

Before technically design an electrical installation we need to know in what market conditions and in what type of energetic system it will operate.

## **COURSE 2**

For household customers (ANRE) elaborated the following **tariffs**:

Monomial CR rate with reservation - involves billing a single price to all of the electric energy consumed in reference period. The tariff has two components: the price of consumed energy during the billing period (lei/ kWh) and the reservation price (lei/ day).

Monomial CI rate with consumption included, has two components: the subscription (calculated for the number of days in the billing period) and the electricity price. Includes reservation price and one daily amount of energy of 1 kWh. The electricity in the subscription and the not consumed one are not rolled over.

CS rate – social type it's an option for low-income consumers. It is advantageous for clients with monthly electricity consumption reduced up to 90 kWh / month. It consists of three consumption installments with different prices:

- Tranche 1: consumption between 0-2 kWh / day
- Tranche 2: consumption between 2-3 kWh / day
- Tranche 3: Consumption over 3 kWh / day

Tranches of consumer social tariff are monthly and not rolled over.

Monomial CD rate, without reservation involves billing a single price to all of the electric energy consumed in the reference period. It is intended for households who do not want to apply a reservation price for their energy supply.

Monomial CR2 rate with reservation, differentiated on two time zones:

It is advantageous if the share of electricity consumption at nights and in weekends exceeds 55% of the total registered. It consists of:

- reservation price (lei/ day), which is intended to cover fixed costs;
- energy prices in the daytime, which applies to the consumption from Monday to Friday between 7.00 - 22.00;
- energy prices in the night-time, which applies to the consumption from Monday to Friday between 22.00- 7.00 and in weekend from 22.00 am Friday to 7.00 pm Monday.

Monomial CR 3 rate with reservation, differentiated on 3 timezones:

It is advantageous if peak consumption can be avoided and if the weight of consumption is shift to the night hours and weekends. It consists of:

- reservation price (lei/ day), which is intended to cover fixed costs;
- price of electricity consumed in peak hours, which applies to consumption in summer season between 8.00 - 9.00 (1 April to 30 September) and winter season ranges 8.00 - 10.00 and 19.00 - 22.00 (1 October - 31 March);
- price of electricity consumed in empty hours: that apply to consumption performed in summer between 0.00 - 08.00 and 21.00 - 0.00 form Friday to Monday, and in winter between the hours 0.00 - 08.00 and 21.00 - 22.00 Friday 0.00 until Monday at 8:00;
- price of electricity consumed in the normal load curve, in summer between the hours 9.00 - 21.00 and in winter, between 10.00 - 19.00.

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### Monomial CTP rate

It is intended for households connected to the low voltage network and is differentiated in three installments of contracted power (no more than 3 kW, between 3 and 6 kW and over 6 kW);

It is beneficial for those households which balance their electricity consumption without exceeding the contracted power. Overconsumption leads to client disconnection by triggering the automatic transfer switch (AAR), set to a load related to requested (contracted) power. Reconnection is made by the consumer itself and is conditioned of discharging the excess load in the supply network. The rate consists of two components: price of consumed energy during the billing period (lei / kW) and reservation price (lei/ day).

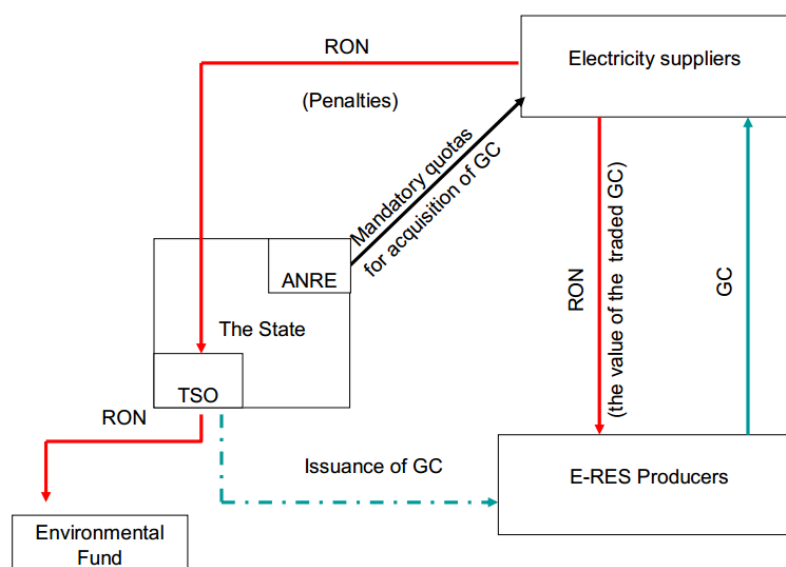
Form 2012, to this electricity tariffs were added: green certificates value (2013: 0,191CV/MWh  $\Leftrightarrow$  0,034 lei/kWh), a separate active power tariff and the competitive market component (CPC).

### **Tradable Green Certificates**

(TGCs) is a new market-based, cost-efficient instrument to regulate the deployment of renewable energy. Green certificates represent the environmental value of renewable energy generated, which can be traded separately from the energy produced. Based on the european law, the Romanian authorities already implemented the green certificate price trading limits of 27 and 55 EUR per certificate. In case the demand is higher than the offer of green certificates, the trading price is expected to reach the maximum value.

Electricity suppliers have the obligation to acquire annually a certain number of green certificates determined for each year by ANRE. The level of the obligation corresponds to the value of the mandatory renewable quota established for the current year multiplied by the quantity of electricity (expressed in MWh) supplied annually to the final consumers.

*Figure 1: Functioning of green certificates system*



In other words, a green certificate is a document certifying the amount of 1MWh of electricity produced from renewable sources.

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\* Romania estimates that the support to electricity production from renewable sources will result in avoided CO2 emissions between 2.7 million tonnes in 2011 and 10.4 million tonnes in 2020.

### **Competitive market component (CPC)**

(CPC) is a "new active electricity tariff applied by providers of last instance to bill end users that have not used their eligibility, correlated with the timing of removing regulated tariffs" (according to the Methodology) in order full liberalization of the electricity market.

*Provider of last instance "provider by the competent authority designated to provide universal service (guaranteed) provision regulated under specific conditions" (according to the Energy Law).*

Calendar of eliminating tariffs is to increase the percentage of procurement stages in the competitive market of the amount of electricity to consumers who have not spent eligibility and "has been set taking into account the possible negative effects of disposal of regulated prices, so they be as little felt by customers" (according to the Energy Law). The non-household customers disposal of tariffs began on September 1, 2012 and ended on 31.12.2013 and for household customers the disposal of tariffs began on July 1, 2013 and will end on 31.12.2017.

According to the methodology, CPC rate is calculated by provider, based only on electricity purchase from a competitive market, "includes the cost of purchasing electricity from centralized competitive markets and the costs of this energy related services provided to the consumer" and is approved by the competent authority (ANRE).

- CPC rate applies only to a portion of the active power, calculated according to the percentage of the purchase of the competitive market set out by the calendar of eliminating tariffs. The remaining quantity consumed is billed at regulated tariff.
- If one consumer benefits of binomial electricity tariff, the CPC applies only on active energy (on active power it doesn't apply).
- CPC rate applies inclusively to the amount of active power charged after a failure (due to measuring groups, to inconsistency between the boundary point and the point of measurement, to network losses when maintaining the voltage level on consumer's demand, to fraudulent consumption and to deviations from forecast referred for consumers with contracted power greater than 1MW).

## **+ microgrids**