

# Tariff Design in Kyrgyzstan: Electricity

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The National Agency sets the following types of tariffs:

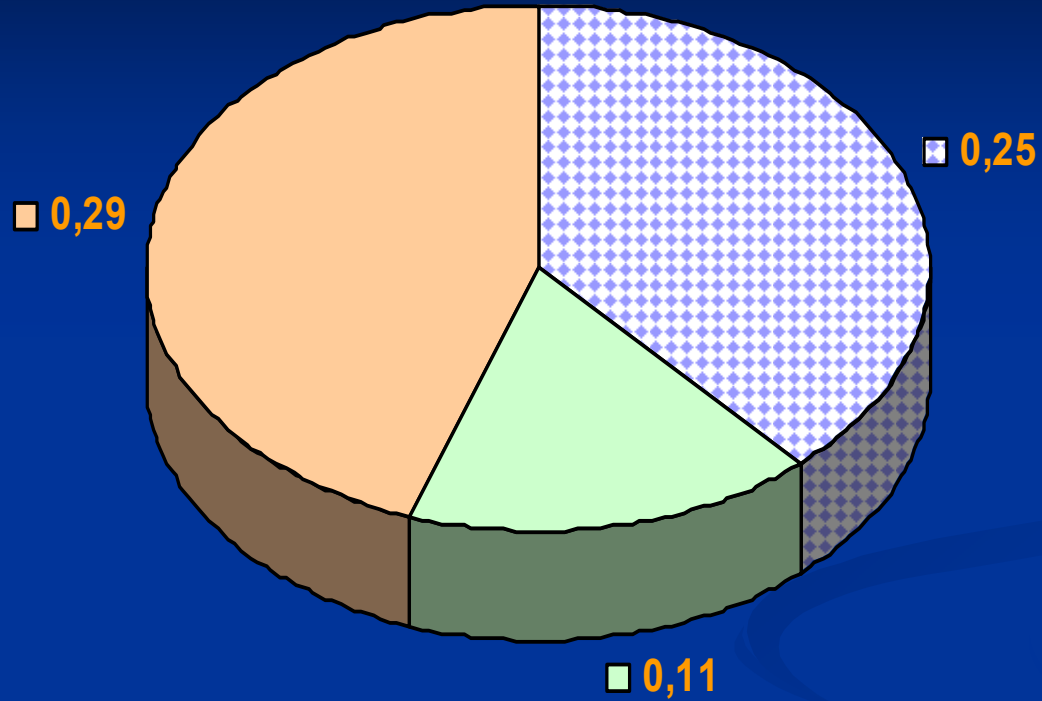
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graph TD; A[ ] --> B[Tariff for generation]; A --> C[Tariff for transmission]; A --> D[Tariff for distribution];
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**Tariff for generation**

**Tariff for transmission**

**Tariff for distribution**

## Structure of tariffs by types of activities

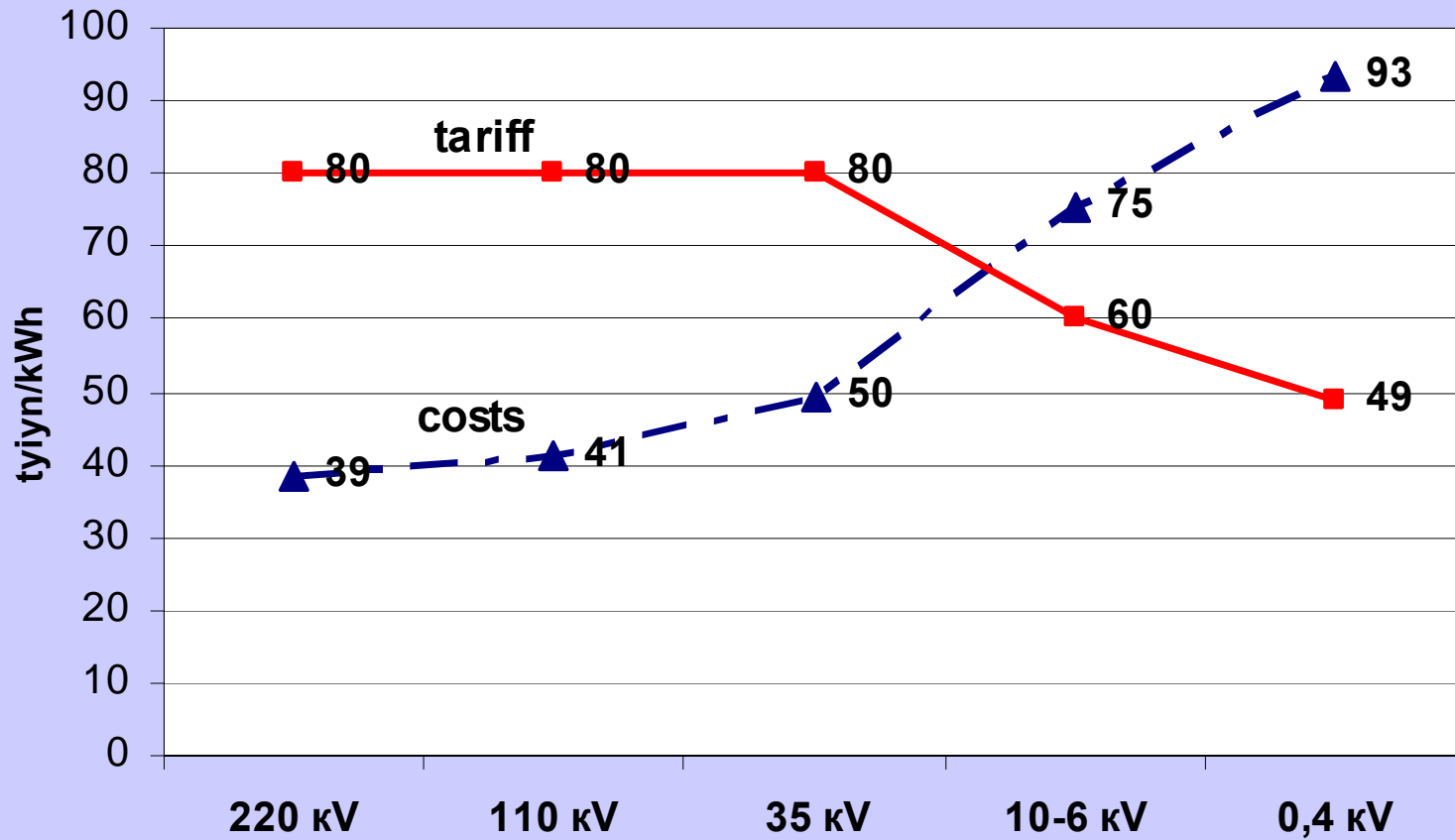


■ Generation

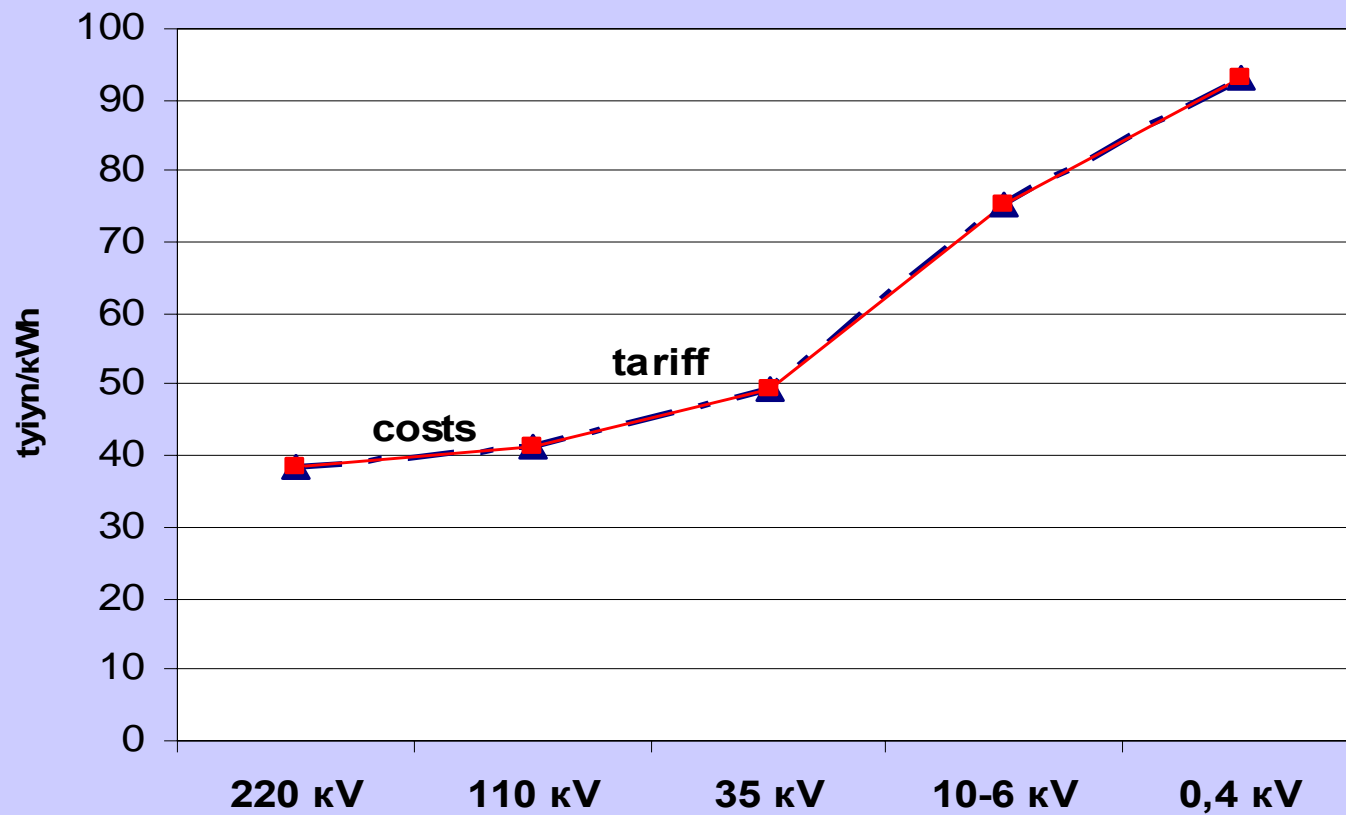
■ Transmission

■ Distribution and supply

## Current Tariff Setting System



## Reforms in Tariff Setting



# Formula for calculation of 3 types of tariffs

## Tariff for generation

$T(g) = E(g) / B(v)$ , where:

- $T(g)$  is an average tariff for generation
- $E(g)$  are necessary costs of a generating company for electricity less subsidies from export
- $B(v)$  is the volume of sales of electricity to RECs (inflow to REC's networks)
- $B(v) = B(v1)+B(v2)+...+B(vn)$

## Tariff for transmission

$T(t) = (C(t) - I(p)) / (B(v) - B(d) + B(e))$ , where:

- $T(t)$  is tariff for transmission,
- $C(t)$  are total financial obligations of the transmission company
- $I(p)$  are revenues of the transmission company from other activities,
- $B(d)$  is sale of electricity to distribution companies from stations' busbars
- $B(e)$  is sale of electricity for export

## Tariff for final consumers

$T(c) = (E(g) + E(t) + E(d1)+E(d2)+...E(dn)) / B(dc)$ , where:

- $T(c)$  is an average tariff for a final consumer,
- $B(dc)$  is useful consumption in the local market,

# Existing Subsidies

- Industrial consumers subsidize residential consumers and agricultural consumers of electricity
- Export of electricity subsidizes domestic market consumers, both for electricity and for heat.

## Problems Related to Cross-Subsidies:

- Lack of transparency, market participants do not know the truth.
- Neither energy companies, nor consumers are motivated to save energy and reduce costs.
- Dependence on subsidies
- Difficulties with long-term planning.

# Main Problems Existing in the Energy Sector

- Permanent increase in residential consumption, which in its turn leads to overload in distribution networks
- Depreciation of plant – the consequence of it is high level of technical losses
- Accumulation of the volume of repair and restoration works
- Frequent interruptions and worsening of the electricity supply quality
- Lack of proper of electricity metering devices is the main reason why commercial losses are increasing
- Low level of cash collections
- Dependence on subsidies, as well as on export

# Ways of Solving Problems

- Reduction of losses of electricity and ensuring its full metering
- Increased fee for sold electricity
- Attraction of foreign investments
- Reconstruction and replacement of depreciated equipment
- Improvement of the quality of energy supply
- Search and creation of new routes for export of energy
- Implementation of market reforms in the energy sector
- Development of international cooperation in the energy field within the region