

# State Energy Agency under the Government of the Kyrgyz Republic

«SEA»



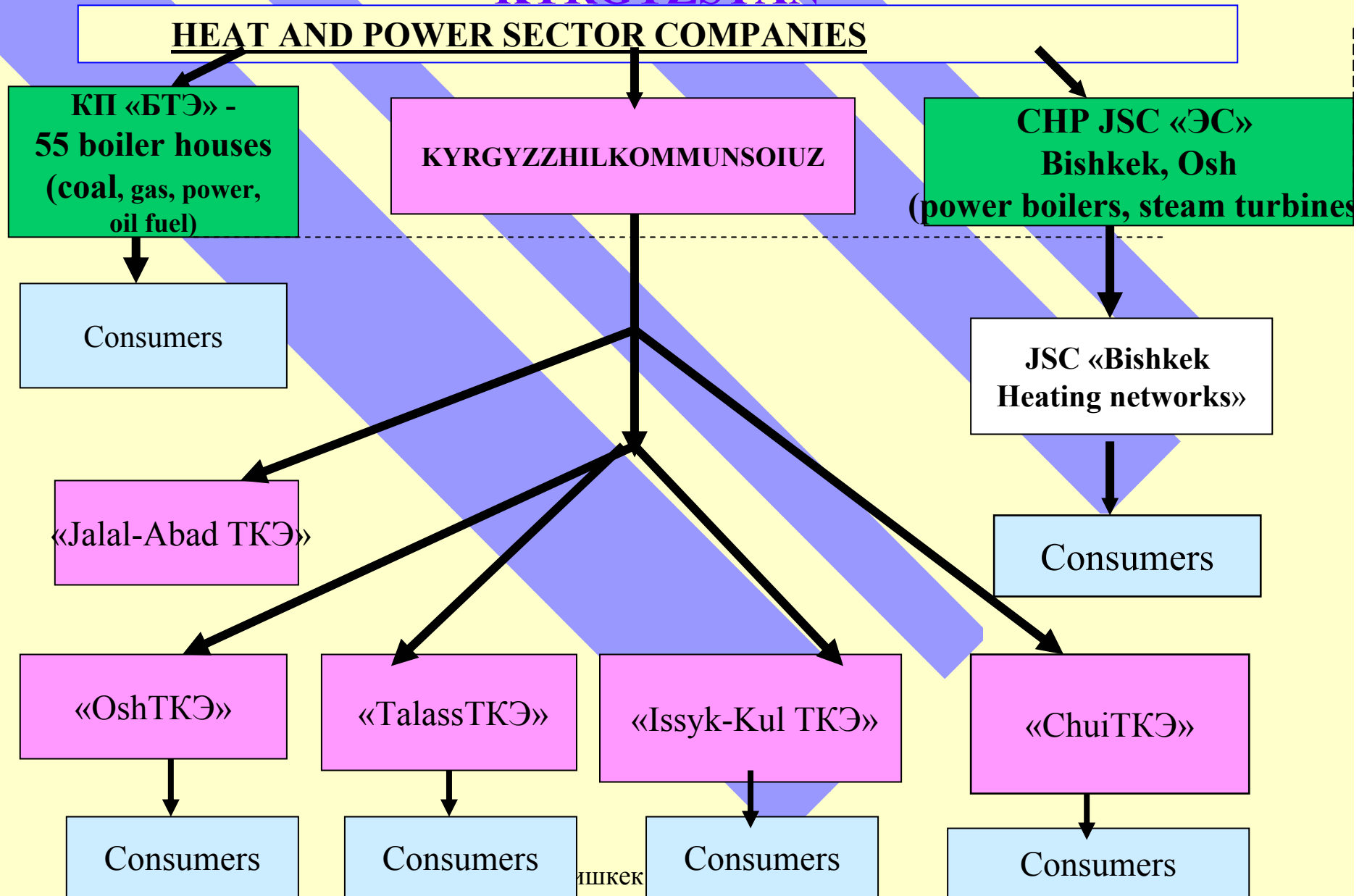
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# Structure of the Heat-and-Power Sector of KYRGYZSTAN





## **ANALYSIS OF THE CURRENT SITUATION IN THE HEAT AND POWER SECTOR:**

- **1. Lack of metering devices for heat at end-users (population)**
- **HIGH PERCENTAGE OF LOSSES IN HEAT AND POWER SECTOR (about 22%)**
- **HIGH PERCENTAGE OF DEPRECIATION OF HEAT AND POWER EQUIPMENT (OVER 80%)**
- **Residential tariffs are by 45% lower than cost of producing heat**
- **3. Residential payment for heat is calculated at averaged indices according to the methodology**
- **4. Residential payment for hot water supply – at a standard per one person (160 l/day) at tariffs that are below costs. The payment should be made according to the number of registered residents and not according to the actual number of people living in the household**



# STRUCTURE OF TARIFFS FOR HEAT

1. Operating costs
2. Technical maintenance costs
3. Costs for servicing debts (repayment of credits)
4. Capital expenditures
5. Profit element

# **COST STRUCTURE OF HEAT FROM CHP**

- **PRODUCTION-RELATED SERVICES** (capital and current repairs of technological equipment, transport vehicles, emergency and current maintenance of internal heating systems, etc.);
- **AUXILIARY MATERIALS** (costs for purchasing inputs necessary to produce heat);
- **COMBUSTIVE-LUBRICATING MATERIALS** —(gasoline, oils, and other stuff needed for production purposes);
- **ENERGY** —(electricity for production and routine needs in the course of generating heat and power);
- **WAGE-FUND;**
- **SOCIAL PAYMENTS (25% from wage-fund);**
- **DEPRECIATION** (according to standards);
- **OTHER EXPENSES** (payment for bank services, per diem, mail, communications, etc.);
- **DISCHARGE PAYMENTS**
- **TAXES (NV, ROAD) – (1.5% and 0.8% from comm. prod.);**
- **COST OF TRANSMISSION AND SUPPLY**
- **REPAYMENT OF CREDITS AND CO-FINANCING**
- **COMMODITIES**
- **TARIFF SET BY THE STATE ENERGY AGENCY**

# **COST STRUCTURE OF HEAT FROM BOILER HOUSES**

- **FUEL FOR HEAT PRODUCTION** (coal, gas, fuel oil);
- **AUXILIARY MATERIALS** (costs for purchasing inputs necessary to produce heat, fuel, etc.);
- **ELECTRICITY** (to produce and distribute heat);
- **SALT AND OTHER INPUTS** (for water treatment (additional softening));
- **WATER** —(to fill in heating systems, routine needs);
- **WAGE-FUND;**
- **SOCIAL PAYMENTS (25% from wage-fund);**
- **CAPITAL AND CURRENT REPAIRS**
- **DEPRECIATION** (according to standards);
- **OTHER EXPENSES** (payment for bank services, per diem, mail, communications, etc.);
- **TAXES (NV, ROAD) – (1.5% and 0.8% from comm. prod.);**
- **COST OF PRODUCTION, TRANSMISSION AND SUPPLY**
- **PROFIT (PROFITABILITY)**
- **FULL COST**
- **TARIFF FOR HEAT SET BY THE STATE ENERGY AGENCY.**

№ П/ П	Consumer category	ENERGY TARIFFS					
		Power	Heat (energy company)	Natural gas	Boiler houses:		
					coal	gas/ fuel oil	Electricity
		tyiin/kWh	som/Gcal	som/thous. m3	som/Gcal	som/Gcal	som/Gcal
1.	Residential	43.0-up to 150 kWh 80.0 –over 150 kWh	<b>390</b> (9\$/Гкал)	2874 (62 \$/ thous. m3)	<b>390</b> (9\$/Gcal)	<b>390</b> (9\$/Gcal)	<b>390</b> (9\$/Gcal)
2.	Other	80 (1.8 ¢/kWh)	640 (14\$/ Gcal)	3540 (77\$/ thous. m3)	1000 (21\$/ Gcal)	1300 (28\$/ Gcal)	1500 (33\$/ Gcal)

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Name of an organization	Number of apartment houses pcs.	Meters to be installed thous. pcs.	Needed grants (investments) Thous. US \$
JSC «BTC»	2820	141.0 –for apartments 2.82 –for houses	5640,0 4512,0
КП «БТКЭ»	481,0	26.0 –for apartments	1357,0

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# PROVISIONS OF THE HEAT SUPPLY STRATEGY IN KR

- ((Developers: World Bank together with interdepartmental working group established according to Decree of the KRG # 81, as of March 20, 2001)
- HEAT SUPPLY STRATEGY WAS DEVELOPED ON THE BASIS OF:**
  - ANALYSIS OF ECONOMIC AFFORDABILITY*** (*population revenues and expenses and expected changes in revenues*)
  - ANALYSIS OF COST AND REVENUE FROM VARIOUS TYPES OF HEAT SUPPLY***
  - CONSEQUENCES OF VARIOUS TYPES OF HEAT SUPPLY*** *for environment, human health*
  - Evaluation of obstacles to commercial and private services of feasible options of heat supply, as well as of mechanisms for overcoming these obstacles***

## MAIN PRINCIPLES OF THE LONG-TERM HEAT SUPPLY STRATEGY OF THE KYRGYZ REPUBLIC

### ■ MAIN STAGES OF THE STRATEGY:

1. **Survival** – period – 3 years starting with 2004. Retention of existing district heating systems and implementation of measures aimed at providing affordable services to the population
2. **Restoration** – period – 3 years starting with 2007. Development and beginning of implementation of sustainable options of heat supply systems
3. **Growth - period - 10 years starting with 2011 – attraction of investments and decentralization of district heating systems, individual heating**

### MAIN ELEMENTS OF THE STRATEGY:

1. **Commercialization of heat supply systems**
2. **Support for condominiums**
3. **Support for private entrepreneurs and producers**
4. **Social reform**
5. **Technical reconstruction**

## **MAIN PRINCIPLES OF THE LONG-TERM HEAT SUPPLY STRATEGY OF THE KYRGYZ REPUBLIC**

- 1. Full coverage of expenses related to production and distribution of heat in district heating systems.**
- 2. Payment for heat in accordance with actual consumption.**
- 3. Clear and accurate determination of ownership rights and duties of heat suppliers and consumers**
- 4. Social reform. Phased reduction of various forms of heat subsidies for main consumers**  
**(Elimination of all types of subsidies - heat is subsidized by export of electricity and republican budgets).**



# THANK YOU!

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