

Georgian National Energy and Water Supply Regulatory Commission

# Regulation of Power Distribution and its Outcomes in Georgia

N. Beridze, M. Berishvili

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# **Transformation of Electric Energy market in Georgia**



# Recent History of Power Distribution Activities in Georgia

- JSC Telasi has been privatised. 4 distribution utilities were operating at retail power market;
- Preparation of other distribution utilities for privatisation has been started;
- The distribution licenses of about 30 small distribution utilities has been abolished;
- In 2006 the Law of Georgia on Electric Energy and Natural Gas has been amended the requirements on distribution activities have been specified;
- The licensing requirements for distribution companies have been specified (minimum two power receiving points and minimum volumes of distributed power, as well as minimum requirements on service quality);
- Achara Energy Company, United Energy Distribution Company and Kakheti Energy Distribution have been privatised;
- Currently, three distribution companies are operating at the market.



# Laws and Regulations in Power Distribution Sector

- Law of Georgia on Electric Energy and Natural Gas
- Law of Georgia on Licenses and Permits
- Licensing Rules
- Electric Energy (Capacity) Market Rules
- Electric Energy (Capacity) Supply and Consumption Rules
- Rules of Activity-Service in Electric Energy Sector, etc.

# Main Definitions With Regard to Power Distribution Activities (1)

- Distribution license issued by GNERC allows individual entrepreneur or legal person buying, transiting, distributing and selling power.
- "Distribution Grid" means for distribution of electric energy (capacity), that connects supply points and customers. The distribution grid includes 0.4-6-10-35-110 kV grids.

# Main Definitions With Regard to Power Distribution Activities (2)

- **Power Distribution Activities** receiving electric energy (capacity) from two or more independent supply points (from two or more substations owned by transmission licensee and energy generator), operating distribution network and selling (distributing) the received energy to retail buyers; also transiting electric energy.
- **Transiting** except for transmission activity, transiting the energy owned by the other through the grid owned by distribution or generation licensee, small power plant or direct user to the electric grid owned by some other predetermined person.

# **Rights and Obligation of Distribution Utility (Main** License Conditions) (1)

# Based on the License conditions, the distribution licensee, within the validity term of the license, is obliged to:

- provide uninterruptible electric energy (capacity) supply to the customers within the scope of the license, in case of due payment;
- in the special periods, observe the allocated power limits and set regimes, provide priority supply to the most important sites, in case of due payment;
- timely and fully pay for the electric energy and services received in the network.

## **Rights and Obligation of Distribution Utility (Main** License Conditions) (2)

- ensure access of the small power plants to the network and, accordingly, ensure conclusion of the respective transit agreements upon the request, as well as ensure execution of the agreements made between small capacity power plants and customers in compliance with the conditions set out in legislation;
- develop and present to the Commission and to the broader public the investment program;
- ensure due public access to the respective documentation and information in his office.

#### **Comparative Analyses of Best Practices of "Utility Services" (1)**

# The modern best practices in the field of power distribution include following components:

- Splitting power distribution and supply activities;
- Free access of the third parties to the grid;
- Ensuring right of the customers to change the supplier by their own discretion and introducing such rights at legislative and practical levels – opening electric energy market;
- Managing loads on the demand side involving customers in energy saving activities and introduction of the respective financial incentives;
- Introducing smarty grids and smart networks and bilateral interactive exchange of the information between the customers, on the one hand, and distributors and suppliers, on the other;
- Allowing access to the energy sale-purchase business for the customers, allowing access of the customer-owned generation source to the distribution grid and incentive-based payment system;
- Ensuring uninterruptible power supply and introducing high commercial service standards; taking them into consideration in financial relations between customers and distribution companies.

#### **Comparative Analyses of Best Practices of "Utility Services"(2)**

# The mentioned innovations of distribution activities are permanently reviewed and they were reflected in the regulations and rules existing in Georgia:

- Distribution and supply activities were not separated so far, with the exception that the customer can buy power directly from small capacity (up to 13 MWt) power plant;
- Free access of the third parties to the network is guaranteed by the legislation. The power "transit" is defined, and distribution licensee is obliged to transit electric energy owned by other person through its network; besides, all the owners of networks shall tolerate use of their networks by the third parties, of course with the due compensation;
- Opening electric energy market or, in the other words, ultimate right of the consumer to purchase electric energy directly from any supplier of their choice will be fully implemented by 2017. currently, such right is granted to the final customers that consume annually not less then 7 million kWtH of power;
- There is no energy efficiency stimulating stepwise rate system, which at the same time would take into consideration needs of socially vulnerable population.

#### **Comparative Analyses of Best Practices of "Utility Services"(3)**

- The most important task of distribution licensees is fully arranging the metering system. In working area of JSC Telasi, individual metering is already completed; as for JSC Energo-Pro Georgia and JSC Kakhetis Energodistributsia, individual metering is done for about 60% of the customers. Total metering will be accomplished in the first half of 2013. as for the automated system of commercial metering, this process has already commenced and in the nearest future, distribution companies will implement it for 6-10 kV lines;
- If the customer owns power generation facility with capacity of up to 100 kWt, he has right to supply and the distribution company is obliged to accept in its grid excessive power at the rate equal to the customers rate minus distributor's margin for the respective voltage level;
- The Decree of the Commission has approved the standards of uninterruptible supply and commercial service. Currently the above practices are being piloted. In parallel, the respective financial and other response forms are being developed.

#### Retail Power Market - 2010

Distribution companies	Small hydropower plants	Retail customers of distribution companoies	Retail Customers of small hydropower plants
JSC Energo-Pro Georgia: - Distribution to retail customers: 2,430.1 million kWtH in total - Transit for retail customers: 0.2 million kWtH in total. JSC Telasi - Distribution to retail customers: 1,645.23 million kWtH - Transit for retail customers: 0 million kWtH in total JSC Kakhetis Energodistributsia	<ul> <li>Small HPP.</li> <li>In 2010 generated - 311,5 million KWtH;</li> <li>Sold at the balance market - 196,7 million KWtH;</li> <li>Average annual rate at balance market - 8,2 Tetri/kWtH</li> <li>By direct contracts - 114,8 million KWtH;</li> <li>average rate -</li> <li>including to the retail customers: 0.2 million KWtH;</li> </ul>	Subscribers:         - Including         residential,         - Number: 854,219         - Consumption:1,035.4 million         KWtH         Non-residential,         - Number: 43,742         - Consumption: 1,350.4 million         KWtH         Subscribers:         Including         residential,         - Number: 391,773         - Consumption:         Non-residential,         - Number: 49,969         Consumption:	Subscribers:         Including         residential,         - Number: 0         - Consumption: 0         Non-residential,         - Number: 1         - Consumption: 0.2 million KWtH         Subscribers:         Including         residential,         - Number: 0         - Consumption: 0         Non-residential,         - Number: 0         - Consumption: 0         Non-residential,         - Number: 0         - Consumption: 0
<ul> <li>Distribution to retail customers: 183.9 million kWtH</li> <li>Transit for retail customers: 0 million kWtH in total</li> </ul>		- Consumption: <u>Subscribers:</u> Including residential, - Number: 118,839 - Consumption:109.283368 million KWtH Non-residential, - Number: 7,209 - Consumption: 97.949143 million KWtH	Subscribers: Including residential, - Number: 0 - Consumption: 0 Non-residential, - Number: 0 - Consumption: 0

#### **Assets of Power Distribution Companies**

	JSC Energo-Pro Georgia			JSC Telasi			JSC Kakhetis Energodistributsia		
Fixed assets by the voltage levels	2007	2010	Change, %	1999	2010	Change, %	2003	2010	change, %
110 kV									
Length of overhead lines, km	2 409,40	2 642,49	9,6	273	247	-9,5			
Length of cable lines, km									
Number of substations	106	118	11,3	23	23	0			
Number of transfomers	190	212	11,5	46	46	0			
Total capacity of sub- stations	3 011,20	3 399	12,8	1335	1 359	1,8			
35 kv									
Length of overhead lines, km	2 520,50	2 537	1,6		88	7,2			
Length of cable lines, km	, ,	23,8		110	30				
Number of substations	218	206	-5,5	12	12	0			
Number of transfomers	320	315	-1,6	23	23	0			
Total capacity of sub- stations	1 155,66	1 091	-1,0	335	335	0			
6-10 kv									
Length of overhead lines, km	15 618.90	13 332,9	-5,3	1 623.00	289	-8,2	3 169	1430	-54,5
Length of cable lines, km		1 452,92		,	1200			10	
Number of substations		10 999	-		1649	-		885	-
Number of transfomers	10 924	10 999	0,6	1569	1988	26,7	884	895	1,2
Total capacity of sub- stations	2 333,40	2 642,47	13,2	1104	1045	-5,3	164,262	192	16,9
0,4 kv									14
I enoth of overhead lines	İ		13		1	51 <i>/</i>		İ	_37.2

## In monitoring of the activities of distribution licensee, the Commission uses

- Material analyses annually provided by the licensees;
- Inspections of licensee activities on basis of complaints and information on violation of the license conditions received from the various sources;
- Selective inspection of the activities by sending the employees of the respective qualification to licensee site.

# The annual report shall contain:

- **Report** on the activities of the previous year (financial and technical);
- > Next year working plan;
- > Information on quality of service and measures for its improvement;
- > Information on emergencies and measures taken for their elimination;
- Environmental impact report;
- The agreements (in case requested);
- > Other information as deemed necessary by the Commission;

The financial and technical reports shall be duly endorsed by the persons having respective competence and authority

# In addition to the above, the distribution licensee shall submit to the Commission:

- Information on measures taken in order to increase energy efficiency;
- Information on new assets and their balance cost created by connecting new customers to the distribution network.

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# On Emergencies in JSC Telasi Network and Investments (thousand GEL)



#### Uninterruptible power supply Total – SAIDI (minute/per customer)



#### SAIDI \_ Average disconnection duration index \_ reporting period (2010) average duration of disconnections per one customer

#### Uninterruptible power supply Total – SAIFI (disconnection/per customer)



SAIFI \_ Average disconnection frequency index \_ reporting period (2010) average number of disconnections per one customer

# Thank you for your attention!