

Analysis of the status quo

- Under the conditions of significant difficulties in the period after 1989 the quality of service for the consumers remained outside the scope of the priorities in the activities and management of the electricity distribution utilities (EDU) in Bulgaria;
- Due to a series of reasons the attention of the distribution utilities is focused on the solving of other issues;
- The positive role of enhancing the service quality for consumers is played by the inclusion into the licenses of EDU and NEC of respective requirements on the quality of the service for consumers.

In August 2002 a thorough study was made of the problems of quality in 5 of the 7 EDU and NEC. The main conclusions are:

- The main difficulty in maintaining the quality of the power and the noninterruption of the power for EDU is the limitation on the investment funds. The measures for the improvement of electricity and the noninterruption of the power supply in the overwhelming number of cases require significant investment;
- There is no systematic control over the quality indicators for the power in the EDU. There are no measuring facilities and units directly engaged in the electricity quality control;
- The adopted indicators and requirements for trade services to consumers are to a large extent closer to the ones, adopted by the countries in the EU;
- A great difficulty is created by the incorrect attitude of the population in some regions.

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Statutory requirements to the quality of the services provided by the utilities to the consumers

- The requirements to the quality of the services provided by the utilities to the end consumers are settled in a fragmented and inconsequential manner in the current legislation;
- The general regime on the quality of the goods and services available on the market and the consumers protection are regulated by the Act on the Protection of Consumers and the Trade Rules;
- A special regime consists of norms contained in the Energy and Energy Efficiency Act (EEEA);

- These norms are laid down in detail in the Regulation on the conditions and the order of the issuance of permits and licenses for activities in the energy sector and in the Regulation on connecting to the transmission and distribution power networks of producers and consumers;
- These acts do not define the term content "quality of service";
- EEEA lays down the body which will exercise control-"SERC exercises control over the quality of the generation, transmission and supply of electricity and heat power and natural gas".

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Obligations of the licensees laid down in the conditions of the licenses

- The transmission and distribution utility is obliged to provide uninterruption and quality of the supplied electrical power for the consumers connected to the transmission or distribution network;
- The contents of the rules for working with consumers are indicated in the Regulation on the conditions and the order of the issuance of permits and licenses for activities in the energy sector;
- The guarantees for the quality of the services are contained also in the general conditions of the contracts for the selling of electrical and/or heat energy or natural gas between the transmission utility and the consumers connected to the transmission network; between the distribution utility and the consumers connected to the distribution network. The criteria in

their approval are the quantitative and qualitative indicators of the energy as well as the effectiveness of the mechanism of communicating with the consumers;

- Activity development plan;
- Plan for the monitoring and control of the quality of service;
- What is needed is a system of rules for the quality of the services provided by the utilities. It should contain the indicators for quality of the services, the minimum criterion for their observance and more concrete sanctions to be imposed by SERC onto the utilities in the case of a failure to comply;
- The final aim is through the system of effective regulation of he quality of the service to be established transparency, predictability of the relations between suppliers and consumers and high quality of the services provided.

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Draft of the Internal Rules of SERC for the regulation and control over the quality of the services provided by the utilities to the end consumers

The subject of these rules is the order of the SERC regulation of the quality of the services provided by licensed utilities (licensees) to the end consumers which involves :

- Quality of the energy and the power carriers;
- Quality of the commercial services;
- Non-interruption of the supply to the consumers.

SERC defines the indicators for the quality of the services, establishes binding criteria for their implementation, prepares long-term objectives for the improvement of the quality and controls the activity of the utilities in achieving those. In controlling the implementation SERC:

- Establishes a Plan for Monitoring, Control and Improvement of the Quality of the Services;
- Controls the annual compliance of the content of the Plan with the annual binding criteria, long-term objectives and the schedule for their achievement;
- May require at all times current information and documents as regards the implementation of the binding criteria and the long-term objectives;
- May impose a requirement on the licensees for the drafting of periodic reports on the implementation of the criteria along specific indicators;
- In case of failure to meet the binding quality criteria sanctions are imposed on the licensee to the indicated amount, within the boundaries and along the stipulated in the EEEA order.

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Indicators on the quality of the power supply

- The indicators on the quality of the electricity for the consumers in Bulgaria are under the BSS 10694-80. This standard corresponds to the development in this sector at the end of the 1970ies and is practically extinct today;
- The European standard EN 50160 as of 1999 reflects the opportunities in recent years.

	Bulgarian state standard BSS 10694-80	
Indicators	Standard values	
1. Deviation from the frequency in a normal regime when the system is working independently.	\pm 0.1 Hz; difference between astronomic and synchronised time < 2 min. A temporary deviation of \pm 0.2 Hz is allowed	
2. A voltage deviation in the consumer clamps	No larger than $\pm 0.5\%$ Un	
2.1 In the clamps of electrical engines and machines.	Between -5 and $+10$ %	
3. Lack of a sinusoid curve in the voltage of all receivers .	Effective value with higher harmonics should be not more of 5% of the effective value of the basic frequency voltage.	

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Characteristic	Low voltage networks	Medium voltage network
1. Frequency	49.5 – 50.5 Hz (for 99.5% of annual period) or 47-52 Hz (annually)	49.5 – 50.5 Hz (for 99.5% of annual period) or 47-52 Hz (annually)
2. Voltage deviation	Un $\pm 10\%$ (for 95% of one week period, rms value for 10 min.) Uí + 10/-15% (for 100% of one week period, rms value for 10 min.)	Un $\pm 10\%$ (for 95% of one week period rms value for 10 min.) Un $\pm 10/-15\%$ (for 100% of one week period, rms value for 10 min.)
3. Quick changes in the voltage	Below 5% Un, changes up to 10% of Un with a short duration	Below 4% Un: changes up to 6% Un with a short duration
4. Nonsymmetrical voltage	Rms value for 10 min. The reverse sequence voltage should be between 0 and 2% of Un of the 0 sequence for 95% of one week period.	Rms value for 10 min. The reverse sequence voltage should be between 0 and 2% of Un of the 0 sequence for 95% of one week period.

Characteristic	Low voltage networks	Medium voltage networks
5. A lack of a sinusoid curve of the voltage	Rms value for 10 min. Each of the harmonics of the voltage for 95% of one week period should be : Un 5%, Un 6%: general deviation 8%	Rms value for 10 min. Each of the harmonics of the voltage for 95% of one week period should be : Un 5%, Un 6%: general deviation 8%
6. Short voltage drop	The expected number can be from several tens to thousands for one year period	The expected number can be from several tens to thousands for one yes period
7. Short interruptions	Indications: from several tens to several hundreds	Indications: from several tens to several hundreds
8. Long interruptions	Indications: (interruptions over 3min.) annual frequency between 10 and 50 depending on the region	Indications: (interruption over 3 min i in .)annual frequency between 10 and 50 depending on the region



Quality of the commercial services

Indicators on the quality of the commercial services

- Indicators for each user;
- Average indicators of the supplier.

Indicators and binding criteria for supply to every consumer.

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Indicator	Criteria
1. Connection to the network of new consumers and starting the power supply	Up to 7 working days after a request of the consumers, payment and implementation of the conditions of connection.
2.Argumentation of the refusal for starting the power supply to new consumers	Up to 7 days of the date of the consumer's written request
3.Responses (written) to requests, letters and requests of consumers	Up to 30 calendar days
4. Preliminary notification of the consumers for a planned interruption of power supply	Up to 30 calendar days
5.Organising resumption of the power supply after a signal of consumers for interruption of the supply	For cities – up to 2 hours
	For rural areas – up to 4 hours
6.Resumption of the supply after malfunctions in the network of the supplier	In the minimum technical timeframe in accordance with the "good governance practice". When possible notifying the consumers about a duration longer than 8 hours

Indicator	Criteria
7.Providing a telephone line for connection with the consumers about interruptions or a lower quality of the power. Registering the messages with a recording device	Telephone number (Different from the one of the dispatch service) For towns – 24 hours a day every day of the week For rural areas – 8 hours
8. Check of the bad quality of the power after a signal of the consumers. Taking measures or announcing the opinion of the supplier	7 days
9. Check on the means of trade measurement after a request of the consumers	5 days
 10. Repair or change of the means of trade measurement of the consumer : - a better characteristics means - Improper function (does not measure, mistakes outside the accuracy class) 	Up to 30 days and notification
	Up to 7 calendar days
11. Check of the bill for the used power on a written notification of the consumer	Up to 5 calendar days
12. Correcting the incorrect measurement (bill) of the used power	Up to 7 days after the check Up to 30 days reimbursement of the sum

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Indicator	Criteria
13. Regime of visits of supplier personnel to the property of the consumers for installing, repairing, checking, maintaining and servicing the facilities of the supplier	From 8:00 to 20:00 after a preliminary notification and identification
14. Resumption of the power supply after interruption because of a failure to pay for the used electricity	For towns – by the end of the next working day after the payment For rural regions – by the end of the 5 th working day after the payment

Thank you for the attention

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