accession needs to go hand in hand with environmental improvements and climate action. MEPs called the countries to revise their plans in the energy sector and for Serbia to prevent state aid to coal. MEPs also request from EC Vice-President Šefčovič and Commissioner Arias Cañete, ensure the equal environmental standards for the Balkans so that the region does not become a dumping ground for dirty energy projects. The one of the best instrument for that is Energy Community Treaty, as it brings the Balkans and the EU in a joint legal framework dealing with energy and associated issues.

Case Study 2.European Energy Community and Ukraine

In September 2010 Ukraine acceded to the Treaty Establishing the Energy Community and undertook a number of commitments to reform its energy sector. This included pledges to align its energy sector with the EU internal energy market and the acquis communautaire related to energy. It was assumed that the adoption and full implementation of provisions within the Energy Community Treaty could provide Ukraine with a competitive, transparent and predictable market framework that would help attract investment and underpin efficiency improvements in the energy sector.

However, Ukraine's membership in the Energy Community was jeopardised in 2013. A number of politicians, including ousted president Viktor Yanukovych[104], expressed reservations about the Community even as Ukraine began implementing its commitments. Uncertainties regarding energy sector reform held the country back. Ukraine's energy sector faces unprecedented challenges, from a reliance on expensive fossil fuel imports to inefficient infrastructure and markets.

Situation in Ukraine's Energy Sector

Ukraine's electricity infrastructure is ageing and deteriorating: many power plants operate well beyond their technical lifetimes and at low efficiency levels, and while electricity is relatively cheap, it comes at a great environmental and health cost." The power plants in western Ukraine export electricity to EU member countries including Hungary, Slovakia and Romania that would not be allowed to host the plants.

Researchers[105] hope that "the current diplomatic crisis with Russia and the removal of politicians engaged in corrupting the sector may finally induce the political will to implement long-overdue reforms. Much of the country's electricity is wasted, with energy efficiency levels far below European standards".

However, taking into account situation in Ukrainian Energy Sector it should not be expected that fast-track reforms, as

- Ukraine generates electricity from nuclear power plants[106] and coal power plants[107], with a small share of hydropower;
- Ukraine faces a great challenge in phasing out these capacities;
- None of the coal-fired power plants in Ukraine have any SOx and NOx pollution control, while particulate matter emissions currently exceed those of the EU's Large Combustion Plants directive by up to 45 times, on average;
- The amount of energy spent in Ukraine to produce one dollar of gross domestic product (GDP) is three times than the EU-average, while carbon dioxide emissions per unit of GDP are the highest in Europe;
- Despite these losses, coal power plants are still able to sell electricity at very low prices due to the country's state aid regime.

[104] Yanukovych Mulls Ukraine's Exit from Energy Community, Ekonomichna Pravda, 27.11.2013. –http://www.epravda.com.ua/news/2013/11/27/405519,

[105] http://bankwatch.org/sites/default/files/dusting-off-Ukraine-energy.pdf

[106] most of which now operate beyond their designed lifetime and represent a threat for the entire continent

[107] http://www.energy-community.org/pls/portal/docs/1216180.PDF

In order to address the above challenges the sector needs coherent policies to ensure the environmental and social protection and not to expose people to health-threatening sources of energy, while attracting large and continued investments to ensure its modernization, sustainability, security, self-sufficiency and competitiveness.

Energy Efficiency in Ukraine

The one of the most problematic areas in energy sector is the ageing coal-fired power plants with insufficient maintenance and limited investment for many years. This hampers efficiency which is further challenged by the high ash content of Ukrainian coal.

While some investments and upgrades in recent years have improved some plant performance, much more is needed and efficiency improvements should be a priority. As Ukraine has one of the most energy-intensive economies in the industrialised world, energy efficiency represents the single best opportunity to improve energy security.

Although the Energy Community sets a very low target for energy efficiency (9 per cent by 2020) improved efficiency is essential for Ukraine's growth and development and for protecting its environment. Ukraine can improve its energy efficiency considerably through targeted policies.

Electricity trade

A portion of Ukraine's electricity system is synchronised with countries in Eastern Europe. The Burshtynskaya thermal power plant supplies electricity to local consumers and to neighbouring Slovakia, Hungary and Romania at a total connection capacity of about 500 MW, but the plant is not connected to the rest of Ukraine. Power stations at Dobrotvorskaya and Burshtynskaya – the only ones that can export electricity to the European grid – belong to Zahidenergo, in which DTEK has a majority stake.

As part of the Energy Community framework, a plan is in place for the whole of Ukraine to synchronise with the European Network of Transmission System Operators for Electricity (ENTSO-E) within the next seven years[108].

This is a positive development, since enlarging markets improves security of supply and can open up more business opportunities for Ukraine given its extra capacity.

Exporting electricity is an area in which revenues are significant. DTEK Power Trade has framework electricity supply contracts with European energy trading units EDF in France and CEZ in the Czech Republic, regulating the supplies of Ukrainian power to Hungary, Poland, Slovakia and Romania[109].

Problems with Implementation of European Energy Treaty by Ukraine

The government has committed to implement a number of EU directives, including the LCPD, which must be implemented by 2018, and the Industrial Emissions directive, with an implementation deadline for 2027, as per Ukraine's membership in the Energy Community Treaty. The eventual fulfilment of these directives will have a positive impact on pollution reduction, as the directives impose dramatic emission reductions on Ukraine's coal-fired power plants.

Under the original Energy Community Treaty provisions, Ukraine had to upgrade its plants by 2018 to comply with the EU's Large Combustion Plants directive (LCPD) or face closure.

October 2013 a decision[110] was taken to extend the deadline but tighten the requirements, so they will have to be in line with the Industrial Emissions directive (IED) by 2027. An Energy Community study shows that investments aimed at compliance with the IED will not cost much more than complying with the LCPD, thus Contracting Parties have every incentive to strive for IED compliance.

As part of the October 2013 decision mentioned above on compliance of existing plants with the IED by 2027, countries can develop National Emissions Reduction Plans (NERPs), a tool to allow thermal power

[108] http://bankwatch.org/sites/default/files/dusting-off-Ukraine-energy.pdf

[109] http://bankwatch.org/sites/default/files/dusting-off-Ukraine-energy.pdf

[110] http://bankwatch.org/sites/default/files/dusting-off-Ukraine-energy.pdf

plants to operate provided that every plant is in compliance with the IED. NERP allow countries a longer deadline than the original LCPD provisions in the Treaty, but the emissions limit values are stricter. NERP mean that instead of each plant following a certain trajectory of declining emissions, the average emissions from plants across the country must decline according to a pre-decided trajectory. Countries which do not want all of their plants to comply can average their emissions and decide which plant is easier and cheaper to retrofit, while the big polluters can delay action to limit their emissions. Another tool is the opt-out, by which plants not included in a NERP are allowed to run for a maximum of 20 000 hours after 2018. They can then either run full time for just under three years or be kept in cold reserve for longer, with a maximum deadline of 2023.

The only country to have drafted a NERP so far is Ukraine, which is asking to extend the deadline for compliance with the IED from 2027 to 2033, 40 000 hours for the opt-out instead of 20 000 and 2030 instead of 2023 for the deadline for opt-out plants to close completely.

In this way, Ukraine wants to continue business as usual in implementing the IED, without properly complying first with the LCPD. The Permanent High Level Group[111] proposed that the Ministerial Council support an extended deadline for Ukraine, so that the Commission could present a proposal for a formal decision and to adopt this via written procedure.

The experts stress that, while there is "difficult conditions in which Ukraine finds itself, creating a precedent whereby a regulatory framework sets different binding rules for its members is a slippery slope that would disturb the path towards a level playing field and result in electricity market distortion".

Health Impacts of Coal Sector

A recent report published by Health and Environment Alliance states[112] that the external costs to health for electricity produced from lignite and coal are higher than for any other energy source in Europe. One terawatt hour (TWh) of electricity produced from hard coal implies on average 24.5 air pollution-related deaths. In addition, 225 cases of serious respiratory, cardiovascular and cerebrovascular disease were part of the estimated health burden of electricity generation from hard coal, as well as 17,676 cases of minor illnesses. A large coal power plant[113] operating at full load throughout the year usually produces several terawatt hours of electricity and thus a multiple of these health impacts.

It was calculated that limiting emissions from air pollutants at large combustion plants as required under the Energy Community Treaty will require investments of nearly USD 10-12 billion, while provide an opportunity to reduce harmful air pollution, associated health impacts and costs and improve plant efficiency.

While electricity is relatively cheap in Ukraine, it comes at a great cost to the environment and people's health. Statistics from Dobrotvir and Burshtyn are quite worrying. In 2013, Ukraine exported some 4,300 GWh of electricity, equivalent to a 500 MW net capacity power plan exporting power 24 hours per day for an entire year. Assuming that this 500 MW power plant was new and would meet EU emission standards, it would result in 17 premature deaths (cases of serious respiratory, cardiovascular, and cerebrovascular disease associated to exposure to coal power plant emissions)[114]. However the number of deaths for a 40 year-old power plant in Ukraine with hardly any pollution control is difficult to estimate and likely to be much higher.

[111] http://bankwatch.org/sites/default/files/dusting-off-Ukraine-energy.pdf

[112] http://www.envhealth.org/IMG/pdf/heal_report_the_unpaid_health_bill_how_coal_power_plants_make_us_sick_final.pdf, pg. 23

[113] Assuming an electric power of 1000 Megawatt (1 Gigawatt) and 7500 full load hours of 8760 potential hours during one year the plant will feed 7.5 Terawatt hours into the grid.

[114] http://bankwatch.org/sites/default/files/dusting-off-Ukraine-energy.pdf

Resources

Ukraine has abundant coal reserves, which account for more than 90 per cent of the country's fossil fuel reserves. Although the capacity of the coal and power sectors is well in excess of domestic demand, Ukraine is a net energy importer. The cost of gas imports from Russia has risen substantially in recent years. Gas accounts for almost 40 % of Ukraine's energy usage[115]. Most of Ukraine's coal is located in the conflict stricken regions of Donetsk, Luhansk and Dnipropetrovsk in the Donetsk coal basin, which continues into Russia. There are two other basins, the Lviv-Volyn basin in western Ukraine, which continues into Poland, and the Dnieper coal basin, a lignite basin in central Ukraine. Ukrainian coal is high in ash and sulphur. This limits its export options. Poor coal quality also constrains the efficiency of coal-fired power plant operations and increases emissions.

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