CAREC

Energy Sector Coordinating Committee Meeting

Licensing & Monitoring Experiences

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Outline

- **Licensing activity**
- **Monitoring**
- **Monitoring Outcomes**
- **Incentive Regulation**
- **Electricity Market**

Licenses

• The Energy Regulatory Authority (ERA) is an organization with duties to regulate electricity and heat generation, transmission, distribution, dispatching and supply of energy in conformity with the related laws and legislation.

According to the Energy Law, the Authority shall have the following full powers concerning licenses:

- To issue, amend, suspend and revoke licenses in accordance with this law;
- To set operational and licensing terms and requirements for licensees;
- To monitor compliance with these terms and requirements;

• **ERA issues licenses for:**

- Electricity & heat generation;
- Electricity & heat transmission;
- Dispatching;
- Electricity & heat distribution;
- Electricity & heat supply
- Import and export of electricity;
- Construction of power stations, transmission & distribution lines;

License Holders

- **License Holders - 74:**
  - National Dispatching Company-1
  - Co-generation Power Plant -7
  - Heat only Boiler-3
  - Electricity Transmission Company – 3
  - Electricity distribution/supply company -12
  - Heat distribution/supply company -30
  - Electricity importing company-9
  - Construction - 7
- **Types of property:**
  - State & municipally owned – 58
  - Private – 11
  - Joint Venture – 3

License Holders

- **Energy Construction Licenses (new capacity):**
  - Pumped Storage – 50 MW
  - Wind Farm1 – 50 MW
  - "Darkhan" Thermal Power Plant/extention – 30 MW

  } For public use

  - Wind Farm 2 – 250 MW – for export
  - Thermal Power Plant 1 – 12 MW
  - Thermal Power Plant 2 – 12 MW
  - Diesel Power Plant – 24 MW

  } For own use

Monitoring

- Reporting requirements defined in the license conditions.
- Permanent data from Licensees':
  - Monthly – debts, receivables, station own use for CHP, transmission & distribution losses, data on market activity
  - Quarterly – Financial statements, Continuty of Supply Indices, number of shutdowns of units at CHP etc.
  - Yearly – Report on compliance with license conditions, Financial statements
  - Other nessessary information, which shall be requested by the regulator
- Site inspections, Financial auditing

Monitoring

- Quarterly analyses and assessment of performance of Licensees'and Markets.
- Quarterly Financial benchmarking (profit level, efficient utilization of the assets, borrowing and payment capability, rate of return etc.)
- Assessment of technical or reliability performance and consumer services, billing, complaint handling, etc.
- Discussion at the Board of Regulators
- Rating of Licensees
- Reporting to Licensees' Owners (Ministry of Finance, Ministry of Energy, State Property Committee, Municipality, Boards of Representatives)
- Make available performance indicators of Licensees' for the public

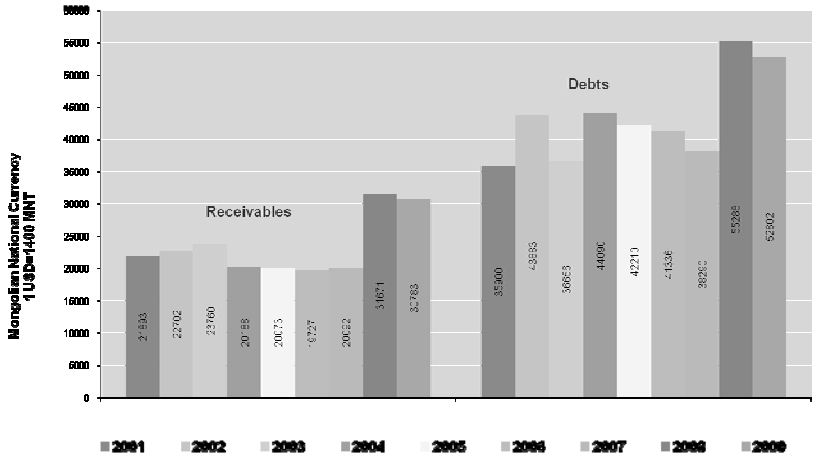
Rating of the largest energy companies in 2009

Rating	Companies
I	"Ulaanbaatar District Heating Network " State Owned Joint Stock Company
II	"Thermal Power Plant #4" State Owned Joint Stock Company
III	"Baganuur & South Eastern Regional Electricity Distribution Network " State Owned Joint Stock Company
IV	"Eastern Energy System " State Owned Joint Stock Company
V	"Nalaikh Heating Station" State Owned Joint Stock Company
VI	"Thermal Power Plant #2" State Owned Joint Stock Company
VII	"Darkhan District Heating Network" State Owned Joint Stock Company
VIII	"Darkhan & Selenge Electricity Distribution Network"
IX	"Baganuur Heating Station" State Owned Company
X	"Dalanzadgad Thermal Power Plant" State Owned Joint Stock Company
XI	"Ulaanbaatar Electricity Distribution Network" State Owned Joint Stock Company
XII	"Darkhan Thermal Power Plant" State Owned Joint Stock Company
XIII	"Erdenet Thermal Power Plant" State Owned Joint Stock Company
XIV	"Western Energy System" State Owned Joint Stock Company
XV	"Erdenet-Bulgan Electricity Distribution Network" State Owned Joint Stock Company
XVI	"Thermal Power Plant # 3" State Owned Joint Stock Company
XVII	"Central Regional Electricity Transmission Grid" State Owned Joint Stock Company

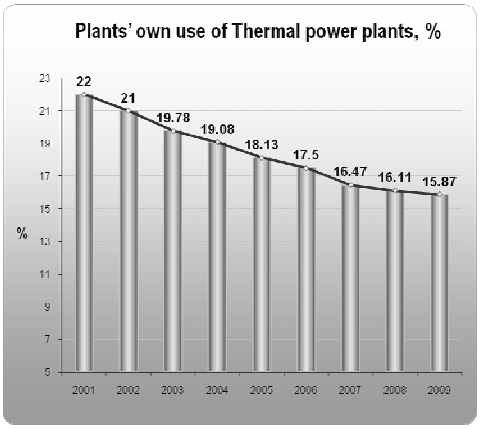
Enforcement

- Written note to the regulated entity about non-compliance
- Discussion at the Meeting of the ERA Board of Regulators and the resolution or decision to remedy the violation within certain period of time shall be delivered to the Licensee.
- Fining the Licensee
- Suspending the license
- Revoking the license (if any)
- Publishing the punisment in the media

Receivables and Debts of the largest energy companies



Power Plants' Own Use of Central Energy System



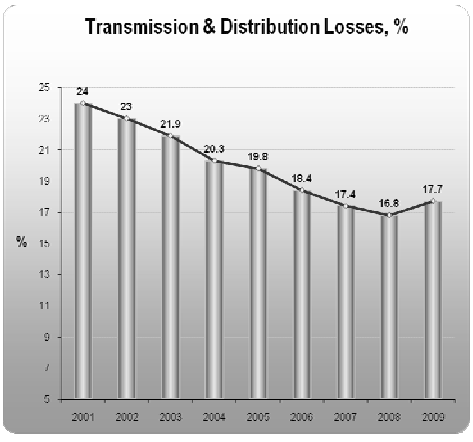
Saved amount:

- in 2002 – **640** thous. $
- in 2003 – **1.3** million $
- in 2004 – **900** thous. $
- in 2005 – **1.4** million $
- in 2006 - **920** thous. $
- in 2007 - **1.6** million $
- in 2008 - **700** thous. $
- in 2009 - **535** thous. $

Total saved amount:

8 million USD

Transmission & Distribution Losses

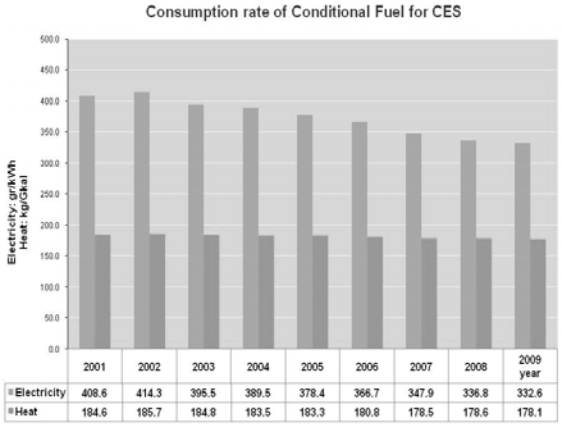


Saved amount:

- in 2003 - **1.25** million $
- in 2004 - **2.0** million $
- in 2005 - **1.17** million $
- in 2006 - **2.1** million $
- in 2007 - **1.6** million $
- in 2008 - **1.3** million $

Total saved amount:
9 million USD

Consumption rate of Conditional Fuel for CES



	2001	2002	2003	2004	2005	2006	2007	2008	2009 year
Electricity	408.6	414.3	395.5	389.5	378.4	366.7	347.9	336.8	332.6
Heat	184.6	185.7	184.8	183.5	183.3	180.8	178.5	178.6	178.1

Savings:

- For electricity – **76** gr/kWh
- For heat – **6.6 kg/Gkal**

Total saved coal:
587 thous. tonn

Incentive Regulation

- **Performance Agreements signed with the Licensees**
- In 2007 - 1 company (1 distribution company)
- In 2008 – 3 companies (1 generator, 2 distribution companies)
- In 2009 – 5 companies (1 generator, 3 distribution companies)
- In 2010 – 4 companies (3 generators, 1 distribution company)

- **Key Performance Indicators:**
- Debts & Receivables, financial ratios
- Plant's own use
- Transmission & distribution losses
- Number of outages of units' at Power plants
- Continuty of Supply Indices: SAIFI, SAIDI, CAIDI
- Average collection period
- Customer satisfaction

Incentive Regulation

- **Key Performance Indicator – Distribution Losses (Example)**

Distribution losses, %	Adjustment to Social Cost of a company, %	Change in Social Cost (Reward or Penalty)
10.9 or less	+20 %	+ 40 mln. ₮
11.0 to 11.4	+10 %	+ 20 mln. ₮
11.5 to 12.0	+5 %	+ 10 mln. ₮
12.1 to 12.2	**0**	**0**
12.3 to 12.7	-5 %	- 10 mln. ₮
12.8 to 13.0	-10 %	- 20 mln. ₮
13.1 or more	-20 %	- 40 mln. ₮

- **Total Rewards for 4 companies in 2009 – 570 thous.$**
- **Penalty for 1 company in 2009 – 45 thous.$**

Electricity Market

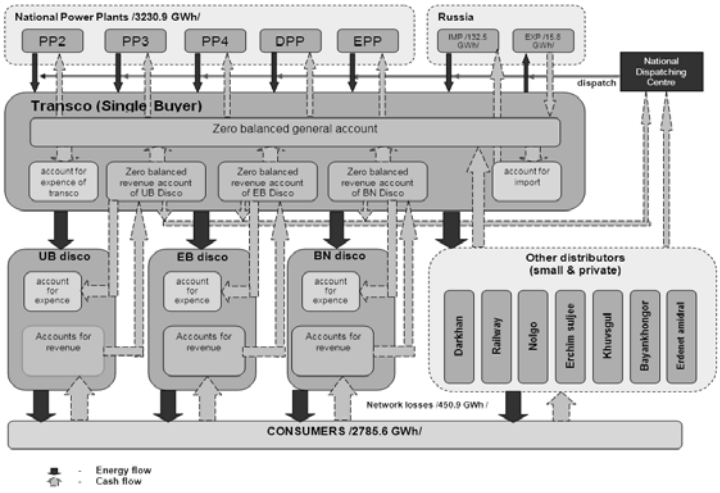
In the Central Energy System electricity traded through the main market "Single Buyer Model" and two other accompanying markets: Spot and Competitive.

❖ *Single Buyer Model:* introduced in 2002, which has peculiarity of using automatic cash allocation mechanizm.

❖ *Spot Market:* introduced in 2006 among generators. In the Spot Market deviations between actual quantities of energy generated and quantities of energy production specified by the Dispatcher are traded.

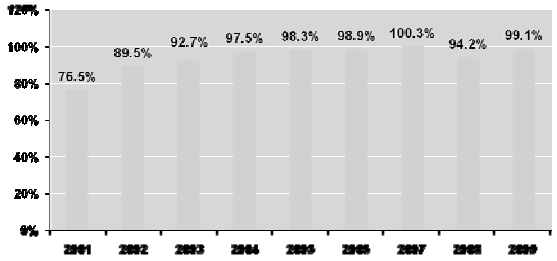
❖ *Competitive Market:* introduced in 2007. In the Competitive Market electricity growth form planned is auctioned among generators. The generators who offered to reduce the generation tariff by a higher percentage will be ranked at first.

Electricity Market: Single Buyer Model

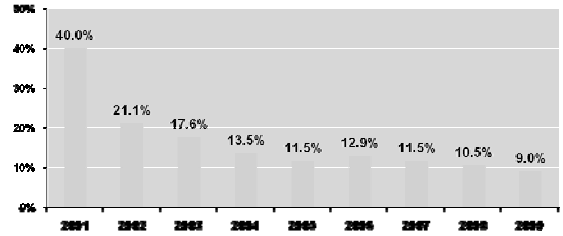


Electricity Market: Single Buyer Model

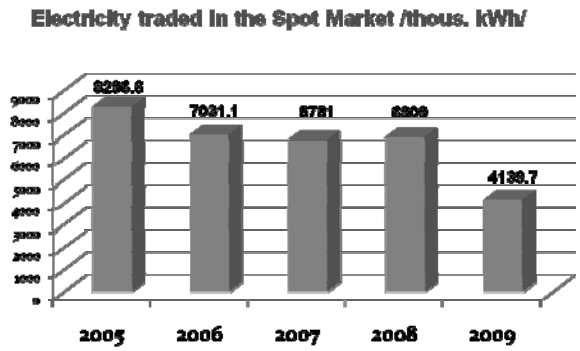
❖ **Electricity payment rate to the generators**



❖ **The rate of offsets in payment**



Electricity Market: Spot Market



By operating the Spot market, the generators will try not to breach the dispatching graph (plan) and in case of breaching it, they will bear some responsibility as per the market-oriented economical principle. In other words, the trade between generators is done by selecting the highest tariff of the companies participating in the market.

THANK YOU FOR YOUR ATTENTION !