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**HYDRO POWER AND ENERGY  
PLANNING PROJECT (HPEP)**

# **ELECTRICITY MARKET TRAINING COURSE**

May 14 – June 19, 2014

June 25, 2014

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# **ELECTRICITY MARKET TRAINING COURSE REPORT**

**MAY 14 – JUNE 19, 2014**

USAID HYDRO POWER AND ENERGY PLANNING PROJECT  
(HPEP)

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## LIST OF ACRONYMS

Acronyms	Definitions
<b>GOG</b>	Government of Georgia
<b>DAP</b>	Day Ahead Planning
<b>ETM</b>	Electricity Trading Mechanism
<b>EU</b>	European Union
<b>GEDF</b>	Georgian Energy Development Fund
<b>GEMM</b>	Georgian Electricity Market Model
<b>GNERC</b>	Georgian National Energy and Water Supply Regulatory Commission
<b>GSE</b>	Georgian State Electrosystem
<b>HPEP</b>	Hydro Power and Energy Planning Project
<b>HPP</b>	Hydro Power Plant
<b>MAP</b>	Monthly Ahead Planning
<b>MoE</b>	Ministry of Energy
<b>MO</b>	Market Operator
<b>TSO</b>	Transmission System Operator
<b>USAID</b>	United States Agency for International Development
<b>WEG</b>	World Experience for Georgia

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## **ELECTRICITY MARKET TRAINING COURSE BACKGROUND AND OBJECTIVES**

USAID HPEP, which was designed to support the Government of Georgia (GOG) in adopting and implementing the Georgia Electricity Market Model of 2015 (GEMM 2015) and to facilitate establishment of a competitive market by means of introducing electricity trading mechanism (ETM) in Georgia, carried out numerous capacity building activities targeted at increasing awareness and capability of Georgian energy sector stakeholders and market players about competitive market models and mechanisms necessary for proper operation of the electricity market to meet the requirements for Georgia to join the EU Energy Community. In light of this, USAID HPEP organized Market Participants Working Group Meeting on March 19, 2014 which aroused active interest of Georgian market participants in electricity trading issues and as a follow up to this meeting, HPEP offered to provide a full Electricity Market Training Course for electricity generators, off-takers, traders, developers, and other market players.

The main topics of Electricity Market Training Course were technical issues related to competitive electricity trading, current developments towards the new market model, and the best practices and lessons learned from other European countries including Turkey.

The Training Course was organized twice a week (Wednesday and Thursday) starting from May 14 through June 19 of 2014. 12 sessions were conducted in HPEP's Office in Tiflis Business Center.

### **Attendees**

Representatives from various market participants, such as Energo-Pro Georgia, Georgian Energy Development Fund, Schulze Global Investments, KGenergy, and Hydrolea attended the training sessions. Participants who attended the full course were awarded USAID Certificates in Electricity Market Training Course.

List of Course Participants is attached as Appendix 3.

### **Themes**

Most of the sessions were conducted by HPEP Chief of Party, Jake Delphia, as well as other Project specialists – Giorgi Chikovani, Elene Ghubianuri, Zviad Gachechiladze, Sopio Khujadze, Nick Sumbadze, John Levett, and Valeriy Vlatchkov.

Trainings were provided in technical issues related to hydropower development and competitive electricity trading, such as risks and risk management for new hydropower plants; advantages of non-recourse financing opportunities over feed in tariff systems; market designs and market structures; power market opening; electricity trading rules and regulations; template power contracts; electricity balancing and market operation; creditworthiness and clearing; daily planning, scheduling; interconnection capacity allocation, congestion and auctions; and other issues essential for developing competitive electricity market in Georgia in compliance with EU requirements.

Training Course Curriculum is attached to the Report as Appendix 2.

## RESULTS AND NEXT STEPS

### Participants Feedback

Training participants highly appreciated the market training course, by admitting its usefulness for their professional activities, and expressed the desire to have additional trainings in the future electricity model of Georgia which is pending to be approved by the Georgian energy stakeholders (MoE, GSE, MO).

*“First of all I want to thank Deloitte for giving such a good seminar to market participant, which was definitely very needful and useful for me and not only for me.*

*I liked all the presentations, but want to mention one of my favorites, about: ancillary services, grid code, clearing mechanism, capacity markets.*

*I would love to have more information and some training in the future model of Georgia’s balancing market and day-ahead market, also in implementation of Balancing Group Model.”* – Said one of the course participants, Ms. Nino Maghradze, Commercial Manager of “KGenenergy”.

HPP investors and developers (e.g. Schulze Global Investments) found the topics delivered by HPEP so interesting and instrumental for them that asked to provide detailed trainings in electricity trading issues, such as:

- Regulations around TDA, access priorities to the transmission line
- Access to Turkish electricity off-takers
- Downside protection, ways and scope of possibilities to negotiate local sales to MO or other off-takers
- Competitive prices on cross border trade. How to compete with Enguri and other cheap energy for export
- DAM and obstacles for its formation in Georgia
- Balancing Hourly market - how it works
- Market coupling with Turkey - Risks/Challenges and possible outcomes associated with it and its connection with electricity market opening
- EU Energy acquis 3rd Package - what is the obligation for Georgia to meet in 2018?

### Next Steps

As promised to the training participants, USAID HPEP will provide a roundtable discussion at USAID HPEP’s office in July 2014. This will allow participants to ask follow-up questions on training and material provided to them during the training period. In addition, a workshop by USAID HPEP will take place at the Annual Cross Border Electricity Trading Conference (July 11) focused on market participant training.

Below are the photos of Market Operations Working Group Meeting:







## APPENDIX 1

### USAID HPEP Electricity Market Training Course

	Training Title	Training description	Trainer	Date
1.	Risks and Risk Management	Each new power project faces many risks – construction, operations, business, political, etc. These risks will be examined for new HPPs and commonly applied risk mitigation measures will be examined.	Jake Delphia	14.05.14
2.	Feed-in Tariff versus competitive market – non-recourse financing opportunities	The issue of replacing feed-in tariffs with a selling energy into a fully competitive power market will be examined.	Jake Delphia	15.05.14
3.	Market designs and market structures	Power market designs exist in different forms, even in Europe. The Georgia market will be examine today and as it is proposed under GEMM 2015. The creation and implementation of a TSO and a MO will be examined.	Sopio Khujadze	21.05.14
4.	Electricity Supply Agreement (Bi-lateral contracting)	Most electricity is sold through bi-lateral agreements. The form of the bi-lateral agreement will be discussed including the draft ESA developed by USAID HPEP.	Elene Ghubianuri	22.05.14
5.	Power Market Opening	EU Directive 2009/72/EC provides specific directions on electricity market opening. The aspects of unbundling, identical generation and customer load annual openings, network pricing, SOLR rules, customer load shapes and other key areas of market opening will be discussed.	Jake Delphia	28.05.14
6.	Grid Codes	GNERC will adopt both transmission and distribution grid codes in the near future. It is imperative that HPPs understand and follow the rules with the grid codes.	Zviad Gachechiladze	29.05.14
7.	Balancing Market Structure and Operation	The daily trading process will be discussed from the point of view of the TSO, MO and the Market Players. Turkey's daily process and the coordination with Georgia will also be discussed.	John Levett	04.06.14
8.	Creditworthiness and Clearing	Every competitive market must be protected from buyers or sellers that default on their promised deliveries of energy or payments for receipts of	Jake Delphia	05.06.14

		energy. The concepts of clearing and a clearing mechanism will be examined.		
9.	Daily planning, nominations, scheduling, operations, metering and settlement process	Very detailed rules are needed for ensuring proper functioning of the competitive electricity markets. Two very important rules are balancing rules and settlement rules. Key aspects of the draft rules prepared by the MO WG will be summarized.	Niko Sumbadze	11.06.14
10.	Interconnection Capacity Allocation, Congestion and Auctions	GSE continues to develop the rules surrounding interconnection capacity to turkey.	Giorgi Chikovani	12.06.14
11.	Introduction of balancing market and international practice in implementation of Balancing Group Model.	Presentation contains explanation of Balancing Market and Balancing Group concept. The legal and regulatory requirements for introducing the Balancing Group Model to the electricity market. Types of balancing groups and technical requirements and organization of the management of Balancing Groups. International experience in implementation of Balancing Group Model in Austria, Bulgaria, Czech Republic, Germany, Hungary, Romania, Slovenia, Switzerland and Energy Community.	Valeriy Vlatchkov	18.06.14
11.	EU directive		Elene Ghubianuri	19.06.14

## **APPENDIX 2**

### **List of Participants**

1. Mikheil Nibladze - Schulze Global Investments LTD (HPP developer)
2. Iliia Razmadze - Schulze Global Investments LTD
3. Tengis Mikadze - Schulze Global Investments LTD
4. Nino Maghradze - KGenenergy LTD (HPP developer)
5. Vakhtang Ghongadze – KGenenergy LTD
6. Radoslav Dudolenski – Hydrolea LTD
7. Lela Natroshvili – EnergoPro (Electricity Distribution Company)
8. Grigol Bechvaia - EnergoPro
9. Avtandil Kobakhidze - EnergoPro
10. Giorgi Mukhigulishvili – WEG (NGO)
11. Roy Heijnschjk – GEDF (energy Development Fund)

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