

# **ECDSO-E CG Meeting**

## **TF: Network tariffs**

Date 30 November 2023,  
Vienna

## *Primary completed tasks:*



- 1. Network losses analysis,*
- 2. Tariff structure and design,*
- 3. Presentations of capacity charges,*
- 4. Workshop procurement of network losses.*

# Key Findings – DSO grid losses



		Approved by NRA				Actual			
% of network losses in revenues		2020	2021	2022	2023	2020	2021	2022	IX 2023
Georgia	Energo-Pro Georgia	26%	31%	28%		39%	24%	23%	20,0%
North Macedonia	Elektrodistribucija	33%	36%	62%		37%	70%	104%	
Bosnia and Hercegovina	MP MH ERS	9%	10%	10%	16%	11%	11%	10%	13,0%
Bosnia and Hercegovina	EPBIH	19%	19%	19%	19%	22%	20%	20%	
Serbia	EPS distribucija	29%	24%	22%		27%	27%	28%	
Montenegro	CEDIS	15%	14%	14%	14%	24%	35%	55%	35,6%
Ukraine	D-TEK Grid	37%	27%	33%		32%	32%	39%	
Bosnia and Hercegovina	EPHZHB	23%	23%	23%		16%	16%	15%	15,0%
Moldova	Premier Energy	22%	30%	35%	23%	17%	27%	35%	22,9%
Kosovo	KEDs	49%	56%	59%	57%	46%	92%	79%	47,0%
Albania	OSHEE	50%	46%	44%		48%	57%	45%	

• *Enormous costs for the procurement of grid losses exceeded approved amounts by NRA*

• *Mostly affected 4 CPs*

• *Despite increase of prices, some DSOs achieve enough income to still be able to operate. No revision from NRA*

# Key Findings – DSO grid losses



Country	DSO	Approved by NRA				Actual			
		2020	2021	2022	2023	2020	2021	2022	IX 2023
	Price, EUR/MWh								
Georgia	Energo-Pro Georgia	29,7	55,0	51,8		49,4	47,9	59,8	56,6
North Macedonia	Elektrodistribucija	56,6	60,7	149,4		59,0	110,3	233,7	
Bosnia and Hercegovina	MP MH ERS	29,1	29,1	29,1	55,7	30,2	29,9	21,9	55,7
Bosnia and Hercegovina	EPBIH	42,8	42,8	42,8	42,8	64,3	56,2	61,5	
Serbia	EPS distribucija	59,4	53,9	55,5		54,0	58,6	66,7	
Montenegro	CEDIS	54,9	53,4	52,9	52,9	55,7	80,4	116,2	127,0
Ukraine	D-TEK Grid	48,5	43,6	60,7		44,6	54,7	70,2	
Bosnia and Hercegovina	EPHZHB	43,9	43,9	43,9	43,9	43,9	43,9	43,9	43,9
Moldova	Premier Energy	50,2	51,2	93,8	81,9	50,2	51,2	94,9	76,3
Kosovo	KEDs	49,2	53,4	115,6	81,7	42,6	84,5		80,4
Albania	OSHEE	42,7	45,0	56,6		44,1	51,1	57,2	

# Key Findings – Capacity Charges



Tariff design	Unit	Albania	BiH/ JP Elektroprivreda BiH1*)	BiH/Repu blika Srpska/ ERS	BiH/Brčko District/E PHZHB	Kosovo	Montenegro	Moldov a	North Maced onia	Serbia	Ukrain e	Georgi a
Energy	kWh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Network Losses	kWh	0	Yes	Yes				Yes	No	No		
Capacity	kW	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No	No
Reactive power	kVArh	Yes	No2*)	Yes	Yes	No	Yes	No	Yes	Yes	No	No
Fixed charge	per customer	No	Yes	Yes 3*	No	No	Yes	No	No	No	No	No
Renewable Energy Sources Fee	KM/kWh	No	No*	No*	No	No	Yes	No	No	No	No	No

- 4 out of 9 CPs (6 out of 11 DSOs) use a combination of energy-based charges with either a capacity-based or a fixed component or both.
- On average 25% of DSO revenue is collected through capacity charges (from 9%-47%)
- While fixed costs account for 80% of total costs, except for North Macedonia where variable costs account for 65% due to high grid losses costs.



# Key Findings – Breakdown of tariff elements



Average distribution tariff	Georgia	North Macedonia	Bosnia and Hercegovina	Bosnia and Hercegovina	Bosnia and Hercegovina	Serbia	Kosovo	Montenegro	Ukraine	Moldova	Albania
€/MWh	Energopro Georgia	Elektrodistribucija	EP HZ HB	JP Elektroprivreda BiH <sup>1*</sup>	ERS	Elektrodistribucija	KEDS	CEDIS	D-TEK Grid	Premier Energy	OSSH
Operating and maintenance costs	7.21	7.04	17.04	16.10	16.66	16.11	5.48	16.86	7.87	7.27	13.75
Losses	7.40	26.62	6.15	4.68	5.49	6.32	22.12	4.70	5.56	7.59	22.97
Return on Assets	6.23	2.89	-	0.44	5.36	3.10	3.56	7.14	1.89	5.21	3.72
Depreciation	2.66	4.71	4.97	5.43	5.36	5.33	3.81	5.92	1.38	3.93	6.63
Working Capital	0.06	-	-	0.02	-	-	0.35	-	-	0.03	0.24
Deducted revenues	(0.52)	-	(2.13)	(2.21)	-	(1.62)	(1.14)	(0.19)	-	-	(2.82)
<b>Normalized Distribution tariff</b>	<b>23.05</b>	<b>41.25</b>	<b>26.03</b>	<b>24.45</b>	<b>32.87</b>	<b>29.23</b>	<b>34.19</b>	<b>34.42</b>	<b>16.70</b>	<b>24.03</b>	<b>44.47</b>
Corrections (between allowed and actually earned)	5.98	0.68	2.65	(0.46)	9.04	-	3.06	(0.62)	0.05	(2.06)	4.68
<b>Actual Distribution tariff</b>	<b>29.02</b>	<b>41.94</b>	<b>28.68</b>	<b>23.99</b>	<b>41.91</b>	<b>29.23</b>	<b>37.25</b>	<b>33.80</b>	<b>16.76</b>	<b>21.96</b>	<b>49.16</b>

## *Presentations on capacity charges, July 2023:*



- *Elektrodistribucija Srbije, Serbia*
- *ERS, Bosnia and Herzegovina*
- *EPHZHB, Bosnia and Herzegovina*

# Workshop procurement of network losses, October 2023

Presented experiences from:

- Netze BW, Germany
- HEDNO, Greece
- ELES-SODO, Slovenia
- E.ON Hungary





**THANK YOU**  
**FOR YOUR ATTENTION**