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# ***KEK OVERVIEW, ISSUES and CHALLENGES***

***Presented at:***

**NARUC/ERRA TRAINING for UNMIK/KOSOVO ENERGY  
SECTOR**

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KORPORATA ENERGJETIKE E KOSOVËS Sh.a.  
KOSOVO ENERGY CORPORATION J.S.C.  
ENERGETSKA KORPORACIJA KOSOVA D.D.

# Overview

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- **Background**
- **Current and Future Challenges**
- **The Way Forward**



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# Background

- UNMIK/Kosovo has a relatively small power system:
  - **355,710** consumers, among which:
    - About 305,000 residential, 50,000 commercial, 710 other consumers
    - There are about 260 industrial customers (included in other)
  - Wholesale tariff for electricity is 3.35 €Cents/kWh, and average end-use tariff is about 5 €Cents/kWh
  - **916 MW** internal “constrained” peak demand **(2006)**
  - **970 MW** internal “unconstrained” peak demand **(2006)**
  - **4,003 GWh** domestic electricity demand **(2006)**
  - **276 GWh** Export **(2006)**
  - **280 GWh** Transmission Losses **(2006)**
  - Demand was met by Coal generation (3,871 GWh), Imports (561 GWh) and hydro (127GWh) generation **(2006)**



# Background (Cont'd.)

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**Kosovo Electricity Corporation (KEK) has Licenses for:**

- **Mining**
- **Generation**
- **Distribution**
- **Supply**



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# Background (Cont'd)

- Total KEK installed capacity in the system is 1,478 MW:
  - 800 MW Plant A (5 units – 65 to 210 MW each, 36 to 45 years old)
  - 678 MW Plant B (2 units – 339 MW each, 23 & 24 years old)
  - Hydroelectric generation is 32 MW
- Total available operating capacity is 870 MW:
  - 270 MW Plant A (A3 & A4 each 135 MW)
  - 600 MW Plant B (B1 & B2 each 300 MW)
- KEK also owns and operates small Hydro generation with less than 1 MW of capacity.
- Total Coal production in 2006 was 6.7 million tons.
- KEK's purchase power budget for 2007 is €45 million.
- The cost of purchase power has increased from €55/MWh in 2006 to about €100/MWh in 2007.

UNMIK/Kosovo electric system operates without reserves. Therefore, if a generator is lost, the load shedding is exercised to balance the supply and demand.



# Current Issues and Challenges

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- **Energy Balance, Billing and Collections**
- **Demand Projections for 2008 and KEK's Plan for Serving the Load**
- **Tariff Filing for 2008**



# Energy Balance

(Energy in MWH)

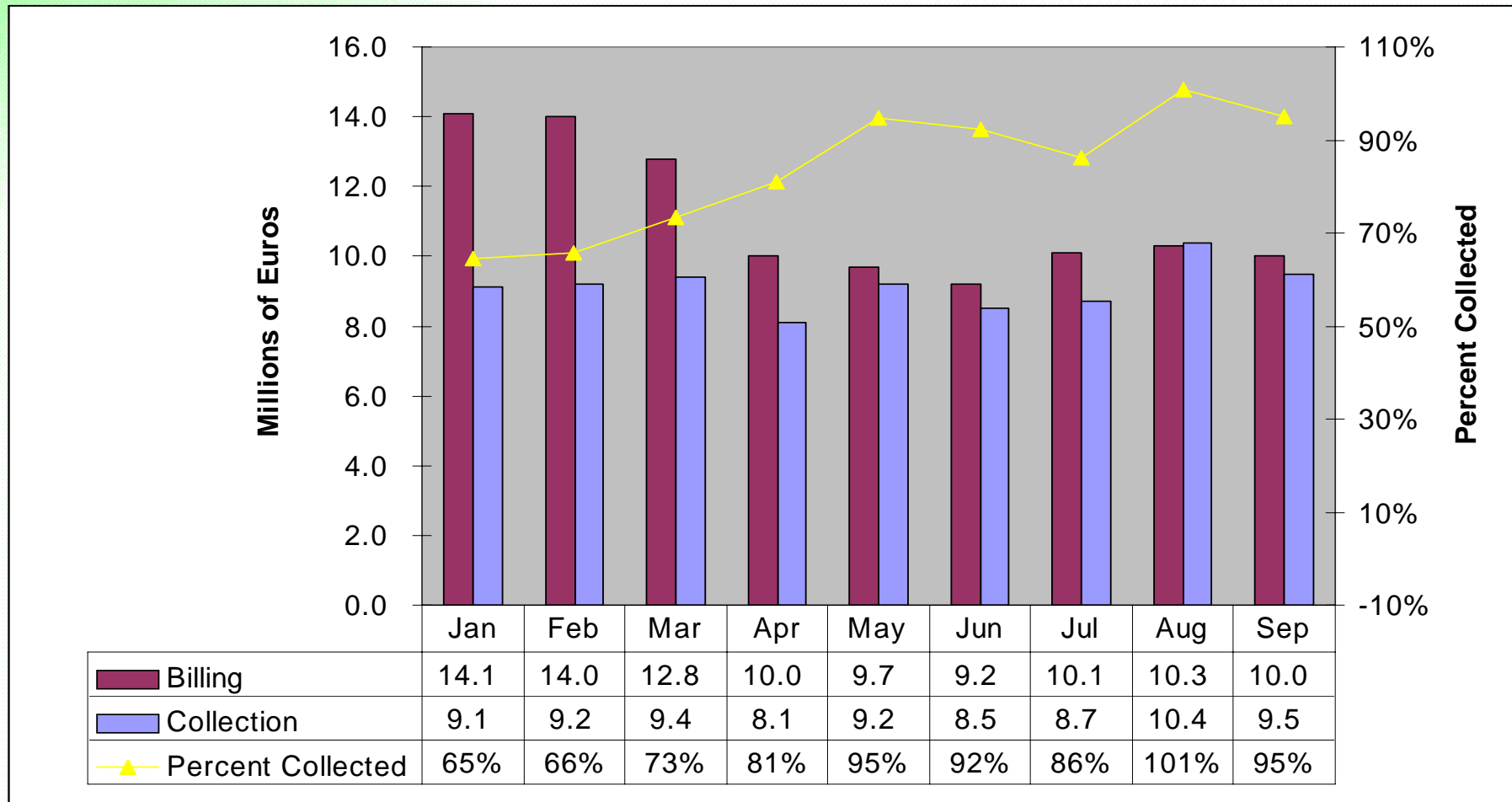
	Month of September 2007	1st 9 Months of 2007
Energy Delivered to Distribution	264,781	2,900,225
Less: Technical Losses	40,002 15%	489,830 17%
Less: Energy Delivered to Enclaves	23,850 9%	202,148 7%
Less: Internal Consumption	6,448 2%	51,189 2%
Plus: Energy to 110 KV Customers	27,457	118,731
Equals: Energy Available for Sale	221,938	2,275,790
Less: Energy Billed	181,087 82%	1,640,591 72%
Equals: Commercial Losses	40,851 18%	635,199 28%

**Value of 635,199 MWH @ 5 €cents/ kWh = €32 Million**



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# Billing and Collection 2007



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# Demand Projections for 2008 and KEK's Plan for Serving the Load

- Due to Transmission and Distribution networks' constraints, the maximum load that KEK can serve is 880 MW (2006 peak was 916).
- **KEK projections are that the demand for 2008 would not substantially increase, if Ferronickel demand is excluded (100MW).**
- The minority areas' growth is unknown, and North Mitrovica's demand alone is about 60MW.
- KEK's plan is to have 700 MW net (including 32 MW Hydro) generation capacity available at all times.
- To serve the load above 700 MW would require: **a) purchase power; or b) additional coal production**



## VII. Tariff Filing for 2008

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- The ERO has requested that KEK file for the 2008 tariff review before the end of October 2007, with the expected tariff change going into effect on January 1<sup>st</sup> 2008.
- In its reply to ERO, KEK has requested that ERO delay the filling until December 2007 and effective date of tariff change to be April 2008.
- KEK's request was formed taking into account the political sensitivities during election and status determination, as well as trimming of the tariff change during the high tariff season (KEK's response to ERO was provided to the Board).
- The current tariffs are shown in the following slide.



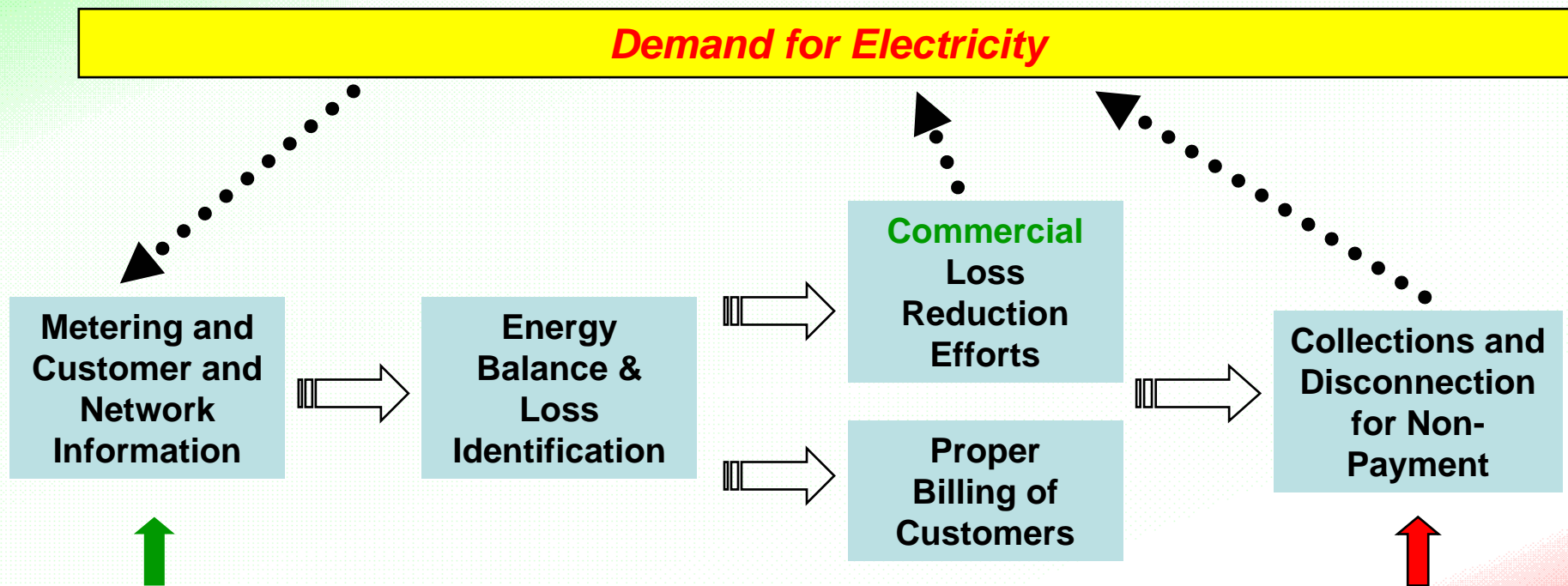
Tariff Group	Voltage level of supply	Tariff elements	Unit	Time-of-day (a)	ERO Proposed	
					High season 1 October - 31 March	Low season 1 April - 30 September
0	110kV	Standing (customer) charge	€/customer/year		34.00	
		Standing (demand) charge	€/kW		519.00	519.00
		Active energy (P), of which:	€/kWh	High tariff	6.03	1.78
			€/kWh	Low tariff	2.50	1.47
Reactive energy (Q):c	€/kVArh					
1	35kV	Standing (customer) charge	€/customer/year		30.00	
		Standing (demand) charge	€/kW		540.00	540.00
		Active energy (P), of which:	€/kWh	High tariff	6.30	2.73
			€/kWh	Low tariff	3.33	2.47
Reactive energy (Q): c)	€/kVArh		0.04	0.04		
2	10kV	Standing (customer) charge	€/customer/year		34.00	
		Standing (demand) charge	€/kW		466.00	466.00
		Active energy (P), of which:	€/kWh	High tariff	7.07	3.15
			€/kWh	Low tariff	3.81	2.87
Reactive energy (Q): c)	€/kVArh		0.32	0.32		
3	0.4kV Category I (large reactive power consumers)	Standing (customer) charge	€/customer/year		29.00	
		Standing (demand) charge	€/kW		270.00	270.00
		Active energy (P), of which:	€/kWh	High tariff	7.85	4.36
			€/kWh	Low tariff	4.95	4.11
Reactive energy (Q): c)	€/kVArh		1.53	1.53		
4	0.4kV Category II	Standing (customer) charge	€/customer/year		34.00	
		Active energy (P)	€/kWh	Single tariff	9.68	6.26
		Active energy (P), of which:	€/kWh	High tariff	11.64	7.63
			€/kWh	Low tariff	5.82	3.81
5	0.4kV (domestic 2-rate meter) (b)	Standing (customer) charge	€/customer/year		24.00	
		<200 kWh/month (First Block)	€/kW		0.00	0.00
		200-600 kWh/month (Second Block)	€/kW		0.00	0.00
		>600 kWh/month (Third Block)	€/kW		0.00	0.00
		<200kWh/month (First Block) of which:	€/kWh	High tariff	4.42	3.17
			€/kWh	Low tariff	2.21	1.58
		200-600 kWh/month (Second Block) of which:	€/kWh	High tariff	5.97	4.28
			€/kWh	Low tariff	2.99	2.14
		>600 kWh/month (Third Block) of which:	€/kWh	High tariff	8.67	6.21
			€/kWh	Low tariff	4.33	3.11
6	0.4kV (domestic, 1-rate meter) (b)	Standing (customer) charge	€/customer/year		24.00	
		<200 kWh/month (First Block)	€/kW		0.00	0.00
		200-600 kWh/month (Second Block)	€/kW		0.00	0.00
		>600 kWh/month (Third Block)	€/kW		0.00	0.00
		<200kWh/month (First Block)	€/kWh	Single tariff	3.94	2.82
		200-600 kWh/month (Second Block)	€/kWh	Single tariff	5.32	3.81
		>600 kWh/month (Third Block)	€/kWh	Single tariff	7.72	5.53
7	0.4kV (domestic unmetered)	Estimated consumption <400kWh/month	€/customer/month		20.00	
		Estimated consumption 400-800kWh/month	€/customer/month		36.00	
		Estimated consumption >800kWh/month	€/customer/month		61.00	
8	Public lighting	Standing (customer) charge	€/customer/year		34.00	
		>600 kWh/month (Third Block)	€/kW	Single tariff	7.82	7.82



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# The Way Forward

## The Fundamentals.....



*This is where we should start to improve collections and restore the energy system*

*This has been the traditional focus of the donor community, lacking adequate attention on the earlier 'building blocks'*



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# The Way Forward (Cont'd.)

*Plans have been developed and are being implemented to provide for energy security and sustainability in UNMIK/Kosovo at affordable costs.*

- Given the experience in other situations similar to UNMIK/Kosovo, it is very reasonable to expect that KEK should be able to account for 100% of its energy received and delivered to customers in late 2008, once the 10/0.4kV meters are installed;
- Open SSW and Sitnica mines on schedule;
- The rehabilitation of the existing generation capacity will reduce need for purchase power;
- Remove bottlenecks to serve the consumer demand;
- Contract or arrange for reserve capacity to provide continuous service;
- Strict disconnection regime for non-payment;
- It is expected that KEK's collection rate will reach 95% before the end of this decade;
- Customer accountability will result in reduction in electric power demand;
- Include all mining and generation assets in UNMIK/Kosovo C tender
- Plans are to privatize Distribution by 2010.



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