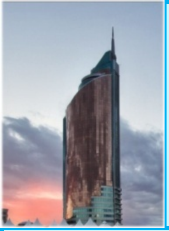
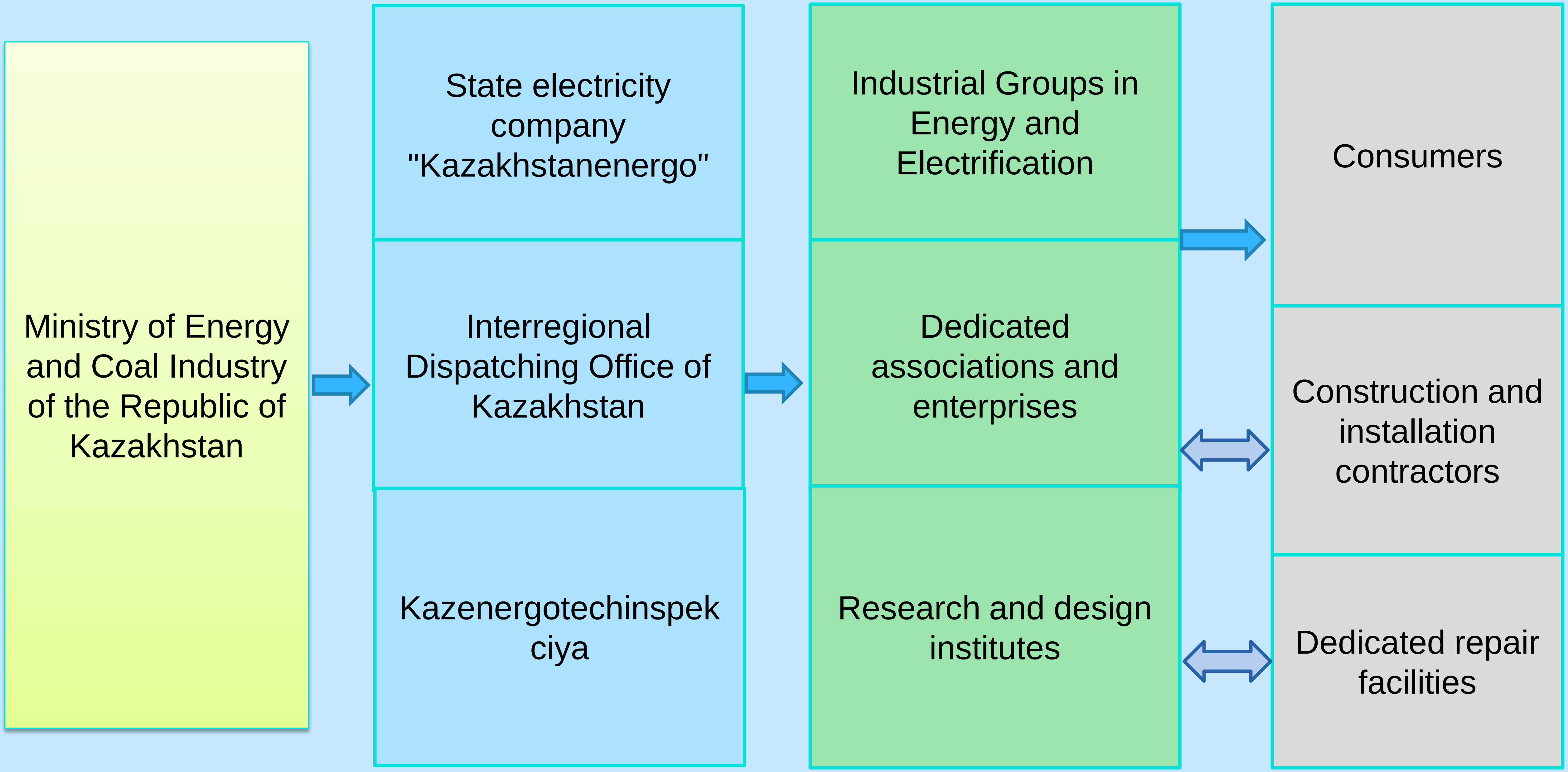


MINISTRY OF INDUSTRY AND NEW TECHNOLOGY
OF THE REPUBLIC OF KAZAKHSTAN

REPUBLIC OF KAZAKHSTAN: Electricity Market Development

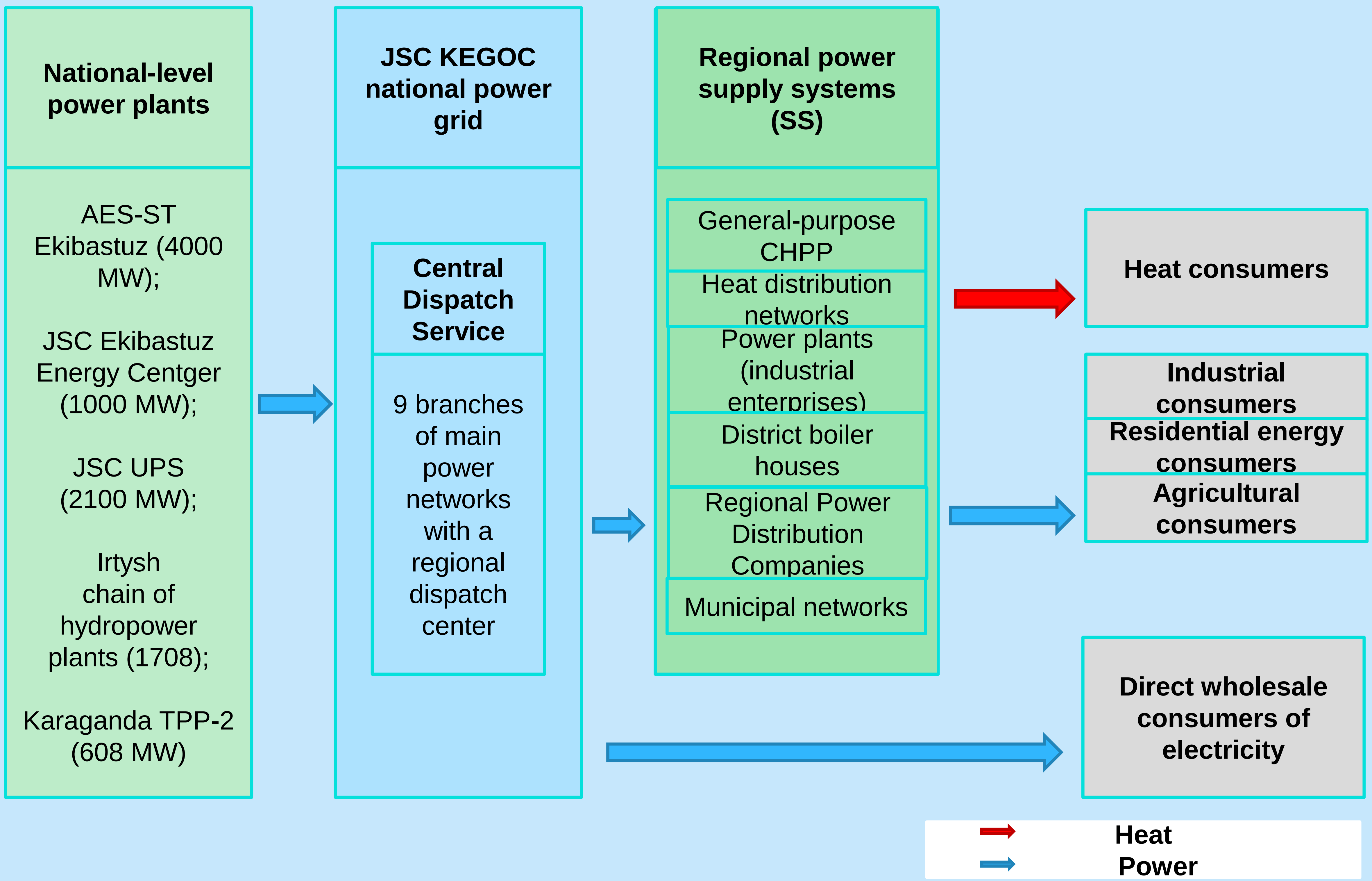
State monopoly structure of the energy sector (1992-1994)



As a result of implementing Stage I of the market reforms in 1995-1996:

- separation of the functions carried out by regional utilities for generation, transmission and distribution of electricity;
- all power plants were converted into joint stock companies with economic and legal independence;
- joint regional power distribution companies (JSC RPDC) were established on the basis of 110-0.4 kV power networks;
- Publicly-traded *Kazakhstan Electricity Grid Operating Company KEGOC* (JSC KEGOC) was established on the basis of 1150 - 220 kV power networks and the Central Dispatch Service of the Unified Power System of Kazakhstan (UPS CDS);
- business entities in the electricity market were allowed to conclude direct contracts for the purchase of electricity;
- large-scale privatization of power plants was launched;
- central regulatory agency for heat and electricity prices (tariffs) was established;
- district heat supply functions were transferred from the central government to local authorities.

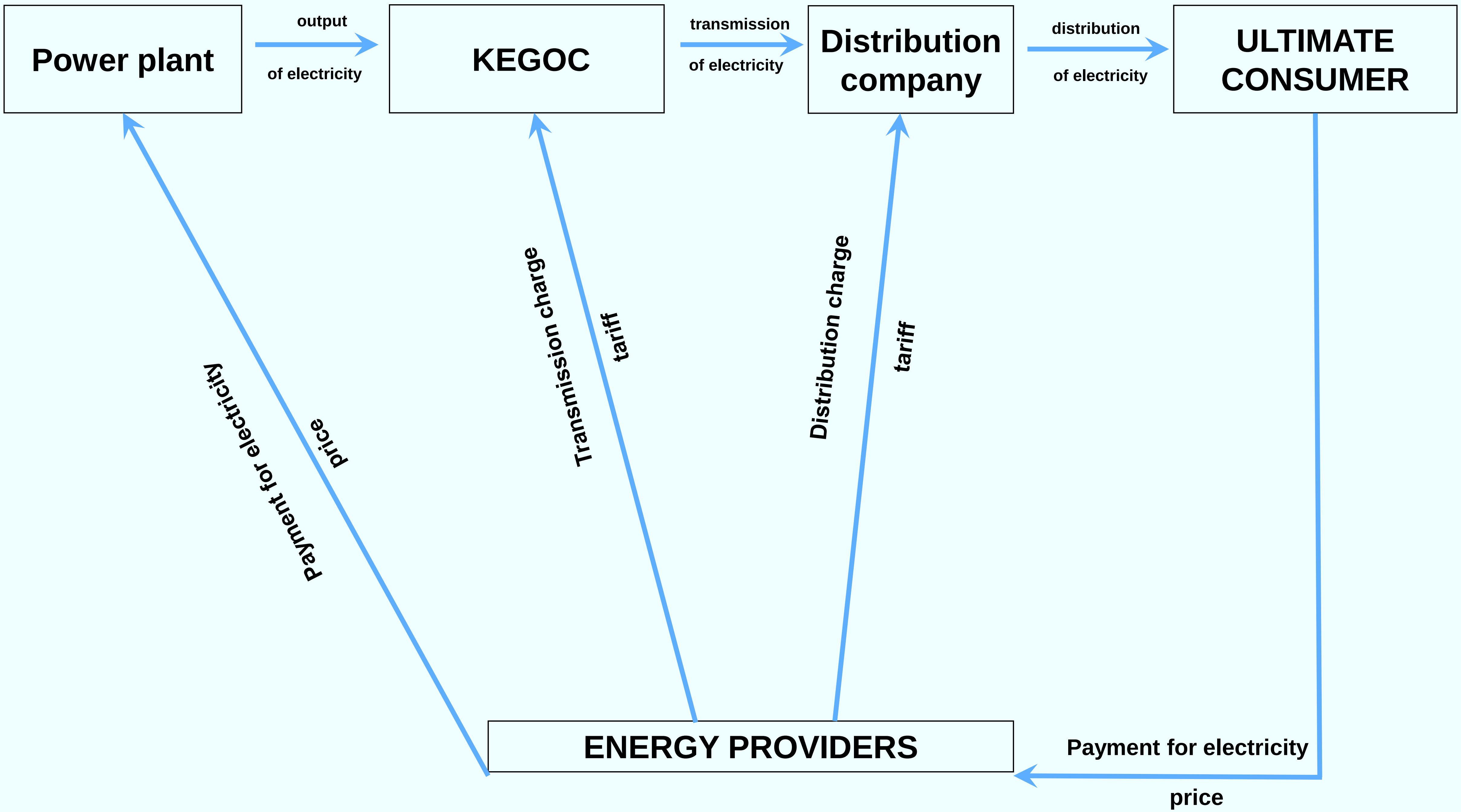
Power Market Structure in the Republic of Kazakhstan following Stage II of reforms (1997-2003)



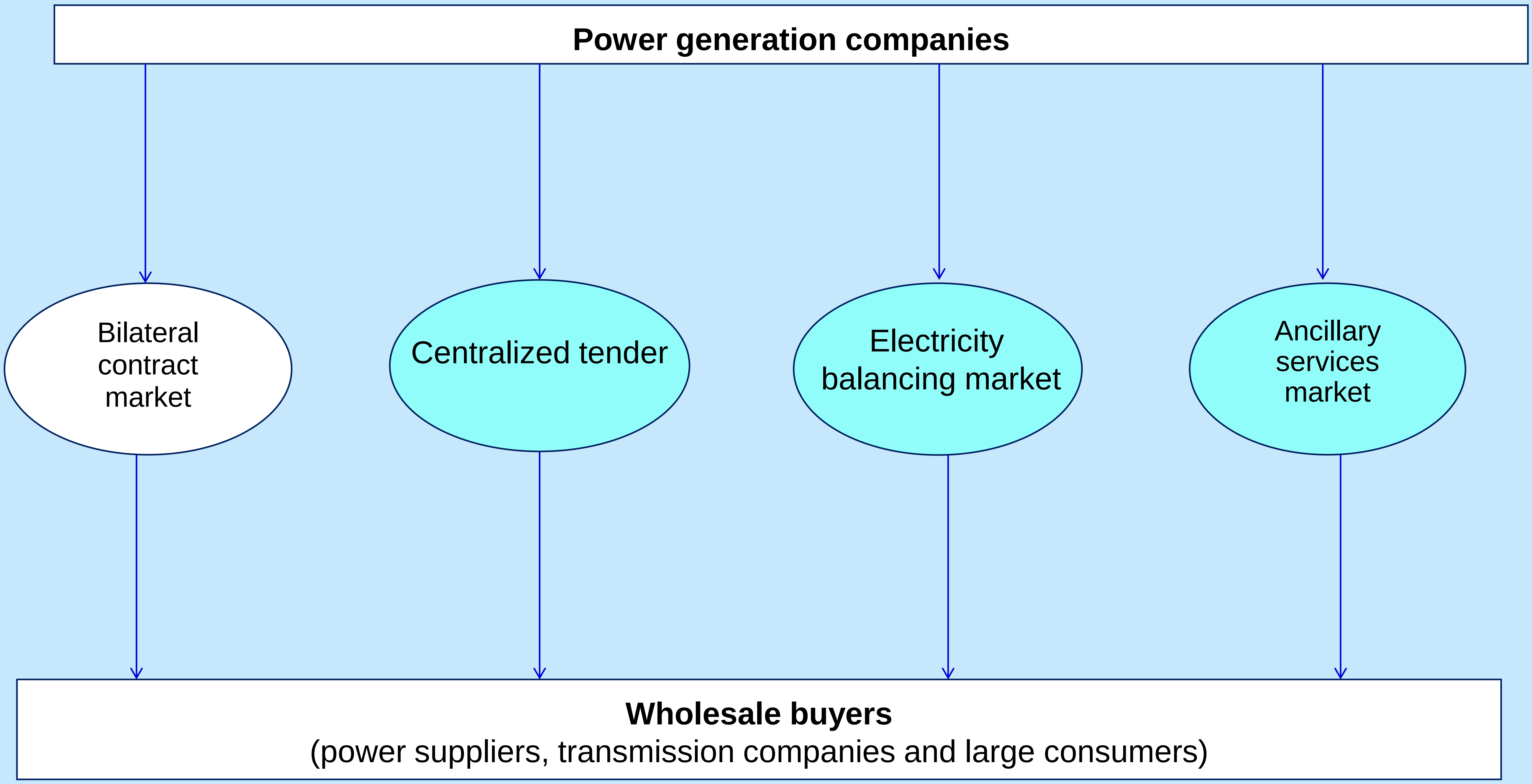
<u>Stage III</u> of developing market relations in the power industry of Kazakhstan (2004-2006) aims to address the following issues in the existing wholesale and retail electricity markets:

- Possible reduction in reliability of the UPS of Kazakhstan due to conflicting interests of consumers and producers of electricity in the absence of market-based mechanisms for resolving imbalances between actual and contractual values of output and consumption of electricity, as well as the tapping of power reserves;
- The need for de-monopolization of a series of vertically integrated regional power companies;
- Lack of competition in supply of electricity to retail customers;
- The need for separating power transmission functions in regional power companies from sales of electricity to retail consumers.

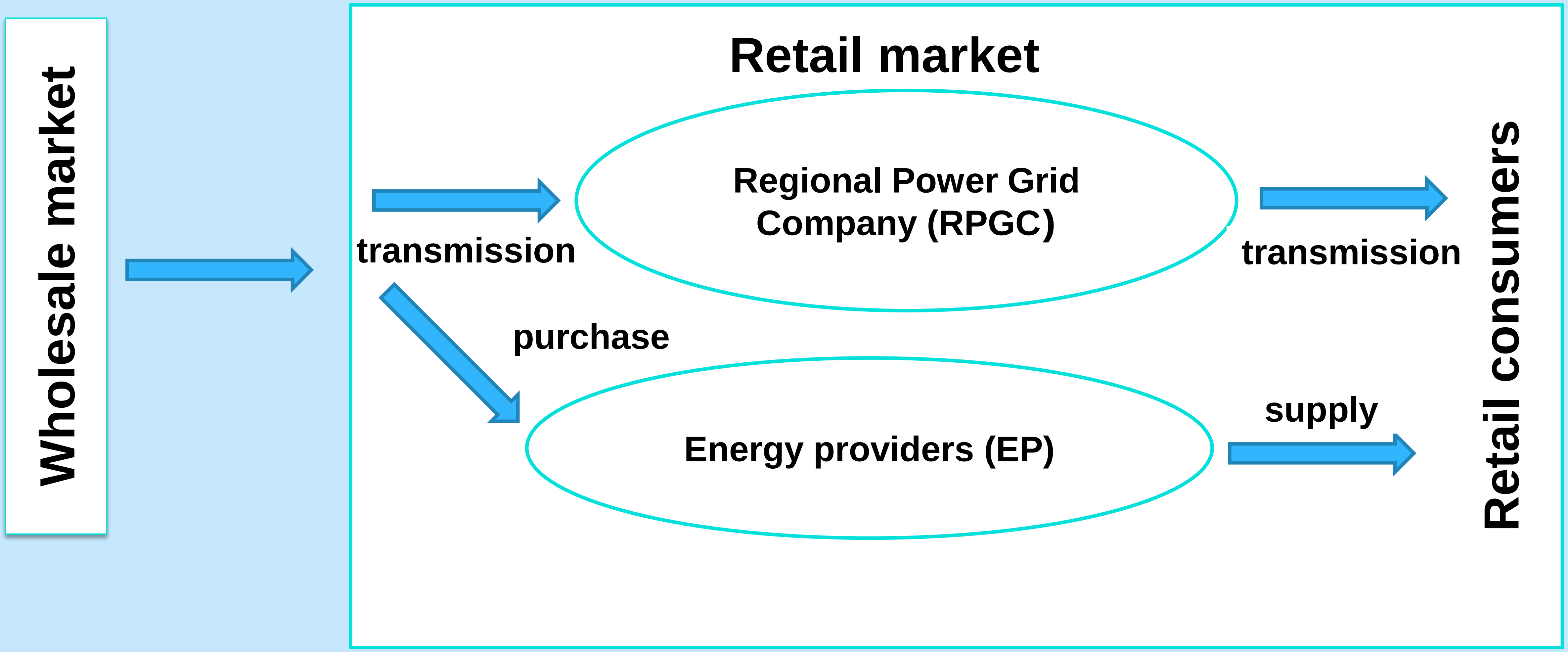
SIMPLIFIED DIAGRAM OF THE ELECTRICITY MARKET following Stage III (ONGOING)



Model of the electricity market after the reforms



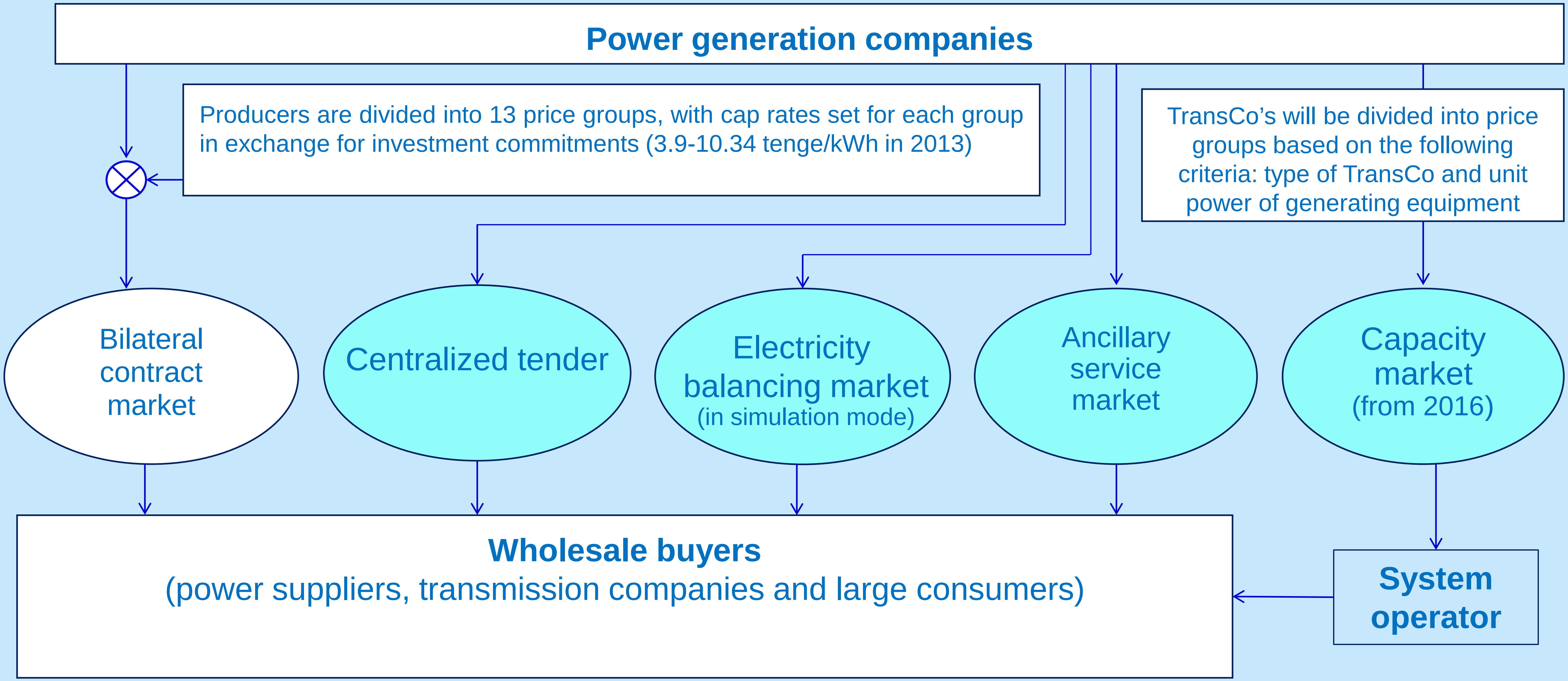
Advanced model of a competitive retail electricity market



Retail market players include:

- **Power generation companies;**
- **Regional Power Distribution Companies;**
- **Power transmission companies;**
- **Last resort supplier;**
- **Energy providers;**
- **Retail consumers.**

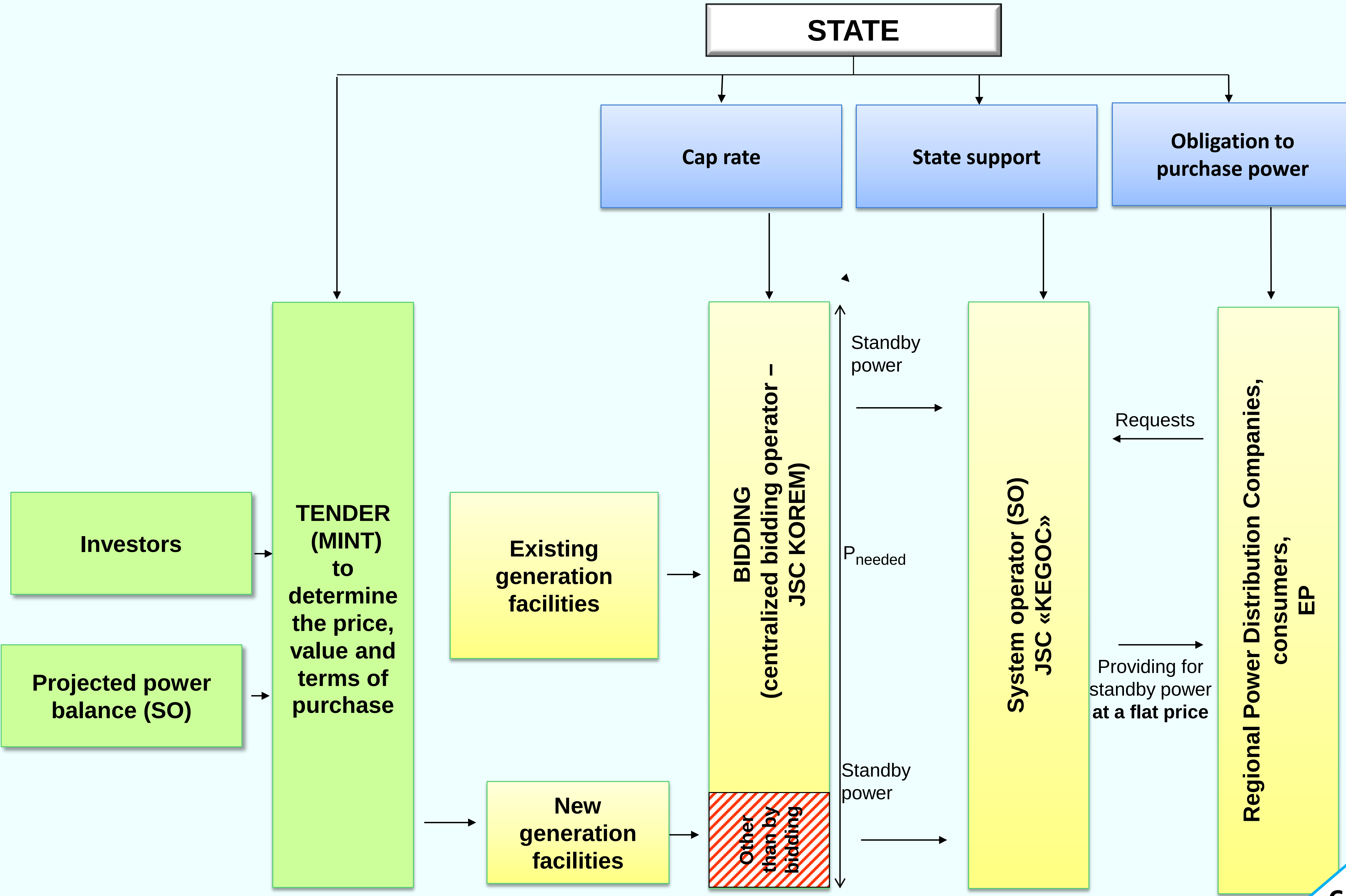
Current model of the electricity market



CAP RATES (under Resolution of the Kazakh Government No.392 dated March 25, 2009)

	2009	2010	2011	2012	2013	2014	2015
Group 1 (GRES-1 plant, 2, UPS) (3)	3.6	4.68	5.6	6.5	7.3	8.0	8.8
Group 2 (ZhGRES) (1)	5.9	6.5	6.9	7.9	8.3	8.5	8.7
Group 3 (Astana - Energy, KarEnergoTsentr, Pavlenergo CHP-2, 3, UKTETS, Ars Mitl) (5)	4.3	4.94	5.4	5.9	6.4	6.9	7.5
Group 4 (Kar GRES-2, Aluminum of Kazakhstan, Balkhash CHP, Zhezkazgan CHP) (4)	3.5	3.8	4.1	4.55	5.1	5.5	6.0
Group 5 (Petrop CHP, Ridder CHP, JSC SSGPO) (3)	3.6	4.1	4.8	5.45	6.25	7.15	8.05
Group 6 (Corp CHP KarGRES-1 Jet-7) (3)	6.3	7.3	7.7	7.9	8.1	8.2	8.3
Group 7 (3 energoort, Atyrau CHP , Aktobe CHP TarazEnergoTsentr PCG Kyzylorda - energy center) (5)	4.9	5.4	5.9	6.3	6.7	7.0	7.3
Group 8 (Kentau CHP, Tekeliysky CHP, LLP Shakhtynsk CHP, JSC Pavlodarenergo, SCE Teplokommunenergo) (5)	4.5	4.95	5.4	5.98	6.6	7.2	7.5
Group 9 (Arkalyk CHP, Ural CHP, Kostanai CHP) (3)	5.28	5.56	5.88	6.28	6.7	7.12	7.6
Group 10 (AlES CHP-1, CHP-2, CHP-3, Kapsh. HPP)(1)	5.74	6.74	7.1	7.4	7.8	8.2	8.6
Group 11 (MAEC-Kazatomprom) (1)	7.23	7.23	7.23	9.54	10.34	10.96	11.62
Group 12 (LLP Zhanazhol GTPP, AZF CHP, JSC TNK Kazchrome, LLP Ural gas turbine TPP, LLP Crystal Management) (4)	5.3	5.8	6.4	7.0	7.7	8.4	8.8
Group 13 (Buh.HPP, UK HPP Shard. HPP, Shulb. HPP, JSC Moynak HPP) (5)	2.79	3.0	3.3	3.63	3.9	4.3	4.5

Electric power market model



Enactment of the Law will allow switching to a new model (starting from 2015)