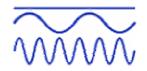




# ENERGY DEMAND AND SUPPLY

NARUC - Energy Regulatory Partnership Program ERC, R. MACEDONIA & PSB, VERMONT Montpelier, Vermont, May 23-27, 2005

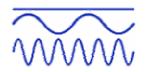
Radomir Cvetkovic, Vice-President, ERC





### THE REPUBLIC OF MACEDONIA'S ENERGY BALANCE

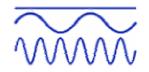
- ➤ In accordance with Article 18 of the Energy Law ("Official Gazette of the Republic of Macedonia" No.47/97), energy demand and the possibilities of meeting such demand are specified by the Republic of Macedonia's Energy Balance.
- The Republic of Macedonia's Energy Balance is developed by the Ministry of Economy, and is approved by the Government of the Republic of Macedonia, after obtaining previous opinion from the Energy Regulatory Commission of the Republic of Macedonia.
- The country's Energy Balance is an annual planning document determining the needs, i.e. the demand for all types of energy, and the possibilities for meeting such demand for the performance of the economic and public life in the country.





# MANNER AND PROCEDURE OF ANNUAL ENERGY BALANCE DEVELOPMENT

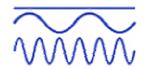
- Collecting data on the needs for specific energy types in the forthcoming year and demand meeting in the current year, expressed on the part of larger energy consumers, producers and suppliers.
- Processing and analyzing data obtained.
- Developing a Proposed Energy Balance.
- Presenting the Proposed Energy Balance on a public debate in order to complete its definition with inputs from major energy consumers, producers, and suppliers.
- Obtaining an opinion on the Energy Balance from the Energy Regulatory Commission of the Republic of Macedonia.
- Adopting the Energy Balance by the Government of the Republic of Macedonia.





### **CONTENTS OF THE ENERGY BALANCE**

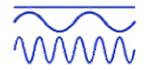
- ➤ Basic assumptions and characteristics of the Energy Balance (a comparative analysis of energy consumption in the previous year, and anticipated consumption for the next year)
- Needs of specific energy types, accomplishments, and generation, in particular:
- Electricity,
- Oil and oil derivatives,
- Coal,
- Coke,
- Natural gas,
- Geothermal energy, and
- Fire-wood.
- Assessment on necessary foreign currency funding for the realization of the Energy Balance





### **GROSS ENERGY CONSUMPTION**

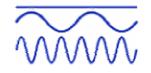
	200	200	Index		
	Quantity	10³TJ	Quantity	10 <sup>3</sup> TJ	
1. Electricity (10 <sup>6</sup> κWh)					
a) production	6209	22,40	6021	21,72	96,97
- hydro	1477	5,33	1355	4,89	91,74
- thermal	4732	17,07	4666	16,83	98,60
b) import	1231	4,44	2191	7,90	177,98
c) export	-	-	-	-	-
d) consumption (a+b+c)	7440	26,84	8212	29,63	110,38
2. Coal (10 <sup>3</sup> tons)		,			•
a) production	7364	55,96	7382	56,09	100,23
b) import	142	1,08	178	1,35	125,35
c) export	-	_	-	, <u> </u>	-
d) consumption (a+b+c)	7506	57,04	7560	57,45	100,72
3. Coke (10 <sup>3</sup> tons)		,			
a) production	_	_	_	_	-
b) import	109	3,20	117	3,44	107,50
c) export	] -		-	_	-
d) consumption (a+b+c)	109	3,20	117	3,44	107,50





### **GROSS ENERGY CONSUMPTION**

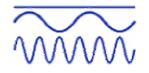
	2004		2005		Index	
	Quantity	103TJ	Quantity	10 <sup>3</sup> TJ		
4. Oil derivatives (10 <sup>3</sup> tons)						
a) production	767	33,79	969	42,69	126,33	
b) import	153	6,74	-	-	-	
c) export	201	8,85	-	-	-	
d) consumption (a+b+c)	719	31,67	779	34,32	108,35	
5. Natural gas (10 <sup>6</sup> м <sup>3</sup> )						
a) production	-	-	-	-	-	
b) import	67,88	2,27	100	3,35	147,60	
c) export	-	-	-	-	-	
d) consumption (a+b+c)	67,88	2,27	100	3,35	147,60	
6. Fire-wood (10 <sup>3</sup> м <sup>3</sup> )		·				
a) production	650	7,08	700	7,62	107,69	
b) import	-	-	_	-	-	
c) export	_	-	_	-	-	
d) consumption (a+b+c)	650	7,08	700	7,62	107,69	
7. Geothermal energy (10 <sup>3</sup> TJ)		0,30		0,32	106,67	
GROSS CONSUMPTION		111,33		119,29	107,15	
a) own production (%)	(61,68%)	68,67	(57,78%)	68,92		
b) import (%)	(38,32%)	42,66	(42,22%)	50,37		





### THE 2005 PLAN: THE ELECTRICITY NEEDS

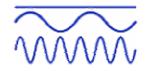
	Million KWh
I. DIRECT CONSUMERS	2299
II. DISTRIBUTION CONSUMERS	4913
Industrial consumers	746
Households	3400
Other consumers	767
III. NETWORK LOSSES	1000
- distribution network	800
- transmission network	200
EXPORT	0
TOTAL NEEDS	8212





### PLAN FOR MEETING THE ELECTRICITY DEMAND

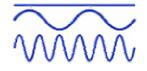
Sources	Million KWh		
HYDRO POWER PLANTS	1355		
THERMAL POWER PLANTS	4666		
TOTAL HPPs + TPPs	6021		
Import	2191		
TOTAL AVAILABLE	8212		





### **2005 NEEDS FOR OIL DERIVATIVES**

Derivative/user	2004 realization	2005 balance	Index	Structure
1. Motor petrol	123230	135000	109,55	17,33
- MP-96	37880	45000	-	-
- UMP-90	5500	6000	-	-
- UMP-95	79850	84000	-	-
2. Diesel fuel	336165	375000	111,55	48,14
-D	206265	240000	-	-
-UL	129900	135000	-	-
3. LOG (liquid oil gas)	30330	31000	102,21	3,98
4. Crude oil	216990	225000	103,69	28,90
5. Jet fuel	12070	13000	107,70	1,65
TOTAL	718785	779000	108,38	100

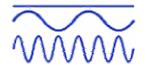




### **2005 COAL NEEDS**

(in tons)

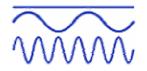
Consumers	Hard coal		Brown coal		Lignite		Total		Index
	2004 realization	2005 demand	2004 realization	2005 demand	2004 realization	2005 demand	2004 realization	2005 demand	
1. Industrial consumers	52283	82537	-	-	238446	218170	290729	300716	103,44
2.TPPs - TPP Bitola I,II,III - TPP Oslomej	-	-	-	-	<b>7207431</b> 6504333	<b>7250000</b> 6250000	<b>7207431</b> 6504333	<b>7250000</b> 6250000	100,59
3. Broad consumption	-	-	-	-	703098 <b>8000</b>	991000 <b>90000</b>	703098 <b>8000</b>	991000 <b>90000</b>	112,50
TOTAL	52283	82537			7453877	7468170	7506160	7559716	100,71





### **2005 NATURAL GAS NEEDS**

- ➤ Realized consumption of natural gas of about 67,8 million m³ in 2004;
- ➤ Anticipated consumption of natural gas of approximately 100 million m³ for 2005;
- The total number of industrial consumers of natural gas in the Republic of Macedonia is approximately 23.





# THANK YOU FOR YOUR ATTENTION

Contact: radomir.cvetkovic@erc.org.mk