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Natural Gas Transmission Grid Code Project

Technical Workshop: Gas Market Design and Natural Gas Transmission Grid Codes

Sponsored by the U.S. Agency for International Development (USAID)

Hosted by the Energy Community Secretariat

Organized by the National Association of Regulatory Utility Commissioners (NARUC)

November 28-30, 2018

Vienna, Austria – Am Hof 4 level 6

Venue: Energy Community Secretariat

Framework and Issues:

The USAID-supported workshop, hosted by the Energy Community Secretariat and organized by NARUC, will explore regulators' roles in facilitating gas infrastructure development, network integration, and cross-border trade. The three-day activity will feature presentations and case studies covering two technical areas where regulators play critical roles: review and approval of network development plans and Transmission Grid Code development.

At this workshop, participants will review the final *Regulatory Guide to Conducting Economic Appraisals of Gas Infrastructure Expansion and Network Plans*, which was developed by NARUC's project advisers with input from the participating regulators. The participants will also review and discuss national-level methodologies for gas investment appraisals drafted by several of the commissions. These national-level investment appraisal methodologies are important first steps towards effective review and monitoring of TYNDPs and gas infrastructure projects, including those that have a regional and cross-border impact.

Regarding Grid Codes, the participating regulators will share recent developments within their respective national Grid Codes. The workshop will serve as a forum where practices and regulatory developments from neighboring countries can be shared and leveraged with the common goal of harmonizing the gas transmission Grid Codes across the region.

Participant List

U.S. Agency for International Development

Ms. Jamila Amodeo, Senior Energy Advisor, Bureau for Europe and Eurasia

Energy Community Secretariat

Ms. Nina Grall-Edler, Head of ECRB Section

Mr Predrag Grujicic, Head of Gas Unit

Ms. Branislava Marsenic-Maksimovic, ECRB Natural Gas Expert

Mr. Nenad Sijakovic, Infrastructure Expert

Mr. Adam Balogh, Infrastructure Expert

NARUC

Ms. Jennifer Ifeanyi-Okoro, Technical Advisor, NARUC

Mr. Paul Sinton Stack, Program Manager, NARUC

Ms. Emiliya Bagirova, Program Officer, NARUC

Expert Speakers

Mr. Andreas Thanos, Policy Specialist at the Gas Division, Massachusetts Department of Public Utilities

Mr. Kent Huzzey, Energy Regulatory Analyst, Centeva L.L.C.

Mr. Alessandro Ischia, Senior Gas Expert, E-Control

Regulatory Participants

Albanian Energy Regulator (ERE)

Mr. Maksim Shuli, Commissioner

Mr. Agim Nashi, Board Advisor

Public Services Regulatory Commission of the Republic of Armenia (PSRC)

Ms. Mariam Momjyan, Chief Specialist of the Tariff Policy Department

State Electricity Regulatory Commission (SERC)

Mr. Milenko Tomić, Head of Licensing Department

Regulatory Commission for Electricity in the Federation of Bosnia and Herzegovina (FERK)

Mr. Mile Srdanovic, Commissioner

Ms. Jasenka Vuk, Energy Market Analyst

Regulatory Commission for Energy of the Republic of Srpska (RERS)

Mr. Mihajlo Travar, Commissioner

Georgian National Energy and Water Regulatory Commission (GNERC)

Mr. Irakli Galdava, Head of Natural Gas Department

Energy Regulatory Office of Kosovo (ERO)

Ms. Drita Desku, Analyst of Thermal Energy and Natural Gas Department

Energy Regulatory Commission of the Republic of Macedonia (ERC)

Mr. Dalibor Mitrovski, Advisor of Natural Gas Department

National Agency for Energy Regulation (ANRE)

Mr. Aurel Patrascu, Head of Natural Gas, Investments and Quality Department

Mr. Denis Vasiliev, Senior Consultant, Regulatory Department

Energy Agency of the Republic of Serbia (AERS)

Ms. Branka Tubin-Mitrovic, Senior Natural Gas Expert

National Energy and Utilities Regulatory Commission (NEURC)

Mr. Andriy Kozhevnykov, Deputy Head of Tariff, Investment Policy and Payment Relations
Division, Regulation of Relations in the Oil and Gas Sectors Department

Project Advisers

Mr. Evangelos Penglis, VIS Consultants

Dr. Fotis Thomaidis, VIS Consultants

Mr. Sergio Ascari, VIS Consultants

DAY ONE, November 28, 2018

THEMATIC FOCUS: Transmission Grid Codes

08:45 Registration

09:00 Welcoming Remarks

Jamila Amodeo, Senior Energy Advisor, Bureau for Europe and Eurasia, USAID
Nina Grall-Edler, Head of ECRB Section, Energy Community Secretariat
Jennifer Ifeanyi-Okoro, Technical Advisor, NARUC

09:30 Giving Shape to Grid Codes – Initial Stages and Evolution – Public Services Regulatory Commission of the Republic of Armenia and Energy Regulatory Office

Facilitator: Fotis Thomaidis, VIS Consultants

Presenters: Mariam Momjyan, Public Services Regulatory Commission of the Republic of Armenia (PSRC)

Drita Desku, Energy Regulatory Office (ERO)

Predrag Grujicic, Energy Community Secretariat

Through presentations from the PSRC and ERO representatives, this session will focus on the initial steps to develop Gas Transmission Grid Codes, including the rationale of a Grid Code, its key contents, and the role of the regulator. Irrespective of the many differences in gas sectors across the region, Grid Codes serve as a fundamental building block whose evolution must both reflect current conditions, while also serving as a driver of gas market development. The Energy Community Secretariat will then give an overview of the gas Grid Code development status in the Energy Community as well as the role of the Energy Community Secretariat in this context.

10:30 Coffee Break

10:50 TSO Obligations and Technical Operating Quality – Albanian Energy Regulator and Energy Agency of the Republic of Serbia

Facilitator: Fotis Thomaidis, VIS Consultants

Presenters: Commissioner Shuli and Mr. Nashi, Albanian Energy Regulator (ERE)

Branka Tubin-Mitrovic, Energy Agency of the Republic of Serbia (AERS)

This session will focus on the key aspects of technical operational quality and its relevance to Transmission Grid Codes. Commissioner Shuli of ERE will discuss his commission's work with Albgaz on handling gas quality specifications and monitoring, as well as on managing planned and unplanned gas interruptions, in the development of their Grid Code. Following this presentation, Ms. Tubin-Mitrovic of AERS will present the compliance review of the gas quality standards for the Interoperability Network Code developed by the Energy Community Regulatory Board.

11:20 Capacity Allocation Mechanism – Energy Regulatory Commission of the Republic of Macedonia

Facilitator: Fotis Thomaidis, VIS Consultants

Presenter: Dalibor Mitrovski, Energy Regulatory Commission of the Republic of Macedonia (ERC)

For this session, ERC will present its newly drafted capacity allocation mechanism procedure (CAM), providing context to its development and explanations for how it expects CAM to evolve over time, as well as implications for capacity allocation at interconnections.

12:10 Lunch

13:00 Capacity Allocation and Balancing – Obligations Stemming from EU and Energy Community Acquis

Presenters: Nina Grall-Edler and Branislava Marsenic, Energy Community Secretariat

Following the specific case study presented by the ERC, representatives from the Energy Community Secretariat will provide a presentation on the obligations per capacity allocation, as well as balancing, setting the context for the afternoon case studies and discussion.

13:20 Daily Balancing Regime – Energy Agency of the Republic of Serbia

Facilitator: Fotis Thomaidis, VIS Consultants

Presenter: Branka Tubin-Mitrovic, Energy Agency of the Republic of Serbia (AERS)

The representative from AERS will present on best practices of TSOs for applying key options and alternatives foreseen in the EC Network Code on Balancing. Additionally, AERS will provide an overview of key topics of the EC Network Code for Balancing and considerations for their application in Serbia.

13:50 Development and Evolution of a Balancing Regime

Presenter: Alessandro Ischia, E-Control

This presentation will discuss the principles and development of the balancing regime in Austria and key lessons learned from the application of the EC Network Code on Balancing that are applicable to the participating regulators.

14:40 Coffee Break

15:00 Transparency Provisions – Georgian National Energy and Water Regulatory Commission and National Agency for Energy Regulation

Facilitator: Fotis Thomaidis, VIS Consultants

*Presenters: Irakli Galdava, Georgian National Energy and Water Regulatory Commission (GNERC)
Denis Vasiliev, National Agency for Energy Regulation (ANRE)*

This session will focus on the application of regulatory requirements for transparency, featuring presentations from Georgian and Moldovan regulators on how transparency requirements have been introduced in their respective regulatory regimes and how they will be applied by the TSOs. GNERC will also describe their experience developing supporting documentation for the newly established Transmission Grid Code. The session will conclude with discussions on the most recent transparency compliance monitoring results of the Energy Community Regulatory Board.

15:45 Gas Transmission Tariffs – Obligations Stemming from EU and Energy Community Acquis

Presenter: Nina Grall-Edler and Branislava Marsenic, Energy Community Secretariat

To set the context for discussions on gas transmission tariffs, representatives from the Energy Community Secretariat will provide a presentation on the various obligations stemming from the European Union and Energy Community acquis.

16:00 Gas Transmission Tariffs: From Commodity-Based to Capacity-Based Models – Energy Regulatory Commission of the Republic of Macedonia

Facilitator: Fotis Thomaidis, VIS Consultants

Presenter: Dalibor Mitrovski, Energy Regulatory Commission of the Republic of Macedonia

ERC will present their experience on developing a new tariff methodology transitioning from a postage-stamp model to an entry-exit commodity and capacity based model on gas transmission tariffs.

16:30 Development of Entry-Exit Tariffs

Presenter: Alessandro Ischia, E-Control

This presentation will discuss the experience and lessons learned from the application of entry-exit tariffs in Austria.

17:20 Wrap-up and Key Takeaways from the Day

Moderator: Jennifer Ifeanyi-Okoro, NARUC

17:30 Adjourn

DAY TWO, November 29, 2018

THEMATIC FOCUS: Transmission Grid Codes and Investment Planning

09:00 Review of Day One Discussion and Overview of Day Two Agenda

Moderator: Jennifer Ifeanyi-Okoro, NARUC

09:05 Coordination and Exchange of Information between TSOs and DSOs

Presenter: Fotis Thomaidis, VIS Consultants

In this presentation, Dr. Thomaidis will discuss the requirements for coordination and information exchange between the TSO and DSOs, focusing on balancing activities. Examples from practices of EU TSOs will be presented.

09:50 US Case Studies – Coordination and Exchange between Transmission and Distribution Companies

*Presenters: Andreas Thanos, MA Department of Public Utilities
Kent Huzzey, Centeva LLC*

US regulators will provide their perspective on coordinating information exchange between transmission and distribution utilities.

11:00 Coffee Break

11:20 Final Gas TYNDP Appraisal Guide and Development of National-Level Appraisal Methodologies

Presenter: Evangelos Penglis, VIS Consultants

Mr. Penglis will outline the changes to the finalized *Regulatory Guide to Conducting Economic Appraisals of Gas Infrastructure Expansion and Network Plans*, which was developed over the course of the project. During his presentation, Mr. Penglis will also outline the current findings from the remote technical assistance to selected regulators for development of their national methodologies.

12:20 Lunch

13:20 Development of Draft Rule for Investment Appraisal in the Energy Sector – Georgia

Presenter: Irakli Galdava, Georgian National Energy and Water Regulatory Commission (GNERC)

GNERC will present the rule it has drafted for investment appraisal in the energy sector and discuss plans to operationalize the rule.

14:00 Applying National Level Methodologies for Appraisal of Investment Plans to Practice: Team Interactive Exercise with Regulators

Facilitator: VIS Consultants

In this session, the regulators will participate in interactive exercises, involving infrastructure project case studies in all project categories, focusing on the identification and monetization of project impacts. This session will provide an opportunity for the regulators to between the approaches followed, as well as to apply methodologies in practice.

14:50 Coffee Break

15:10 Applying National Level Methodologies for Appraisal of Investment Plans to Practice: Team Interactive Exercise with Regulators (cont'd)

Facilitator: VIS Consultants

16:25 Wrap up and Key Take Away from the Day

Moderator: Jennifer Ifeanyi-Okoro, NARUC

16:45 Adjourn

18:30 Group Dinner

DAY THREE, November 30, 2018

THEMATIC FOCUS: Investment Planning Review and Approval

09:00 Review of Day Two Discussions on Investment Planning

Moderator: Evangelos Penglis, VIS Consultants

09:05 Regional Infrastructure Development Coordination

Presenter: Adam Balogh and Nenad Sijakovic, Energy Community Secretariat

This presentation will focus on the instruments in place at the Energy Community for coordination of regional infrastructure development, such as the Projects of Energy Community Interest and Projects of Mutual Interest. The presentation will also briefly introduce the European Ten Year Network Development Plans.

10:05 US Case Studies on Utility Investment Planning – Part I

Presenter: Kent Huzzey, Centeva LLC

11:05 Coffee Break

11:25 US Case Studies on Utility Investment Planning – Part II

Presenter: Andreas Thanos, MA Department of Public Utilities

12:25 Lunch Break

13:25 Approach to Cross-Border Cost Allocation

Presenter: Sergio Ascari, VIS Consultants

Mr. Ascari will present the process and submission requirements by promoters of PCI projects so as to enable allocation of PCI costs across borders and identify good practices for NRAs in treating relevant requests.

14:20 Facilitated Discussion on Investment Review and Appraisals

Facilitated: VIS Consultants

This discussion will focus on next steps for investment review and appraisal for the participating regulators.

15:00 Wrap-up and Key Takeaways from the Day and Next Steps for the Project

Session Facilitator: Ms. Jamila Amodeo, USAID

The wrap-up session will address the key takeaways from the day's presentations and discussions.

15:30 Adjourn

Biographies:

Andreas D. Thanos, Policy Specialist, Gas Division, Massachusetts Department of Public Utilities

Andreas Thanos has been, in various capacities with the Gas Division of the Massachusetts Department of Public Utilities since 1993. In addition to his regular gas division-related duties that include the review of market competitiveness, gas distribution company forecast and supply plans, commodity and capacity purchase agreements, he is also working on local and regional cybersecurity matters, cooperating with utilities, counterparts and commissioners at the state and regional level. At the national level, he is the Chair of the National Association of Regulatory Utility Commissioners' ("NARUC") Staff Subcommittee on Gas. He was the key staff person on NARUC's LNG Working Group -- a NARUC-US DOE partnership established to educate commissions about LNG. He is a member of the Advisory Council to the North American Energy Standards Board.

Andreas Thanos has participated in several international, USAID-funded NARUC projects on topics varying from communications and cybersecurity to natural gas interstate and local transportation and planning. Andreas frequently participates as a panelist or moderator in panels discussing utility regulation, the natural gas market and LNG. Finally, in his spare time, he produces a monthly summary of LNG news. Andreas Thanos has previously served on the Board of the Boston Fuel Consortium (currently Green Energy Consumers Alliance) and was an adjunct professor at the University of MA/Boston. Andreas holds an MBA from the University of Massachusetts in Boston, and a Master's in Energy Economics from Boston University.

Kent E. Huzzey, Energy Regulatory Analyst, Centeva L.L.C.

Mr. Huzzey is a second generation natural gas industry professional. He has worked the gas molecule from the reservoir in the ground to the commercial/residential end user over the course of a thirty-eight year career. He is retired U.S. Naval Reserve Officer.

Evangelos Penglis, Partner at VIS Economic & Energy Consultants S.A.

Evangelos Penglis is an Economist with postgraduate studies in Management from the London Business School. He has over 28 years of experience in energy and infrastructure sectors consulting. He started his career with Deloitte in London, subsequently joining Kantor Management Consultants where he held senior management positions, rising to Head of the Energy and Infrastructure division. He has also served as Advisor to the Minister of Economy and Finance of Greece.

Evangelos has directed, managed, and implemented over 80 consulting and technical assistance projects, mainly in the energy sector, on behalf of EC, World Bank, EBRD, energy utilities, Governments and regulators. He specializes in energy policy and market reform, strategy and business planning for utilities, pricing and regulation, restructuring and reorganization of energy and transport companies, privatization and PPP structuring, energy and infrastructure project appraisals, and feasibility studies.

He has participated as a Team Leader and senior expert in the implementation of many key donor and IFI funded advisory projects worldwide, and has also project managed several key, large and complex projects internationally.

Some of the projects he has been involved include Energy Policy development and implementation in Ukraine, Armenia and Georgia, formulation of Energy Pricing, Electricity and Gas Tariffs in Greece, Egypt, Ukraine, Uzbekistan, Georgia and Myanmar, and drafting of Gas distribution codes in Greece. He participated in the implementation of many feasibility studies and cost benefit analyses for major oil, gas and electricity infrastructures in Ukraine, Armenia, Georgia and Central Asia. He has provided capacity building and advisory services to energy regulators in Greece, Cyprus, Romania, Egypt, Ukraine and Montenegro. He has led the structuring and implementation of key PPP projects in the Greek gas distribution sector. He has participated in the restructuring/unbundling of gas companies in Greece, and in the privatizations of water, gas and electricity companies in the UK and Greece.

Fotis Thomaidis, Partner at VIS Economic & Energy Consultants S.A.

Fotis is a Chemical Engineer and holds a PhD in energy policy as applied particularly in the natural gas sector. He has over 13 years of work experience in the energy sector. Prior to VIS, he held positions of Senior Consultant in the Energy & Infrastructure Division of Kantor Management Consultants, and a Research Fellow at the Energy Policy and Development Centre of the University of Athens.

His core expertise encompasses project management, natural gas and electricity market analysis, investment appraisals, pricing & regulation, strategy, business planning and restructuring for energy utilities, energy modelling and development of energy policy tools. Fotis has worked as manager and expert in more than 30 energy consulting projects, in the EU, Western Balkans and the FSU countries, for private and public utilities, Ministries, the EC, ACER and BSEC.

Indicatively, Mr. Thomaidis has worked in analysis and development of gas regulatory frameworks, including inter alia EU-wide analysis of the tariffs of gas TSOs, improvement of gas distribution tariff methodology practices, drafting of network codes and tariff methodologies for gas distribution and transmission. He has advised international energy utilities in the identification and assessment of business opportunities, formulation of market entry strategies, unbundling of supply and distribution activities. Recently he cooperated with NARUC for the development of a detailed outline of the gas transmission grid code in Georgia.

Sergio Ascari, Partner at VIS Economic & Energy Consultants S.A.

Mr. Sergio is a Gas Advisor, Research Associate and Instructor of the Florence School of Regulation, in charge of gas training activities (since 2006), taking part in the development of the Gas Target Model for the European Union integrated gas market (2011). As independent Consultant, he works mainly in the analysis and modelling of the European energy market and regulation as well as in training and market analysis and design worldwide.