

Principles of regulatory setting prices for guaranteed supply in electricity sector in Serbia

Energy law

The applicable Energy law has entered into force in January 2015.

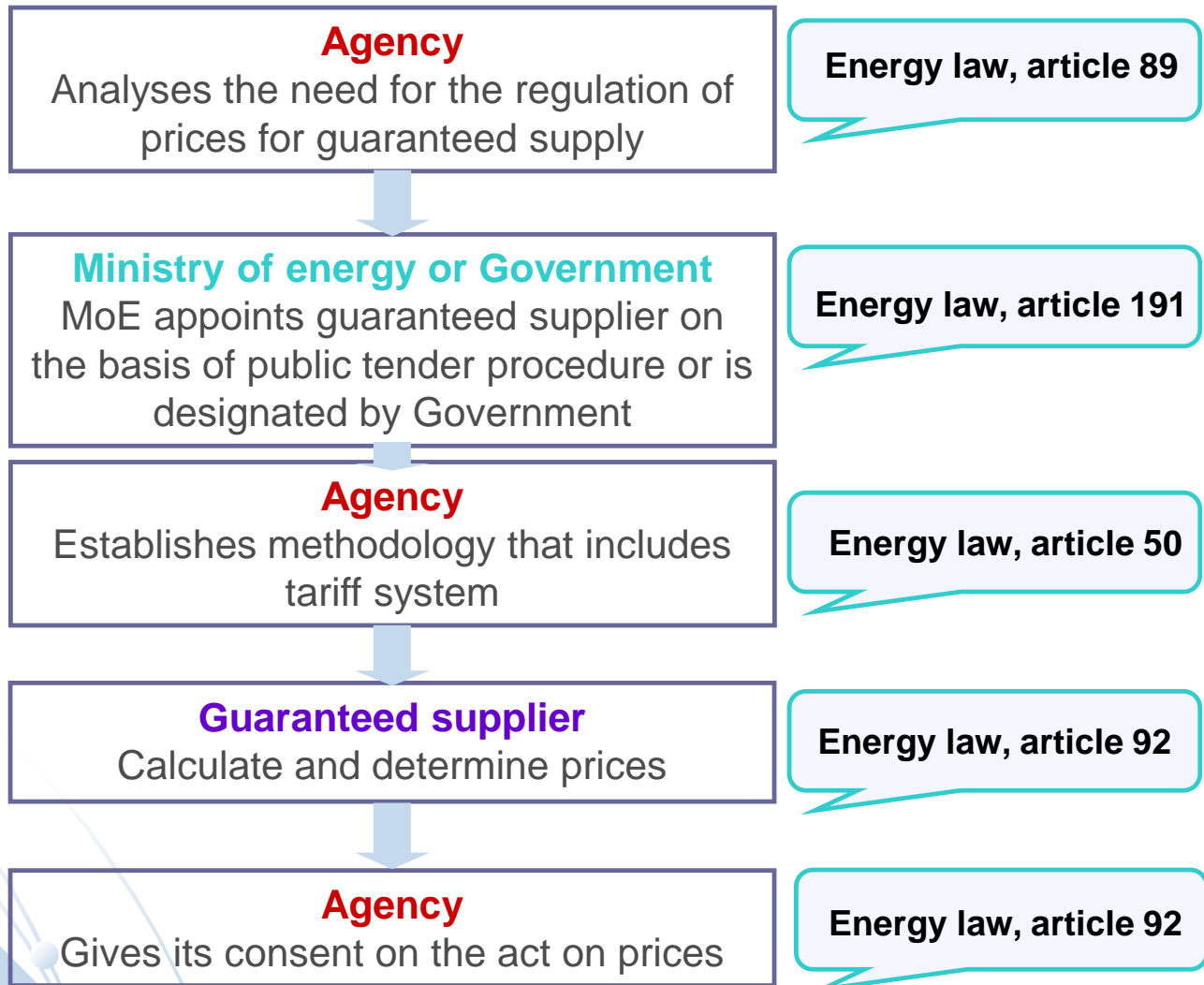
- Electricity supply to households and small customers is carried out by the guaranteed supplier,
- Prices of electricity for guaranteed supply may be regulated,
- Once a year Agency is analyzing the need for the regulation of prices for guaranteed supply.

Small electricity customers

Final customers (legal persons and entrepreneurs) with:

- fewer than 50 employees,
- total annual revenue of up to 10 mil. EUR
- all facilities are connected to the electricity distribution system with the voltage level lower than 1 kV,
- electricity consumption in the previous year was not higher than 30,000 kWh

Algorithm of price regulation and jurisdiction



Process of calculating prices

There are 2 phases in a process of calculating prices:

- Phase 1:

Setting of Maximum allowed revenue of guaranteed supplier,

- Phase 2:

Allocation of Maximum allowed revenue to tariff elements, tariff rates and category and groups of consumers

Elements of MAR

$$\text{MAR}_t = \text{OPEX}_t + D_t + \text{EP}_t + \text{DUoSt} + \text{GSR}_t - \text{OR}_t + \text{KE}_t$$

where:

- t – regulatory period,
- MAR_t – maximum allowed revenue in period t (din.),
- OPEX_t – operational costs in period t (din.),
- D_t – depreciation costs in period t (din.),
- EP_t – electricity procurement costs including all dependent electricity procurement costs in period t (din.),
- DUoSt - electricity distribution use-of-system costs in period t (din.),
- GSR_t - guaranteed supplier's revenue in period t (din.),
- OR_t – other revenues in period t (din.),
- KE_t – correction element in period t (din.).

Desegregation of activities

- Common operational costs, assets, depreciation costs and other revenues reported in regulatory accounts must be disaggregated among regulated activity of guaranteed supply and other regulated or non-regulated activities.
- Guaranteed supplier is obliged to provide independent audit and to submit audited reports for each energy activity to AERS.

OPEX

Operating costs are costs which are directly incurred by the by the guaranteed supplier, and those which represent a share of joint or common costs.

They comprise further justified costs:

- material costs
- costs of salaries, benefits and other personal expenditures
- production services costs,
- non-material costs

DEPRECIATION

Depreciation is a systematic allocation of the cost of an asset to the accounting periods in which the asset provides benefits to the entity.

Tariff methodology use straight-line depreciation method.

The depreciation costs are calculated for:

- existing assets
- assets that will be activated in the monitored regulatory period.

Electricity procurement costs

- Electricity procurement costs for guaranteed supply represent justified costs on the basis of electricity procurement for guaranteed supply purposes.
- Electricity procurement costs also include all dependent electricity procurement costs given in line with international accounting standards.

Electricity distribution use-of-system costs

Electricity distribution use-of-system costs represent the product of electricity distribution use-of-system tariffs and adequate physical values on the basis of which the distribution system is used for guaranteed supply purposes.

Guaranteed supplier's revenue

$$\text{GSR}_t = n * (\text{OPEX}_t + D_t + \text{EPT} + \text{DUoSt} - \text{OR}_t + \text{KE}_t) / (1-n)$$

where:

- n – percentage (could be max. 2%) of the guaranteed supplier's revenue in period t (in %)

Other Revenues

Other revenues are revenues earned by employing regulated assets for carrying out activities such as:

- gains earned through selling of assets,
- revenues on the basis of compensated damages,
- revenues for the costs of court litigation and
- other revenues.

Correction element

Correction element corrects the MAR for the following regulatory period.

The deviation between actual revenue and calculated revenue based on actual energy parameters and the value of justified costs and revenues earned in the previous regulatory period.

Tariff system - main principles

- **Each consumer pays for electricity proportionally to costs incurred in the system :**
 - according to volume and manner of electricity consumption
 - according to power used and point of connection to the system
- **Stimulating of rational consumption of electricity**
- **Efficient use of available generation, transmission and distribution capacities**
- **Non-discrimination which, amongst other things, implies lack of social component in tariff system**

Other requests

- **Applicability of Tariff System in practice depends on:**
 - technical equipment at metering points
 - legal restrictions

- **Straightforwardness/simplicity depends on:**
 - use and manner of electricity consumption
 - daily, monthly and season fluctuation in consumption
 - consistent application of ground principles of setting tariffs –
greater simplification = greater discrimination of consumers

Criteria for cost allocation

Allocation depends on:

➤ Electricity generation and consumption

- total
- by type of generation capacity
- by voltage levels
- by consumption groups
- within each consumption group

➤ Cost structure

- fixed and variable
- by voltage levels
- costs of specific equipment and services
- costs of losses and system services

Customers' categories

Customers' categories:

- metering - active energy, reactive energy and maximum demand
 - low voltage consumption
- metering – active energy only
 - consumer spending (households, commercial)
 - public lighting

Tariff elements

Tariff elements are:

- demand (kW)
- active energy (kWh)
- reactive energy (kvarh)
- delivery point

Tariffs (1)

Tariffs for tariff element demand:

- accounting demand
 - monthly maximum active power – for customers with power metering
 - approved demand established by the approval for the connection – for customer spending (without power metering)
- excessive demand set-up
 - applied for customers with power metering

Tariffs (2)

Tariffs for tariff element active energy:

- higher daily tariff rate for active energy
 - applied during the day – 16 hours
- lower daily tariff rate for active energy
 - applied during the night – 8 hours
- single tariff metering
 - applied during the all day
- active energy – public lighting
- active energy – neon signs
 - group within public lighting category – use electricity for the lighting of billboards

Tariffs (3)

- Tariffs for tariff element active energy – category of customer spending:
 - tariff for rational consumption – green zone
 - monthly level by 350 kWh
 - tariff for moderate consumption – blue zone
 - monthly level over 350 kWh to 1600 kWh
 - tariff for high consumption – red zone
 - monthly level over 1600 kWh

Tariffs (4)

- Tariffs for tariff element reactive energy:
 - reactive energy
 - applied to the amount of reactive energy corresponding to the factor $\cos(\varphi) \geq 0,95$
 - excessively taken reactive energy
 - applied to the part of the amount of reactive energy corresponding to the factor $\cos(\varphi) < 0,95$
- Applied for customers with reactive energy metering - low voltage customers

Tariffs (5)

- Tariff for tariff element delivery point:
 - Guaranteed supplier`s cost
 - applied for all customer categories
 - establish in equal monthly amounts for each metering point

THANK YOU!

QUESTIONS?



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