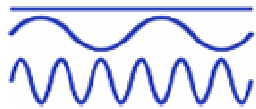
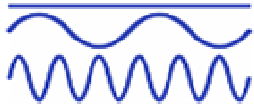


***NARUC Energy Regulatory Partnership Program  
ERC, R. Macedonia – PSB, Vermont  
Vermont, June 18-25, 2004***

**Prepared by: Commissioners  
Branko Brajkovski & Murat Ramadani**

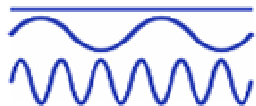


# ***Affordability of Energy Services for the Republic of Macedonia***



## ***TOPICS:***

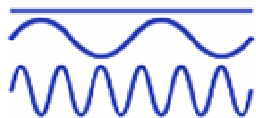
- Annual generation and consumption of electricity and natural gas consumers categories
- Percentage of income paid by an average Macedonian for utility services
- Total number of subscribed consumers receiving subsidies and benefits
- Government support mechanisms, low income programs ( best practices and efficiencies, and reducing cross-subsidies )
- Other



***Annual generation and consumption of electricity at 2003***  
***( data from integrated utility company – ESM )***

	GW h
Hydro plants	1.218
Termo plants	4.902
Imports	953
<b>Total Energy on 110 kV</b>	<b>7.074</b>

	GW h
Eligible consumers	1.531
Looses on transmission	233
<b>Energy on 35 kV</b>	<b>5.319</b>



ENERGY REGULATORY COMMISSION  
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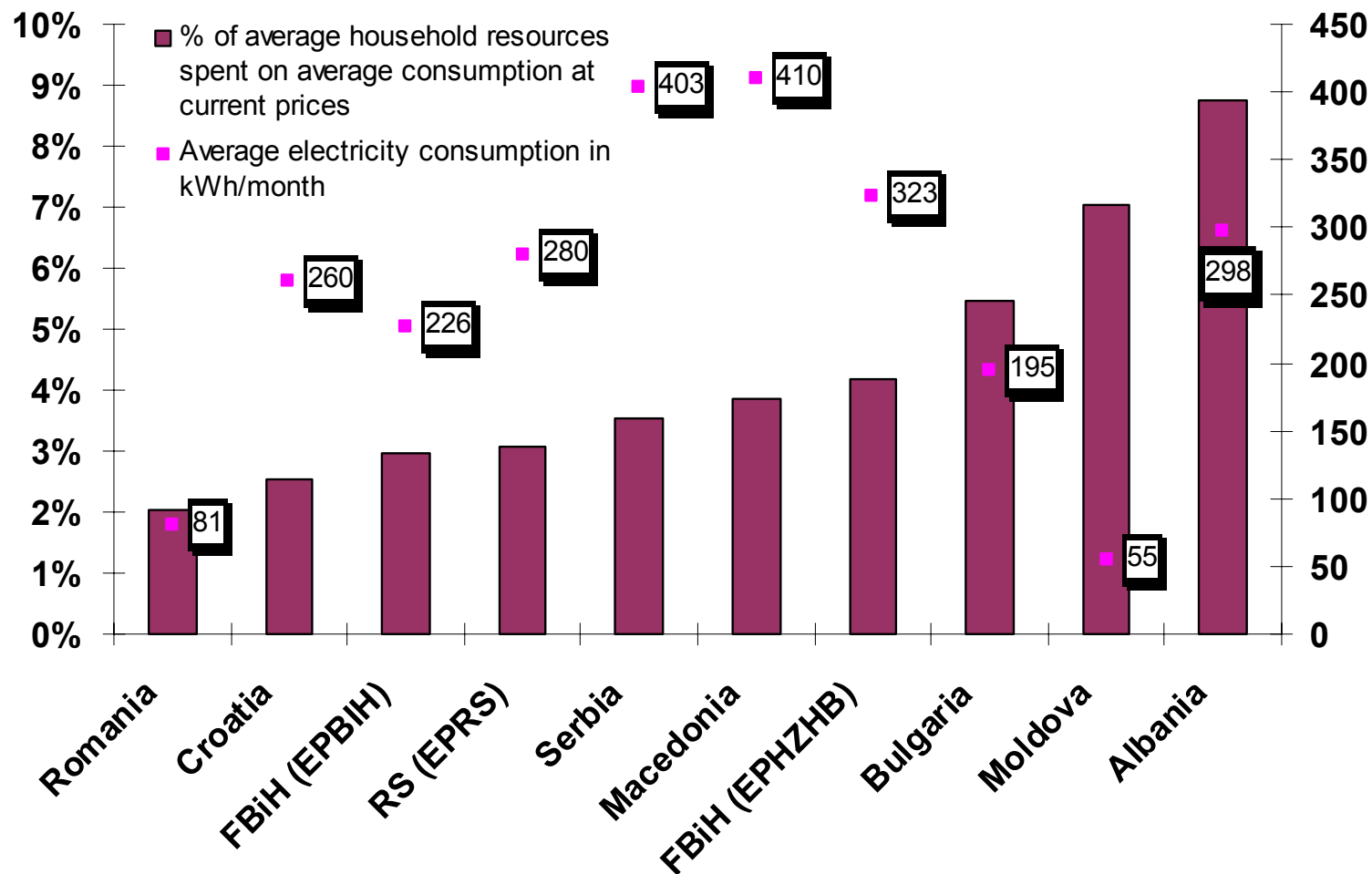
	GW h
Energy consumption on 35 kV	48
Small hydro plants	151
<b>Energy on 10 kV</b>	<b>5.422</b>
Energy Consumption on 10 kV	707
<b>Energy on 0.4 kV</b>	<b>4.715</b>

	GW h
Households ( 629.000 )	2.901
I tariff grade	104
II tariff grade	533
Utility lighting	83
Non evidential energy	10
Distribution losses	1.082
<b>Total energy consumption on 0.4 kV</b>	<b>4.715</b>

## ***Eligible Consumers for electrical energy at 2003***

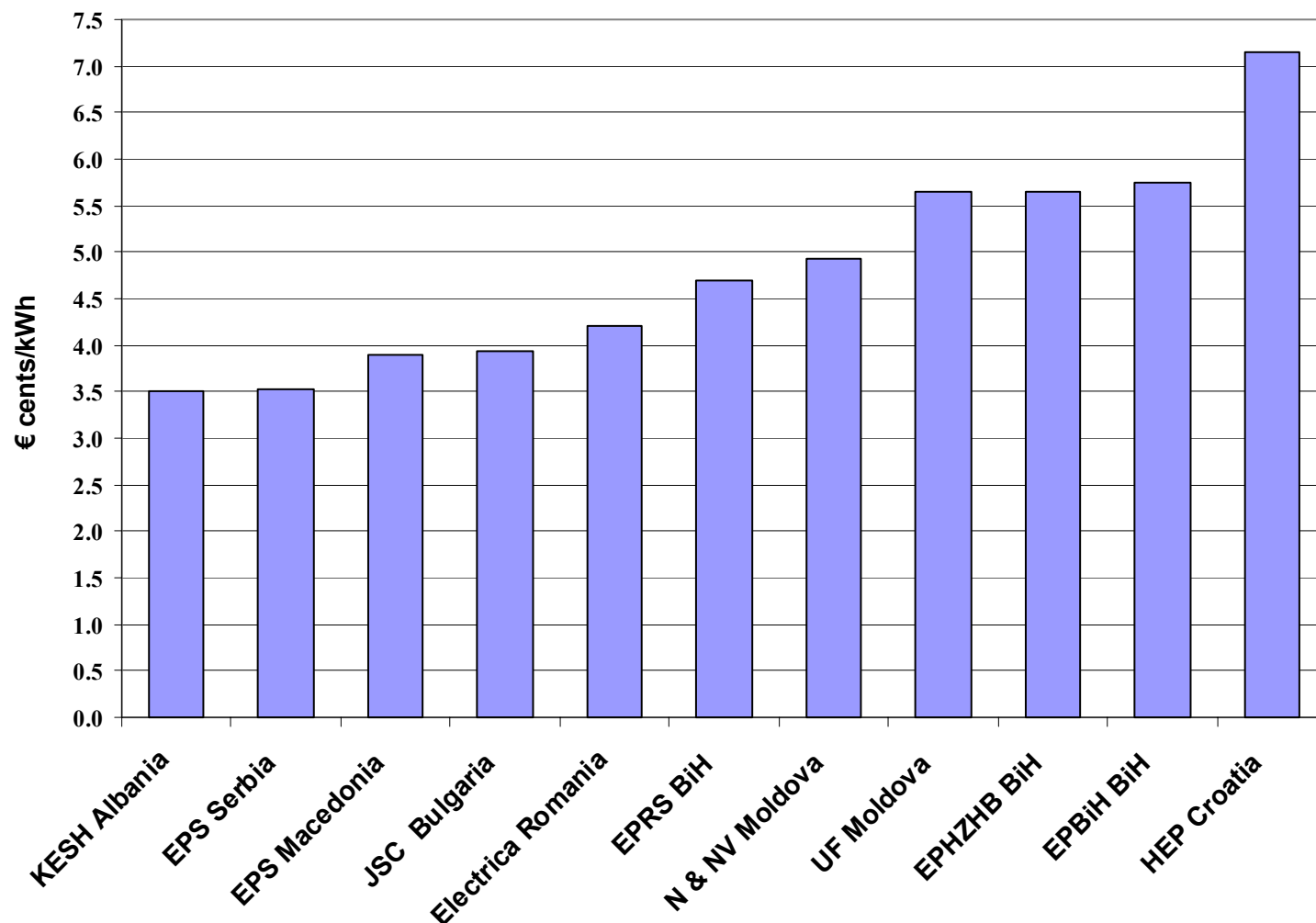
	GW h
SILMAK (JUGOHRUM)	483
OHIS	14
USJE	89
MHK DOO / INVESTAS	38
ZTP	17
ALUMINA	13
BUCIM / SEMKORP	14
FENI INDUSTRI	438
OKTA	61
SUVENIR	1
HEMTEKS	0.14
MAKSTIL	194
TOPLA VALAVNICA	10
LADNA VALAVNICA	24.2
RZ TOPILNICA	0
ENERGETIKA	7.2
REK OSLOMEJ	25
REK BITOLA	103
<b>TOTAL</b>	<b>1531</b>

## Average Household Consumption and Affordability, current prices, 2002



The data from this slide is taken from the IPA Energy Consulting presentation of Douglas Caskie Sofia energy meeting , October 2003.(Energy Reform and social safety Net)

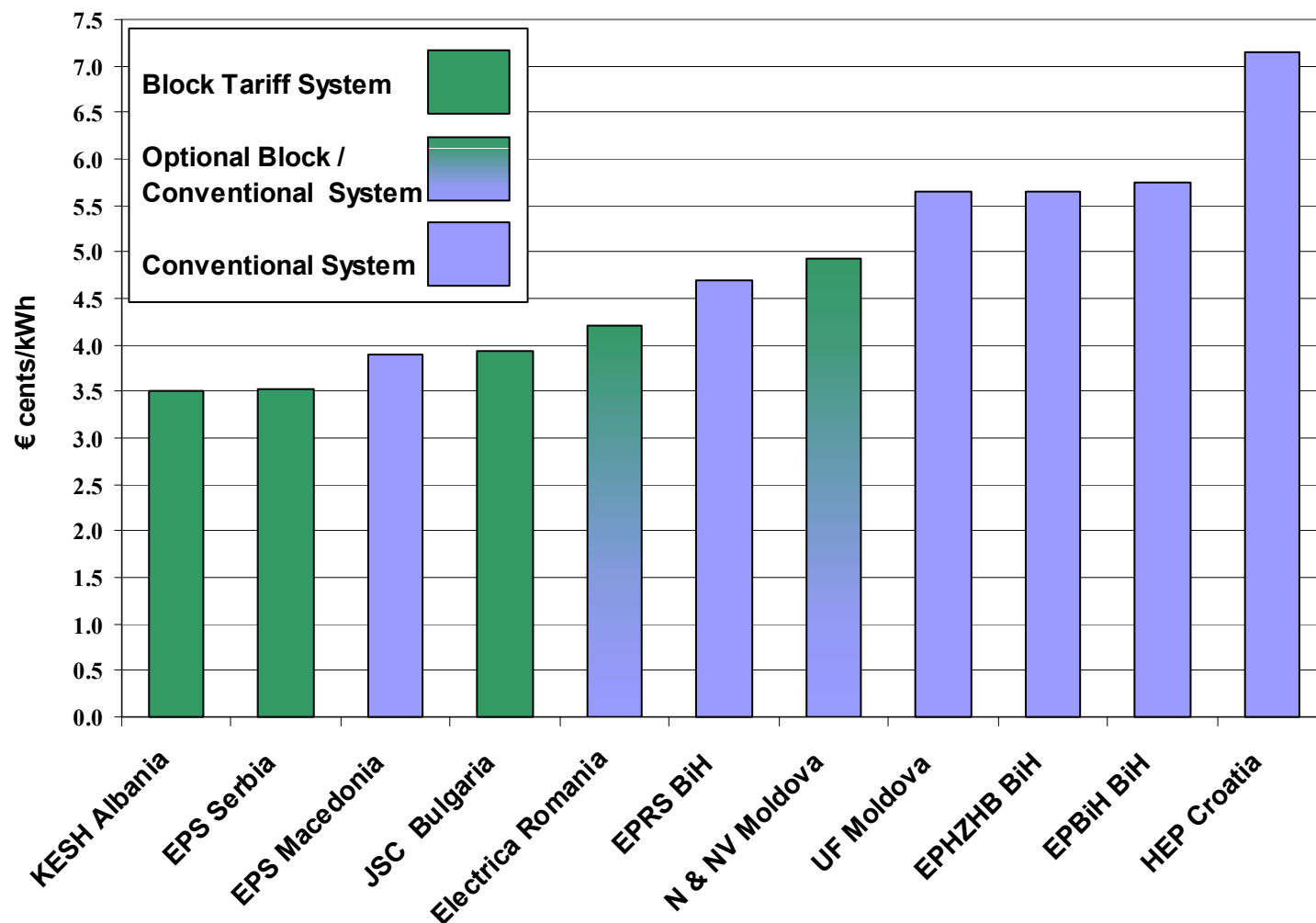
## Average Household Tariffs, 2002



The data from this slide is taken from the IPA Energy Consulting presentation of Douglas Caskie Sofia energy meeting , October 2003.(Energy Reform and social safety Net)



## Existing Tariff Structure



The data from this slide is taken from the IPA Energy Consulting presentation of Douglas Caskie Sofia energy meeting , October 2003.(Energy Reform and social safety Net)

## ***Safety Nets: Summary***

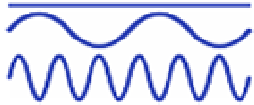
<b>Country</b>	<b>Utility</b>	<b>Social Protection Mechanism</b>	<b>Coverage</b>	<b>Targeting</b>
Serbia	EPS	Three block lifeline tariff, means tested subsidy for welfare beneficiaries and occasional heating subsidy mechanism	<b>Good</b>	<b>Good</b>
Bulgaria	JSC	Two-block lifeline tariff and heating subsidy mechanism for welfare beneficiaries	<b>Good</b>	<b>Fair</b>
Romania	Electrica	Two block lifeline tariff (Optional)	<b>Good</b>	<b>Poor</b>
Albania	KESH	Two-block lifeline tariff	<b>Good</b>	<b>Poor</b>
Moldova	RED Nord Vest	Two block lifeline tariff (Optional) and categorical subsidy mechanism	<b>Fair</b>	<b>Poor</b>
Moldova	RED Nord	Two block lifeline tariff (Optional) and categorical subsidy mechanism	<b>Fair</b>	<b>Poor</b>
Moldova	Union Fenosa	Categorical Subsidy Mechanism	<b>Fair</b>	<b>Poor</b>
BiH	EPRS	Municipality-based categorical subsidy	<b>Fair</b>	<b>Fair</b>
BiH	EPBiH	Subsidies for selected vulnerable consumers in certain Cantons	<b>Poor</b>	<b>Fair</b>
BiH	EPHZHB	n/a	<b>n/a</b>	<b>n/a</b>
Croatia	HEP	n/a	<b>n/a</b>	<b>n/a</b>
Macedonia	ESM	n/a	<b>n/a</b>	<b>n/a</b>

The data from this slide is taken from the IPA Energy Consulting presentation of Douglas Caskie Sofia energy meeting , October 2003.(Energy Reform and social safety Net)

## ***Reform Options and Next Steps***

- Macedonia:
  - Affordability is an issue but social protection is a “blank canvas”
  - Subsidy for welfare beneficiaries?
  - ... and those reliant on electricity for heating?
  - And/or introduction of a three-tier block tariff (Serbian model)?

The data from this slide is taken from the IPA Energy Consulting presentation of Douglas Caskie  
Sofia energy meeting , October 2003.(Energy Reform and social safety Net)



## ***Block tariffs in neighboring countries***

### **Serbia and Montenegro**

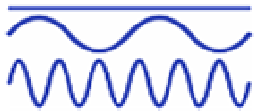
- Block I ( green ) to 600 kWh / monthly
- Block II ( blue ) from 600 to 1600 kWh / monthly
- Block III ( red ) over 1600 kWh / monthly

### **Bulgaria**

- Block I to 75 kWh / monthly
- Block II over 75 kWh / monthly

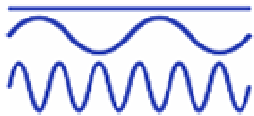
### **Albania**

- Block I to 220 kWh / monthly
- Block II over 220 kWh / monthly



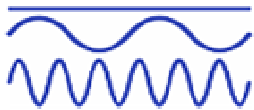
## ***The New Tariff System in the Republic of Macedonia***

***In the Republic of Macedonia, the new tariff system is still being prepared. This new tariff system will take into consideration the protection of low-income households through the introduction of block tariffs.***

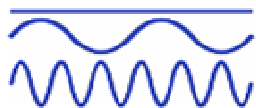


## ***Usage of Natural Gas***

- Natural gas is imported from Russia;
- The annual capacity of the gas system is 800.000.000 Nm<sup>3</sup>;
- In 2003, the consumption was 81.470.000 Nm<sup>3</sup>;
- For 2004, consumption is forecast around 108.000.000 Nm<sup>3</sup>;
- Current consumption is solely for industrial purposes;
- In the near future, natural gas usage is expected to be used for production of electricity and heating as well as household consumption.



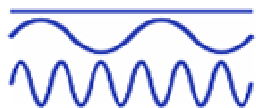
- The small use of the gas line system is a result of the undefined ownership rights between the Government of Macedonia and Makpetrol AD Skopje.
- The construction of the CHP facility (gas-fired), as well as the construction of the distribution network in Skopje, will cause increase of natural gas consumption in near future at about 500.000.000 Nm<sup>3</sup>.



## ***Annual Natural Gas consumption in 2003***

<b>Consumer company</b>	<b>Nm<sup>3</sup> x ( 1.000.000 )</b>
<b>A.D Toplifikacija Skopje</b>	<b>10.30</b>
<b>Toplana Skopje- Sever A.D Skopje</b>	<b>2.80</b>
<b>Ohis A.D Skopje</b>	<b>4.30</b>
<b>A.D Pivara Skopje</b>	<b>5.80</b>
<b>A.D Zito Luks Skopje</b>	<b>1.70</b>
<b>Cementarnica “ USJE” Skopje</b>	<b>2.60</b>
<b>Komuna A.D Skopje</b>	<b>2.00</b>
<b>Evropa A.D Skopje</b>	<b>1.00</b>
<b>IGM Tipo Skopje</b>	<b>0.85</b>
<b>JP ESM Energetika</b>	<b>9.50</b>
<b>Balkan Still A.D Skopje</b>	<b>5.00</b>
<b>Makstill A.D Skopje</b>	<b>20.00</b>

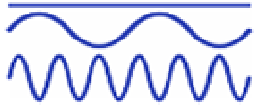




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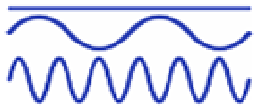


Consumer company	Nm <sup>3</sup> x ( 1.000.000 )
JSP Skopje	0.30
FZC 11 Oktomvri Kumanovo	3.30
KIK Kumanovo	0.03
Tutunski Kombinat Kumanovo	0.30
Institute Zelezara	0.60
Kasarna Ilinden	1.60
Koka Pak	0.09
Celicana	8.00
Zito Luks 1 and 6	0.85
Idnina Kratovo	0.25
TO 11 Oktomvri	0.40
<b>Total</b>	<b>81.47</b>



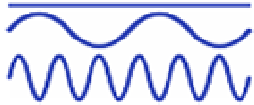
## ***Average consumption and average price of electricity***

- In 2003, the average household consumption of electricity was 385 kWh/month;
- Average price paid by households for the electricity used is 6.5 \$ cent/kWh;
- The price for electricity is 4,9 \$ cent/kWh;
- Additional expenses and government taxes for electricity are 1.6 \$ cent/kWh.



## ***Percentage of income paid by an average Macedonian household for utility services***

- Total number of **households recorded: 630,000**
- Average **monthly income** for 2003 was **USD 230**
- **Electricity usage:** USD 25.02/monthly, i.e. 10.88%
- **Drinking water – sanitary** (10m<sup>3</sup>) costs USD 3.36/monthly, i.e. 1.45%
- **Heating** for a **60 m<sup>2</sup>** apartment costs USD 32/monthly, i.e. 13.91%
- **Average telephone bill:** USD 15/monthly, i.e. 6.52%.



## ***Social Assistance Law, 2004 Program***

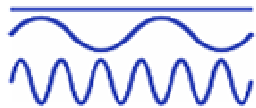
### **Social assistance for households with low income:**

#### **Group “A”**

- Assistance payments of USD 55.48 per household where the members of the household **are not fit for work**, in total around 5,200 households;

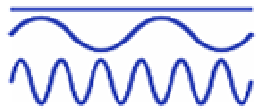
#### **Group “ B”**

- Assistance payments of USD 45.98 per household where the members of the households **are fit for work** but are not financially/materially secure, in total 65,000 households.



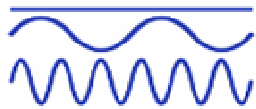
### **Individual social assistance and care:**

- **Social assistance and care** are paid to those who cannot perform their elementary life needs without help of another person. USD 16,923,078.00 is allocated for the total number of 18,950 beneficiaries/recipients.
- **Right to receive health/medical protection**
- **Right to receive an allowance for reduced working hours**
- **Civilian - handicapped**
- **The provider of the family is called on duty for a military training**



## **C O N C L U S I O N**

- Total number of households that require social assistance is 70,200 ( 65,000 + 5,200 ). This constitutes approximately **11.42 %** of total number of households in the Republic of Macedonia.
- Total fund for social assistance for 2004 is **\$59,110,577.00.**
- ***Social assistance for the low-income households is distributed as a general payment (not intended to cover specifically the expenses for the utility services).***



**Thank you  
for your attention**