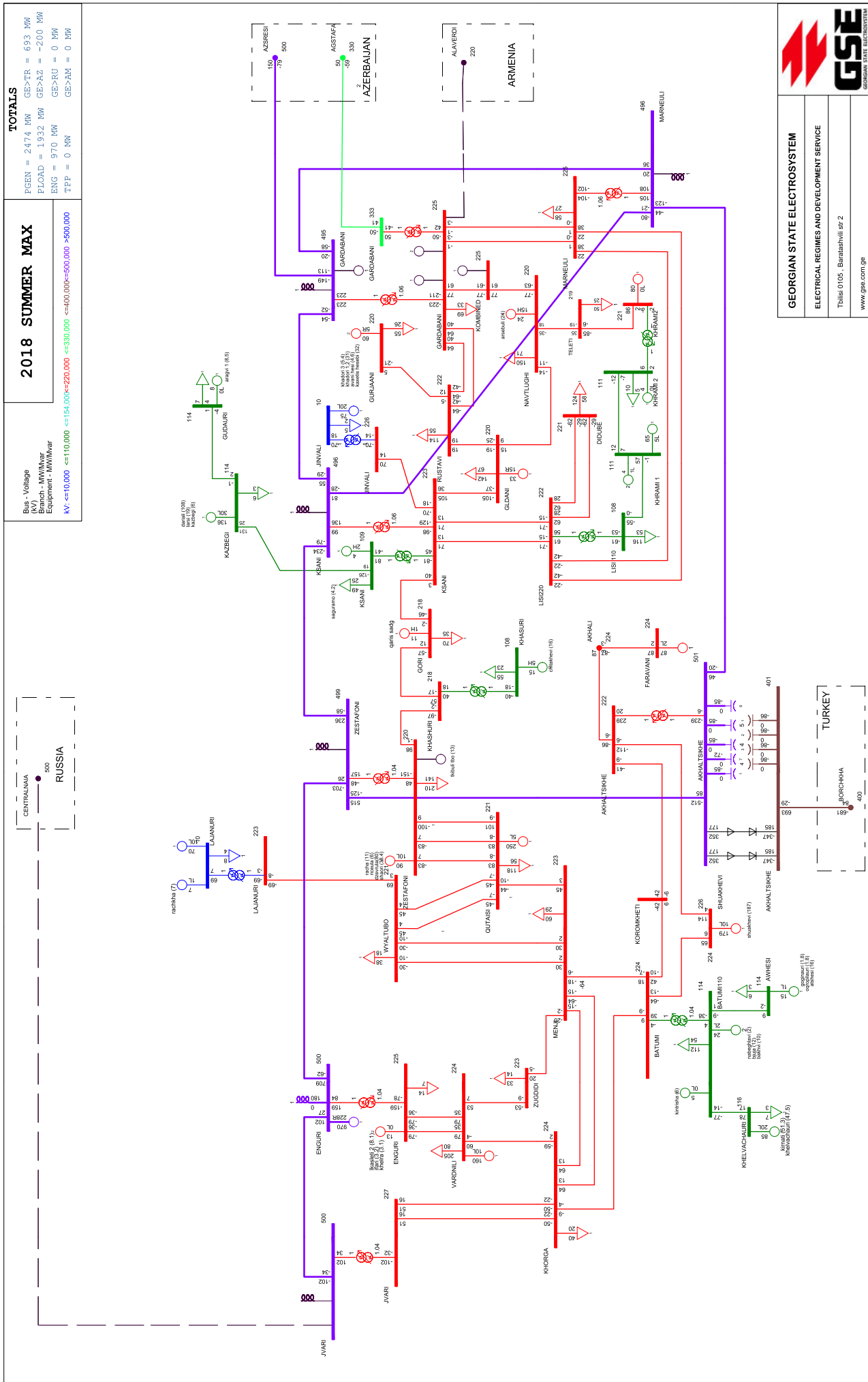
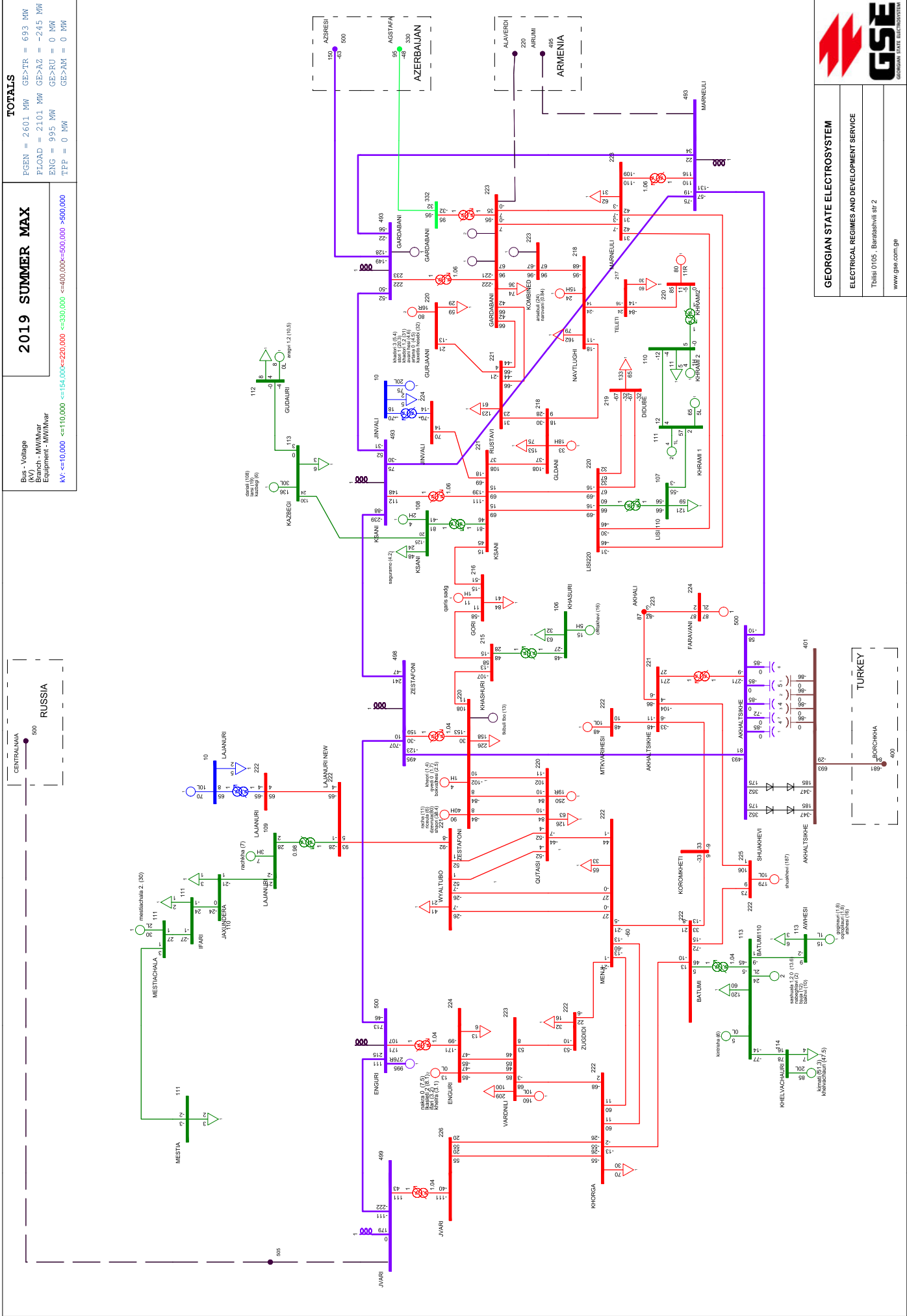


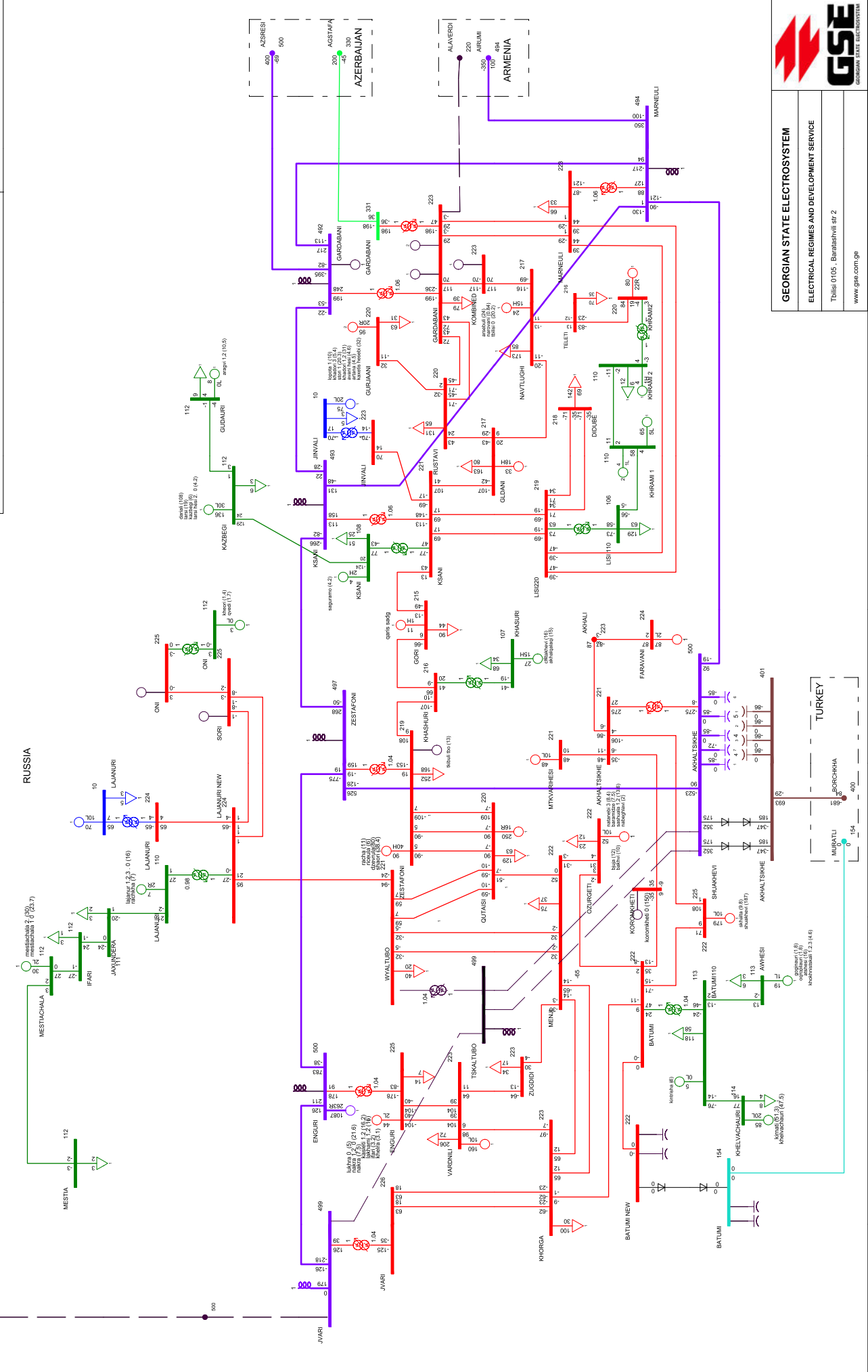
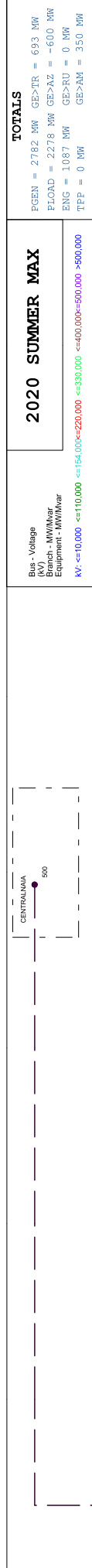
ANNEX 1 LOAD FLOW SCHEMES



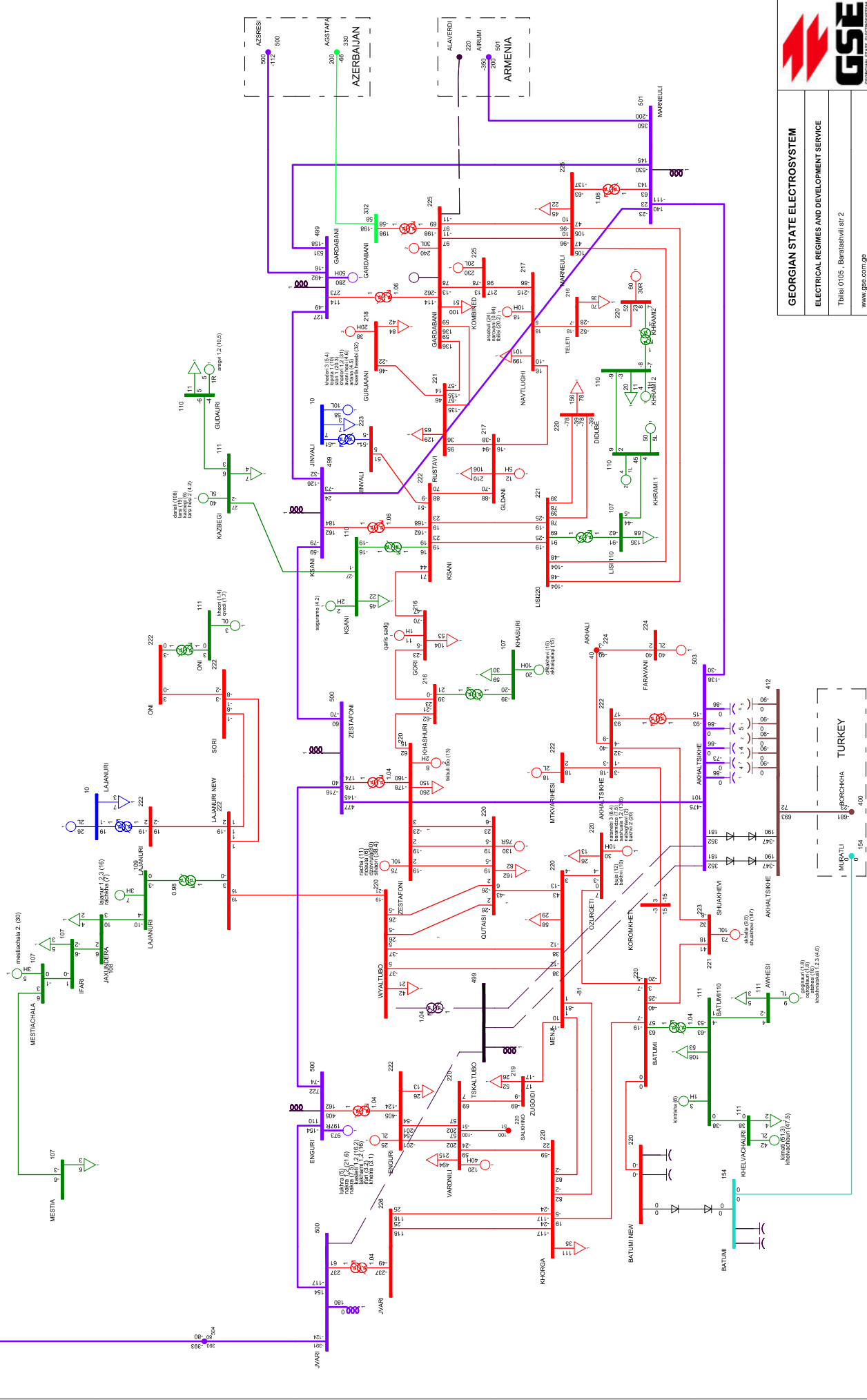
2019 SUMMER MAX	TOTALS
Bus - Voltage	PGEN = 2601 MW GE>TR = 693 MW
Branch - MW/Mvar	PLOAD = 2101 MW GE>AZ = -245 MW
Equipment - MW/Mvar	ENG = 995 MW GE>RU = 0 MW
KV-<=10.000 <=110.000 <=154.000<=220.000 <=330.000 <=400.000<=500.000 >500.000	TTP = 0 MW GE>RM = 0 MW



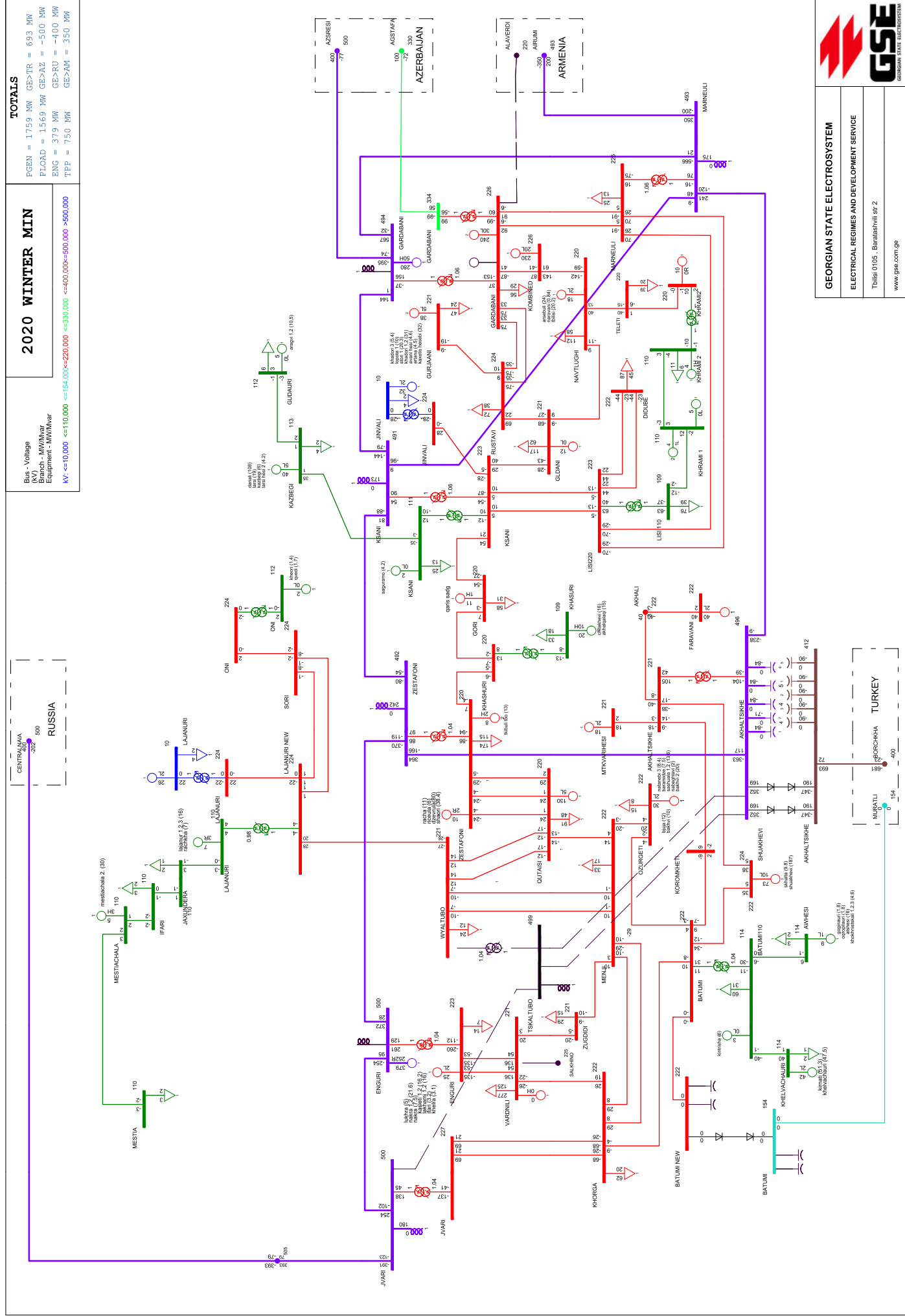
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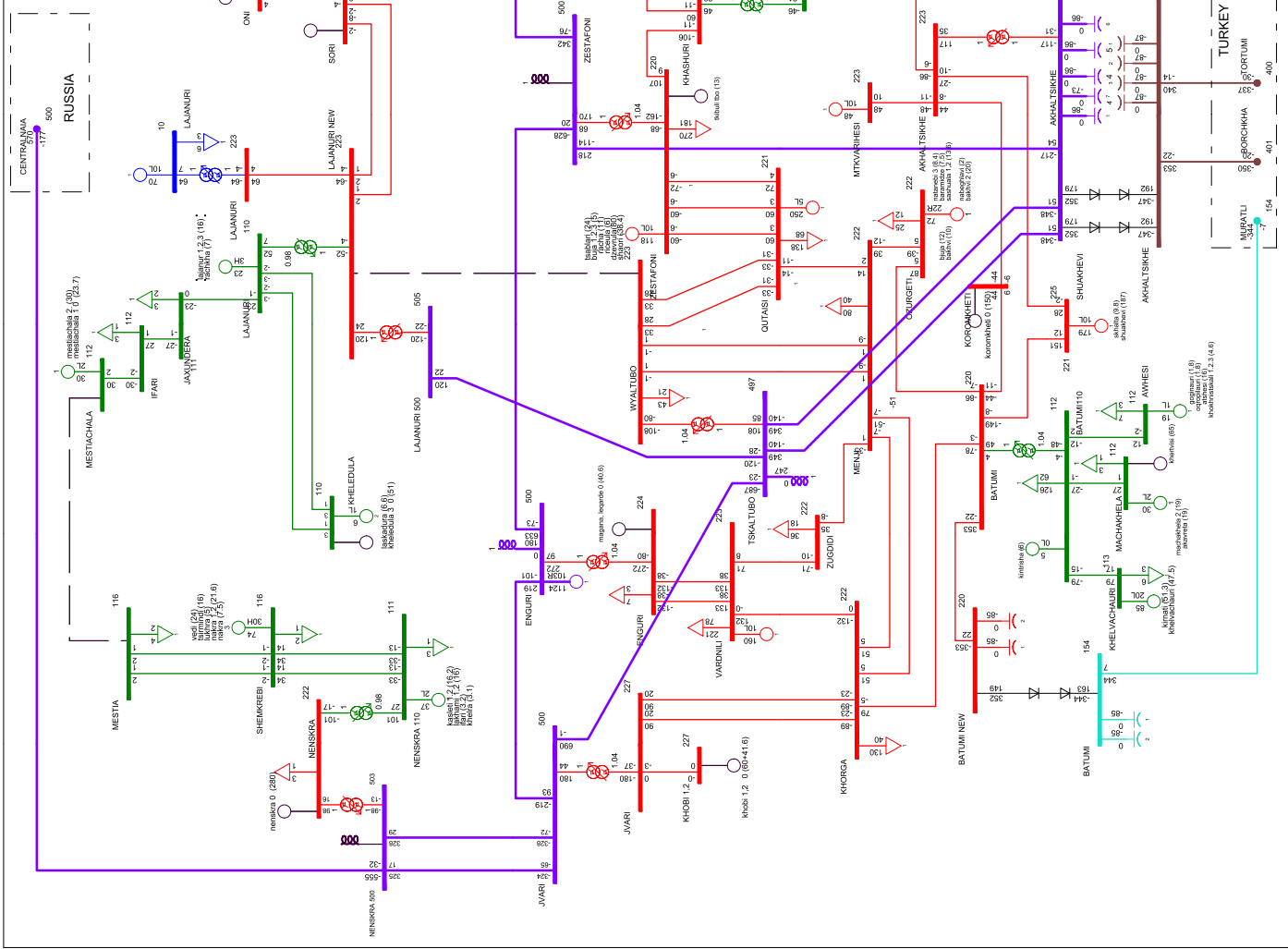
2020 WINTER MAX	TOTALS
Bus Voltage	PGEN = 2660 MW GE>TR = 693 MW
Branch - MW/Mvar	LOAD = 2750 MW GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 973 MW GE>RU = -500 MW
KV<=10.000 <=110.000 <=154.000<=220.000 <=330.000 <=400.000<=500.000 >500.000	TPP = 750 MW GE>AM = 350 MW



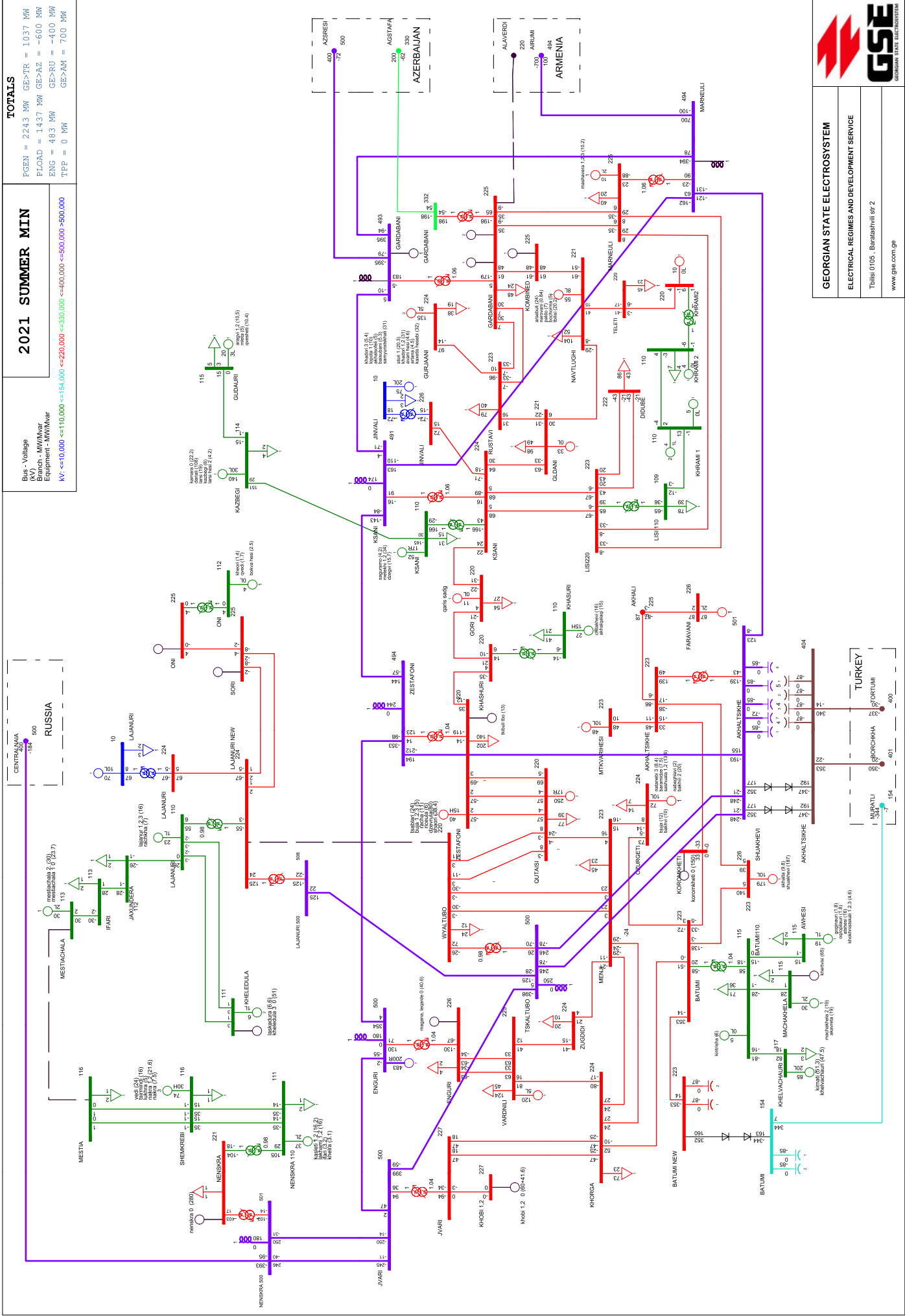
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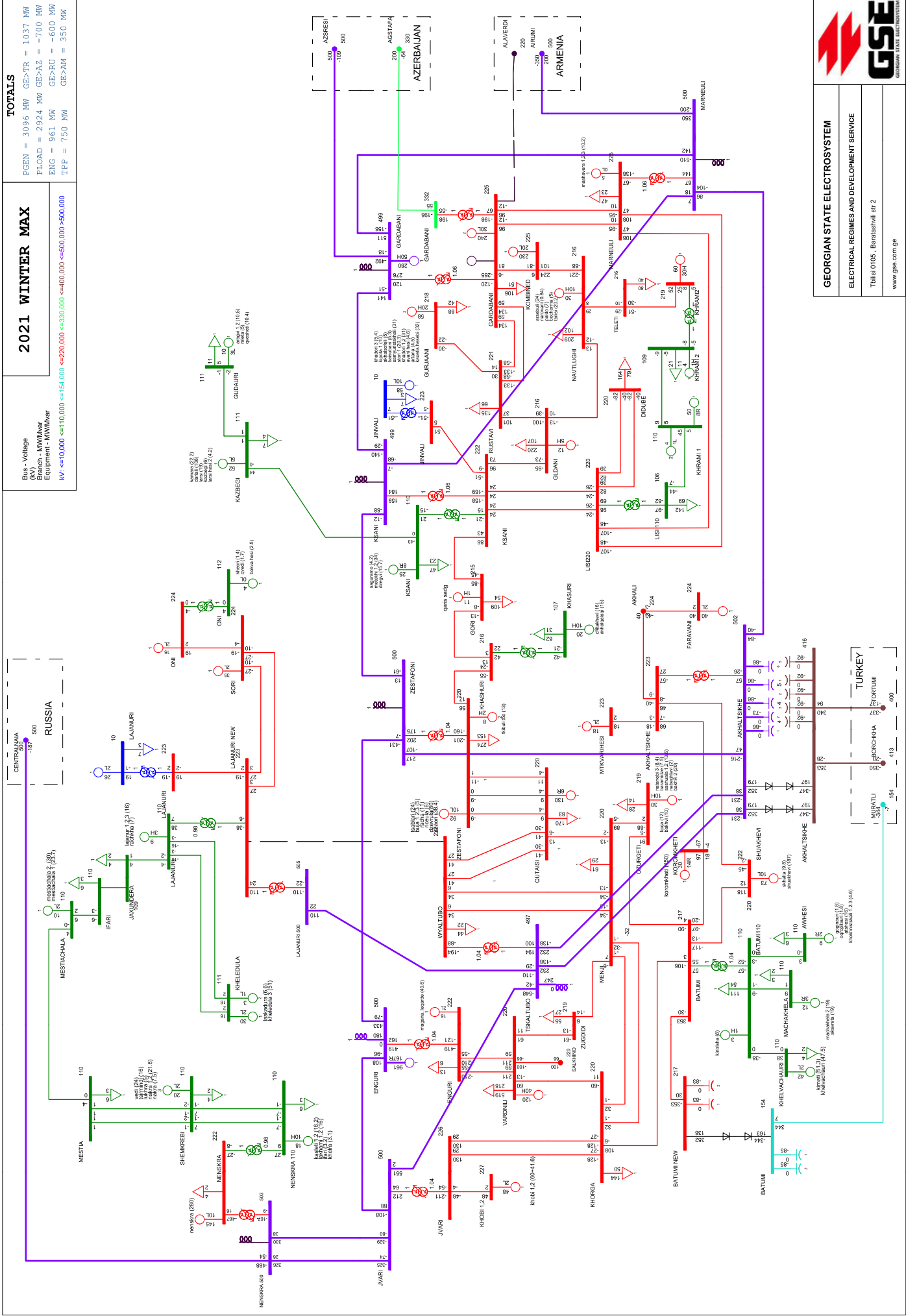
2021 SUMMER MAX		TOTALS
Bus - Voltage	3132 MW	GE>TR = 1037 MW
Branch - MW/Mvar	2469 MW	GE>AZ = -600 MW
Equipment - MW/Mvar	1124 MW	GE>RU = -570 MW
		TPP = 0 MW
		GE>RM = 700 MW



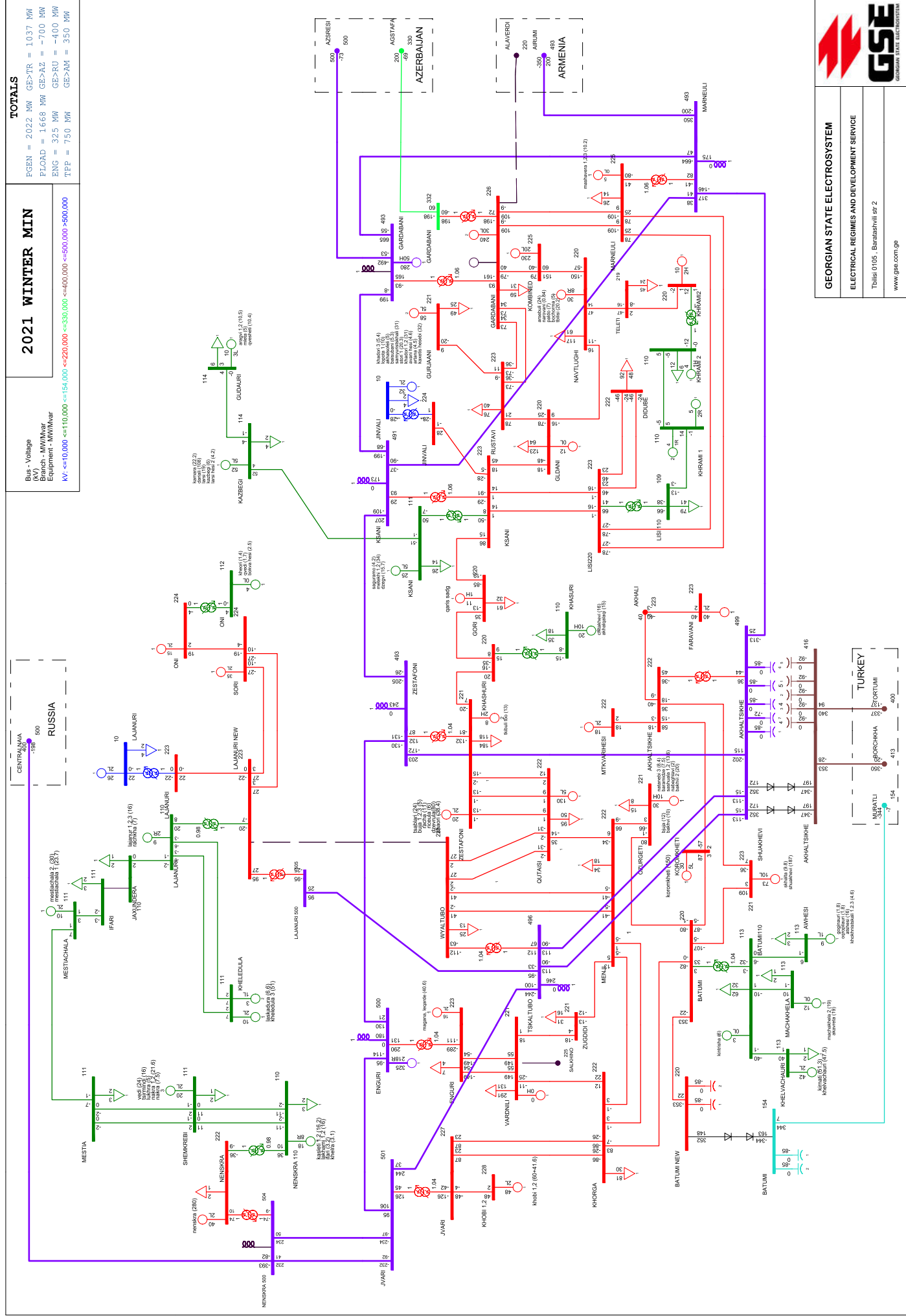
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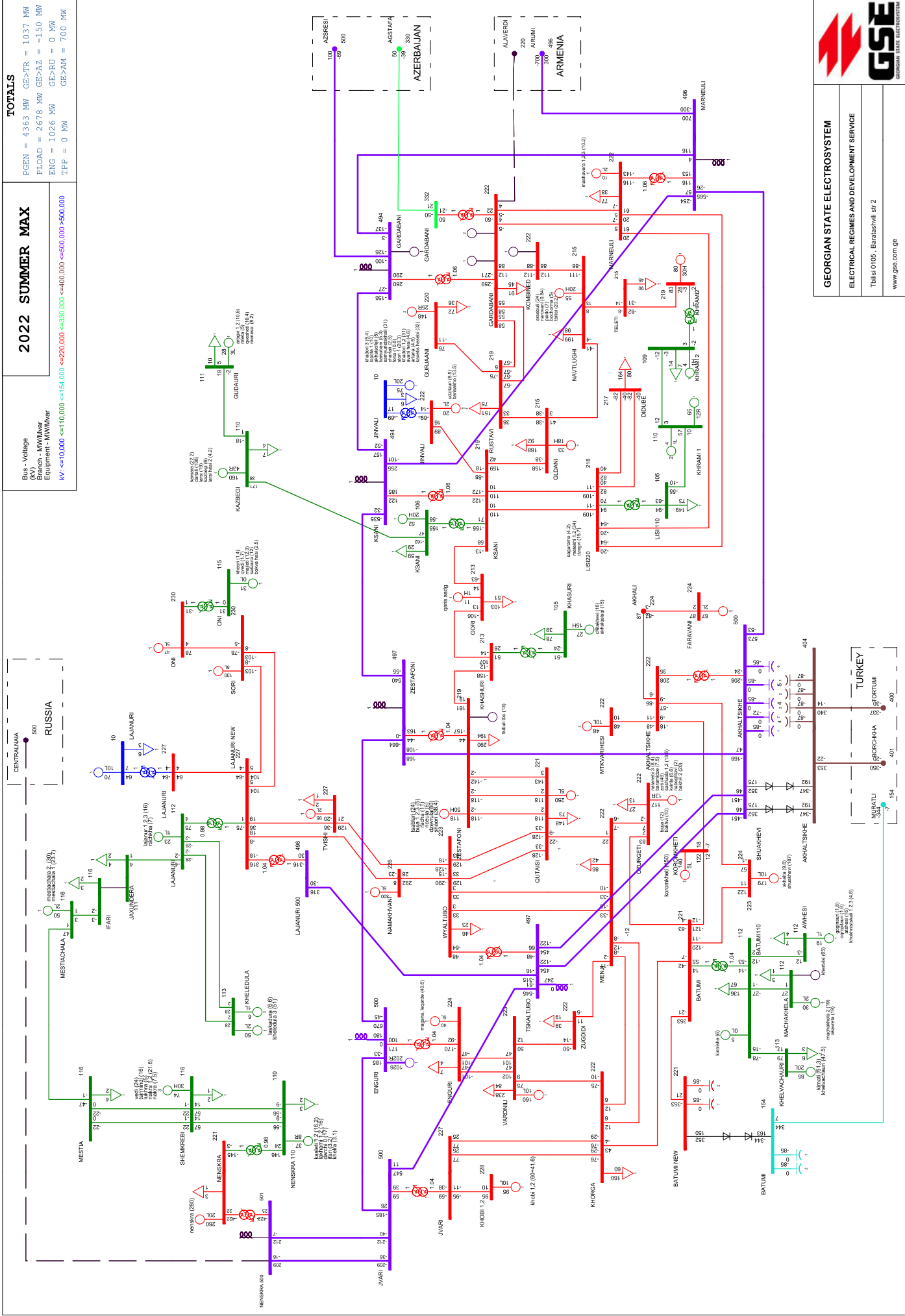
2021 WINTER MAX	TOTALS
Bus - Voltage	PGEN = 3096 MW GE>TR = 1037 MW
Branch - MW/Mvar	PLOAD = 2924 MW GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 961 MW GE>RU = -600 MW
	TPP = 750 MW GE>AM = 350 MW
	kV: <=10,000 <=110,000 <=154,000 <=220,000 <=330,000 <=400,000 <=500,000 <=500,000



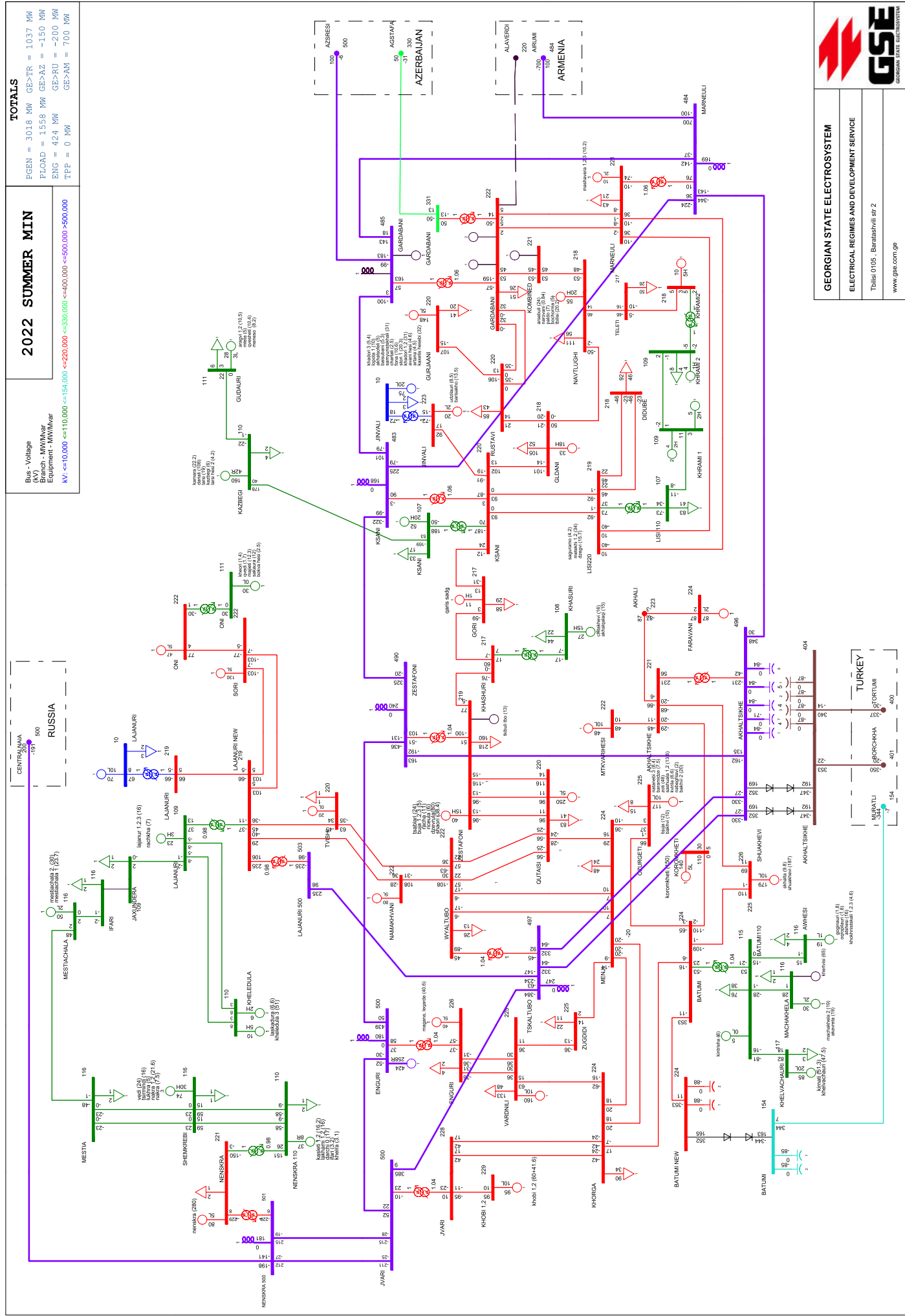
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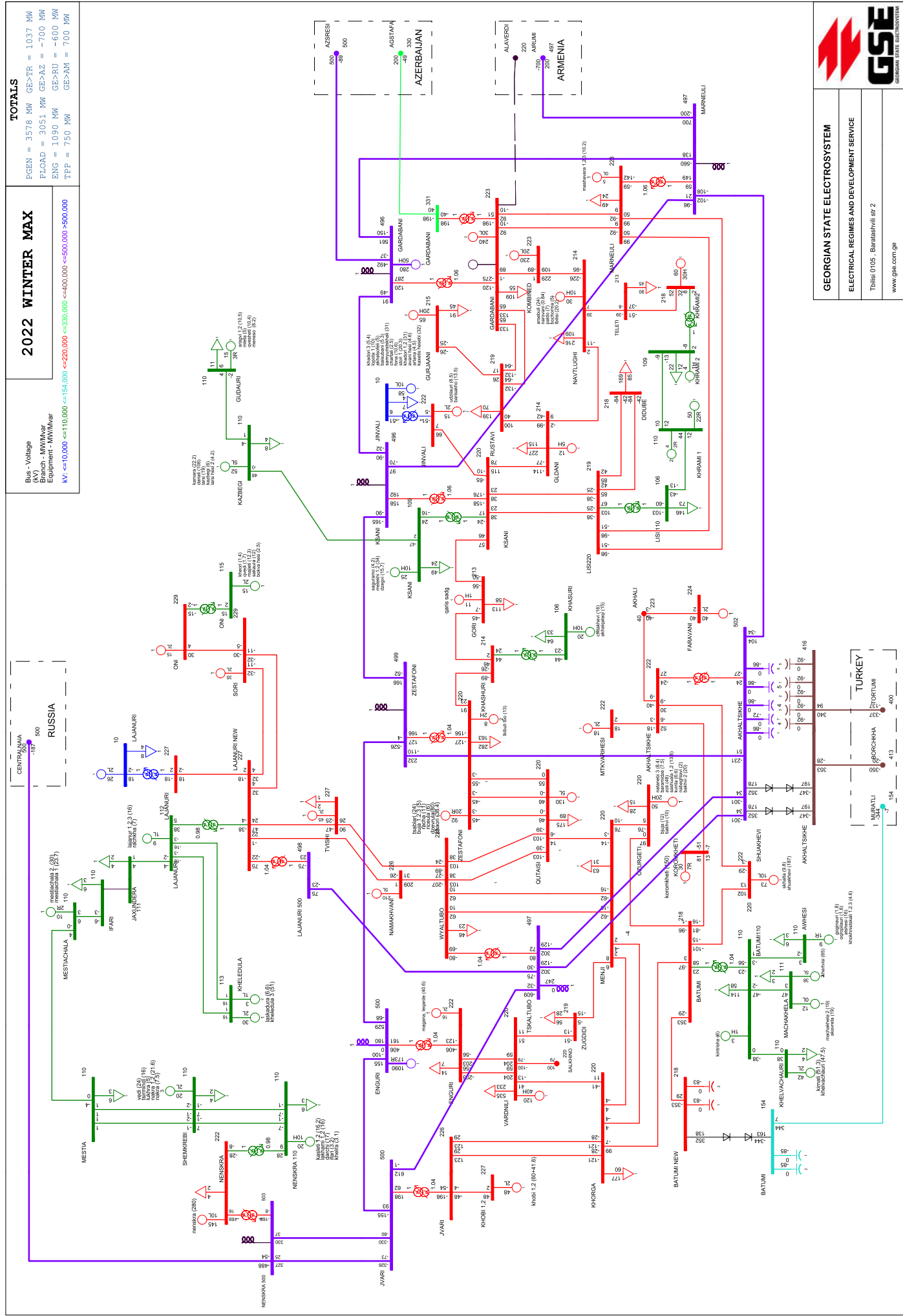


2022 SUMMER MAX	TOTALS
Bus - Voltage	PGEN = 4363 MW GE>TR = 1037 MW
Line - MW/Mvar	PLOAD = 2678 MW GE>AZ = -150 MW
Branch - MW/Mvar	ENG = 1026 MW GE>RU = 0 MW
Equipment - MW/Mvar	TPP = 0 MW GE>RM = 700 MW
kW <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000	

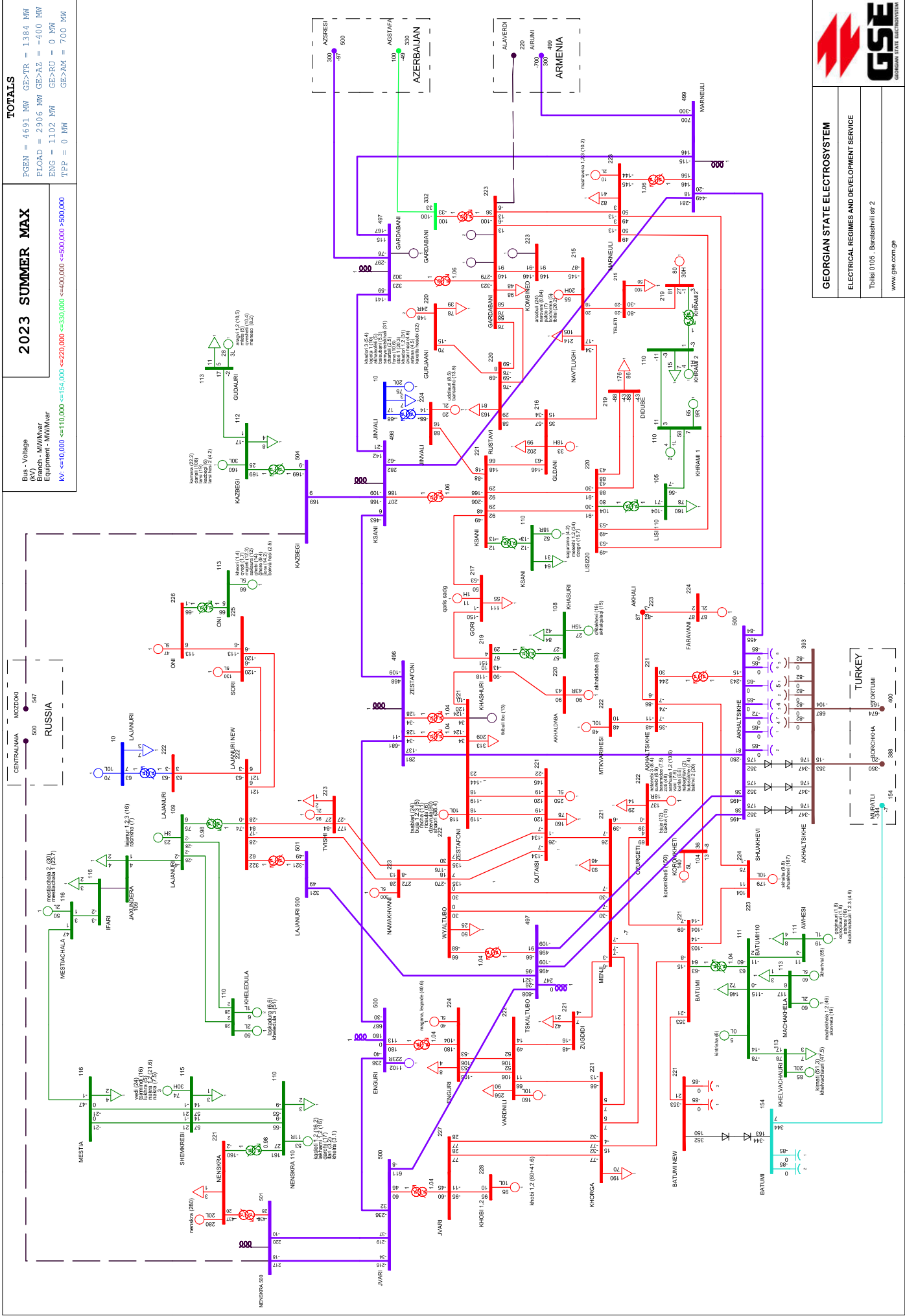


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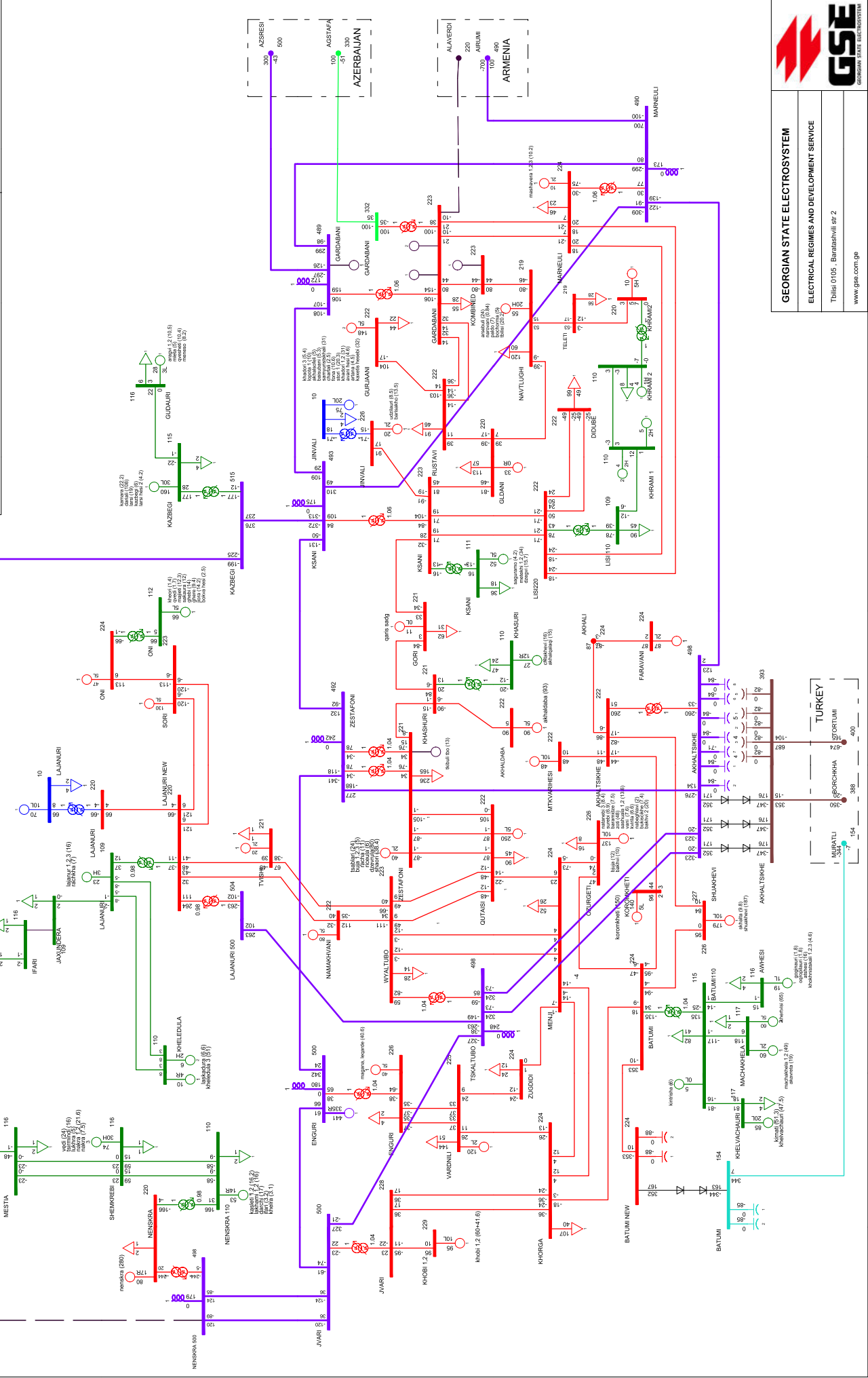


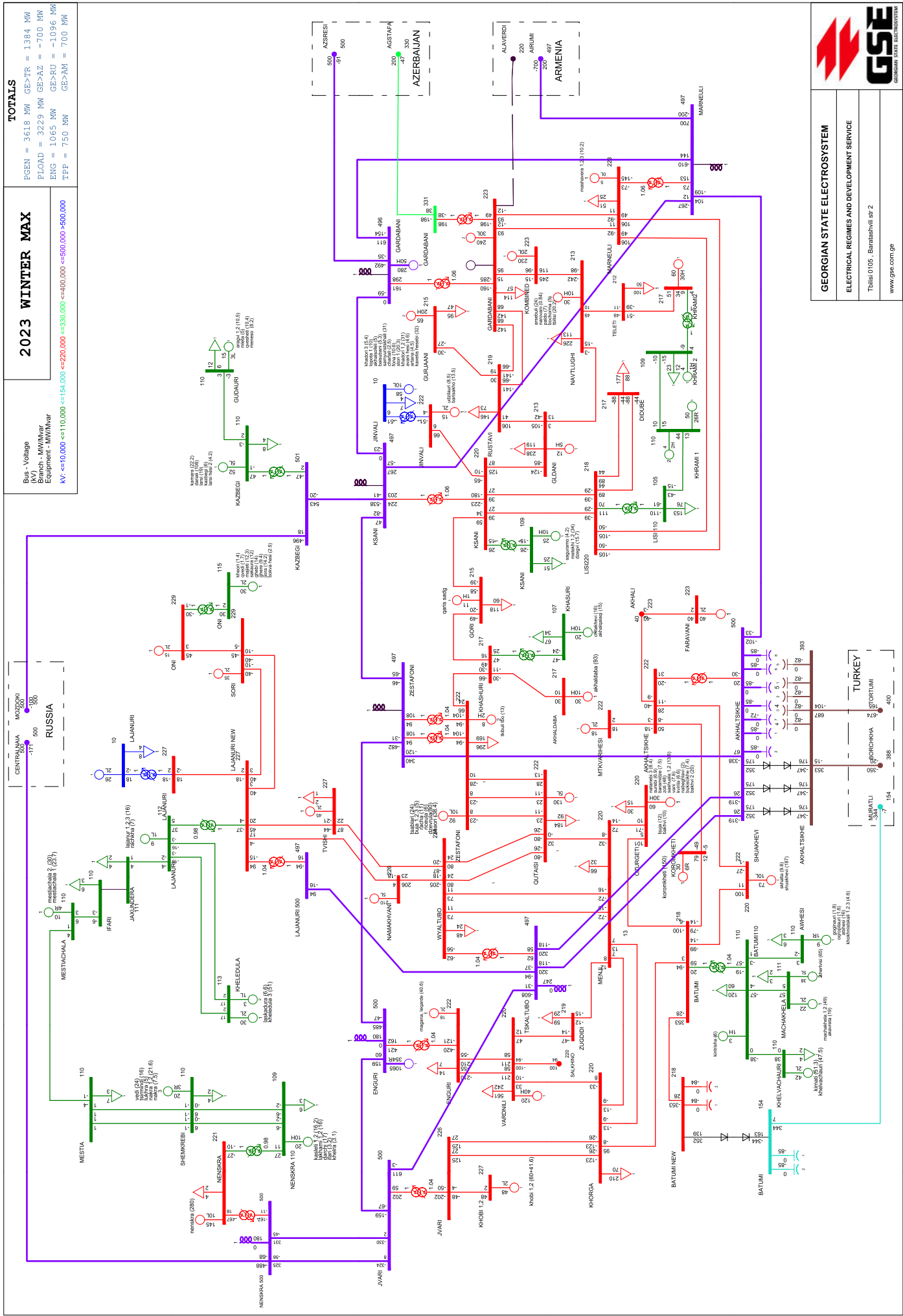
2023 SUMMER MAX	TOTALS
Bus - Voltage	PGEN = 4691 MW GE>TR = 1384 MW
Line - MW/Mvar	LOAD = 2906 MW GE>AZ = -400 MW
Branch - MW/Mvar	ENG = 1102 MW GE>RU = 0 MW
Equipment - MW/Mvar	TPP = 0 MW GE>AM = 700 MW
kw <=10,000 <=110,000 <=154,000 <=220,000 <=330,000 <=400,000 <=500,000 <=600,000	



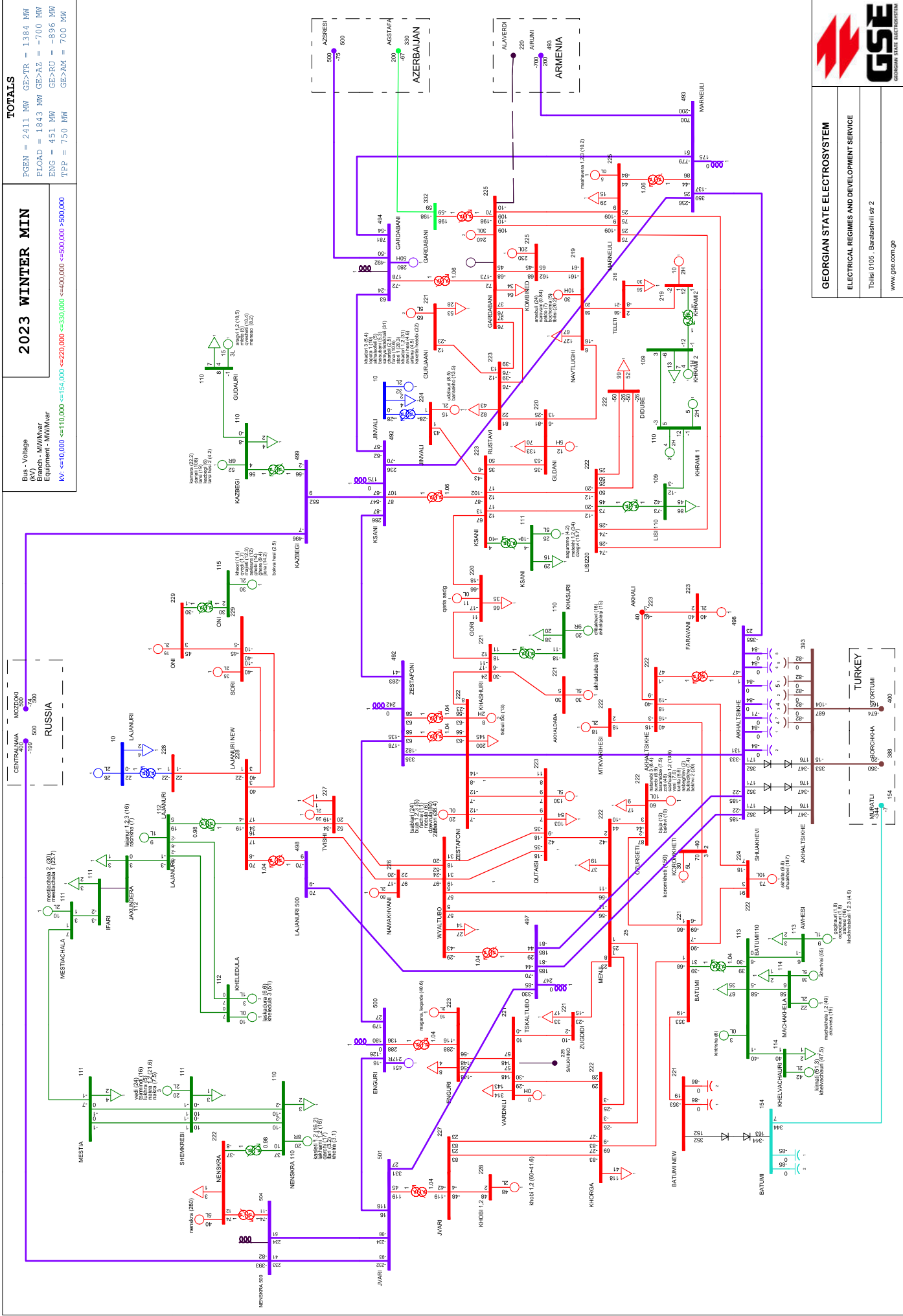
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2023 SUMMER MIN	TOTALS
Bus - Voltage	PGEN = 3247 MW GE>TR = 1384 MW
Line - MW/Mvar	PLOAD = 1691 MW GE>AZ = -400 MW
Branch - MW/Mvar	ENG = 441 MW GE>RU = -199 MW
Equipment - MW/Mvar	TPP = 0 MW GE>RM = 700 MW
kW <=10,000 <=110,000 <=154,000 <=220,000 <=330,000 <=400,000 <=500,000 <=500,000 <=500,000	



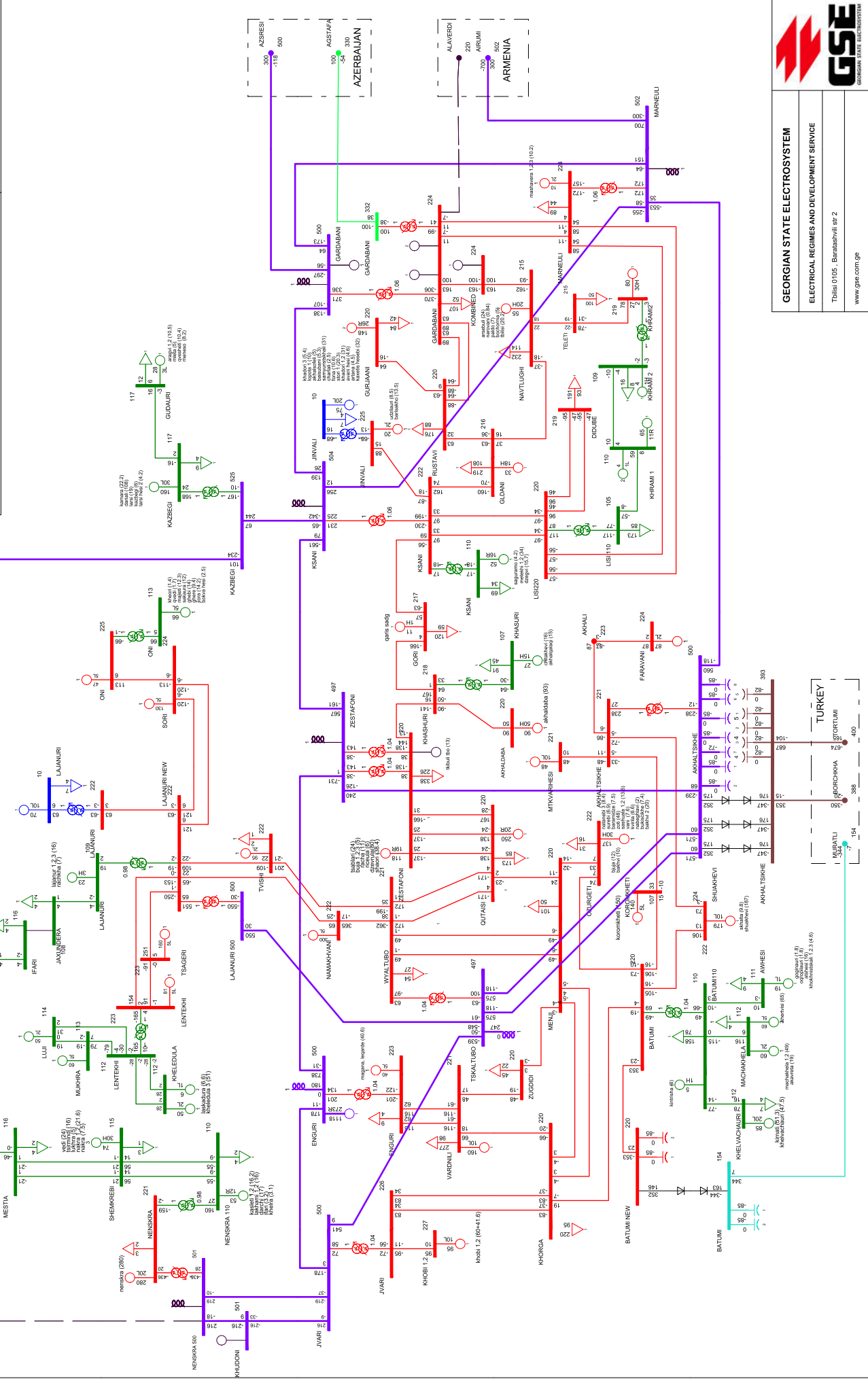


2023 WINTER MIN	TOTALS
Bus - Voltage	PGEN = 2411 MW GE>TR = 1384 MW
Line - MW/Mvar	PLOAD = 1843 MW GE>AZ = -700 MW
Branch - MW/Mvar	ENG = 451 MW GE>RU = -896 MW
Equipment - MW/Mvar	TPP = 750 MW GE>RM = 700 MW
kW <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000	



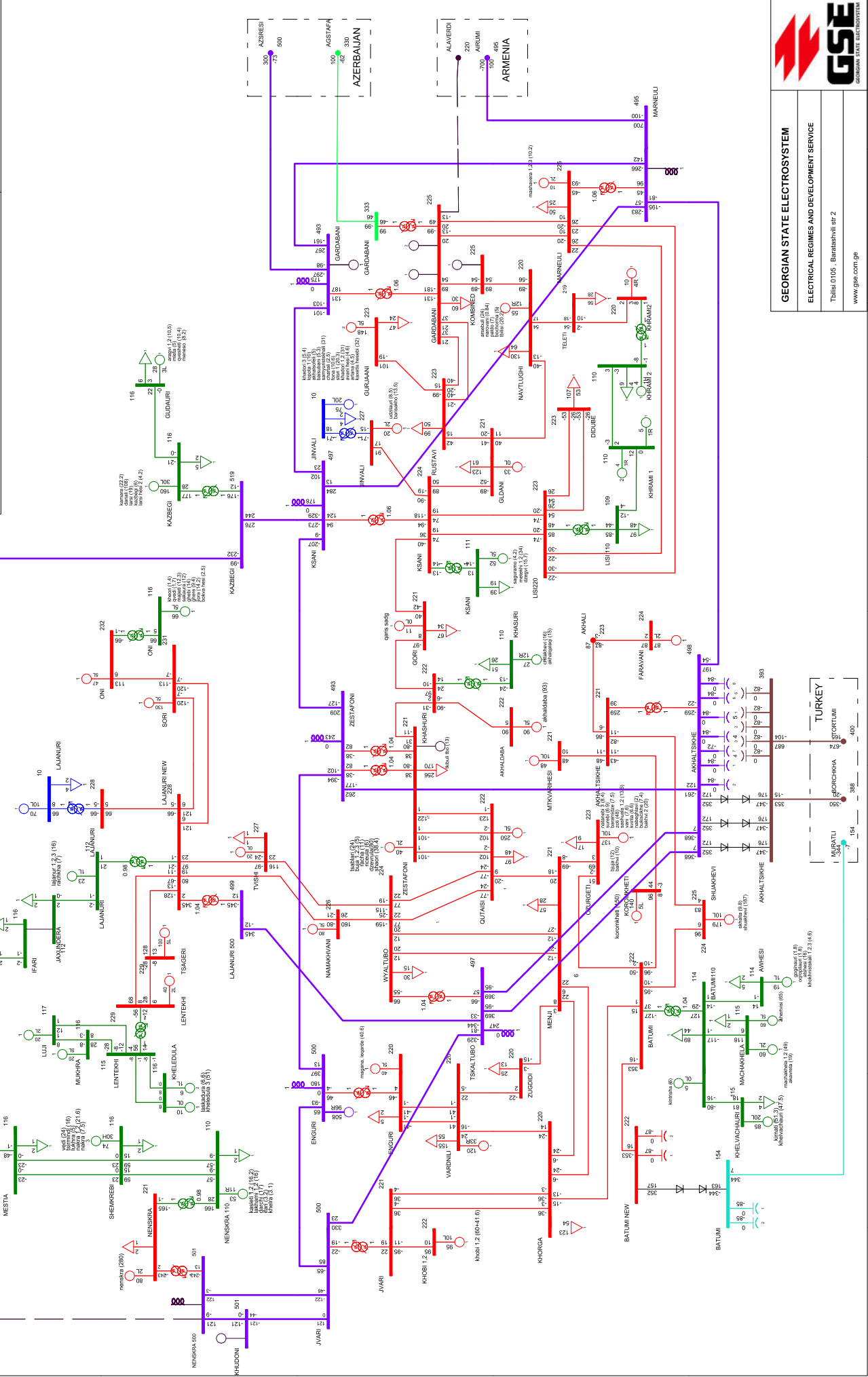
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2024 SUMMER MAX	TOTALS
Bus - Voltage	PGEN = 5058 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 3152 MW GE>AZ = -400 MW
Equipment - MW/Mvar	ENG = 1118 MW GE>RU = 101 MW
N1 <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000 <= 500,000	TEP = 0 MW GE>RM = 700 MW

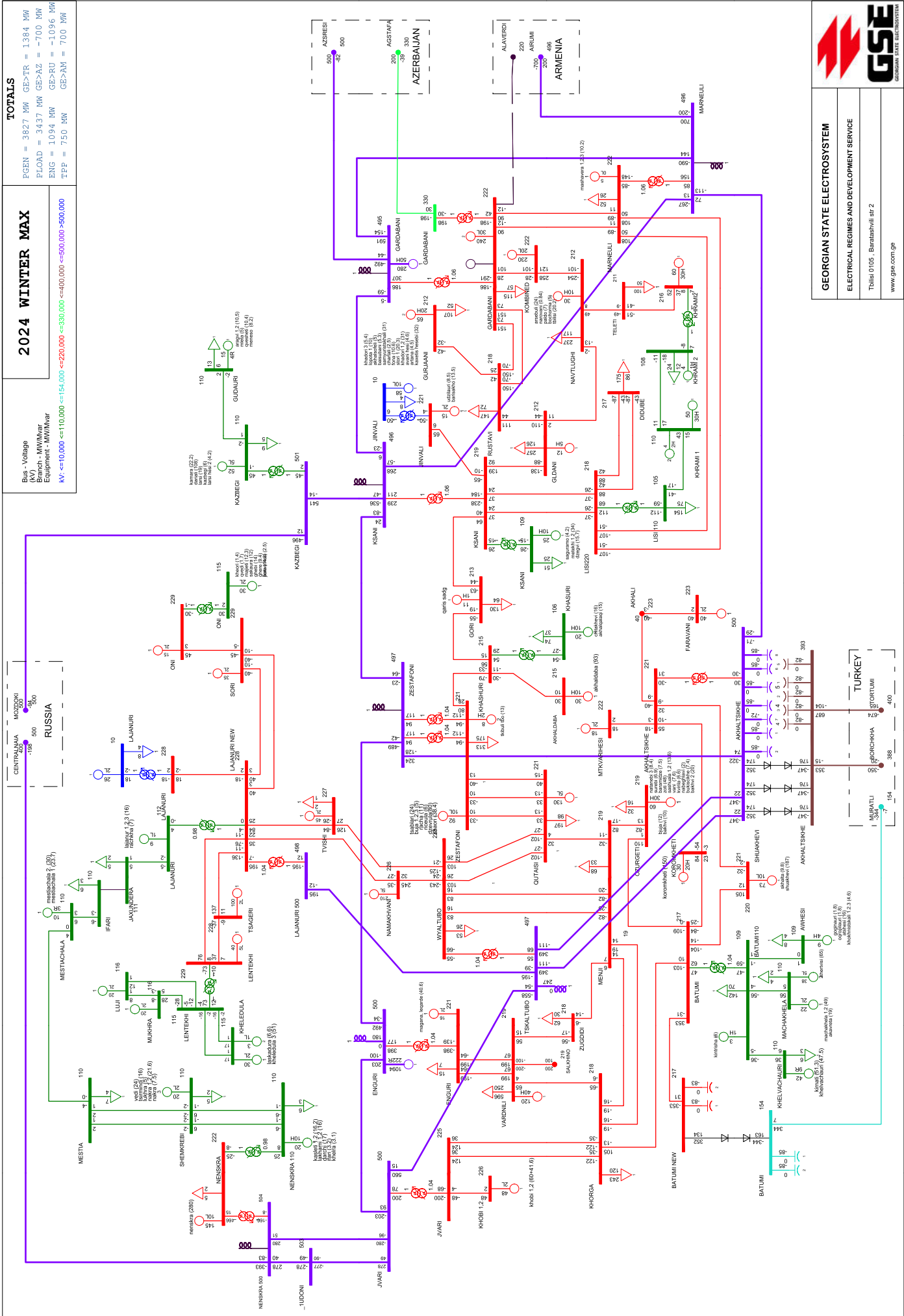



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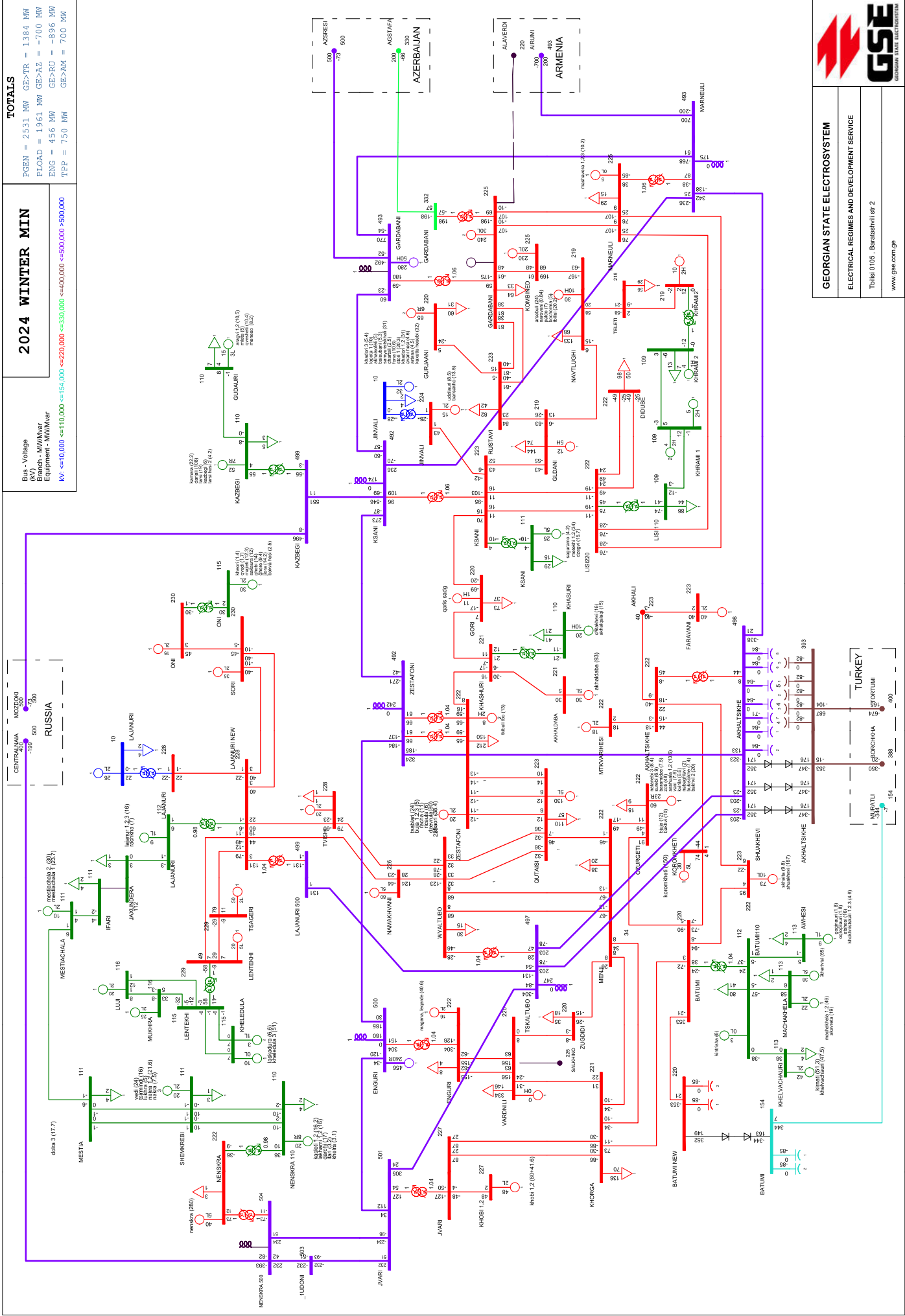
2024 SUMMER MIN	TOTALS
Bus - Voltage	PGEN = 3494 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 1834 MW GE>AZ = -400 MW
Equipment - MW/Mvar	ENG = 508 MW GE>RU = -99 MW
N1 <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000	TEP = 0 MW GE>RM = 700 MW



2024 WINTER MAX	
Bus - Voltage (KV)	PGEN = 3827 MW GE>TR = 1384 MW
Busch - MW/Mvar	PILOAD = 3437 MW GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 1094 MW GE>RU = -1096 MW
	TEP = 750 MW GE>AM = 700 MW
KV <= 10,000 <= 10,000 <= 150,000 <= 330,000 <= 500,000 <= 500,000 <= 500,000	

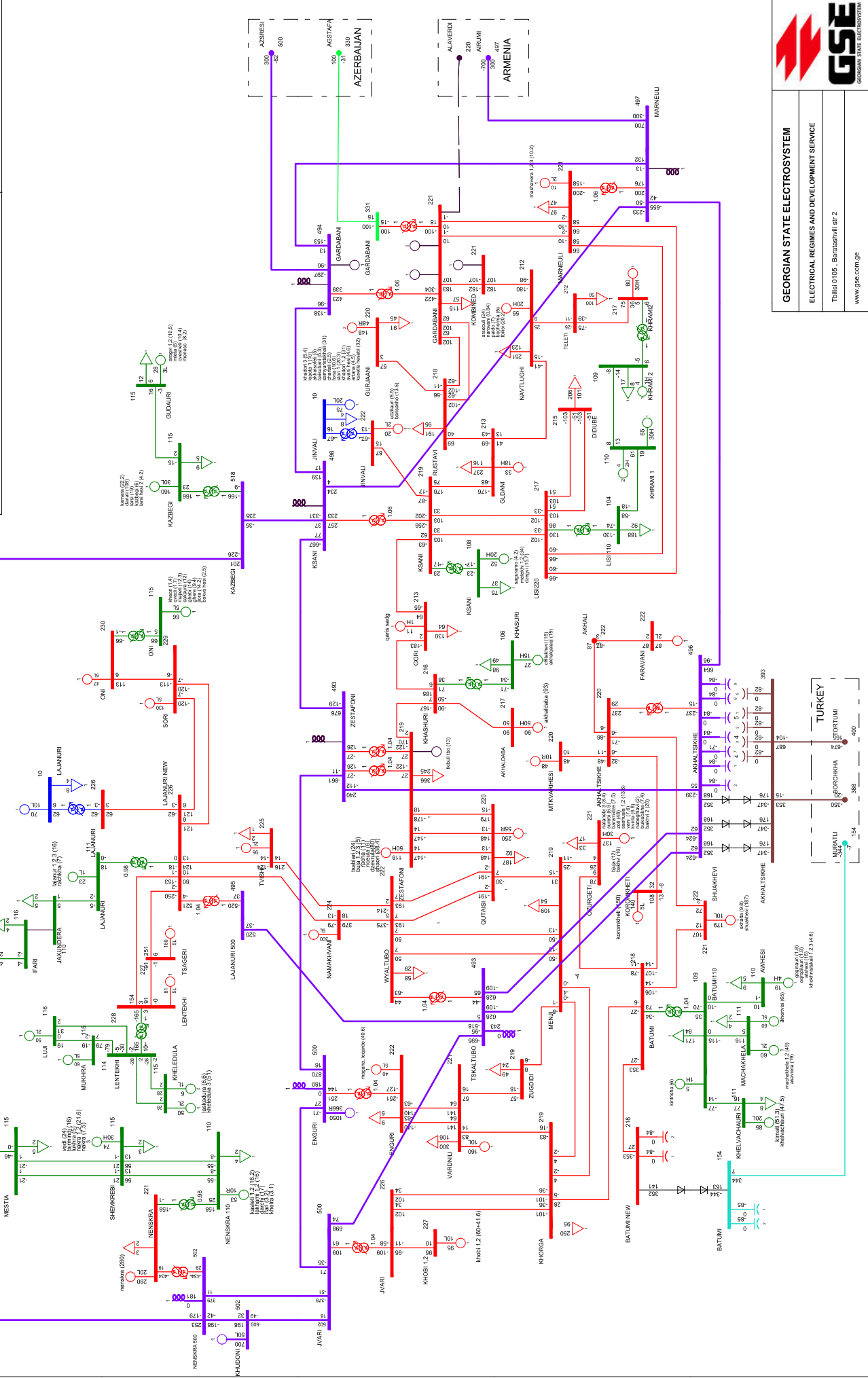


2024 WINTER MIN	TOTALS
Bus - Voltage	PGEN = 2531 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 1961 MW GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 456 MW GE>RU = -896 MW
	TPP = 750 MW GE>RM = 700 MW
	kV: <=10,000 <=110,000 <=154,000 <=220,000 <=330,000 <=400,000 <=500,000 <=500,000

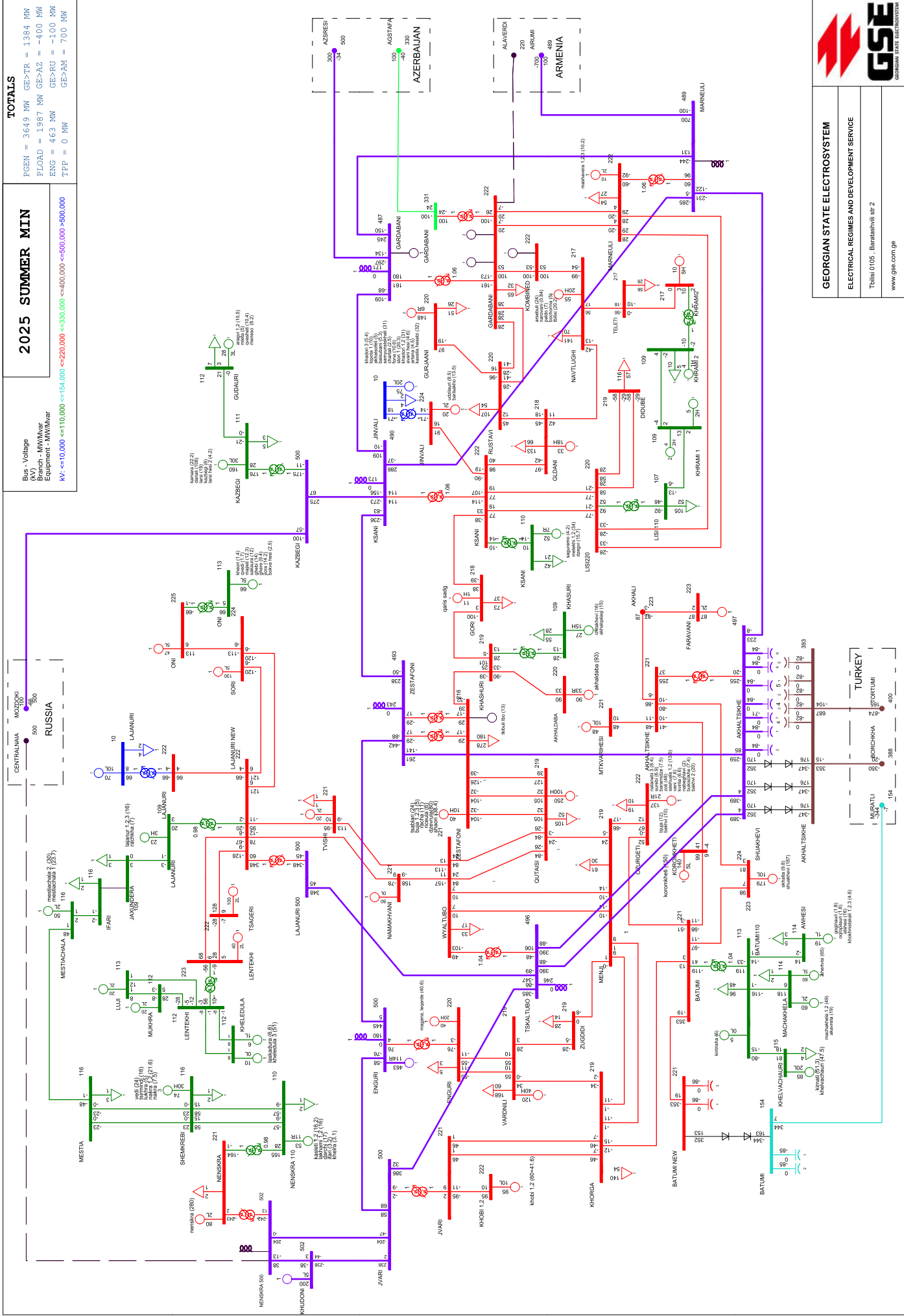


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2025 SUMMER MAX	TOTALS
Bus - Voltage	PGEN = 5690 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 3414 MW GE>AZ = -400 MW
Equipment - MW/Mvar	ENG = 1050 MW GE>RU = 451 MW
N<=10,000 <=110,000 <=154,000 <=220,000 <=330,000 <=400,000 <=500,000 >500,000	TEP = 0 MW GE>RM = 700 MW



2025 SUMMER MIN	TOTALS
Bus - Voltage	PGEN = 3649 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 1987 MW GE>AZ = -400 MW
Equipment - MW/Mvar	ENG = 463 MW GE>RU = -100 MW
N1 <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000 <= 500,000	TEP = 0 MW GE>RM = 700 MW




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Bus - Voltage
(kV) ch - MW/Var
Equipment - MW/Var

2025 WINTER MAX

TOTALS

FCEN = 4047 MW GE>TR = 1384 MW
FCEN = 3652 MW GE>AZ = -700 MW
ENG = 974 MW GE>RU = -1097 MW
TEP = 750 MW GE>AM = 700 MW

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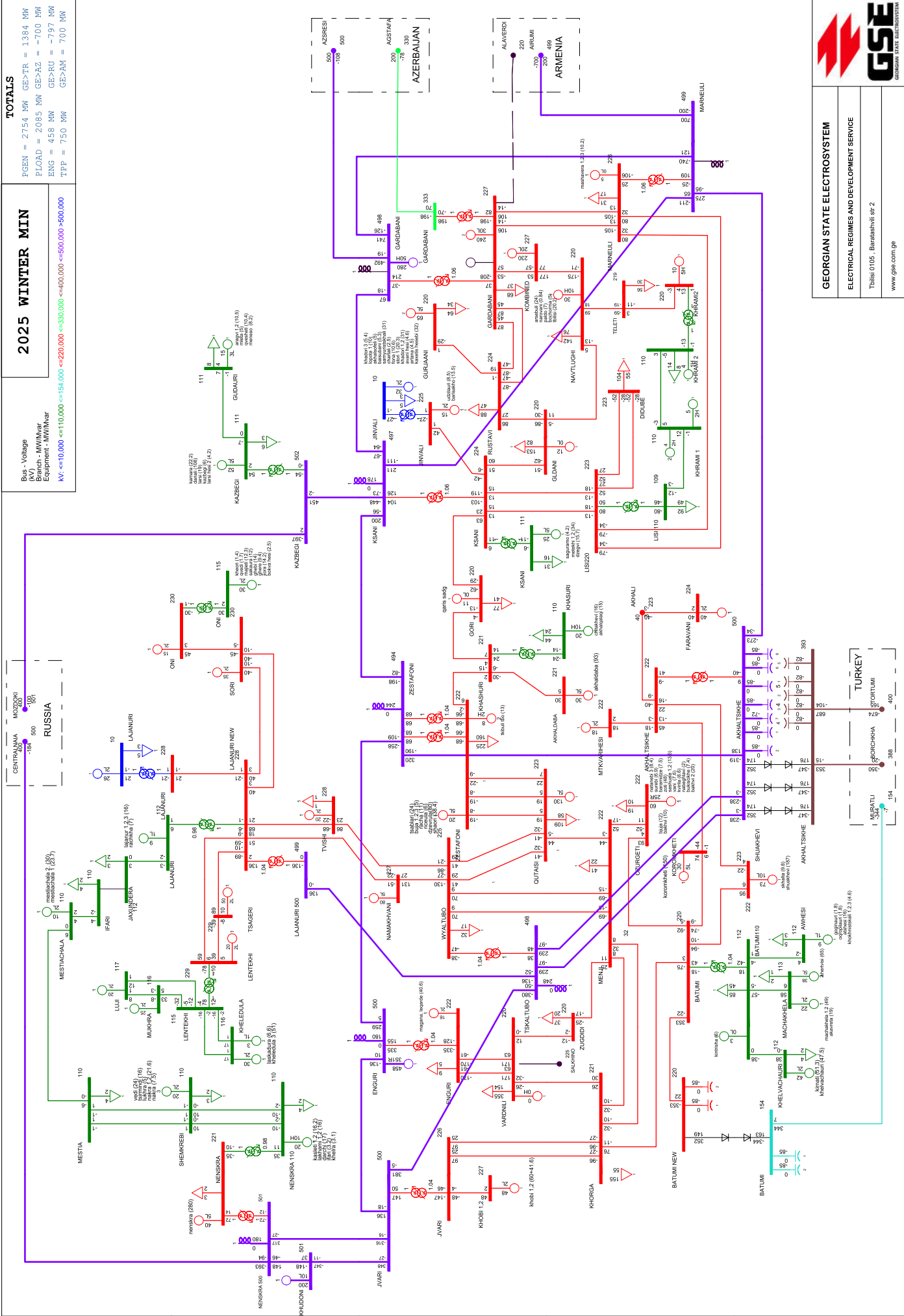
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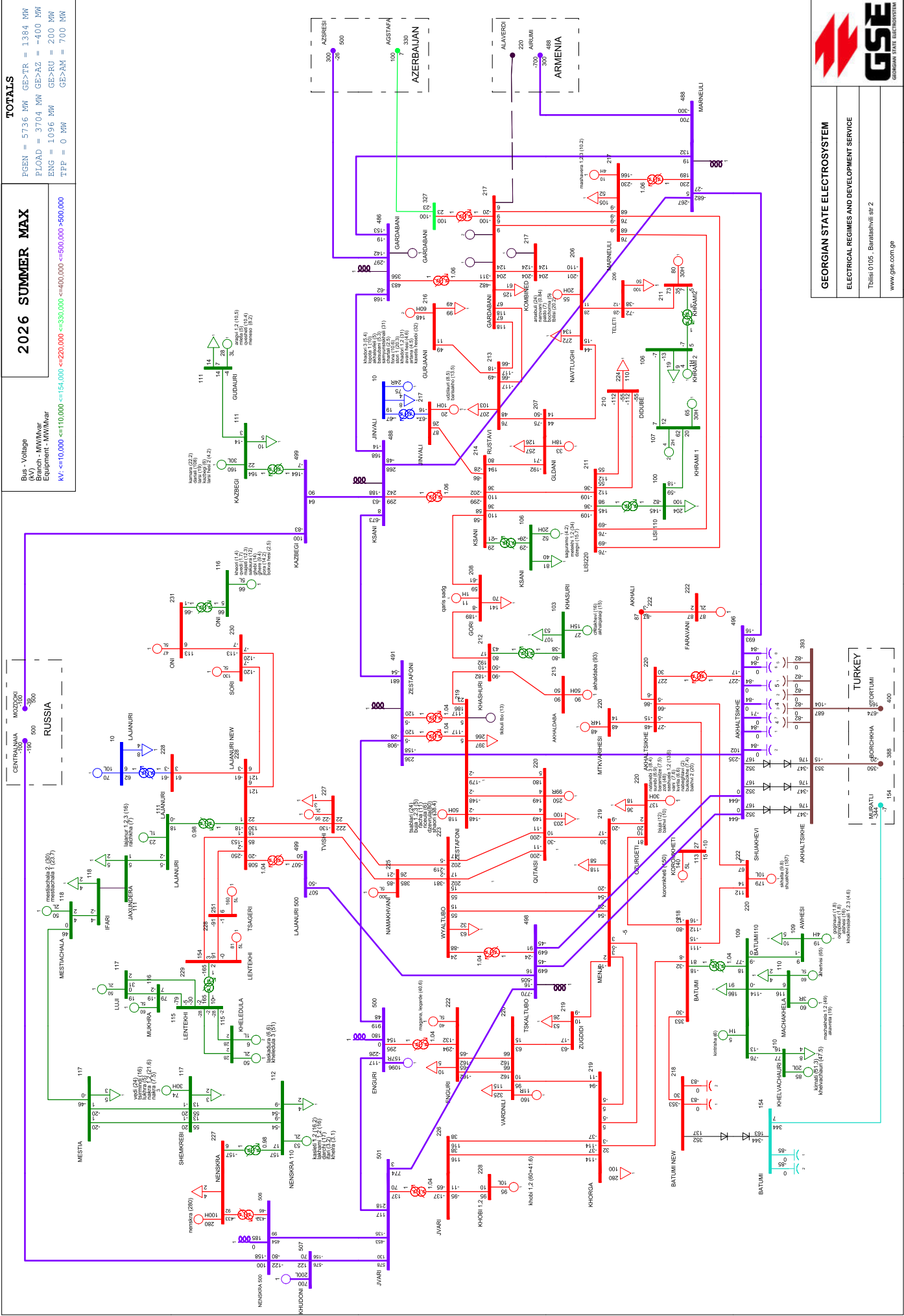
2025 WINTER MIN	TOTALS
Bus - Voltage	PGEN = 2754 MW GE>TR = 1384 MW
Branch - MW/Mvar	LOAD = 2085 MW GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 458 MW GE>RU = -797 MW
N1 <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000	TPP = 750 MW GE>RM = 700 MW



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Bus - Voltage Branch - MW/Mvar Equipment - MW/Mvar K<=10,000 <=110,000 <=154,000 <=220,000 <=330,000 <=400,000 <=500,000 >500,000 GE>TR = 1384 MW PLOAD = 3704 MW GE>AZ = -400 MW ENG = 1096 MW GE>RU = 200 MW TFP = 0 MW GE>RM = 700 MW	2026 SUMMER MAX	TOTALS
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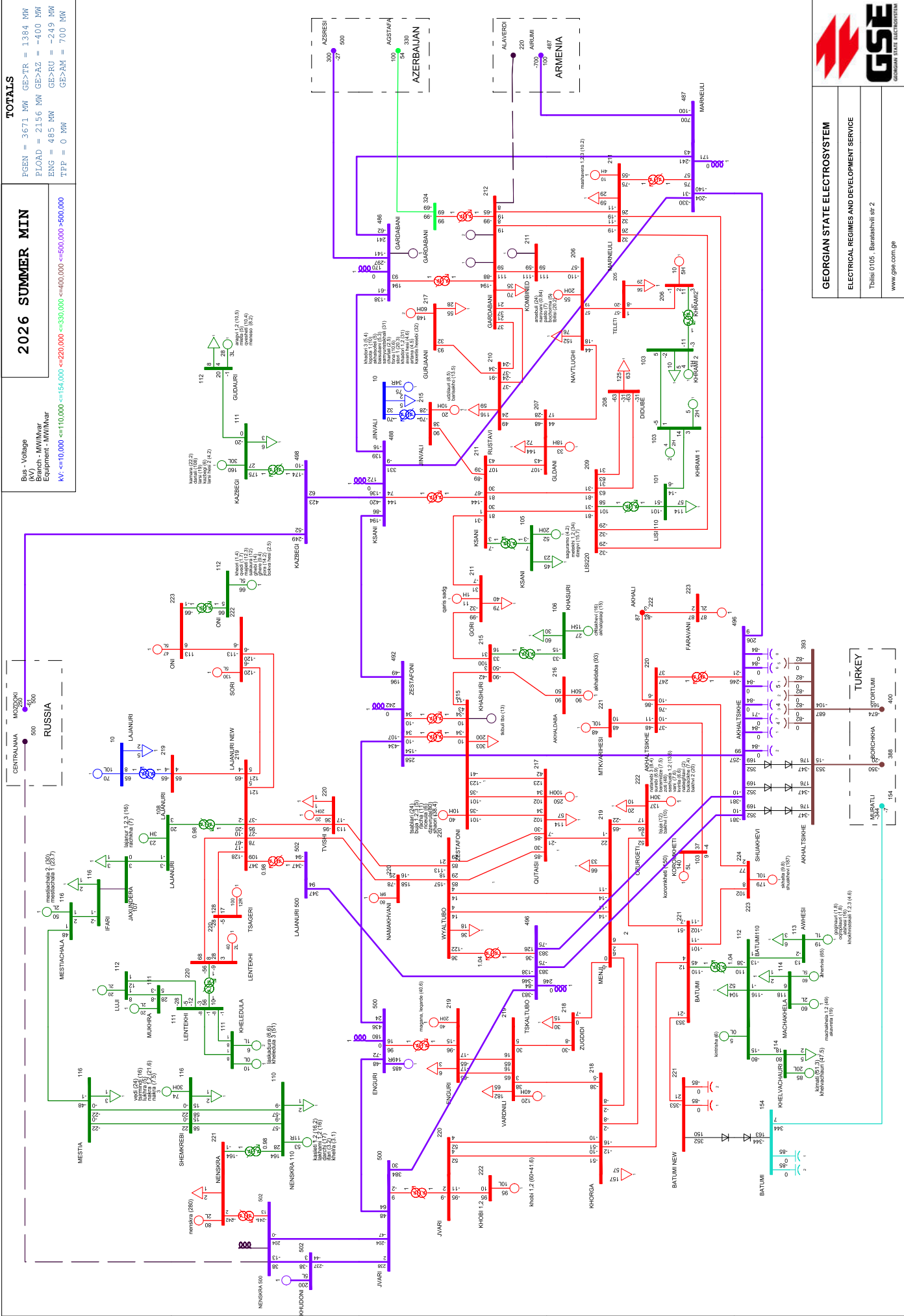
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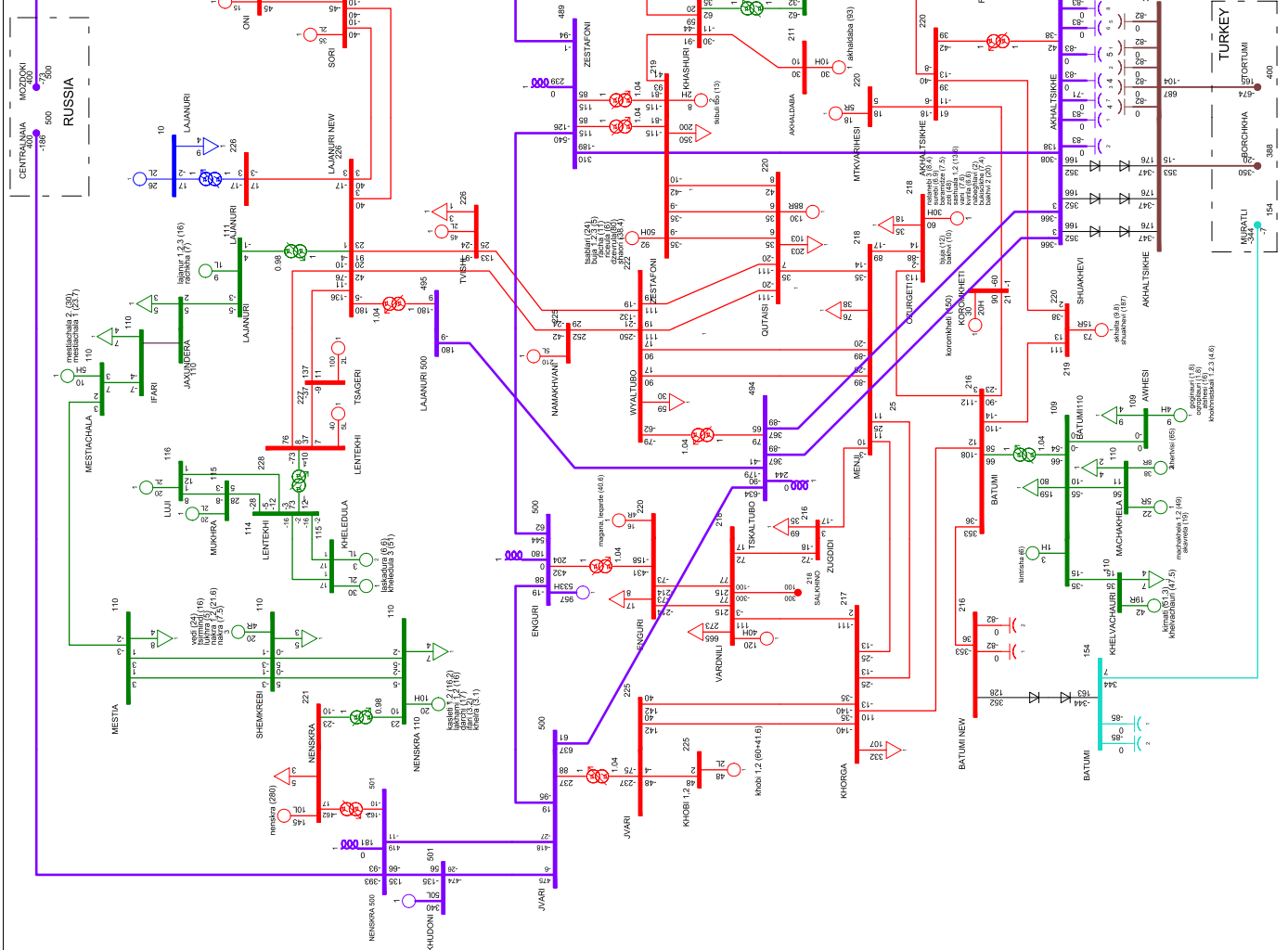
2026 SUMMER MIN	TOTALS
Bus - Voltage	PGEN = 3671 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 2156 MW GE>AZ = -400 MW
Equipment - MW/Mvar	ENG = 485 MW GE>RU = -249 MW
N1 <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 > 500,000	TEP = 0 MW GE>RM = 700 MW



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2026 WINTER MAX		TOTALS
Bus - Voltage	PGEN = 4270 MW	GE>TR = 1384 MW
(KV)ch - MW/Mvar	PGEN = 3871 MW	GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 957 MW	GE>RU = -1097 MW
KV <= 10,000 <= 10,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000	TEP = 990 MW	GE>AM = 700 MW



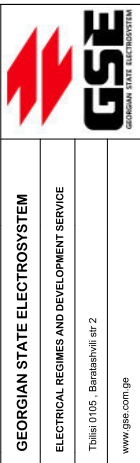


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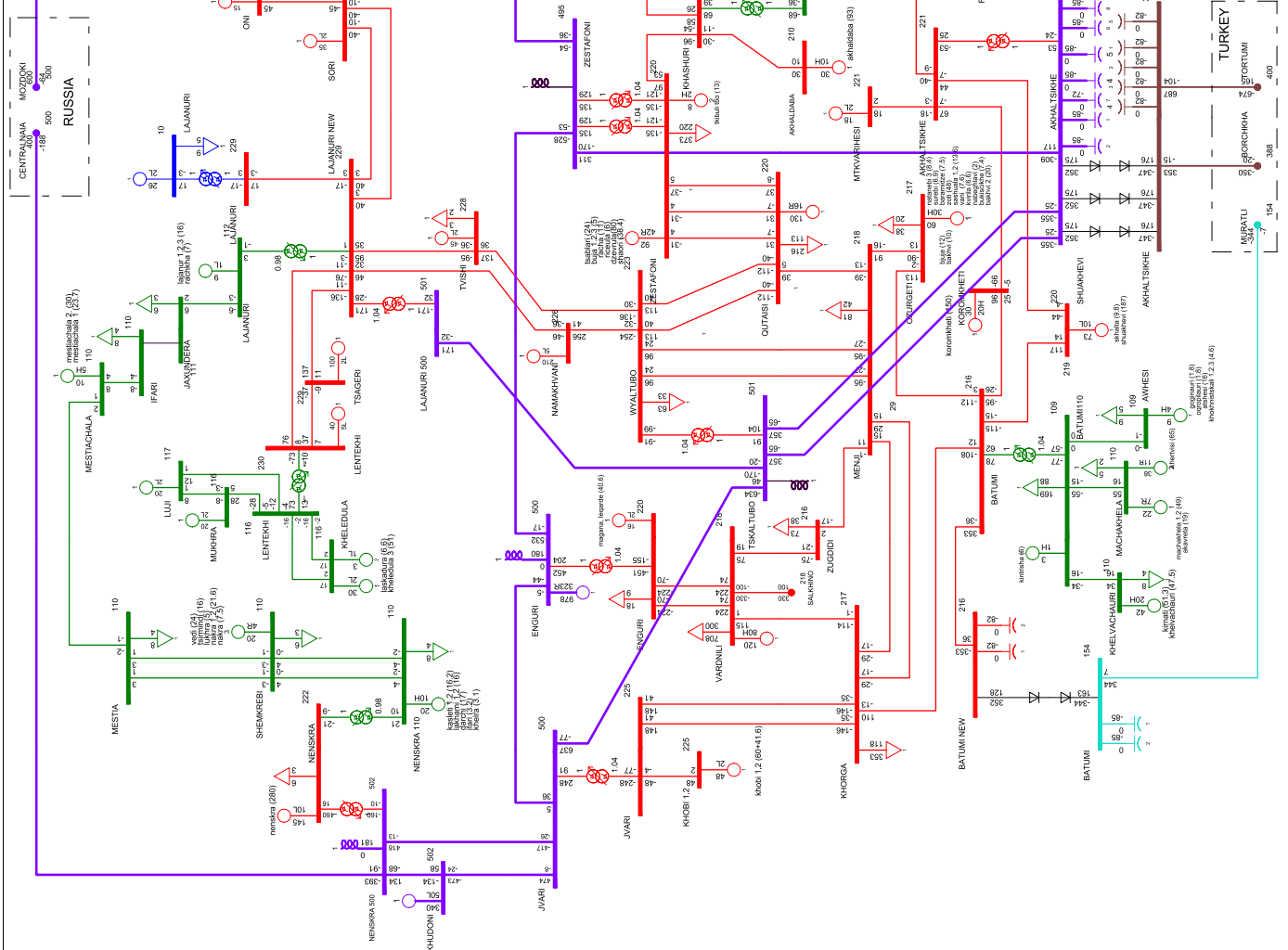
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2027 WINTER MAX		TOTALS
Bus - Voltage	PGEN = 4291 MW	GE>TR = 1384 MW
(KV)ch - MW/Mvar	PGEN = 4112 MW	GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 978 MW	GE>RU = -1324 MW
KV <= 10,000 <= 10,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000 <= 500,000	TEP = 990 MW	GE>AM = 700 MW





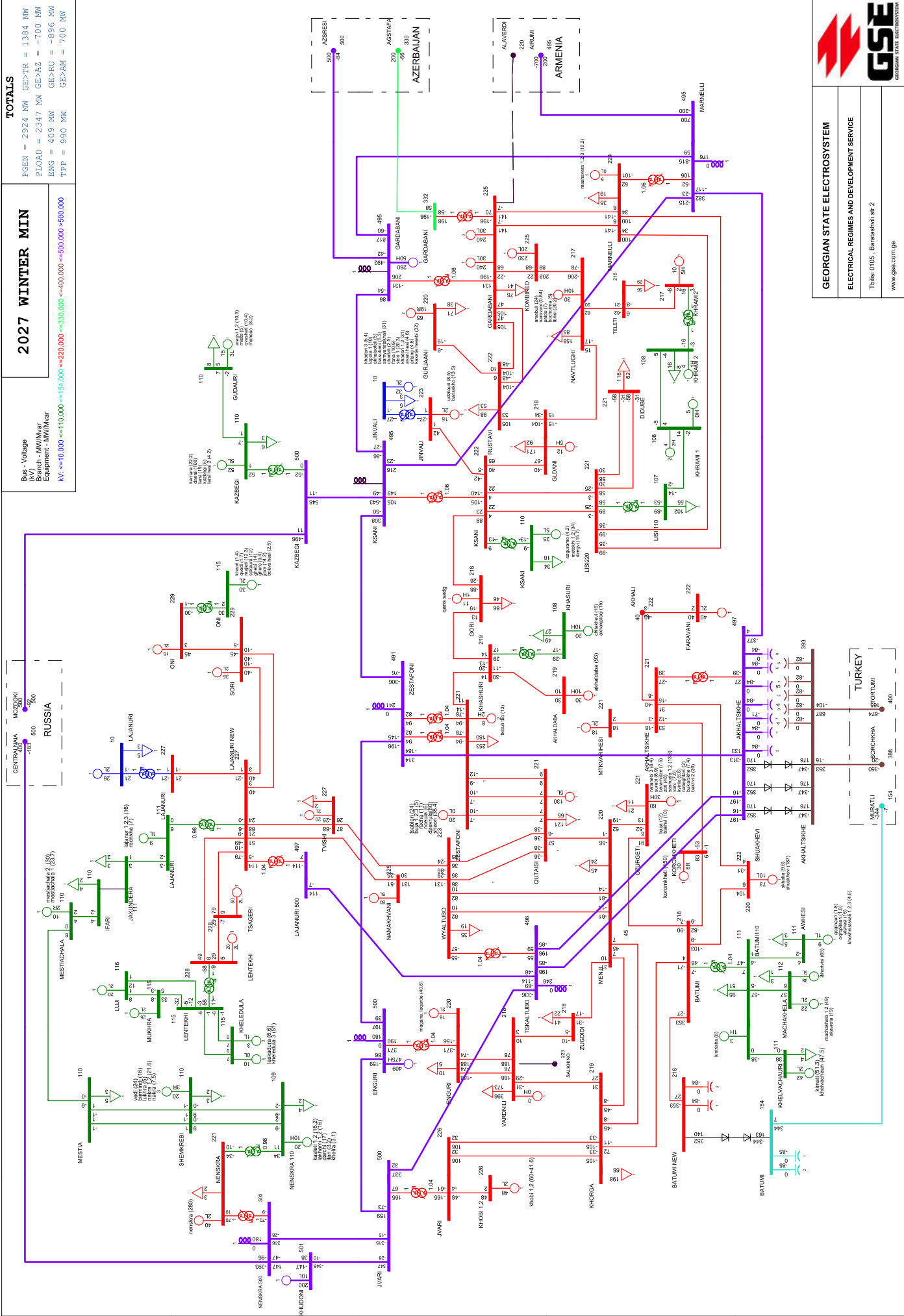
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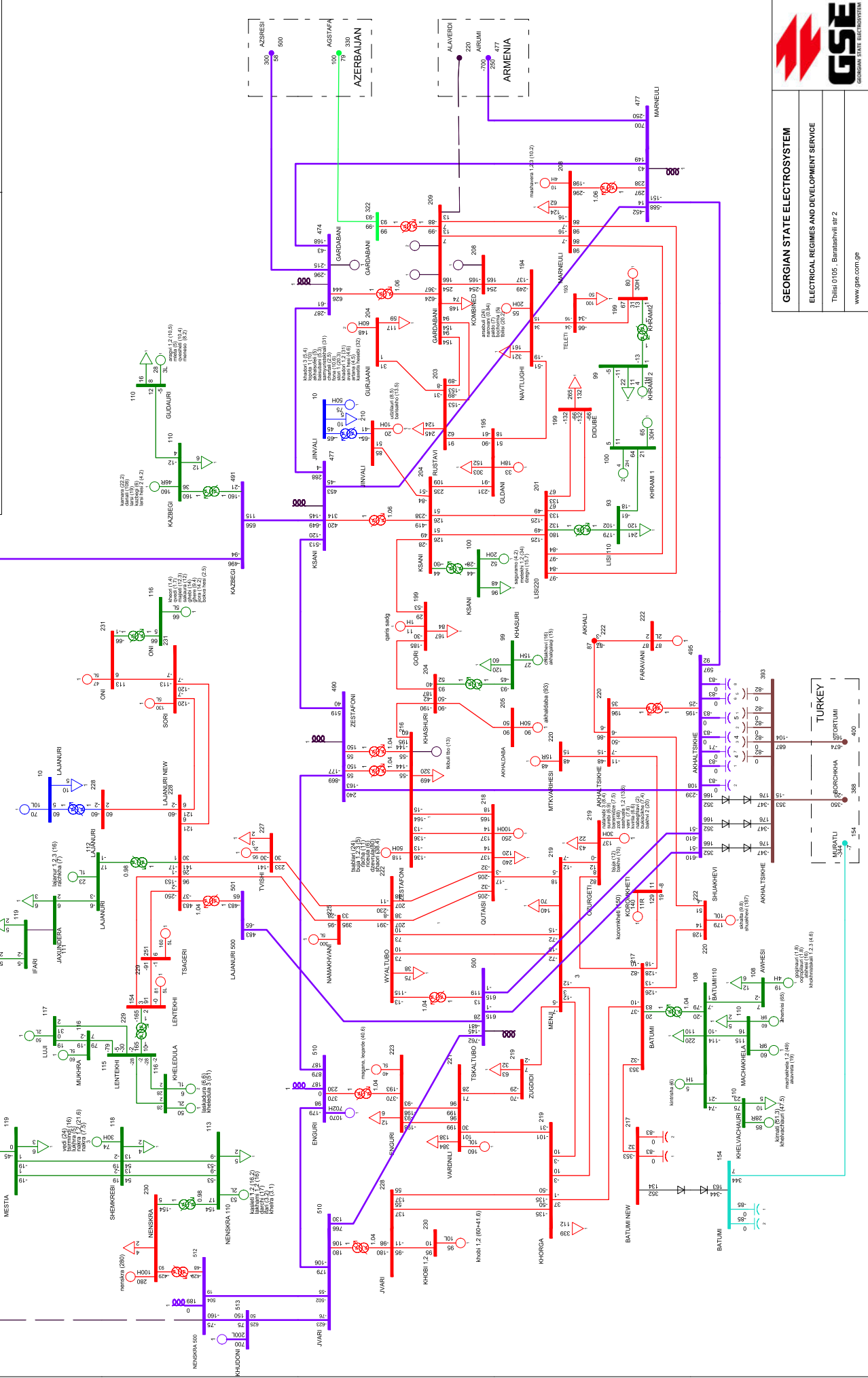
2027 WINTER MIN	TOTALS
Bus - Voltage	PGEN = 2324 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 2347 MW GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 409 MW GE>RU = -896 MW
	TPP = 990 MW GE>RM = 700 MW

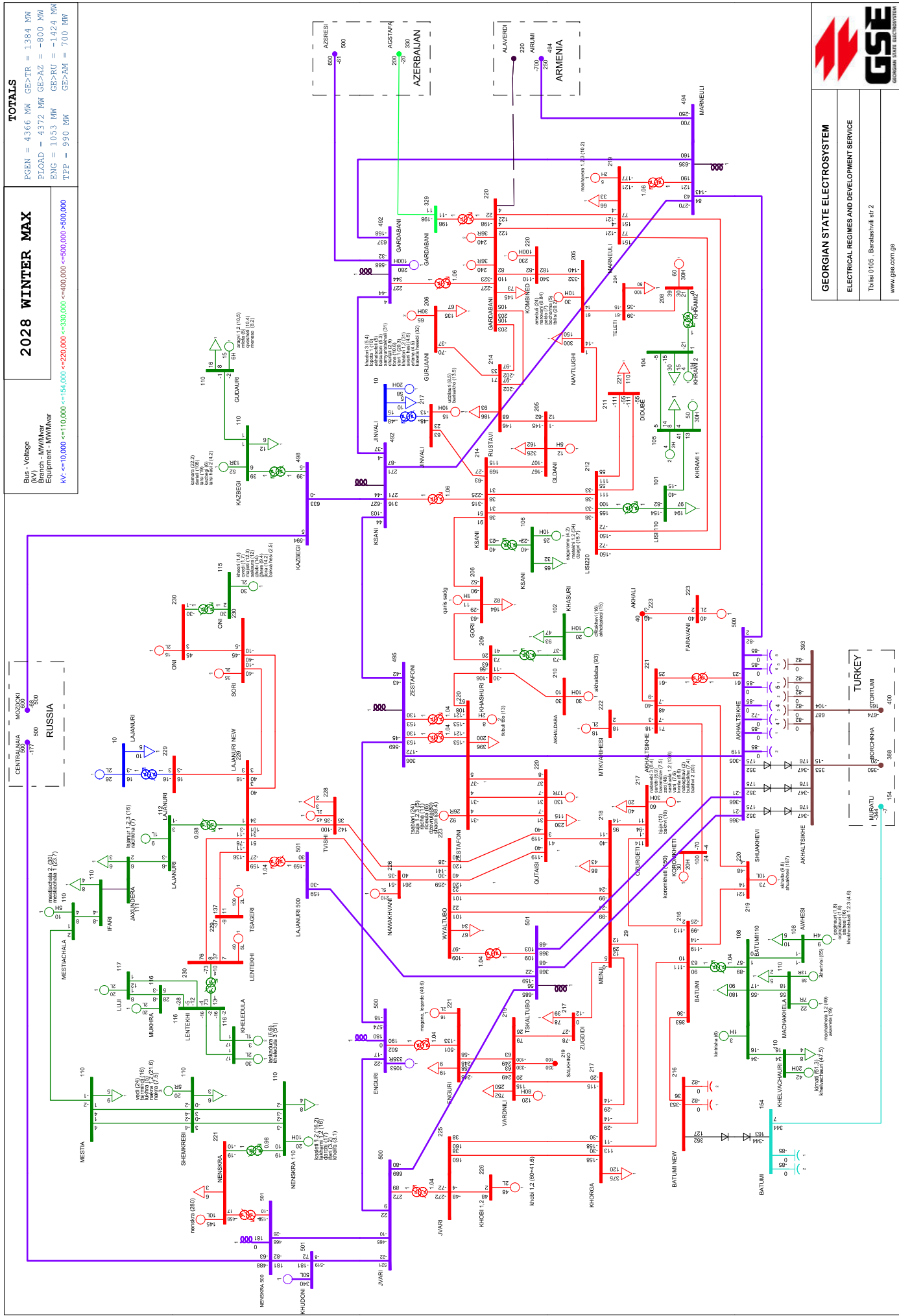


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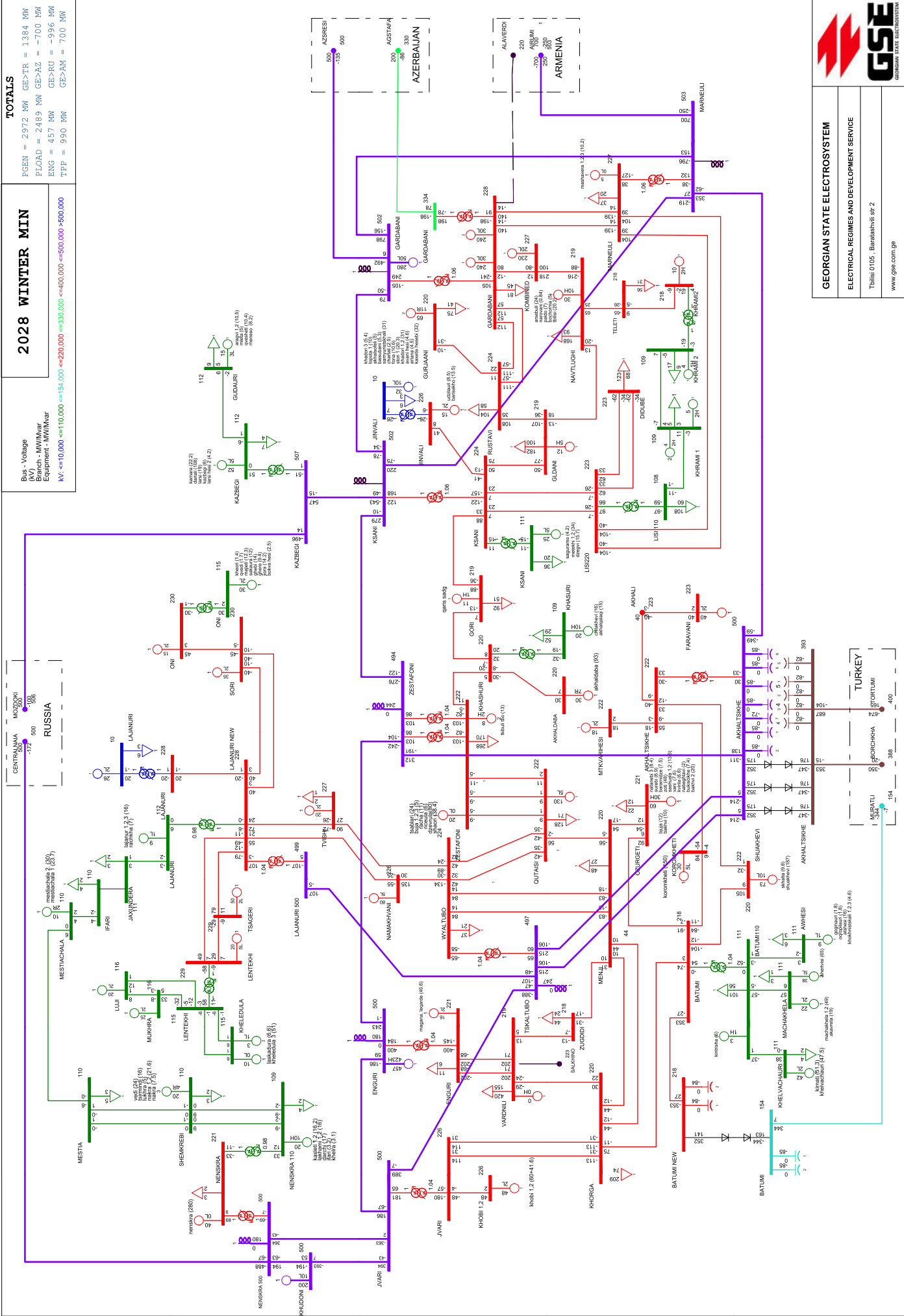


2028 SUMMER MAX	TOTALS
Bus - Voltage	PGEN = 5710 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 4360 MW GE>AZ = -400 MW
Equipment - MW/Mvar	ENG = 1070 MW GE>RU = -496 MW
NV <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 > 500,000	TEP = 0 MW GE>RM = 700 MW





2028 WINTER MIN	TOTALS
Bus - Voltage	PGEN = 2972 MW GE>TR = 1384 MW
Branch - MW/Mvar	PLOAD = 2489 MW GE>AZ = -700 MW
Equipment - MW/Mvar	ENG = 457 MW GE>RU = -996 MW
N1 <= 10,000 <= 110,000 <= 154,000 <= 220,000 <= 330,000 <= 400,000 <= 500,000 <= 500,000	TPP = 990 MW GE>RM = 700 MW





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Regimes:

- 2021 Summer Max
- 2024 Summer Max
- 2028 Summer Max

Emergency:

- Emergency trip of 500-kV transmission lines – three-phase short circuit with 0,0001 Ohm resistance and duration of 0.12 seconds followed by OHL trip.

Plotted parameters:

- Active power flow on lines (MW)
- Bus Voltage (kV)
- Frequency (Hz)

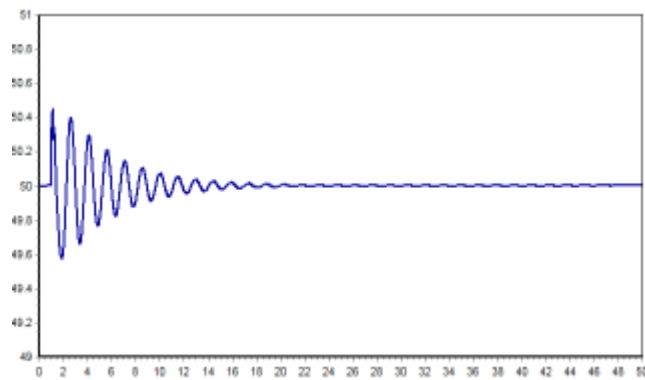
2021 Summer Max

2021 Summer Max of Georgia	
Generation of Georgia (MW)	3136
Load of Georgia (MW)	2469
Import from Azerbaijan (MW)	600
Export to Azerbaijan (MW)	0
Import from Armenia (MW)	0
Export to Armenia (MW)	700
Import from Turkey (MW)	0
Export to Turkey (MW)	1037
Import to Russia (MW)	570
Export to Russia (MW)	0
Total import (MW)	1170
Total export (MW)	1737

Emergency outage of OHL “Enguri-Zestafoni”:

Power flow on line is 644 MW

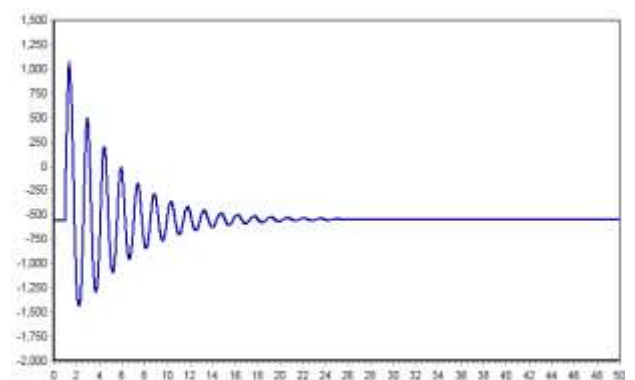
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

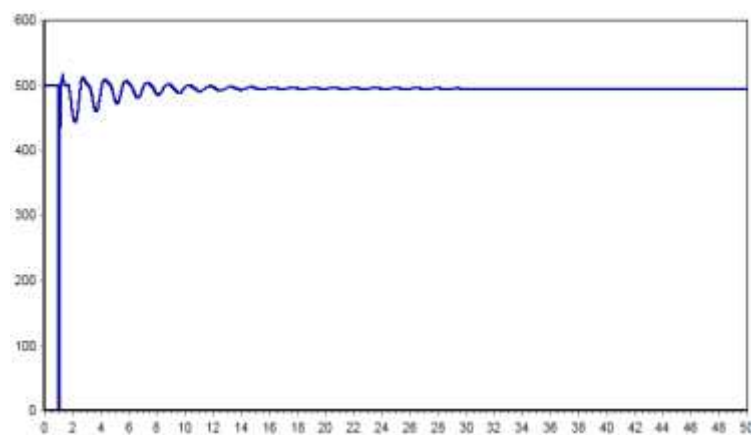
Power flow on OHL „Jvari-Tsentralnaia“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on “Enguri-500”:

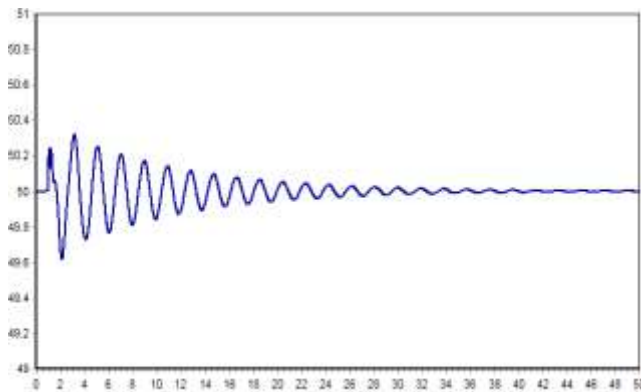


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL “Enguri-Jvari”:

Power flow on line is 202 MW.

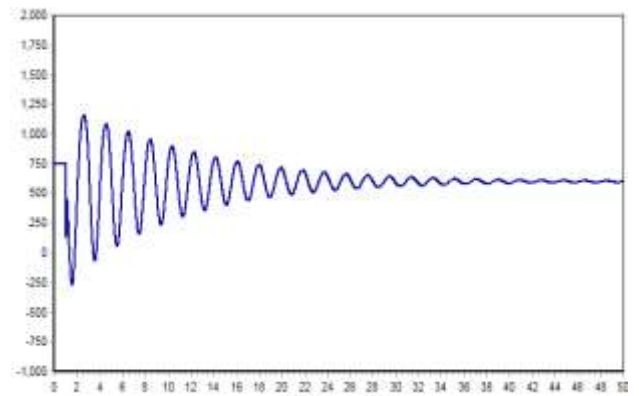
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

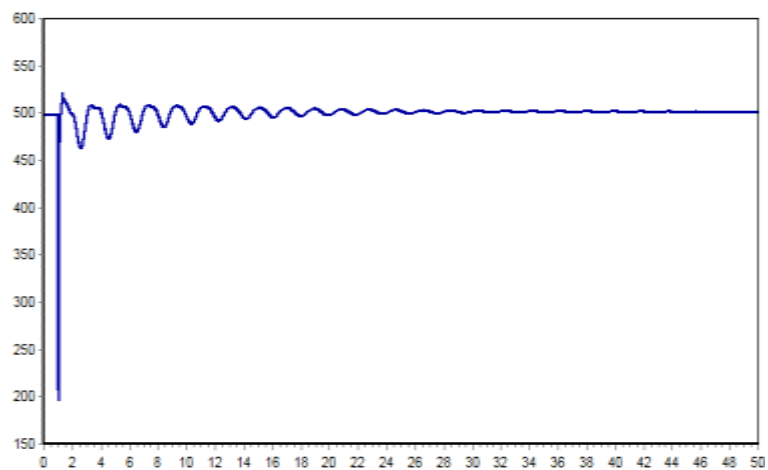
Power flow on OHL „Jvari - Tskhaltubo“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Akhaltsikhe 500“:

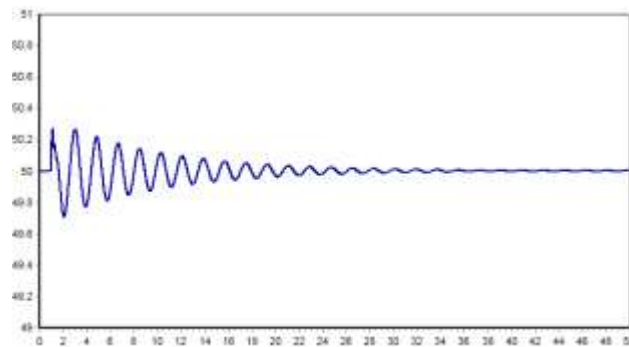


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Zestafoni - Akhaltsikhe“

Power flow on line is 251 MW.

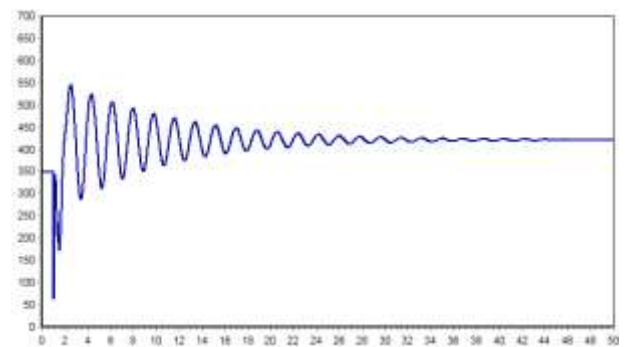
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

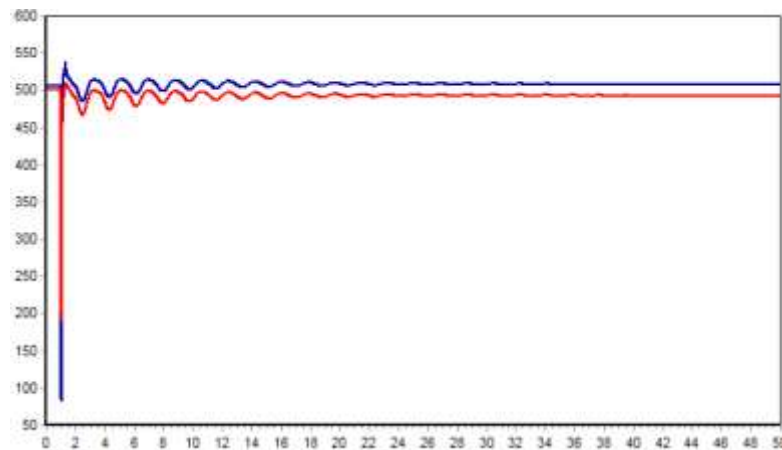
Power flow on OHL „Tskaltubo - Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Akhaltsikhe 500“ (Blue) and Voltage on „Zestafoni 500“ (Red) nodes:

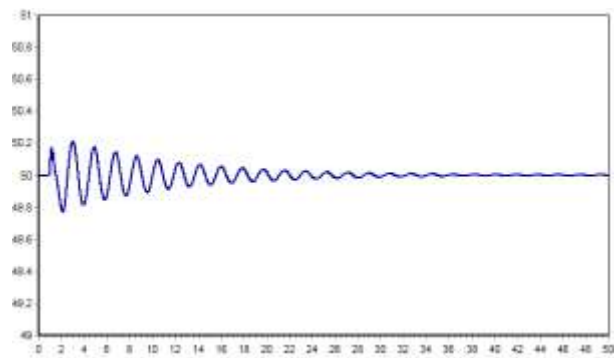


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Zestafoni - Ksani“

Power flow on line is 332 MW.

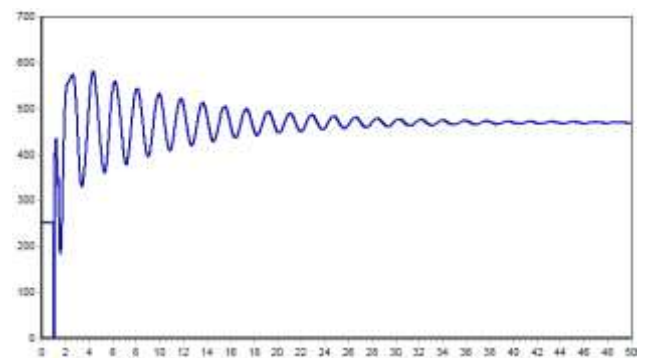
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

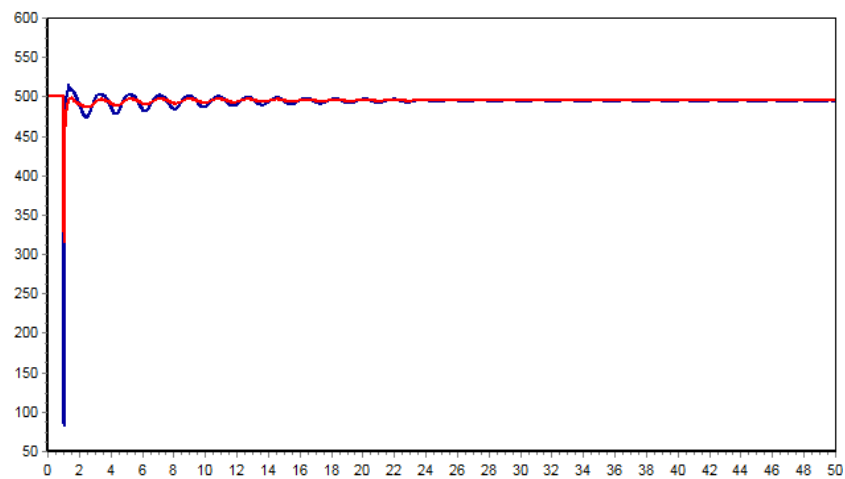
Power flow on OHL „Zestafoni - Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Zestafoni 500“ (Blue) and Voltage on „Ksani 500“ (Red) nodes:

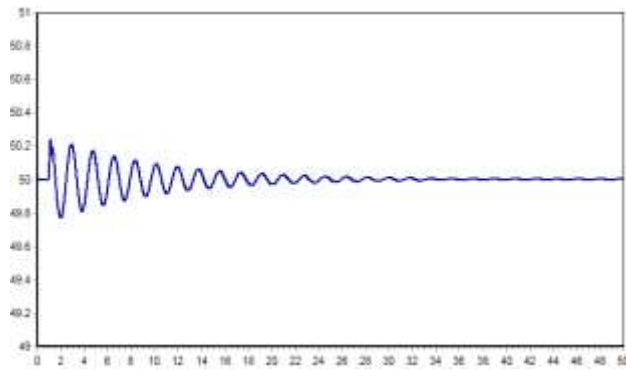


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Gardabani“

Power flow on line is 73 MW.

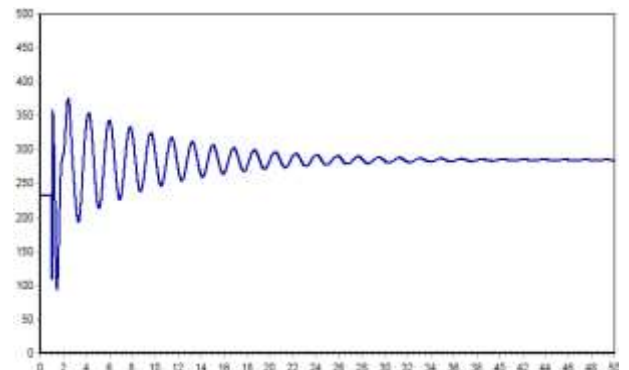
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

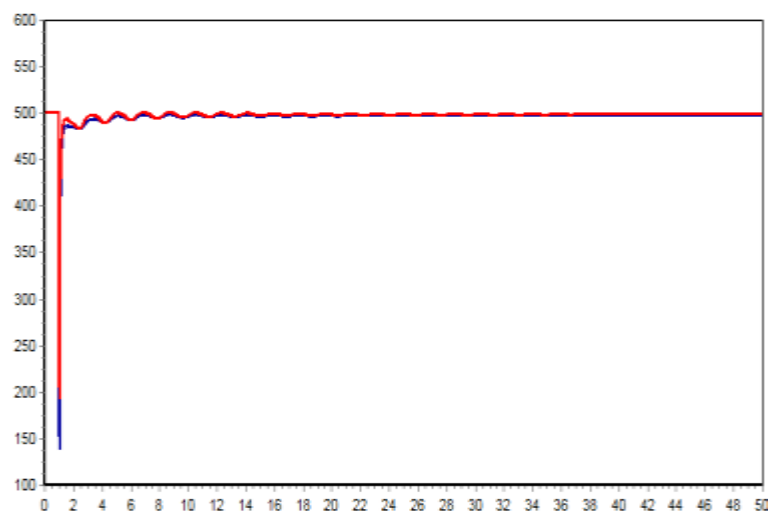
Power flow on OHL „Ksani - Marneuli“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Ksani 500“ (Blue) and Voltage on „Gardabani 500“ (Red) nodes:

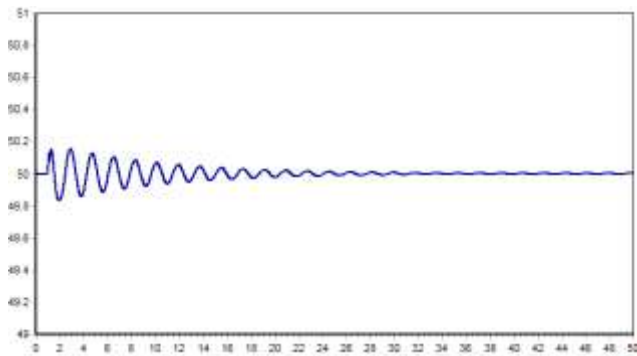


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Marneuli“

Power flow on line is 232 MW.

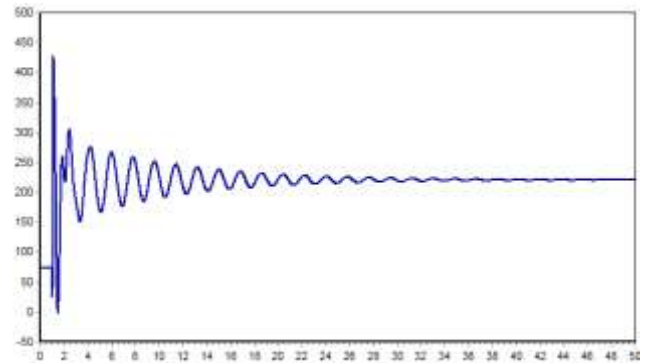
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

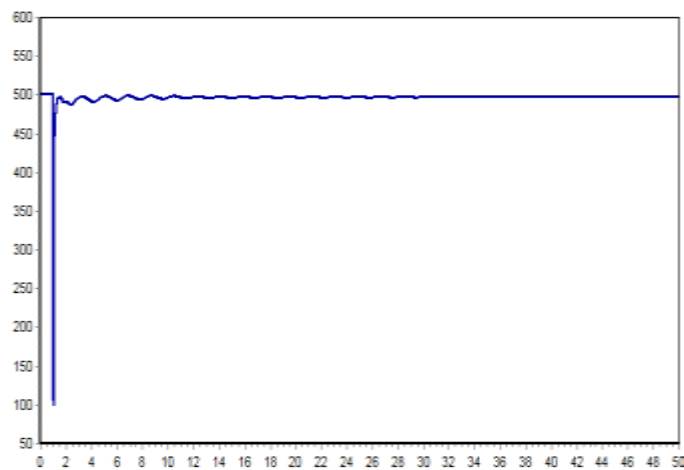
Power flow on OHL „Ksani - Gardabani“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Ksani 500“:

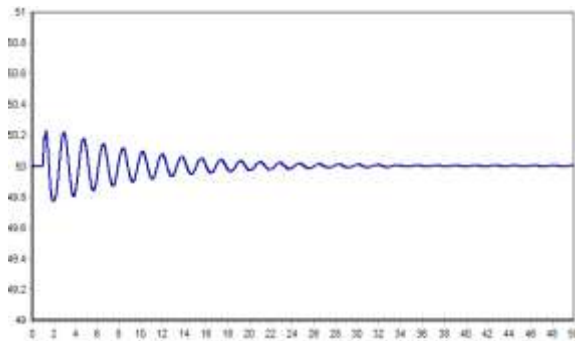


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Gardabani - Marneuli“

Power flow on line is 253 MW.

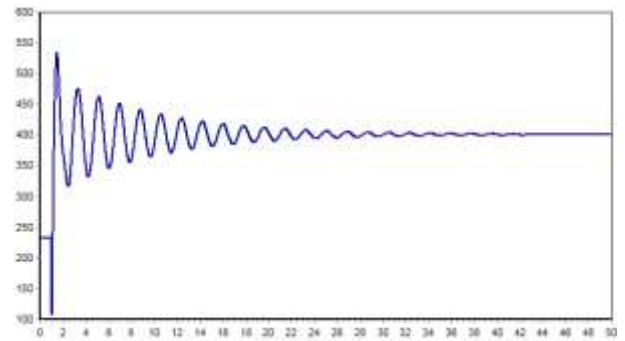
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

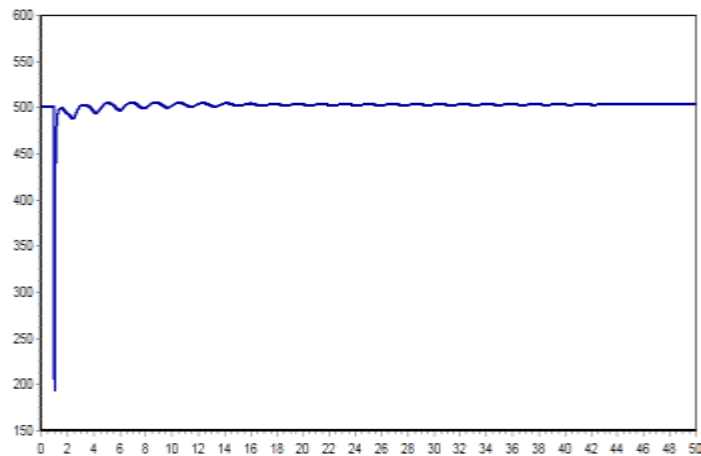
Power flow on OHL „Marneuli - Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Ksani 500“:

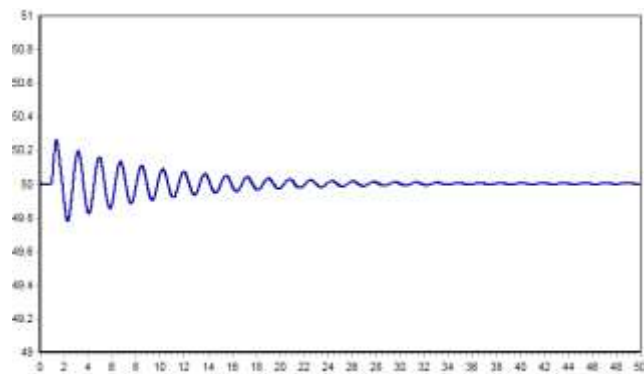


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Marneuli - Airum“

Power flow on line is 700 MW.

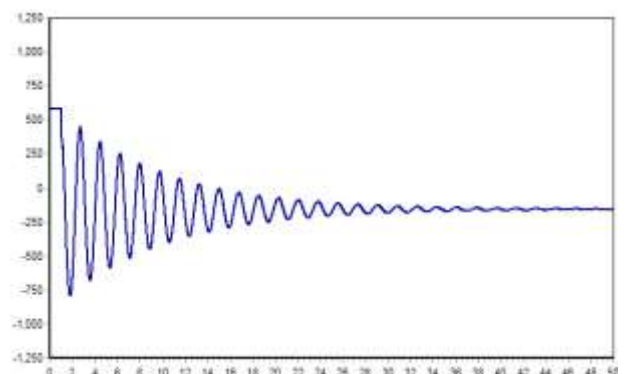
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

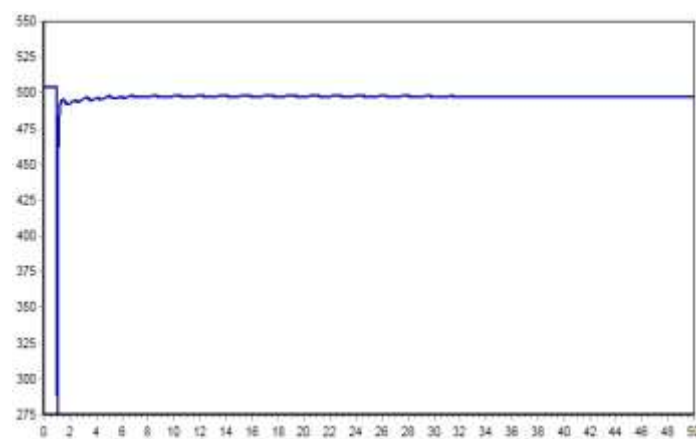
Power flow on OHL „Jvari - Novosvobodnaia“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Marneuli 500“

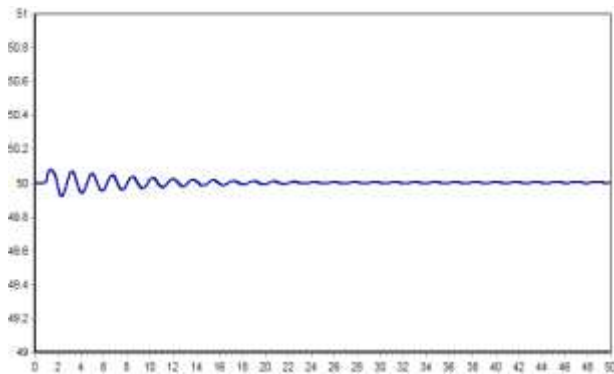


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Batumi - Muratli“

Power flow on line is 350 MW.

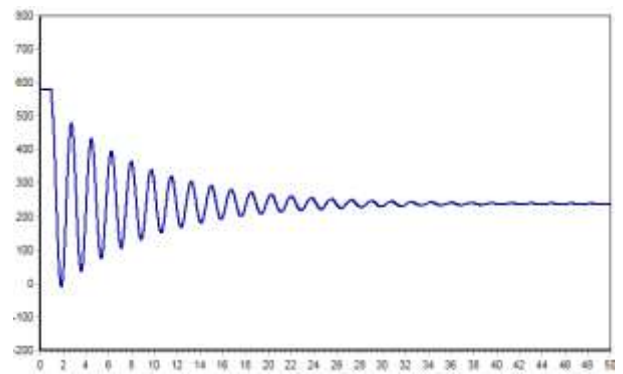
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

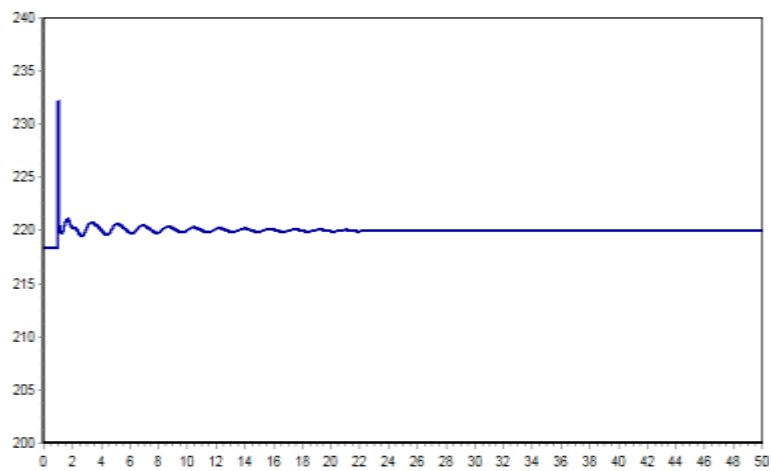
Power flow on OHL „Jvari - Novosvobodnaia“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Batumi 220“:

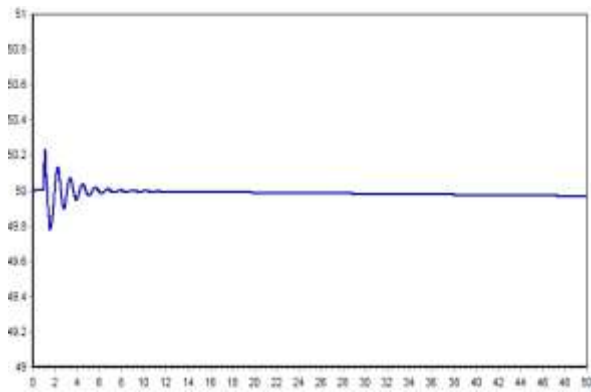


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Jnari - Novosvobodnaia“

Power flow on line is 555 MW.

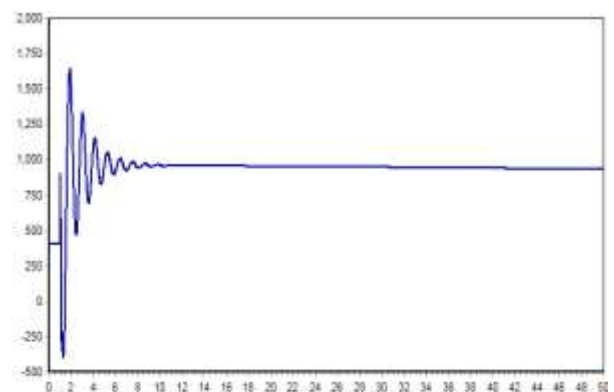
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

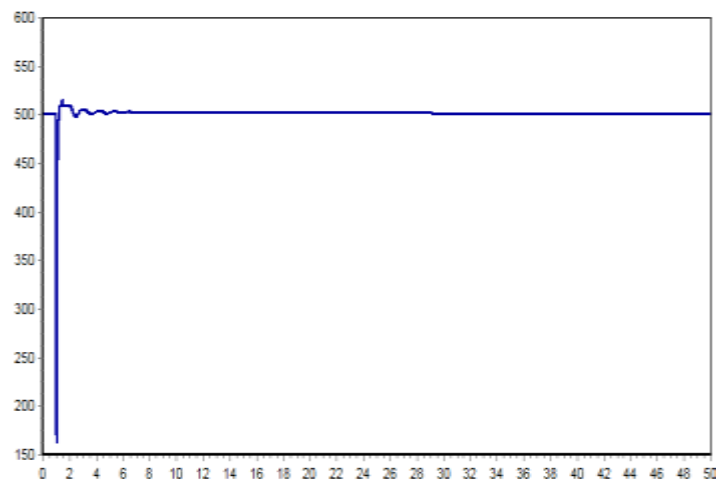
Power flow on OHL „Gardabani - Samukhi“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Jvari 500“:

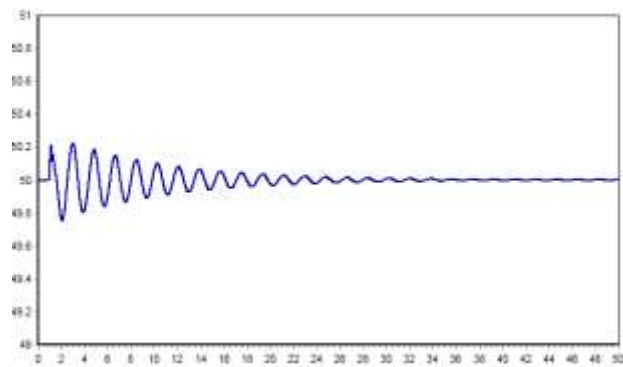


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Tskaltubo - Akhaltsikhe“

Power flow on line is 348 MW.

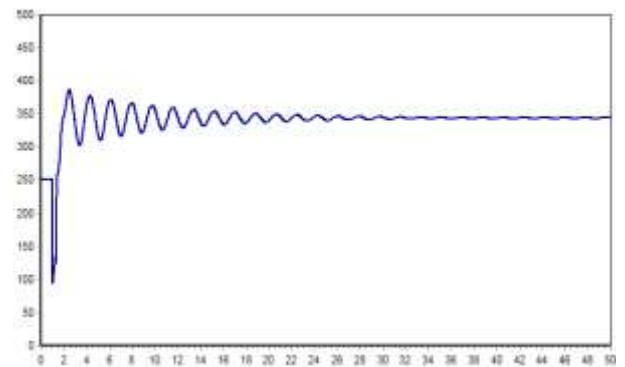
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

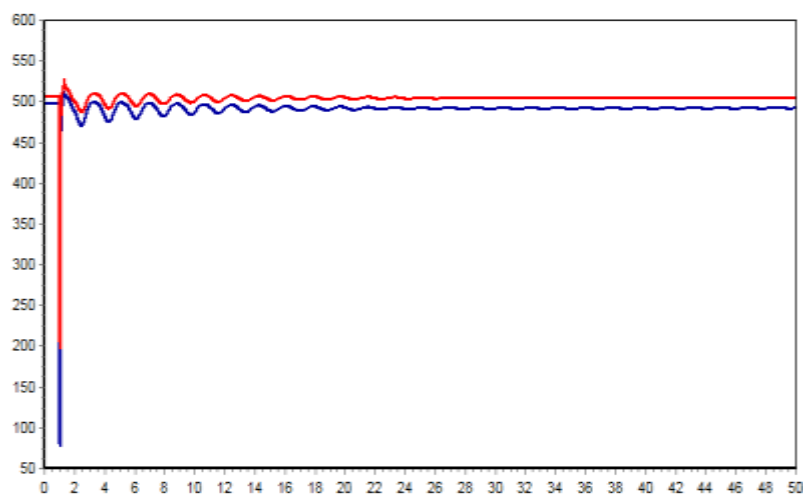
Power flow on OHL „Akhaltsikhe - Zestafoni“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Tskaltubo 500“ (Blue) and Voltage on „Akhaltsikhe 500“ (Red) nodes:

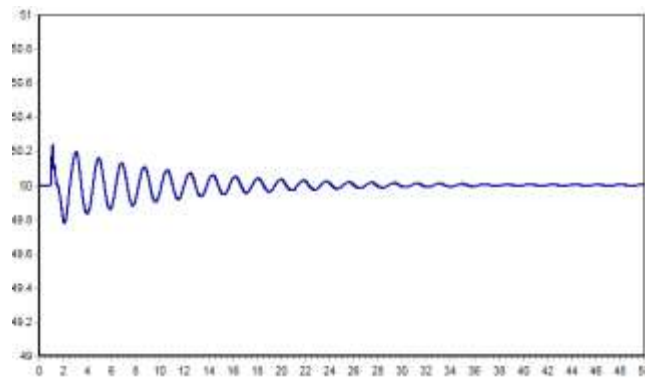


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Tskaltubo - Jvari“

Power flow on line is 745 MW.

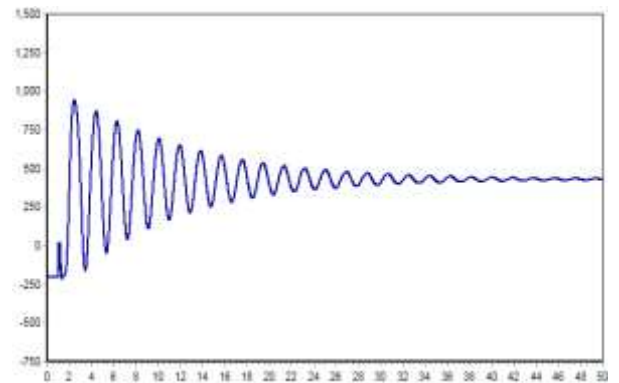
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

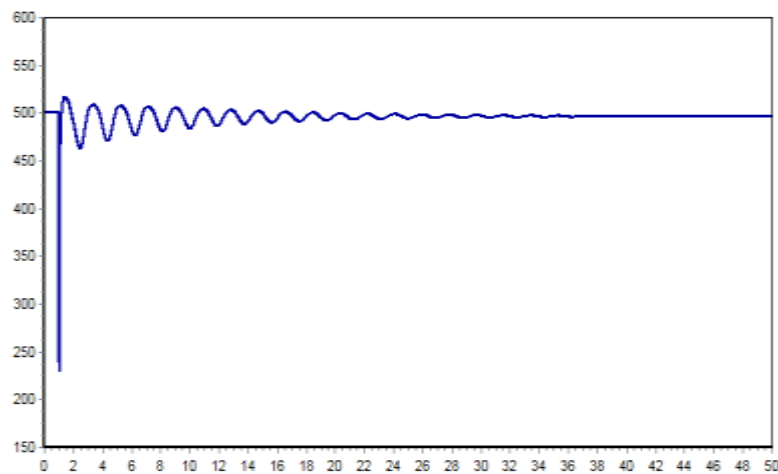
Power flow on OHL „Enguri - Jvari“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Jvari 500“:

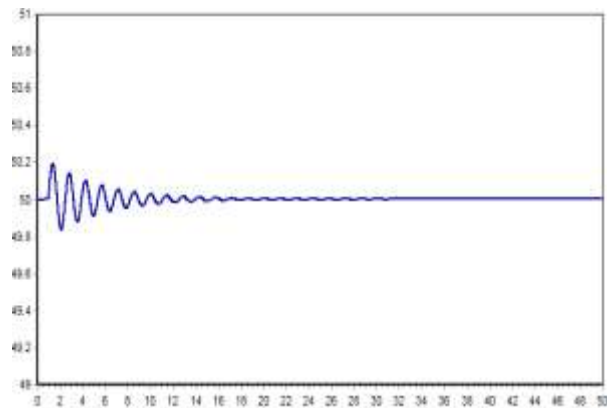


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Akhaltsikhe - Borchkha“ and HVDC

Power flow on line is 704 MW:

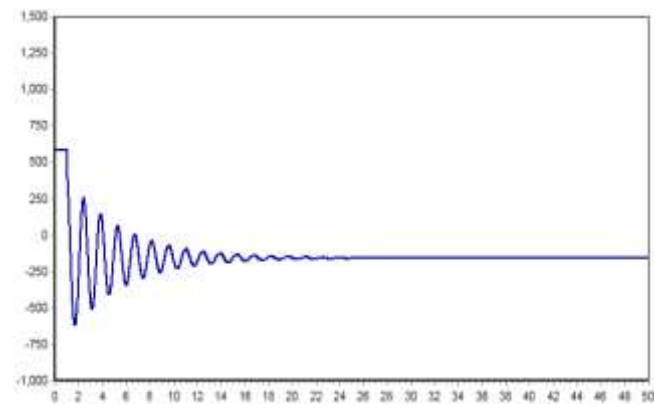
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

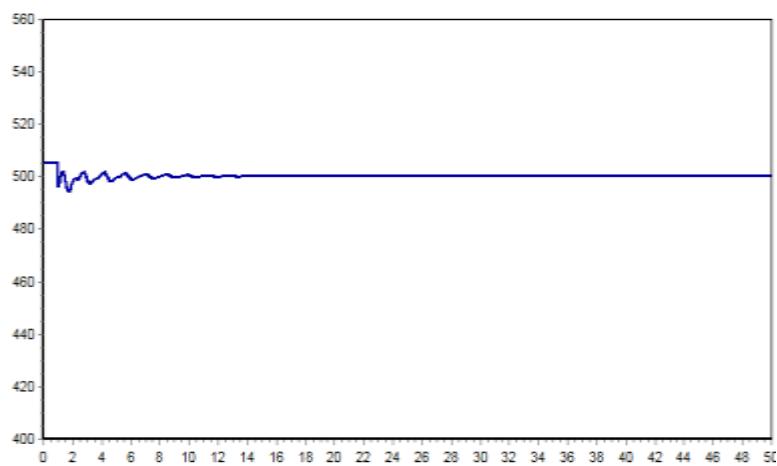
Power flow on OHL „Zestafoni - Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „akhaltsikhe 500“:

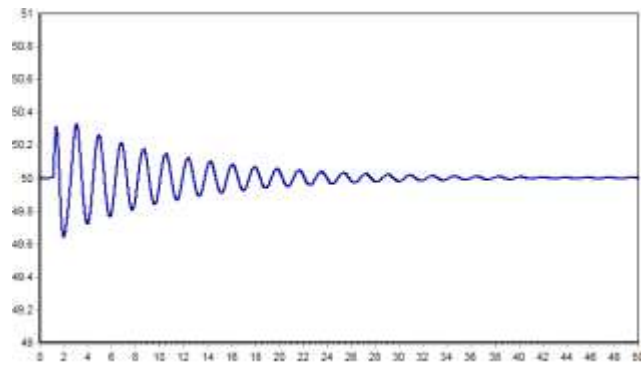


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Marneuli - Akhaltsikhe“

Power flow on line is 314 MW.

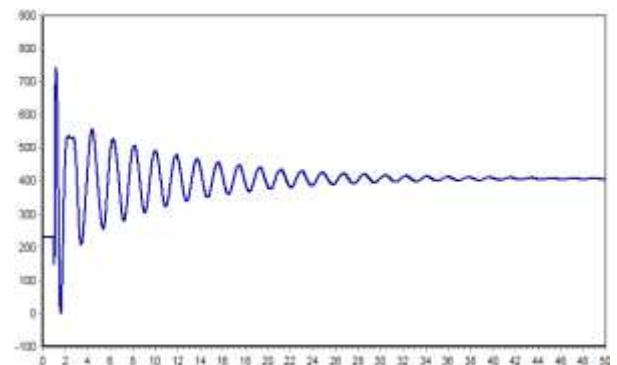
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

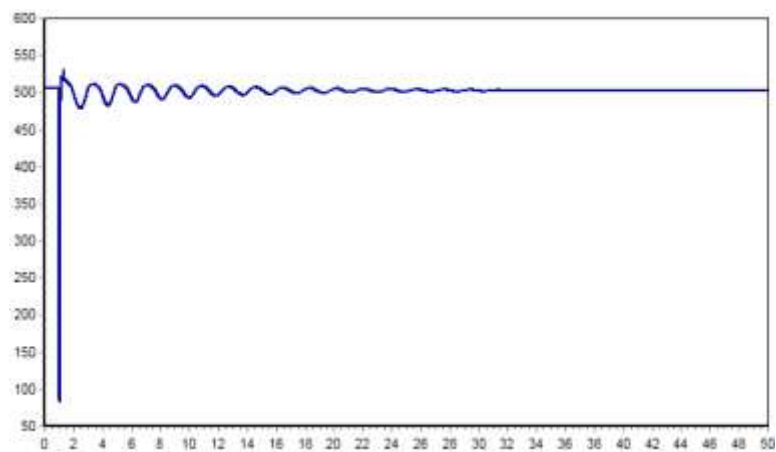
Power flow on OHL „Ksani - Marneuli“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Akhaltsikhe 500“:

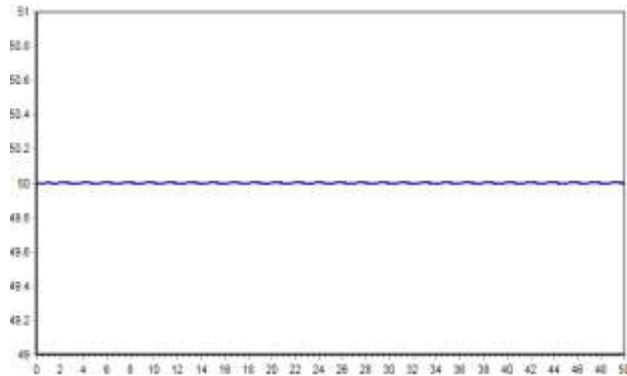


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

500/220 AT „Enguri“

Power flow in AT 274 MW.

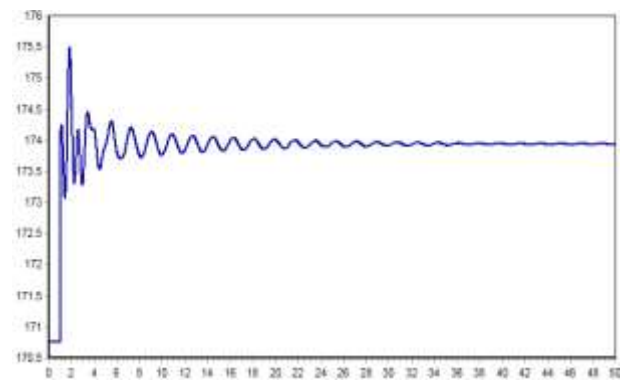
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Ksani“:



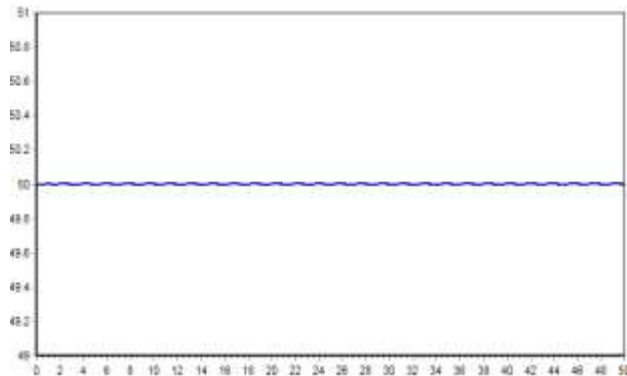
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Zestafoni“

Power flow in AT 56 MW.

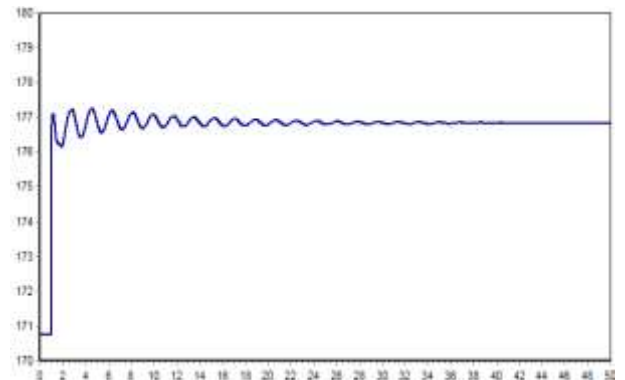
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Ksani“:



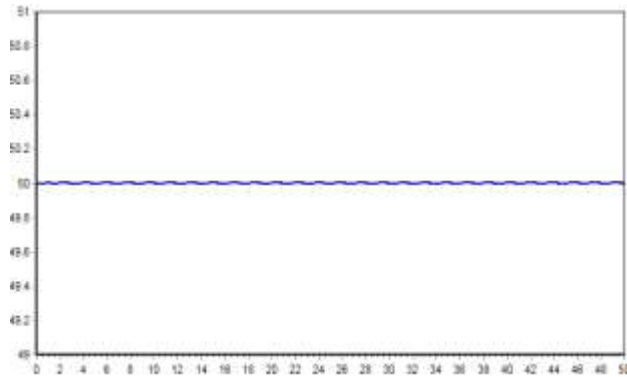
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Ksani“

Power flow in AT 171 MW.

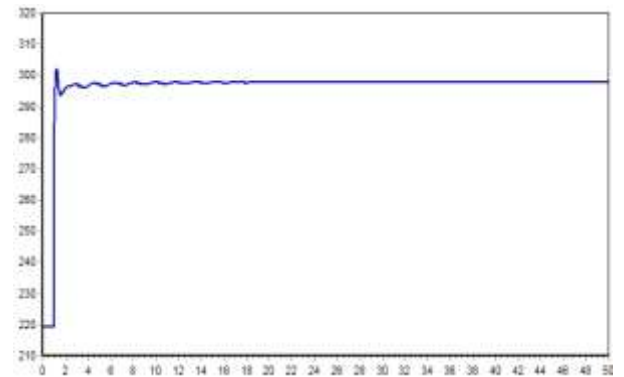
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Gardabani“:



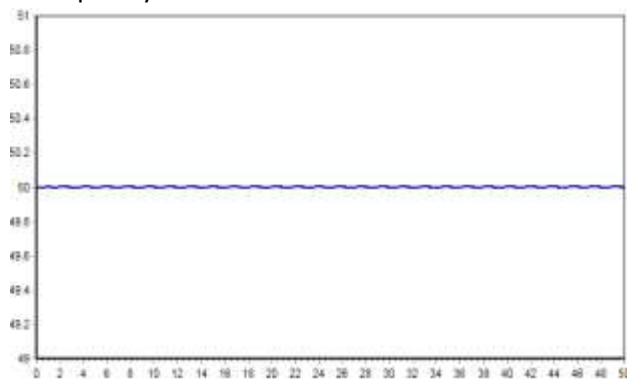
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Gardabani“

Power flow in AT 219 MW.

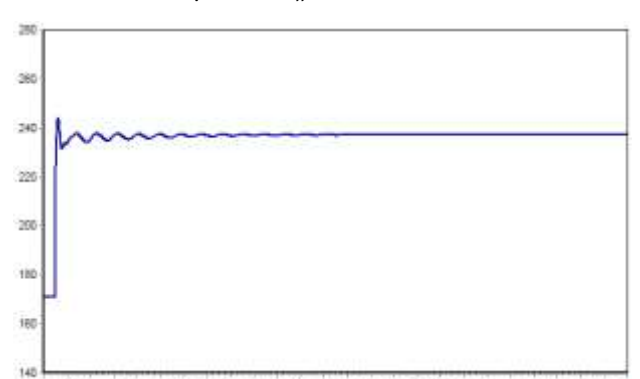
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Ksani“:



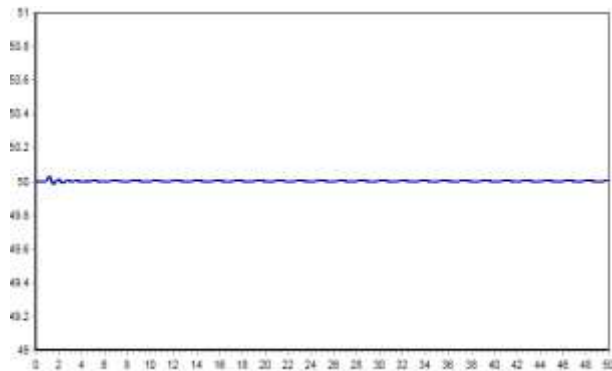
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Akhaltsikhe“

Power flow in AT 75 MW.

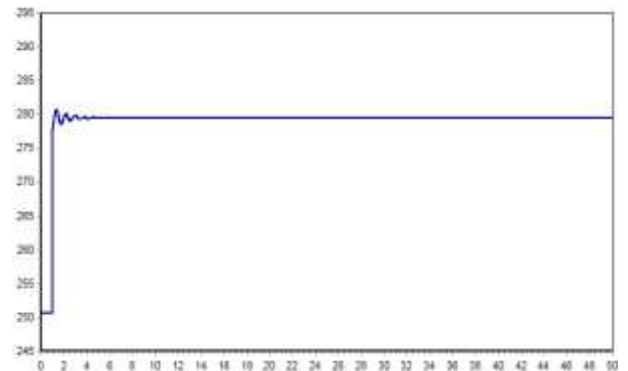
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Zestafoni - Akhaltsikhe“:



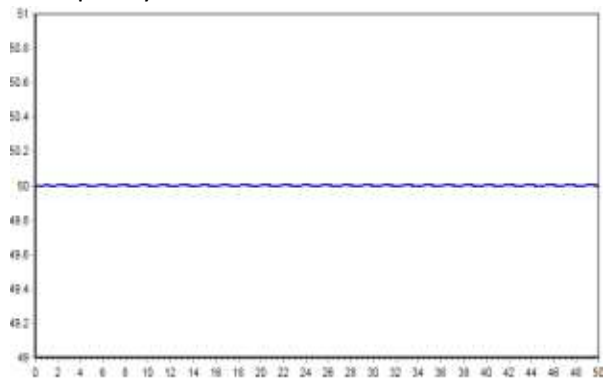
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Marneuli“

Power flow in AT 94 MW.

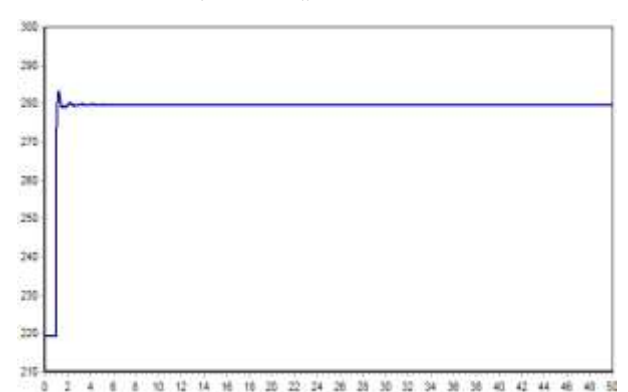
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Gardabani“:



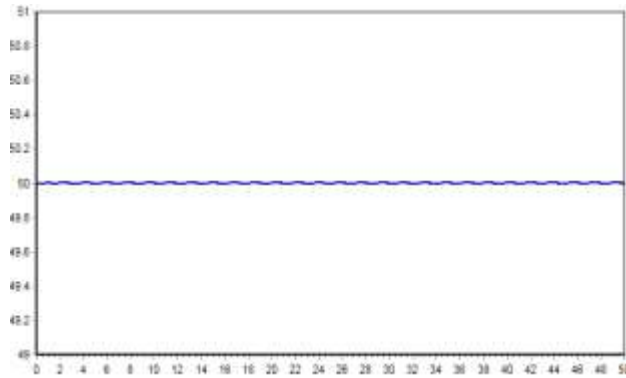
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Jvari“

Power flow in AT 171 MW.

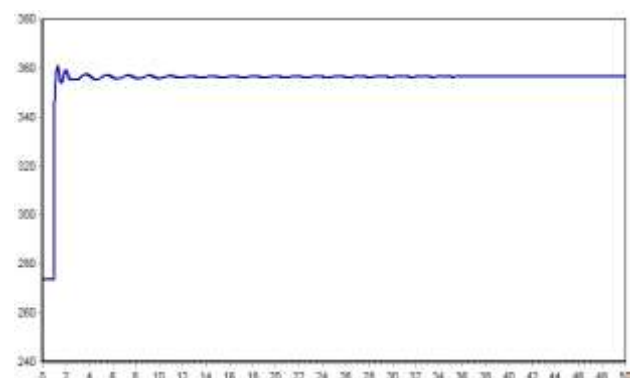
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Zestafoni - Akhaltsikhe“:



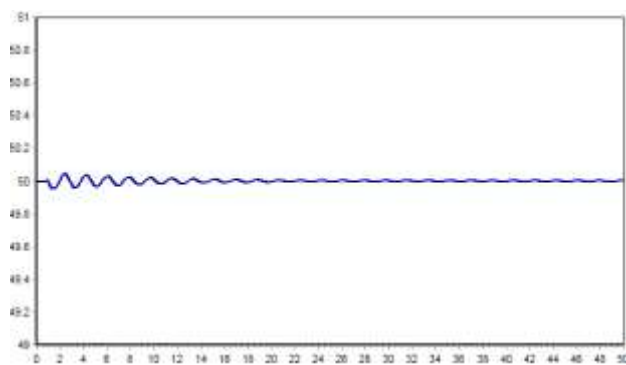
Vertical axis Power (MW),

Horizontal axis Time (Sec)

Generator of HPP Enguri outage

Generator power was 250 MW.

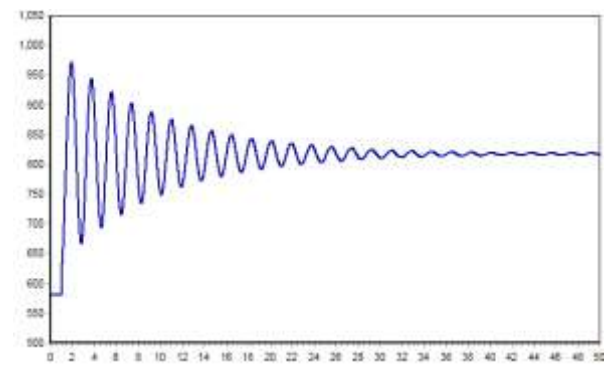
Frequency:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Power flow on OHL „Jvari - Novosvobodnaia“:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

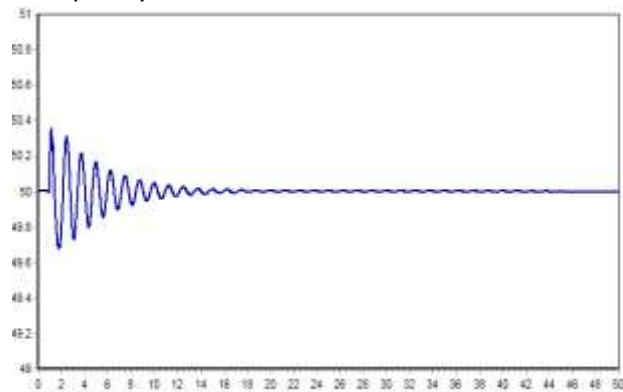
2024 Summer Max

2024 Summer Max of Georgia	
Generation of Georgia (MW)	5050
Load of Georgia (MW)	3150
Import from Azerbaijan (MW)	400
Export to Azerbaijan (MW)	0
Import from Armenia (MW)	0
Export to Armenia (MW)	700
Import from Turkey (MW)	0
Export to Turkey (MW)	1384
Import to Russia (MW)	0
Export to Russia (MW)	100
Total import (MW)	400
Total export (MW)	2184

Emergency outage of OHL „Enguri - Zestafoni“

Power flow on line is 733 MW.

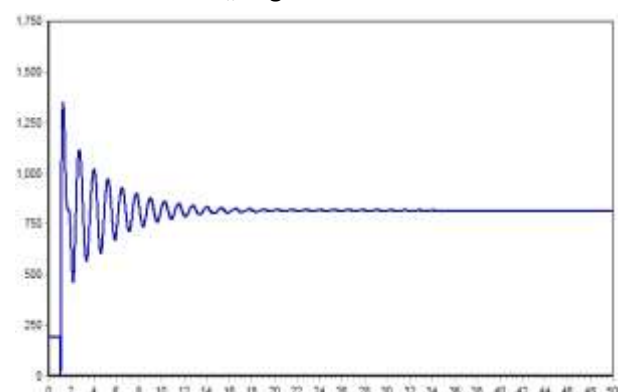
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

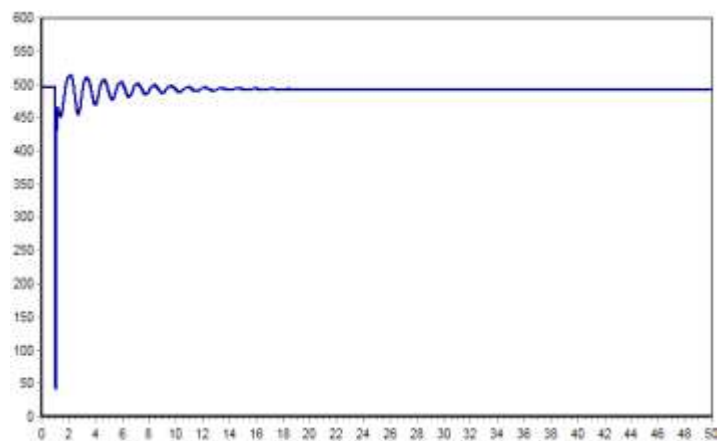
Power flow on OHL „Enguri - Jvari“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Enguri 500“:

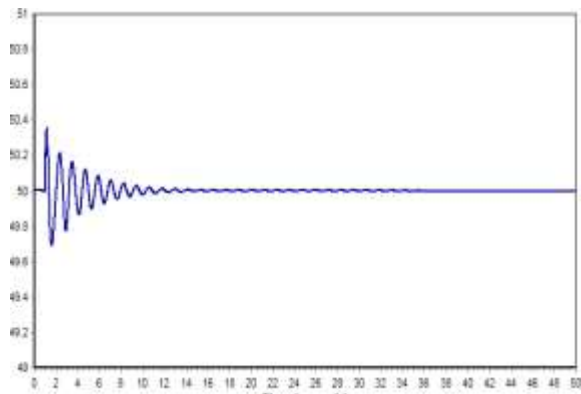


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Enguri - Jvari“

Power flow on line is 189 MW.

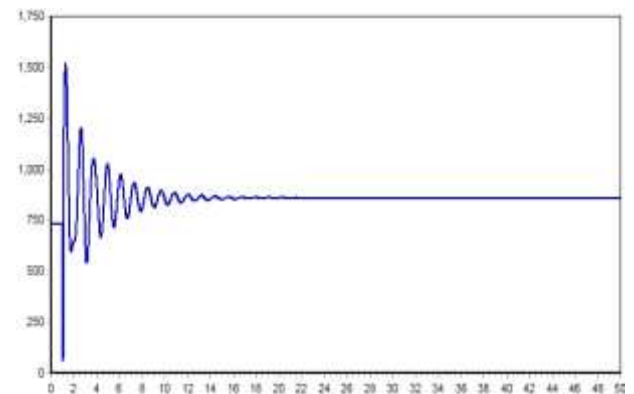
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

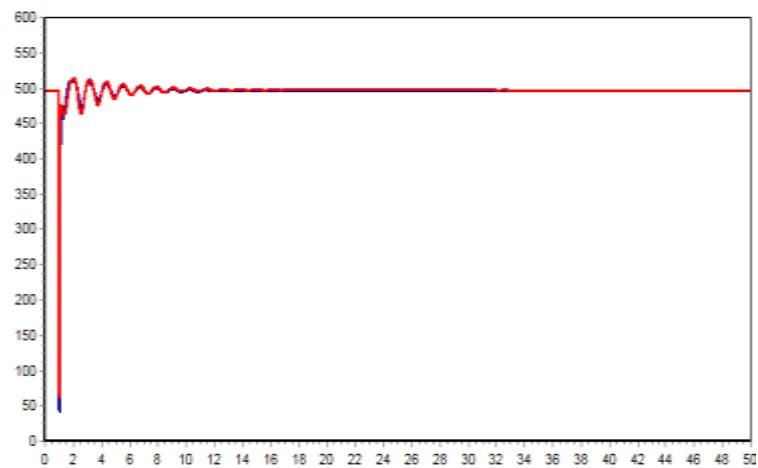
Power flow on OHL „Enguri - Zestafoni“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Enguri 500“ (Blue) and Voltage on „Jvari 500“ (Red) nodes:

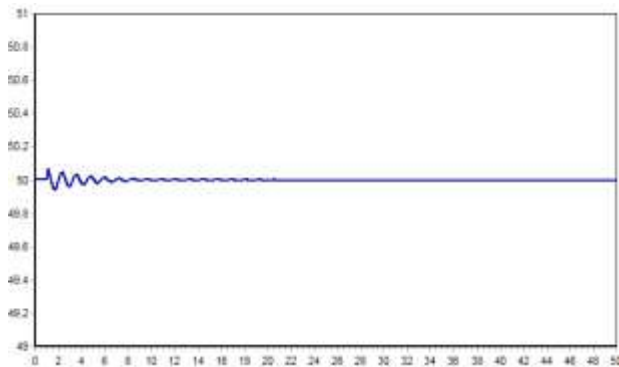


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Kazbegi“

Power flow on line is 79 MW.

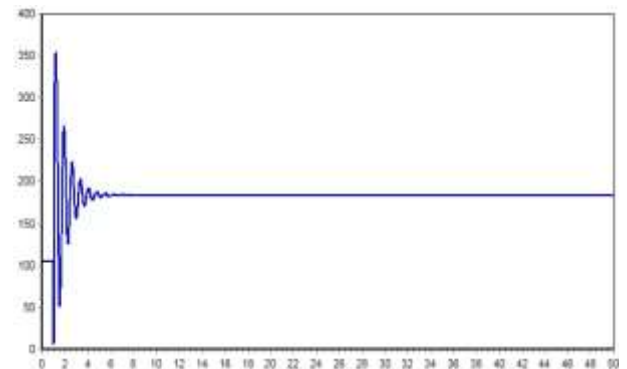
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

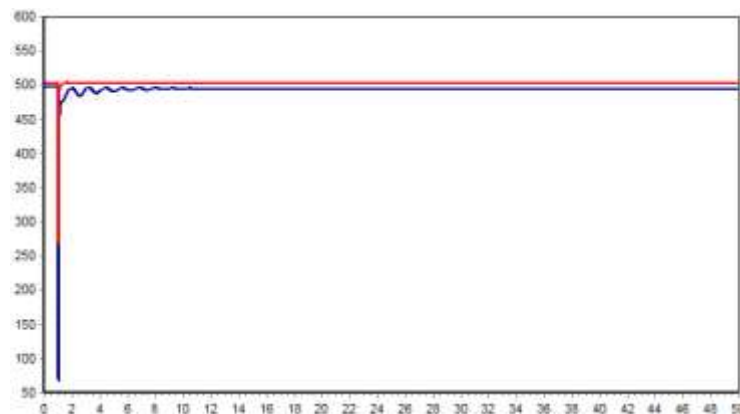
Power flow on OHL „Kazbegi - Mozdoki“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Ksani 500“ (Blue) and Voltage on „Kazbegi 500“ (Red) nodes:

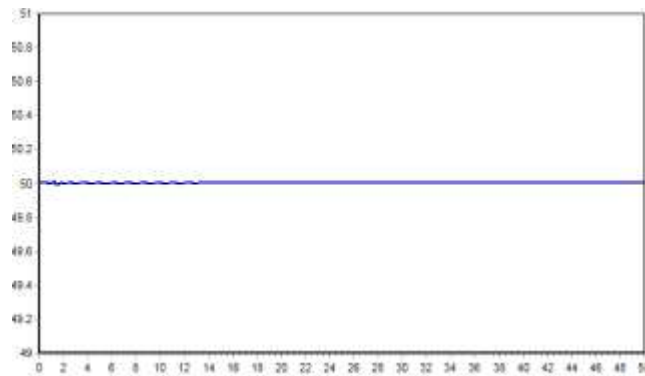


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Kazbegi - Mozdoki“

Power flow on line is 100 MW.

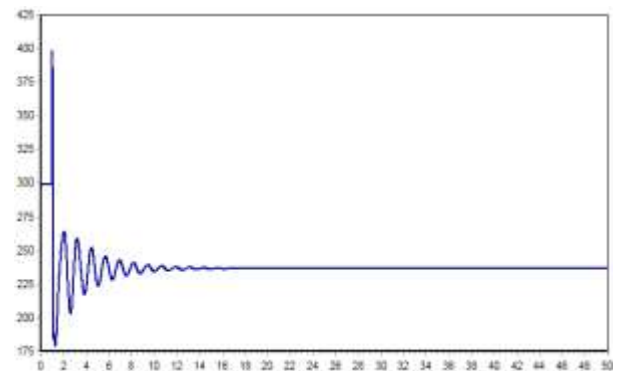
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

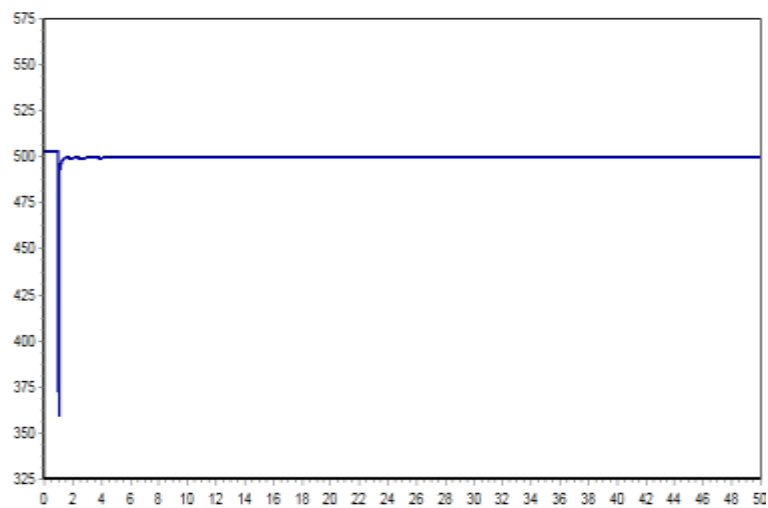
Power flow on OHL „Gardabani - Samukhi“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Kazbegi 500“:

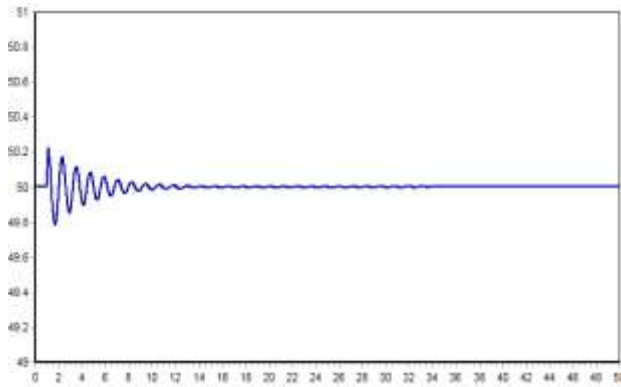


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Zestafoni - Akhaltsikhe“

Power flow on line is 252 MW.

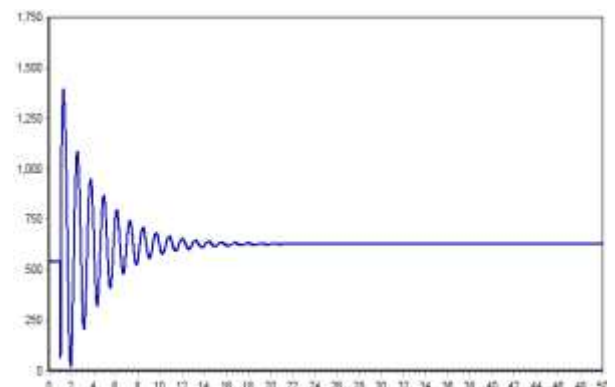
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

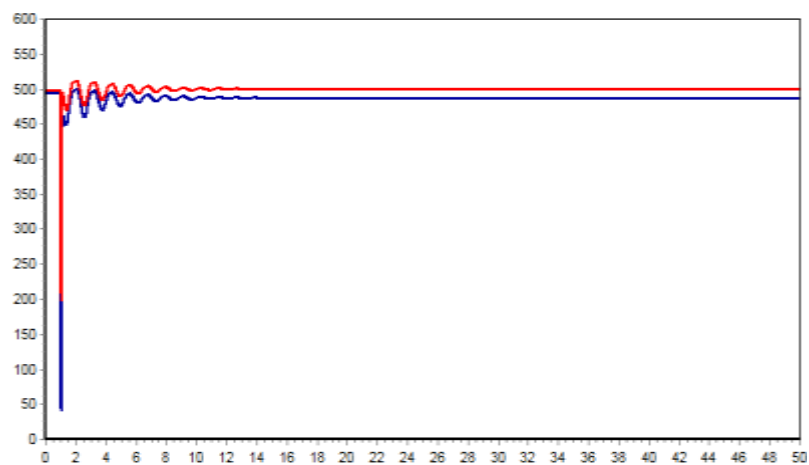
Power flow on OHL „Zestafoni - Ksani“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Zestafoni 500“ (Blue) and Voltage on „Akhaltsikhe 500“ (Red) nodes:

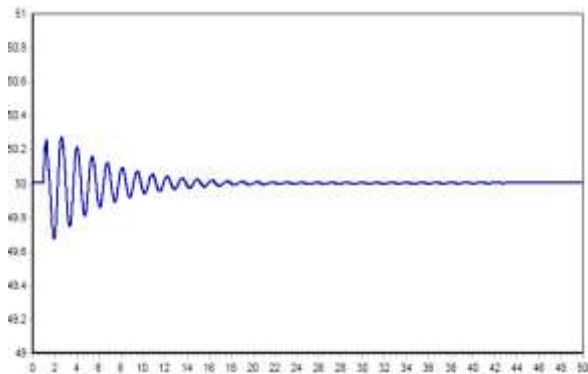


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Zestafoni - Ksani“

Power flow on line is 546 MW.

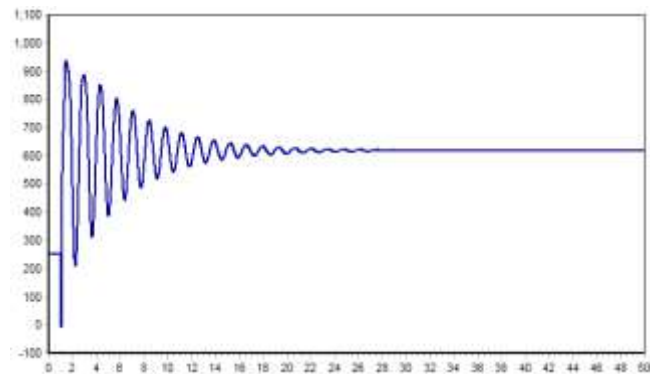
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

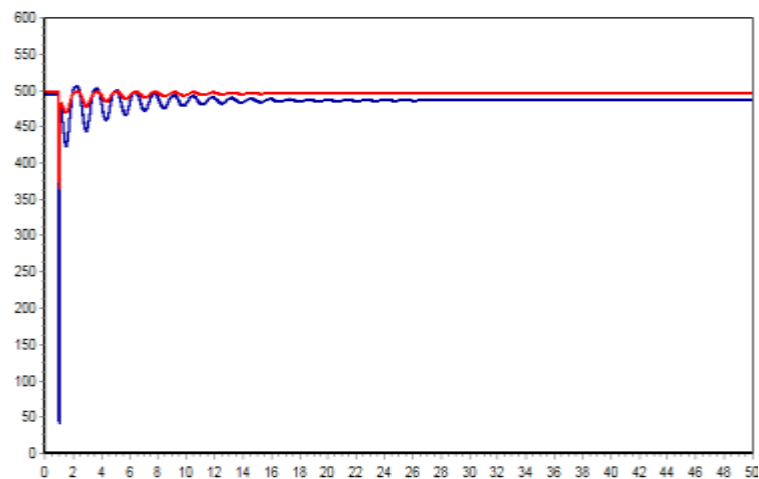
Power flow on OHL „Zestafoni - Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Zestafoni 500“ (Blue) and Voltage on „Ksani 500“ (Red) nodes:

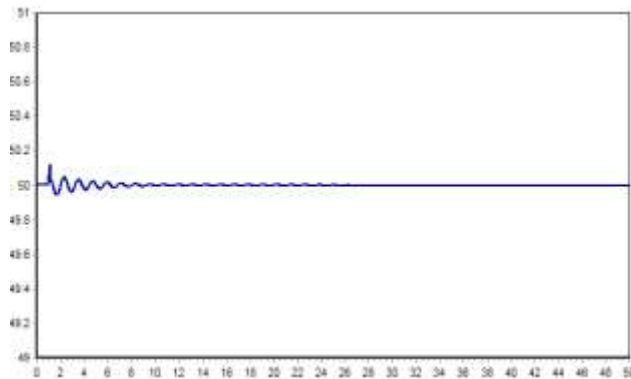


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Gardabani“

Power flow on line is 142 MW.

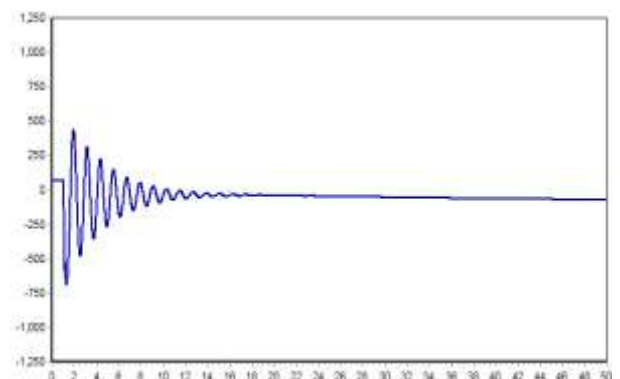
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

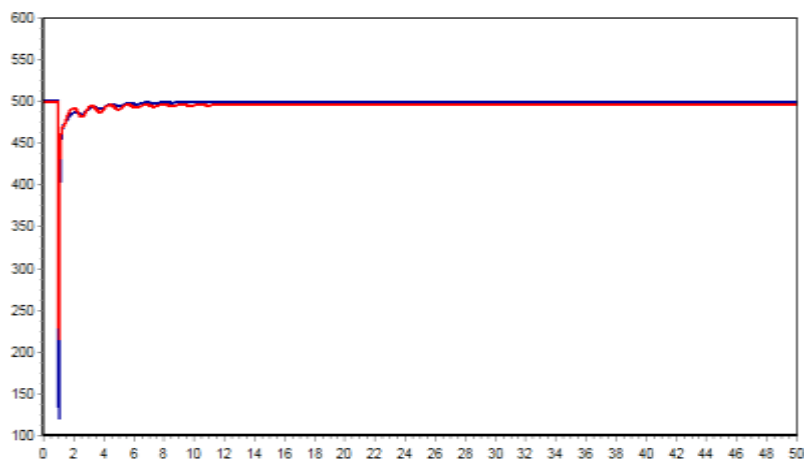
Power flow on OHL „Gardabani - Marneuli“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Ksani 500“ (Blue) and Voltage on „Gardabani 500“ (Red) nodes:

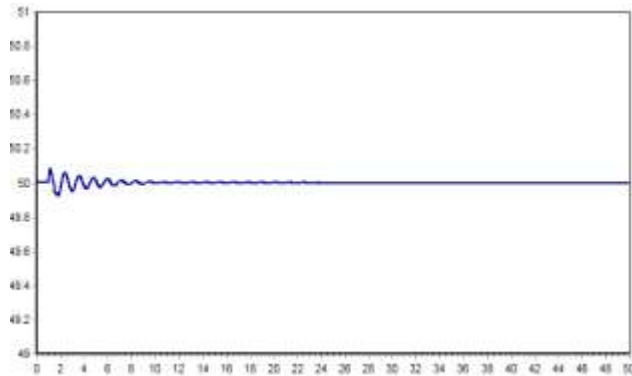


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Marneuli“

Power flow on line is 262 MW.

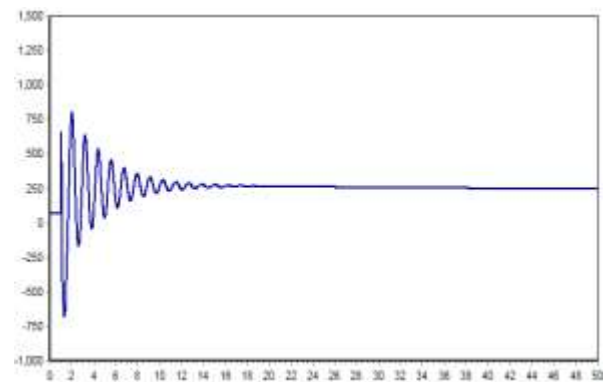
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

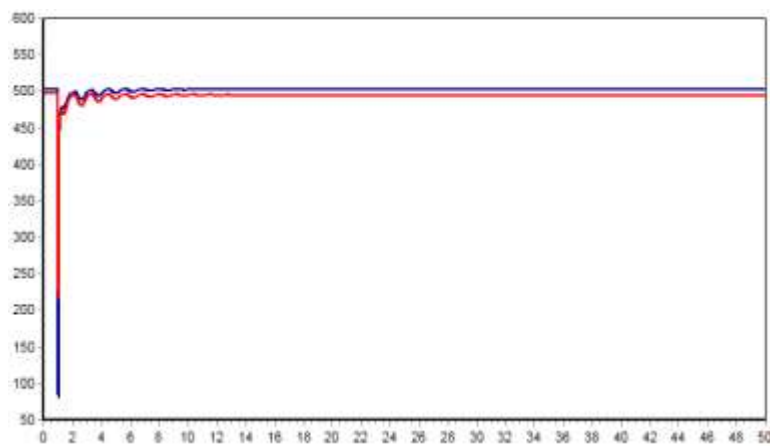
Power flow on OHL „Gardabani - Marneuli“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Marneuli 500“ (Blue) and Voltage on „Ksani 500“ (Red) nodes:

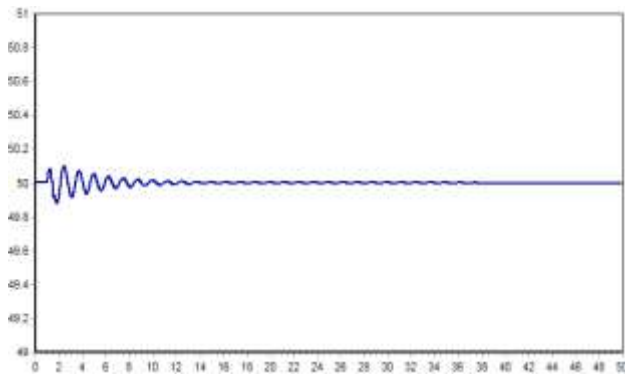


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Marneuli“

Power flow on line is 70 MW.

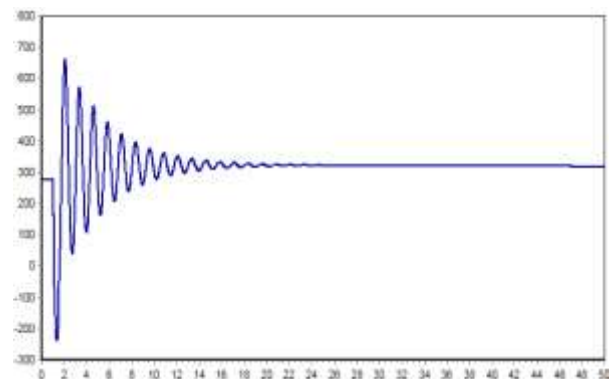
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

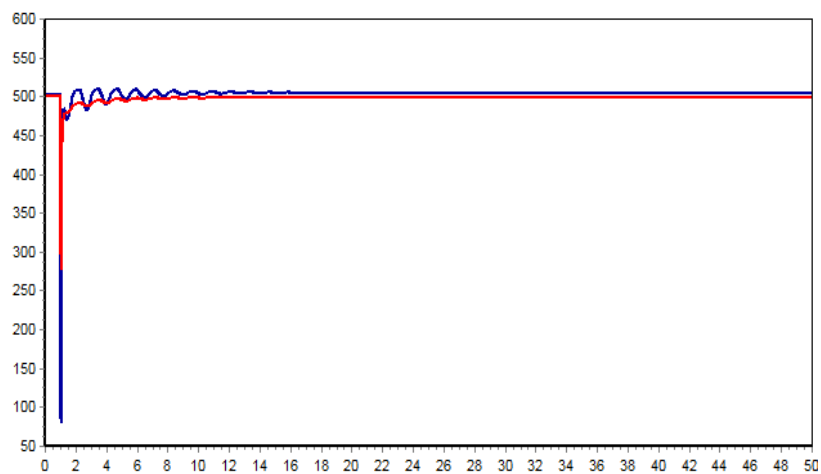
Power flow on OHL „Ksani - Gardabani“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Gardabani 500“ (Red) and Voltage on „Marneuli 500“ (Blue) nodes:

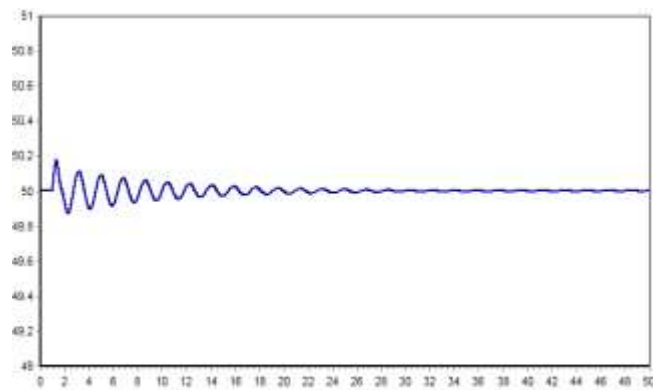


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Marneuli - Airum“

Power flow on line is 700 MW.

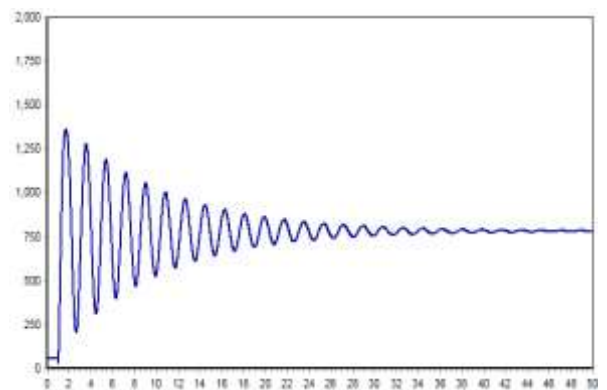
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

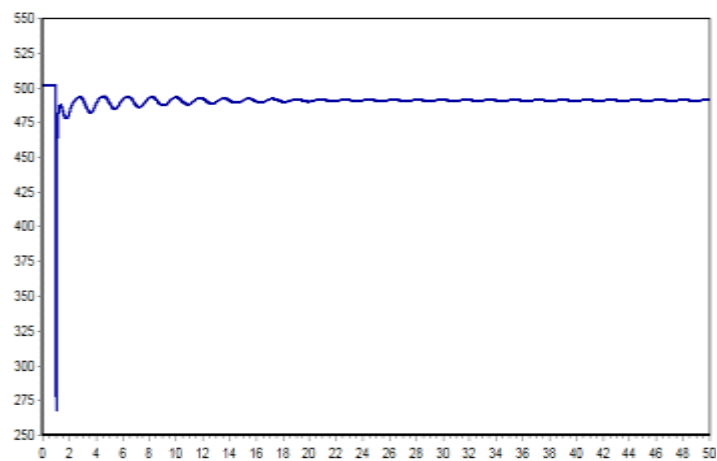
Power flow on OHL „Kazbegi - Mozdoki“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Marneuli 500“:

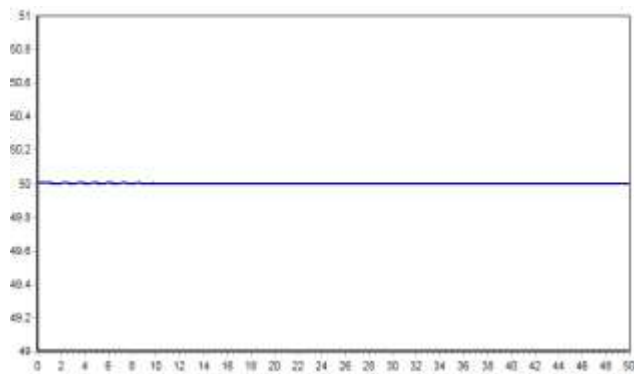


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Gardabani - Agstafa“

Power flow on line is 100 MW.

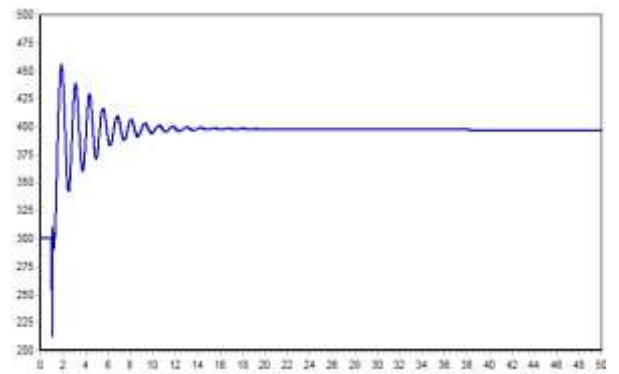
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

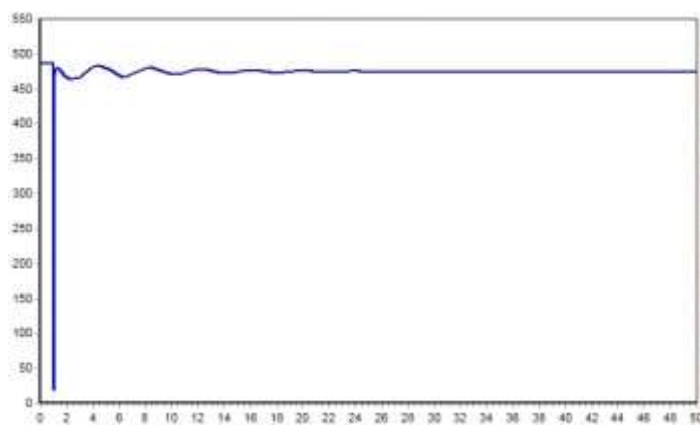
Power flow on OHL „Gardabani - Samukhi“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Gardabani 500“:

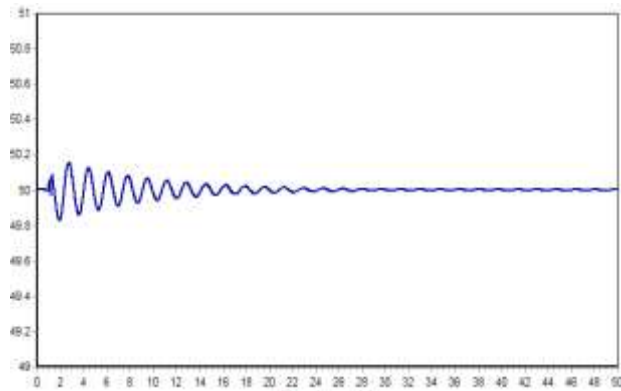


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Gardabani - Samukhi“

Power flow on line is 300 MW.

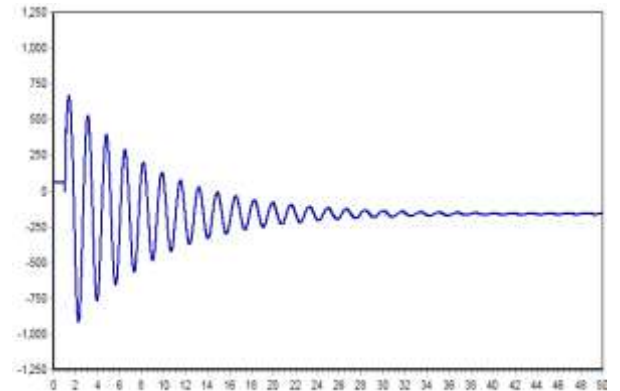
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

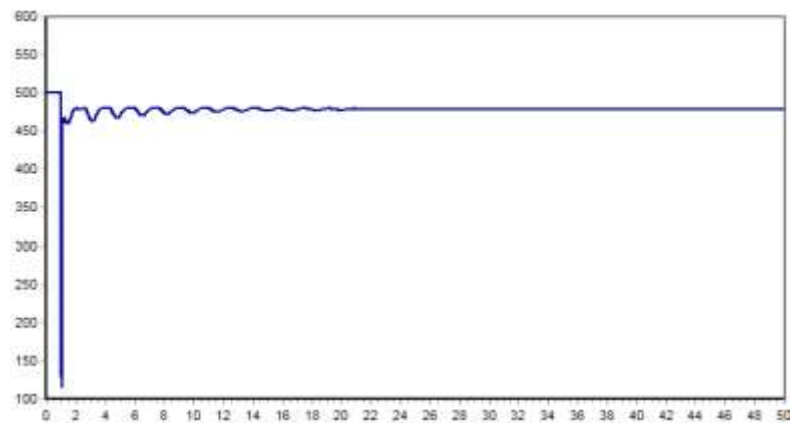
Power flow on OHL „Kazbegi - Mozdoki“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Gardabani 500“:

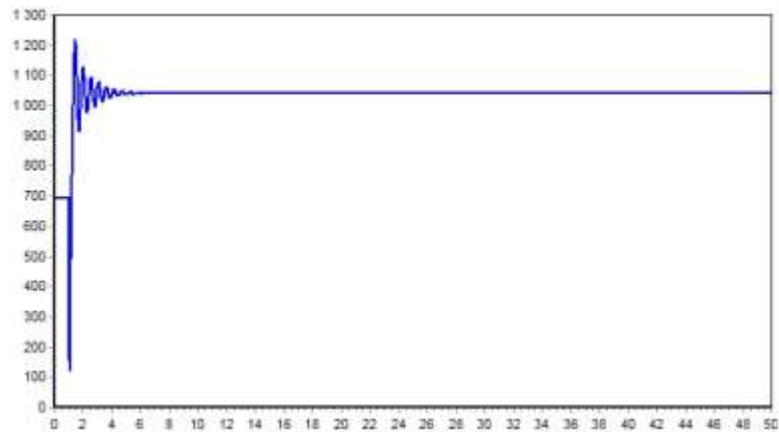


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Akhaltsikhe - Borchkha“

Power flow on line is 353 MW.

Power flow on OHL „Akhaltsikhe - Tortum“:

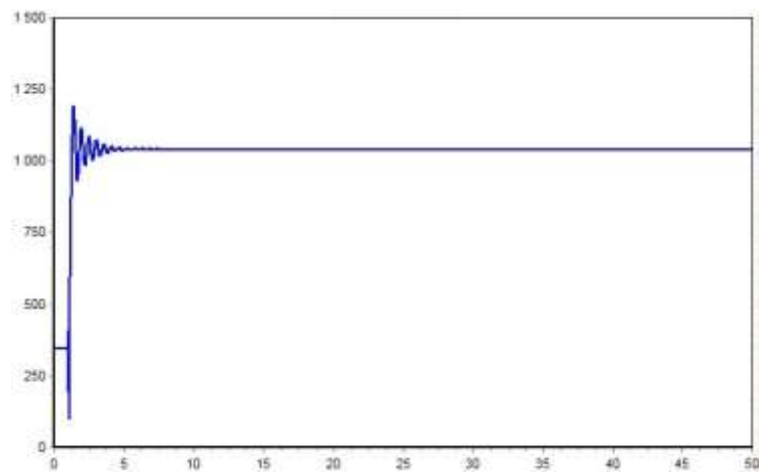


Vertical axis Power (MW), Horizontal axis Time (Sec)

Emergency outage of OHL „Akhaltsikhe - Tortum“

Power flow on line is 687 MW.

Power flow on OHL „Akhaltsikhe - Borchkha“:

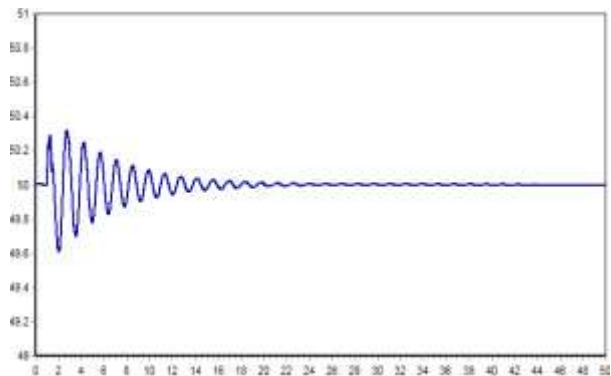


Vertical axis Power (MW), Horizontal axis Time (Sec)

Emergency outage of OHL „Marneuli - Akhaltsikhe“

Power flow on line is 543 MW.

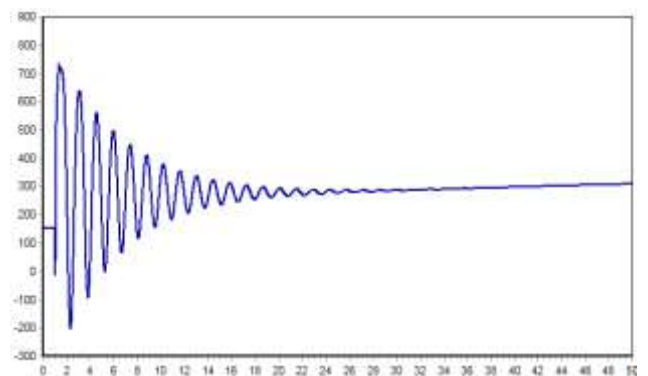
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

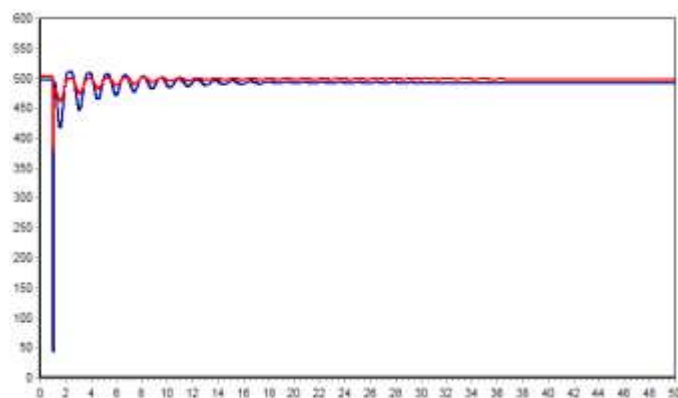
Power flow on OHL „Ksani- Gardabani“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Marneuli 500“ (Blue) and Voltage on „Akhaltsikhe 500“ (Red) nodes:

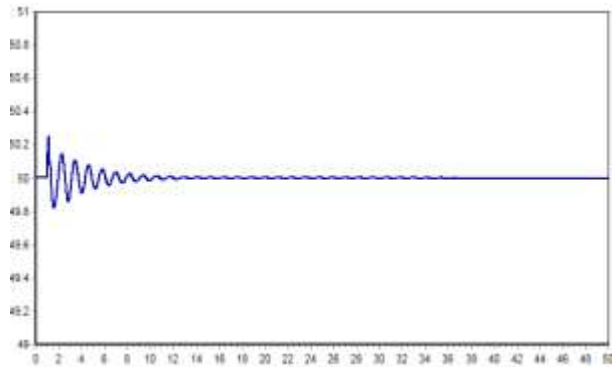


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Nenskra - Jvari“

Power flow on line is 204 MW.

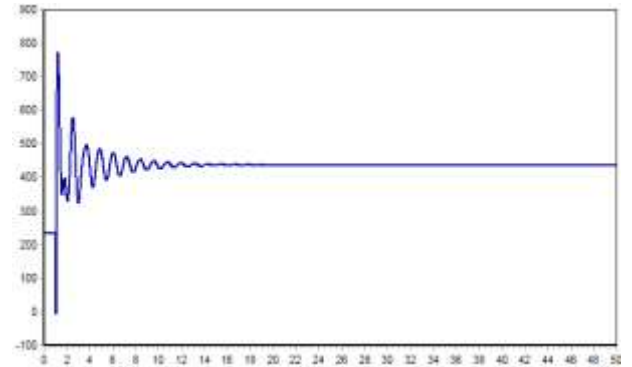
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

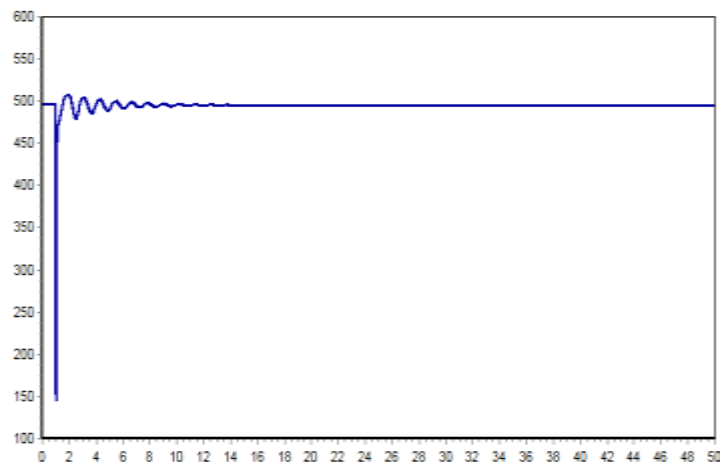
Power flow on OHL „Enguri- Jvari“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Jvari 500“:

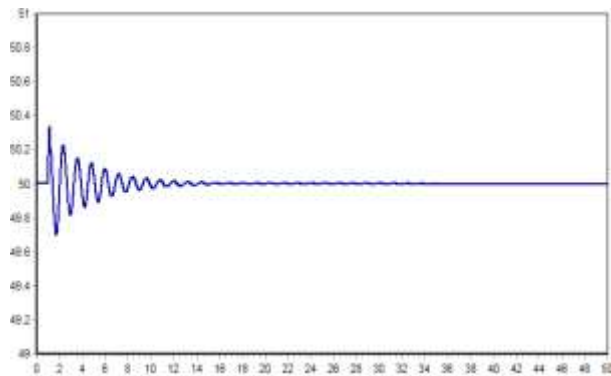


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Jvari - Tskaltubo“

Power flow on line is 561 MW.

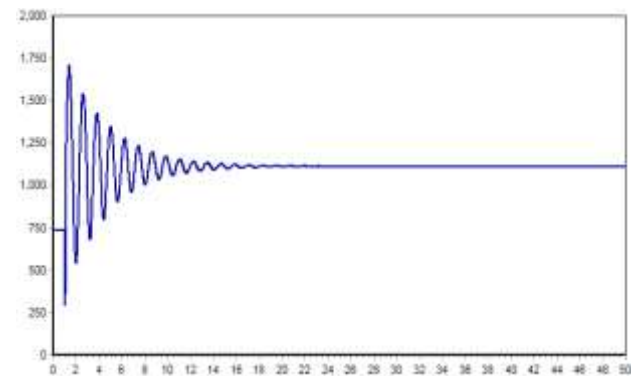
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

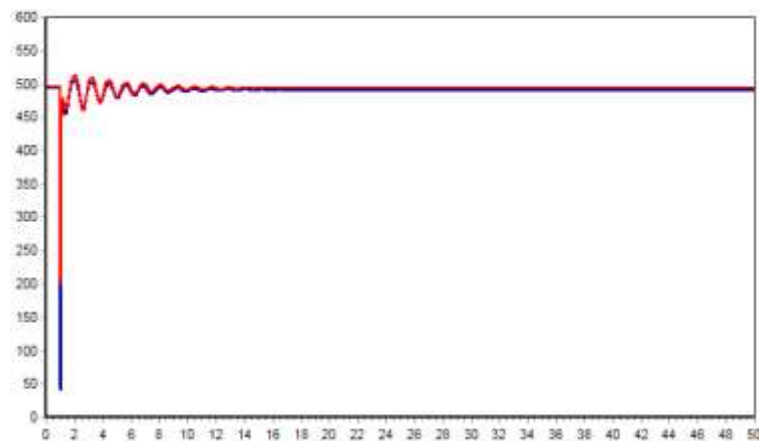
Power flow on OHL „Enguri- Zestafoni“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Jvari 500“ (Red) and Voltage on „Tskaltubo 500“ (Blue) nodes:

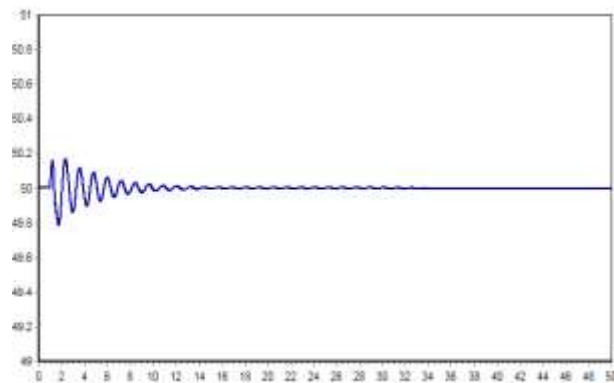


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Tskaltubo - Akhaltsikhe“

Power flow on line is 590 MW. (Both circuit 1180 MW)

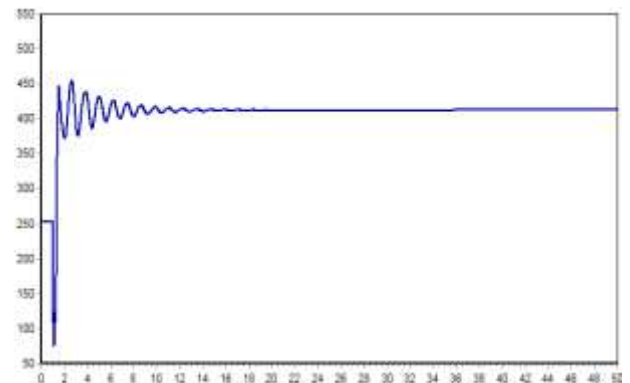
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

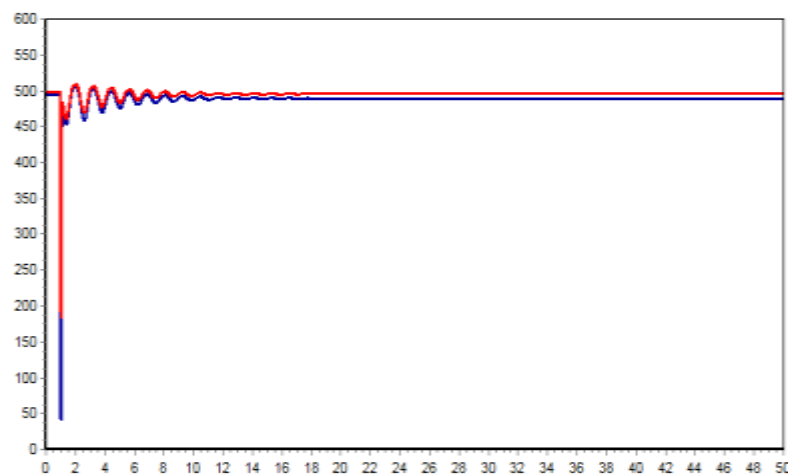
Power flow on OHL „Zestafoni- Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Tskaltubo 500“ (Blue) and Voltage on „Akhaltsikhe 500“ (Red) nodes:

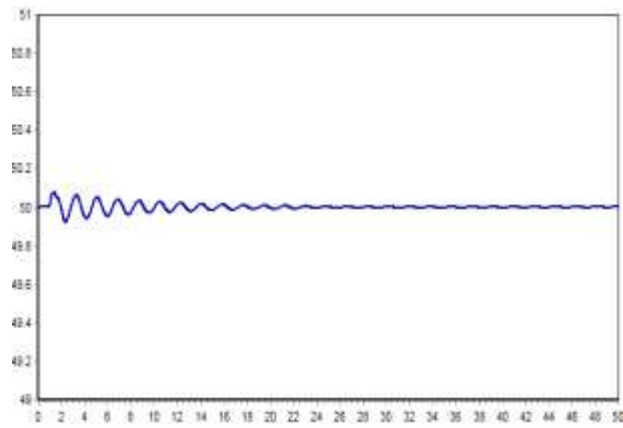


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Batumi - Muratli“ and HVDC

Power flow on line is 352 MW.

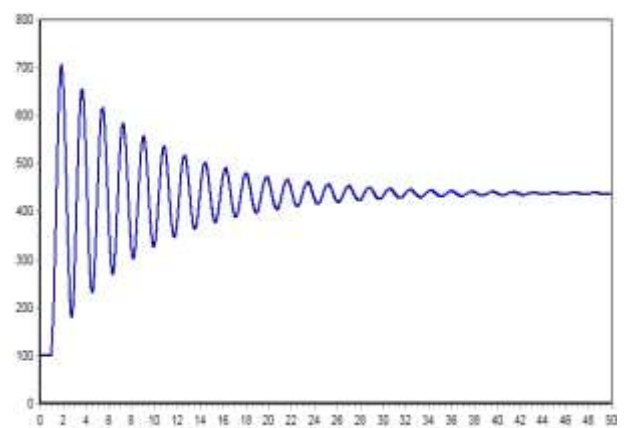
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

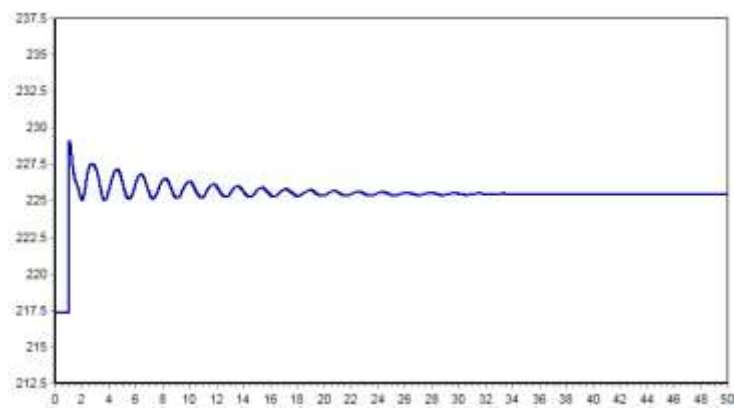
Power flow on OHL „Khudoni - Novosvobodnaia“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Batumi 220“:

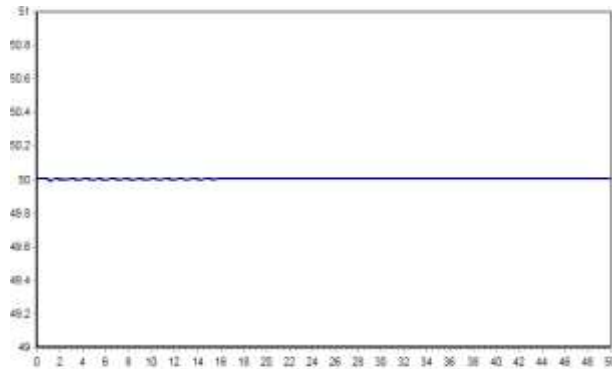


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

500/220 AT „Enguri“

Power flow in AT 179 MW.

Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Jvari“:



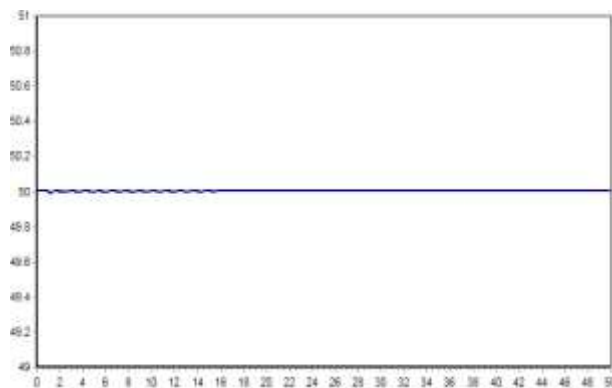
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Zestafoni“

Power flow in AT 72 MW.

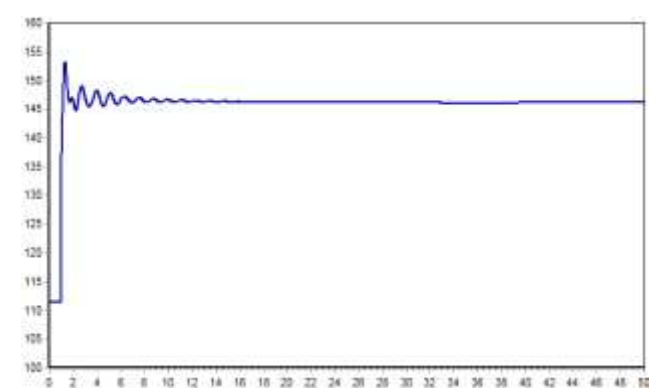
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Tskaltubo“:



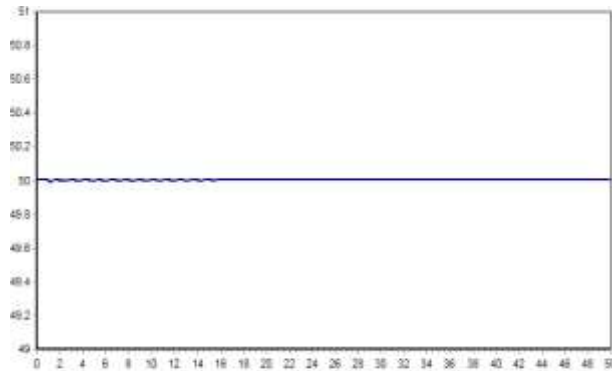
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Ksani“

Power flow in AT 215 MW.

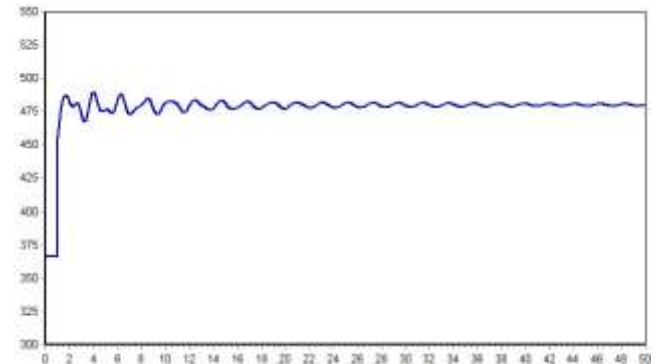
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Gardabani“:



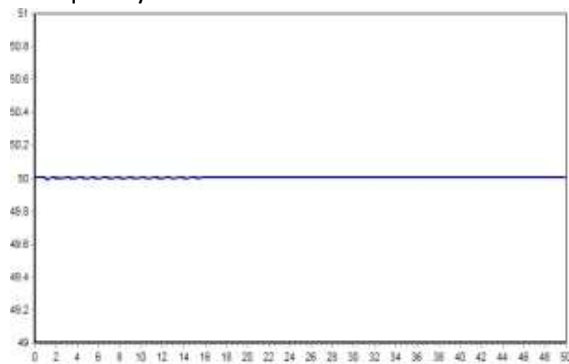
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Gardabani“

Power flow in AT 372 MW.

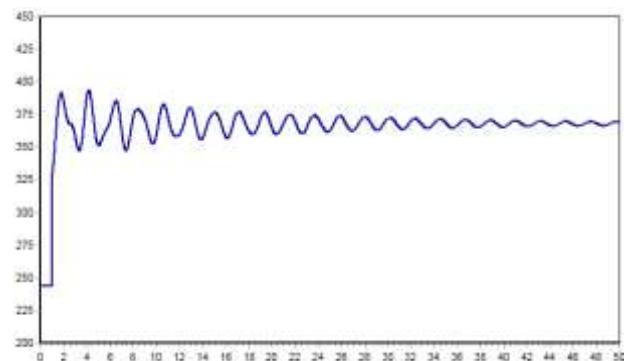
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Ksani“:



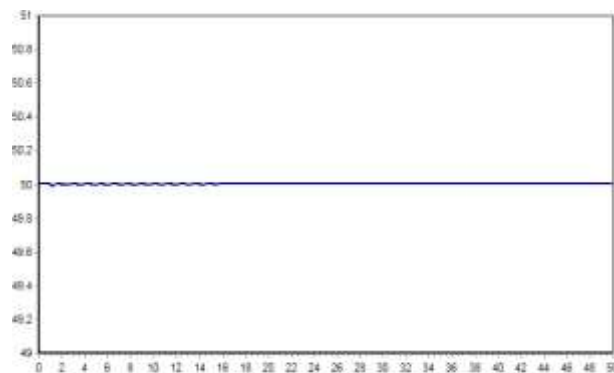
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Akhaltsikhe“

Power flow in AT 177 MW.

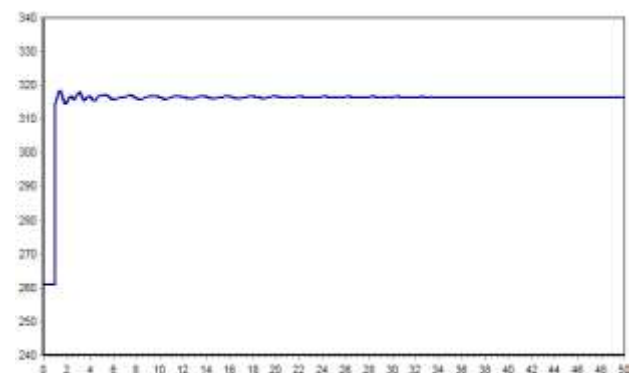
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Zestafoni- Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Marneuli“

Power flow in AT 167 MW.

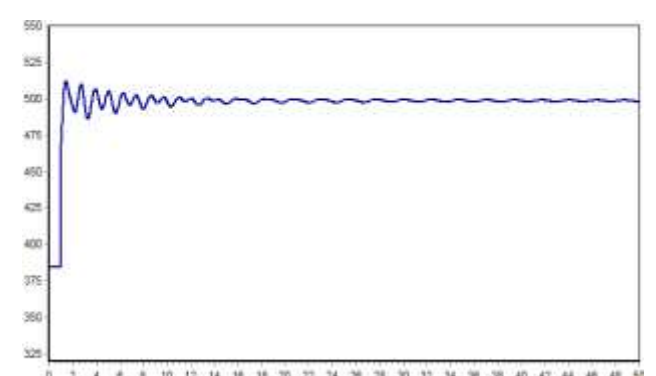
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Gardabani“:



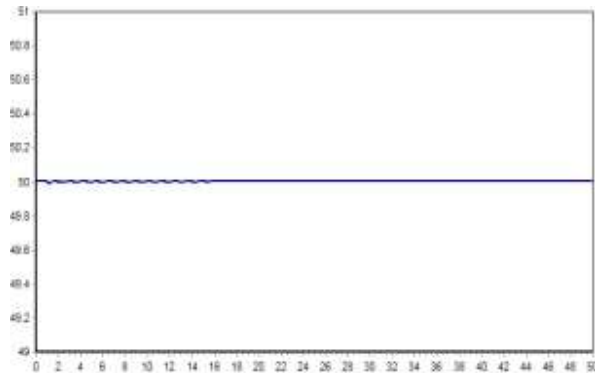
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Jvari“

Power flow in AT 61 MW.

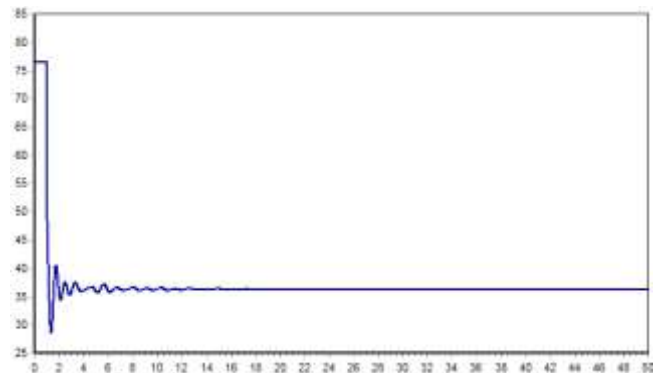
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Tskaltubo“:



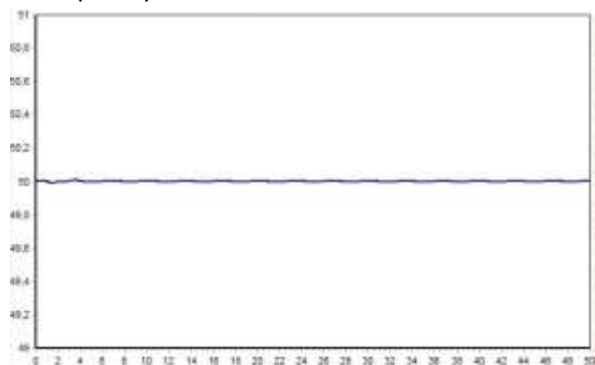
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/110 AT „Kazbegi“

Power flow in AT 144 MW.

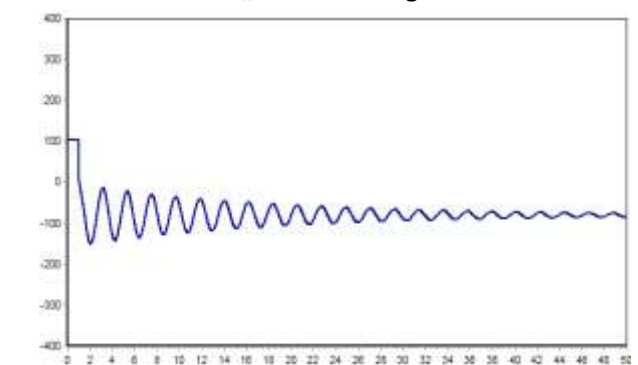
Frequency:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Power flow on OHL „Ksani- Kazbegi“:



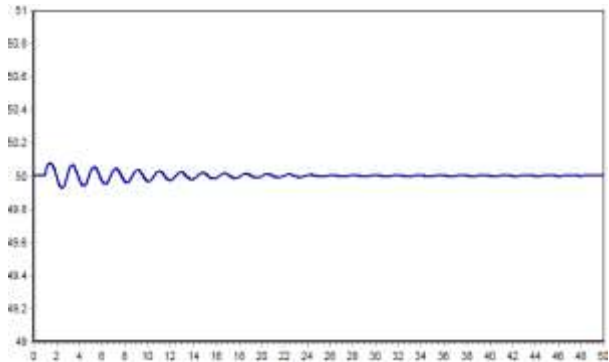
Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

500/400 HVDC „Akhaltsikhe“

Power flow in AT 1055 MW.

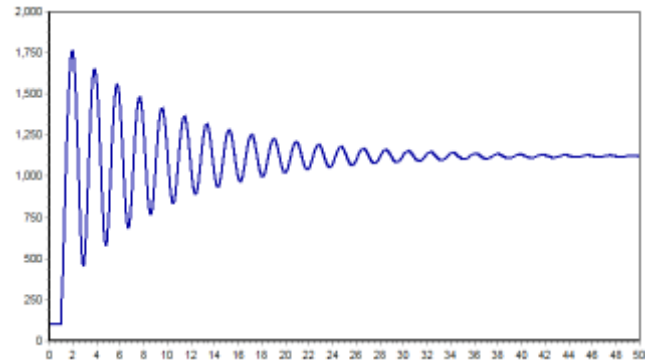
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Kazbegi- Mozdoki“:



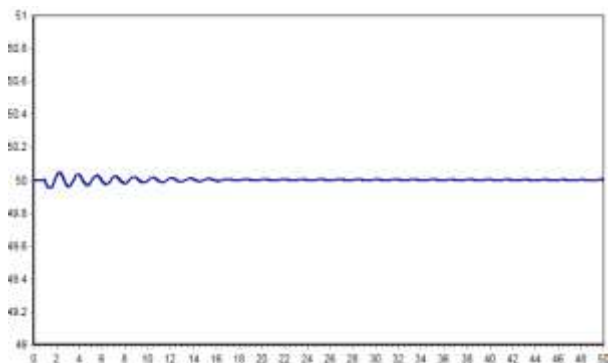
Vertical axis Power (MW),

Horizontal axis Time (Sec)

Generator of HPP Enguri outage

Generator power was 250 MW.

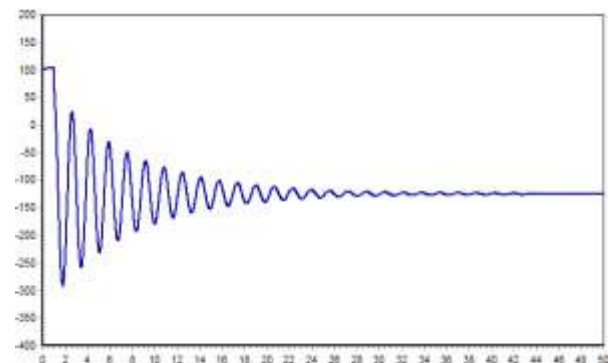
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Kudoni- Novosvobodnaia“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

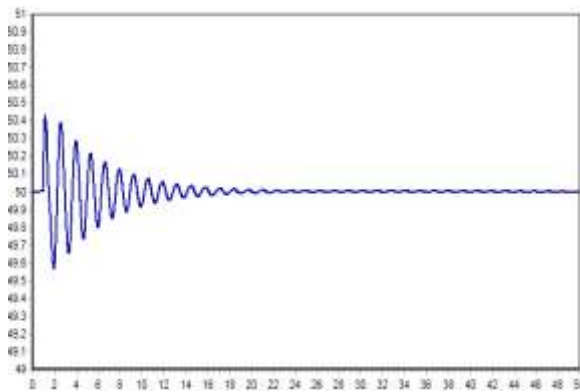
2028 Summer Max

2024 Summer Max of Georgia	
Generation of Georgia (MW)	5701
Load of Georgia (MW)	4360
Import from Azerbaijan (MW)	400
Export to Azerbaijan (MW)	0
Import from Armenia (MW)	0
Export to Armenia (MW)	400
Import from Turkey (MW)	0
Export to Turkey (MW)	1384
Import to Russia (MW)	200
Export to Russia (MW)	0
Total import (MW)	600
Total export (MW)	1784

Emergency outage of OHL „Enguri - Zestafoni“

Power flow on line is 859 MW.

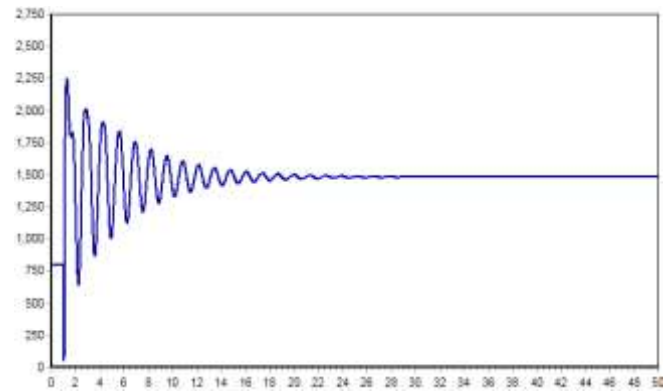
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

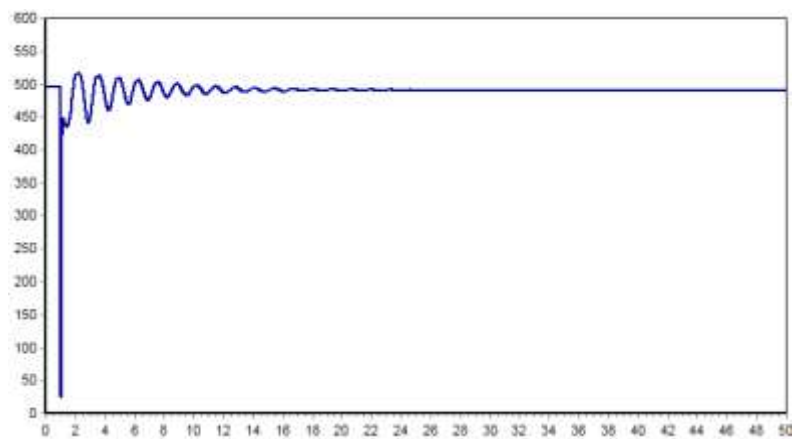
Power flow on OHL „Jvari - Tskaltubo“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Enguri 500“:

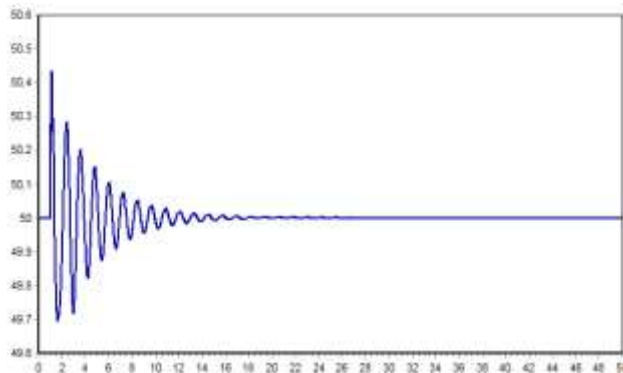


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Enguri - Jvari“

Power flow on line is 189 MW.

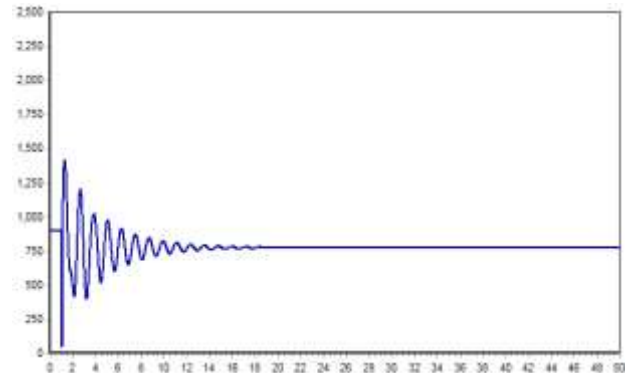
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

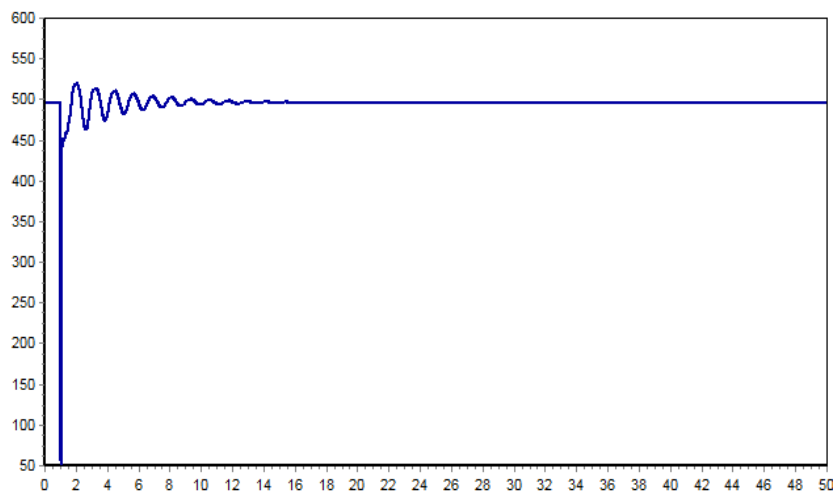
Power flow on OHL „Enguri - Zestafoni“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Jvari 500“:

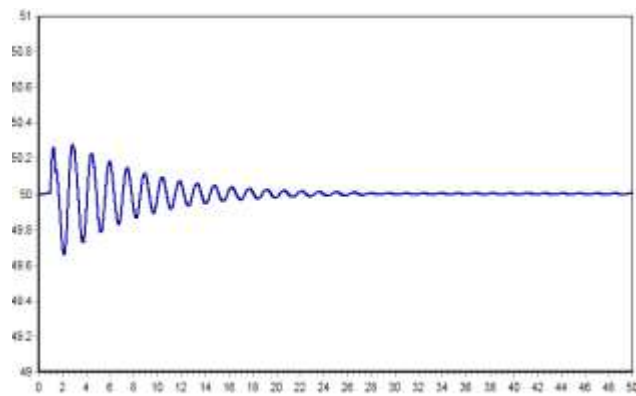


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Zestafoni - Akhaltsikhe“

Power flow on line is 245 MW.

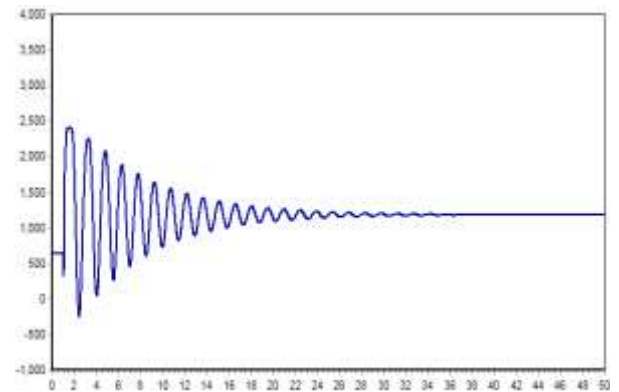
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

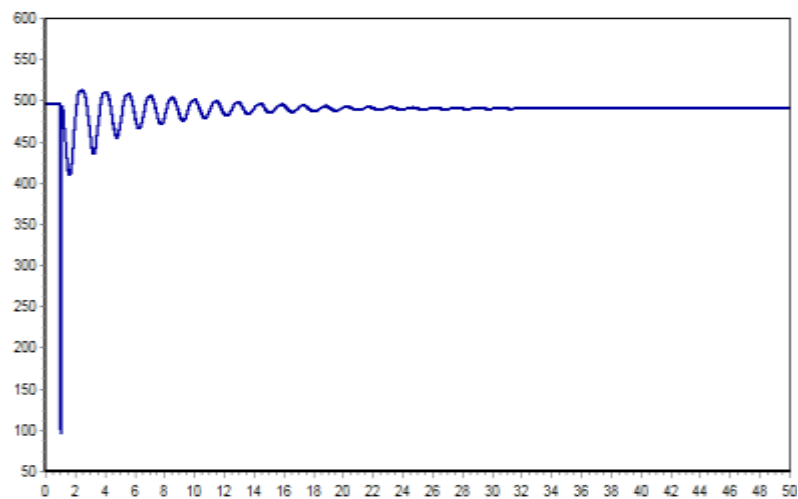
Power flow on OHL „Zestafoni - Ksani“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Akhaltsikhe 500“:

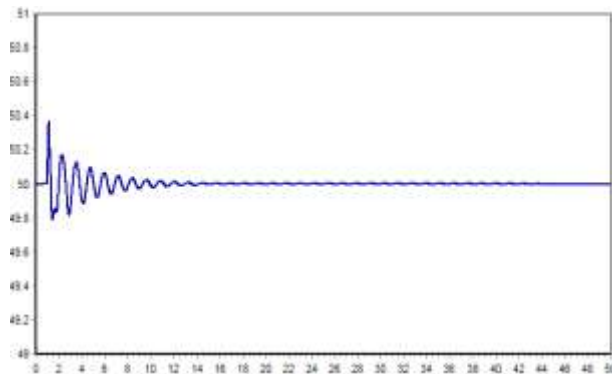


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Khudoni - Jvari“

Power flow on line is 648 MW.

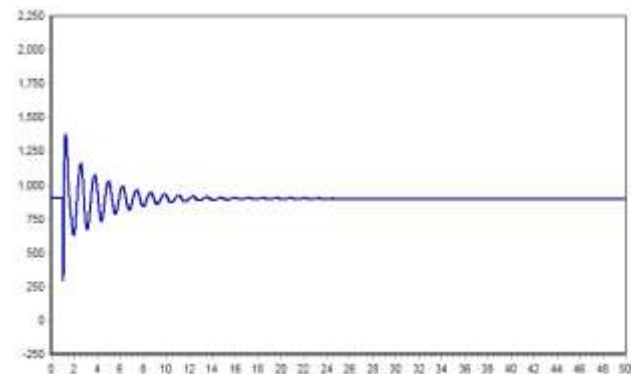
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

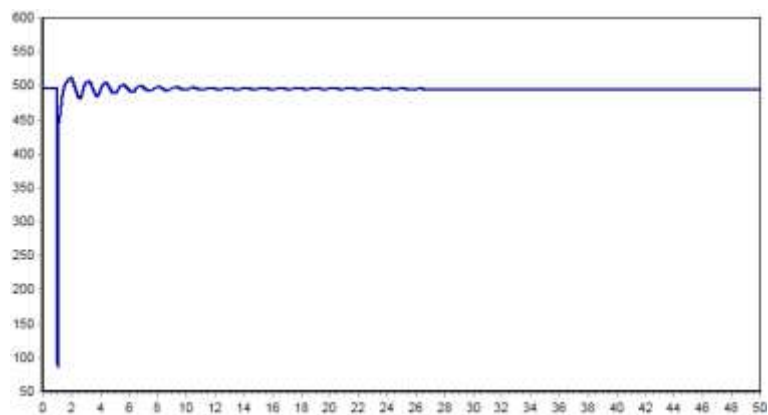
Power flow on OHL „Enguri - Zestafoni“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Khudoni 500“:

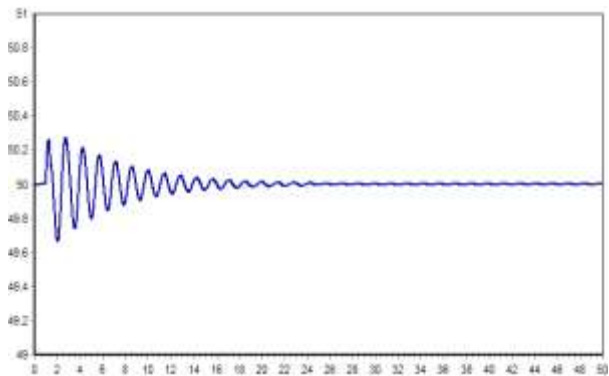


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Zestafoni - Ksani“

Power flow on line is 541 MW.

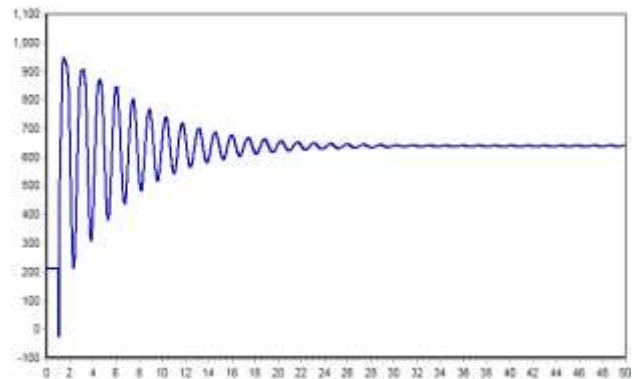
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

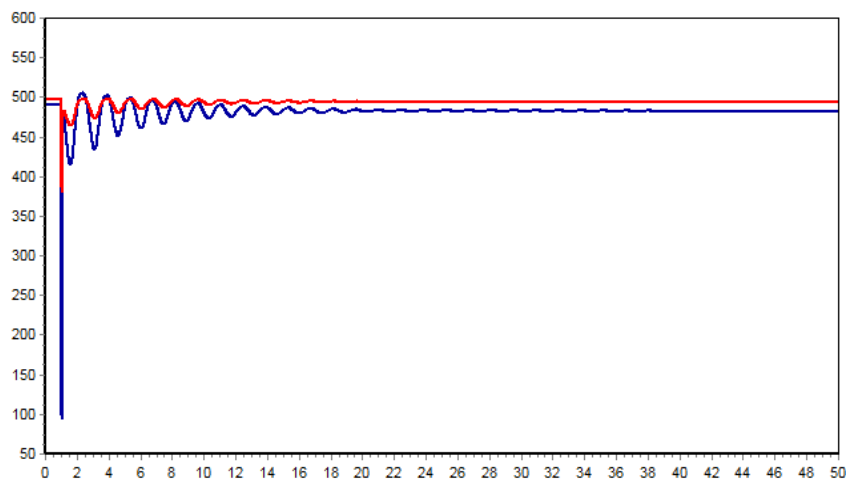
Power flow on OHL „Zestafoni - Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Zestafoni 500“ (Blue) and Voltage on „Ksani 500“ (Red) nodes:

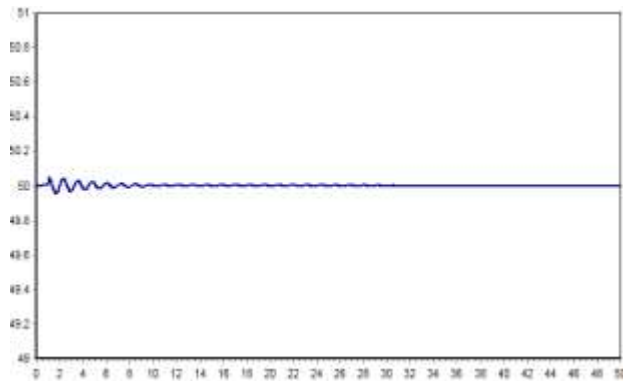


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Gardabani“

Power flow on line is 215 MW.

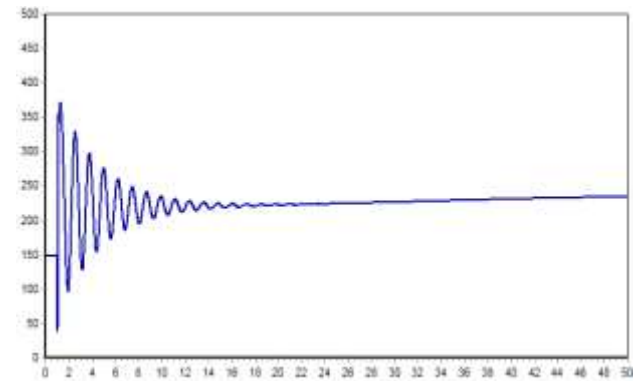
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

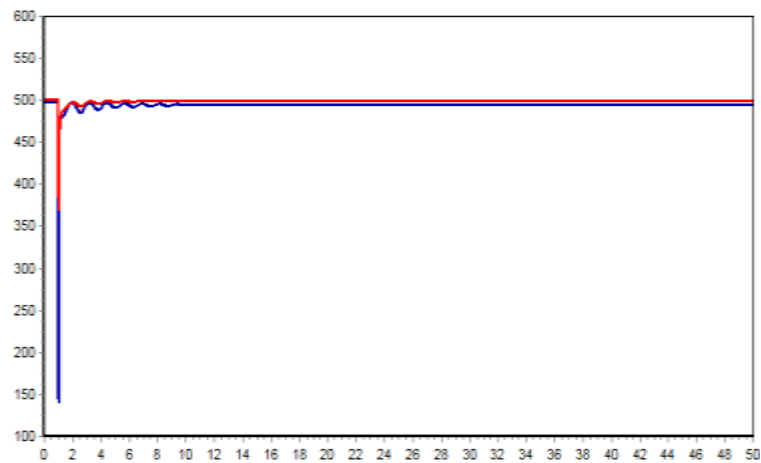
Power flow on OHL „Ksani - Marneuli“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Ksani 500“ (Blue) and Voltage on „Gardabani 500“ (Red) nodes:

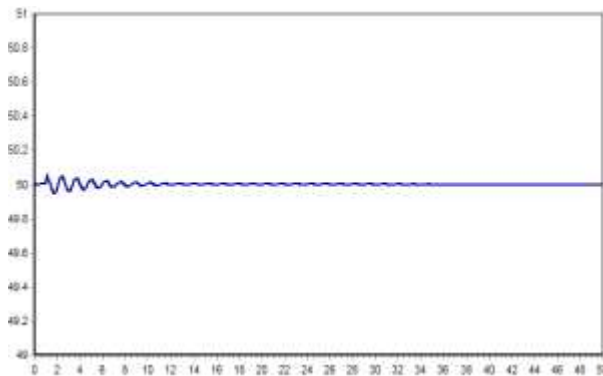


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Marneuli“

Power flow on line is 296 MW.

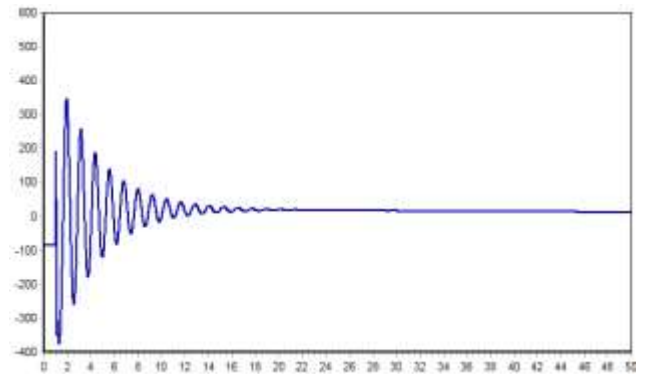
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

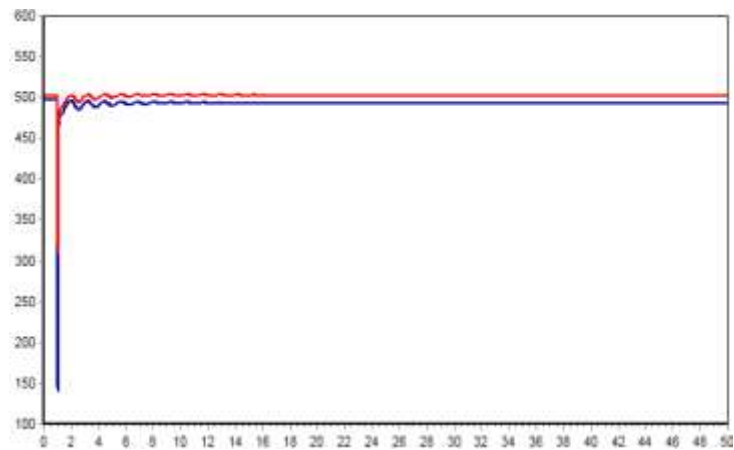
Power flow on OHL „Gardabani - Marneuli“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Ksani 500“ (Blue) and Voltage on „Marneuli 500“ (Red) nodes:

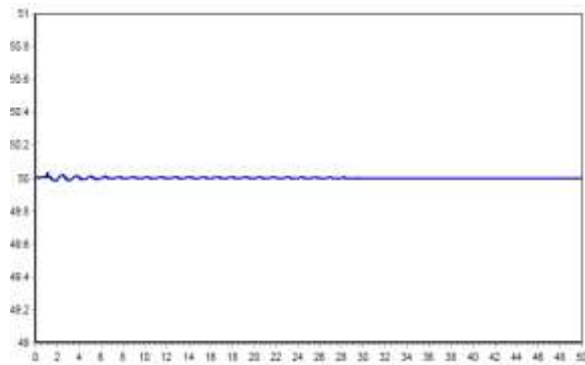


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Gardabani - Marneuli“

Power flow on line is 124 MW.

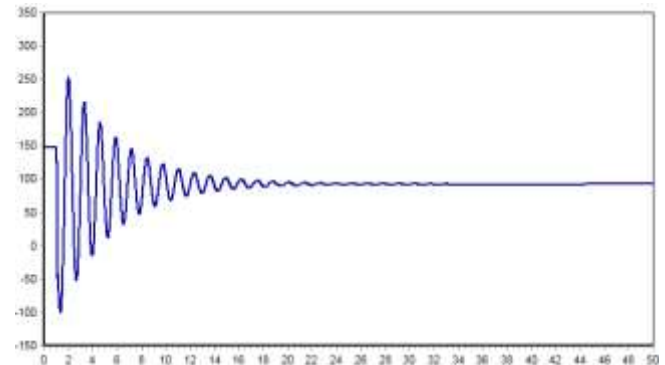
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

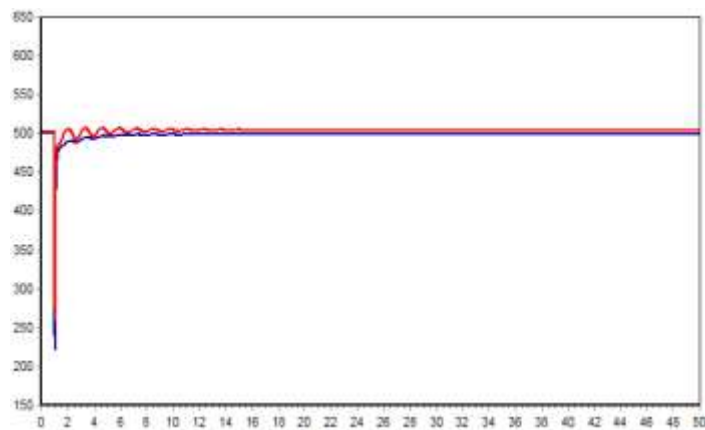
Power flow on OHL „Ksani - Marneuli“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Gardabani 500“ (Blue) and Voltage on „Marneuli 500“ (Red) nodes:

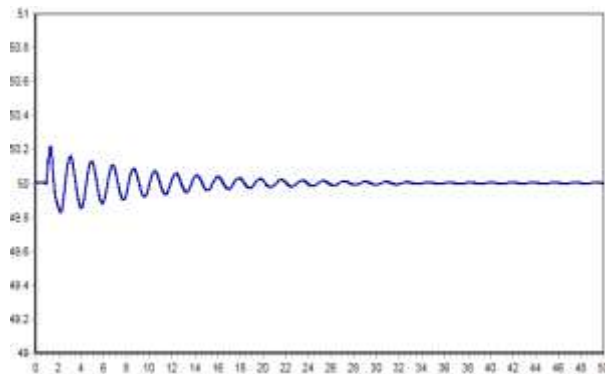


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Marneuli - Airumi“

Power flow on line is 400 MW.

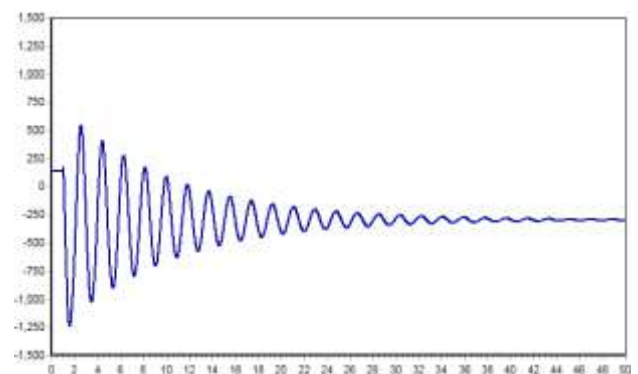
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

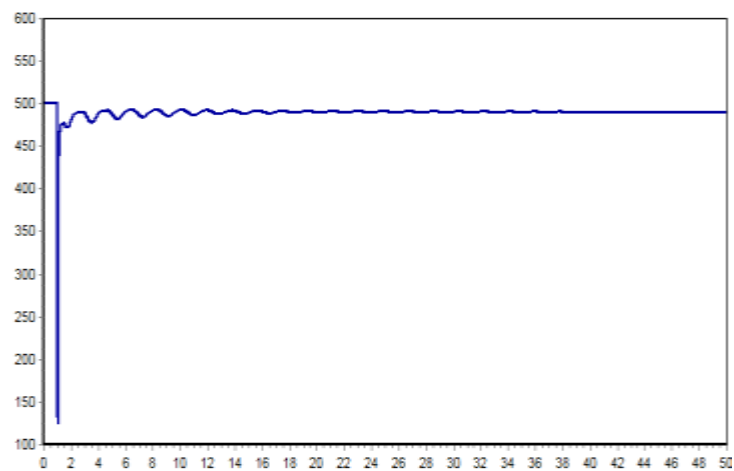
Power flow on OHL „Kazbegi - Mozdoki“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Marneuli 500“:

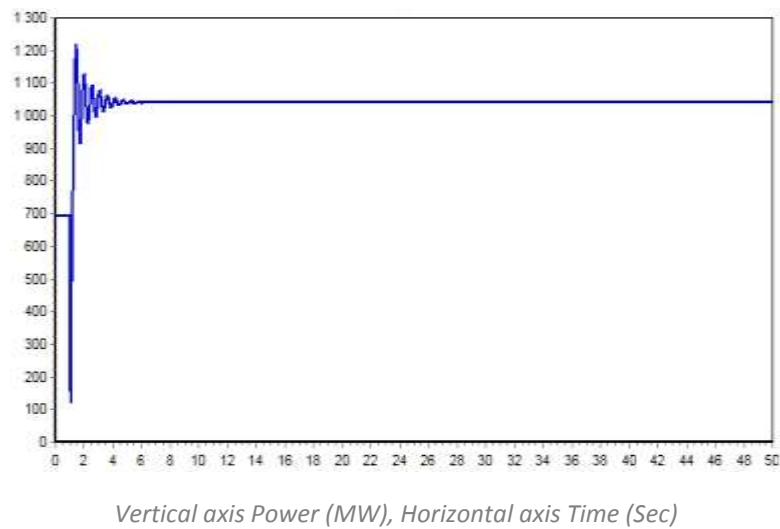


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Akhaltsikhe - Borchkha“

Power flow on line is 353 MW.

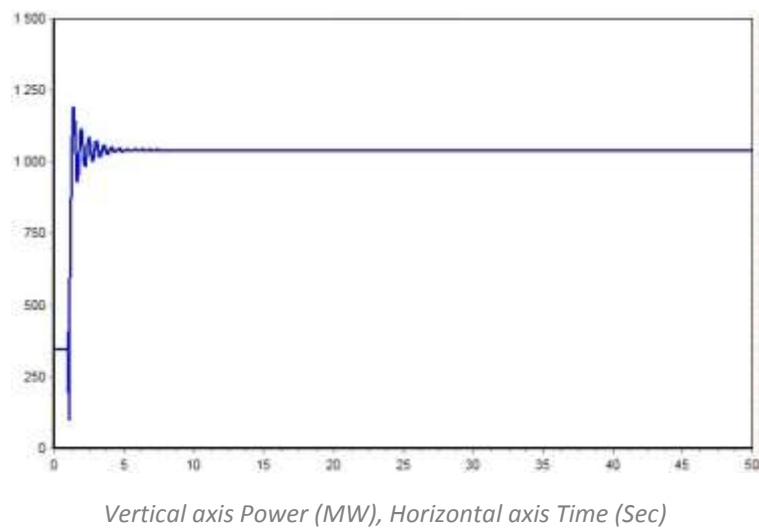
Power flow on OHL „Akaltsikhe - Tortum“:



Emergency outage of OHL „Akhaltsikhe - Tortum“

Power flow on line is 687 MW.

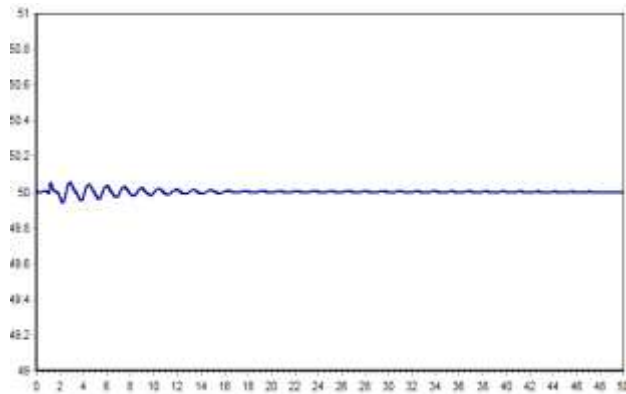
Power flow on OHL „Akaltsikhe - Borchkha“:



Emergency outage of OHL „Marneuli - Akhaltsikhe“

Power flow on line is 554 MW.

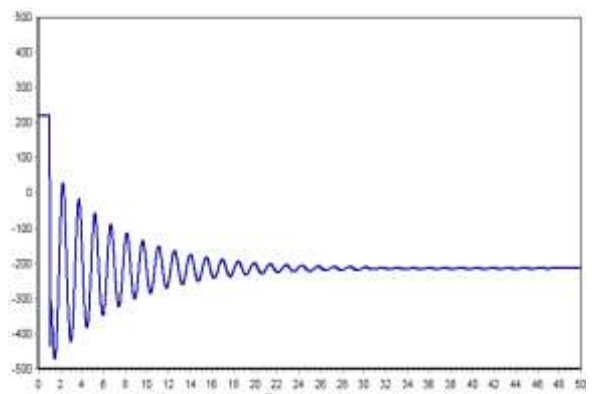
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

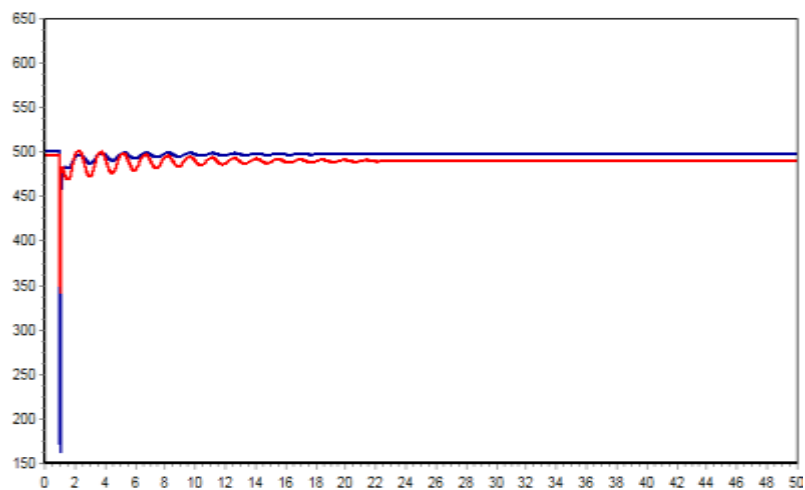
Power flow on OHL „Zestafoni - Akhaltsikhe“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Marneuli 500“ (Blue) and Voltage on „Akhaltsikhe 500“ (Red) nodes:

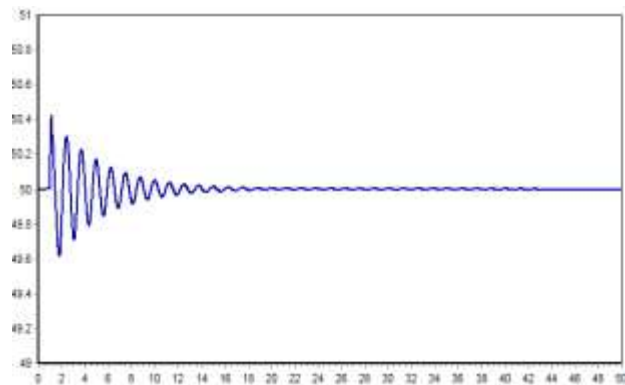


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Jvari - Tskaltubo“

Power flow on line is 766 MW.

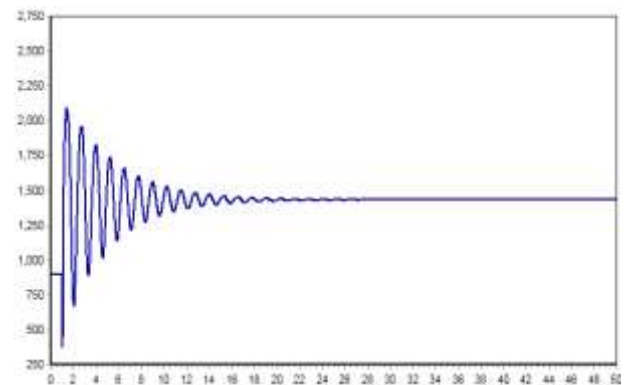
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

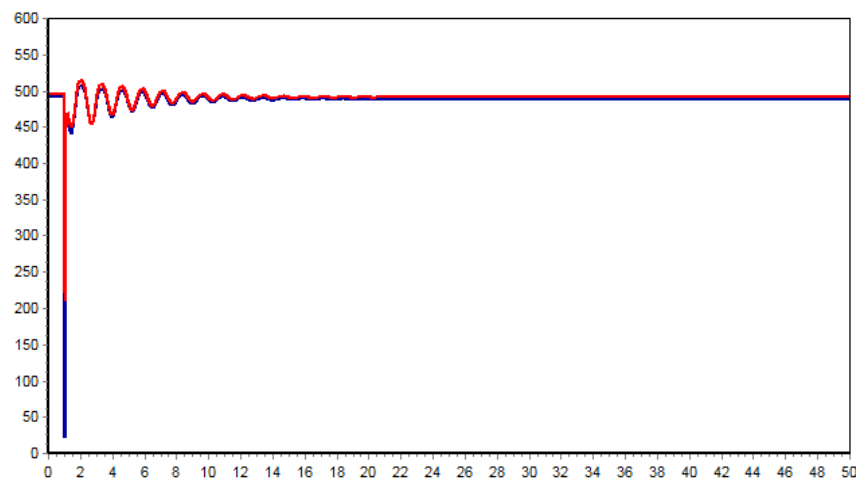
Power flow on OHL „Enguri - Zestafoni“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Tskaltubo 500“ (Blue) and Voltage on „Jvari 500“ (Red) nodes:

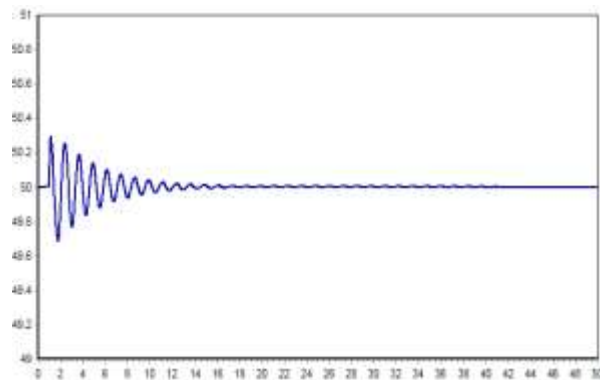


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Tskaltubo - Akhaltsikhe“

Power flow on line is 614 MW.

Frequency:

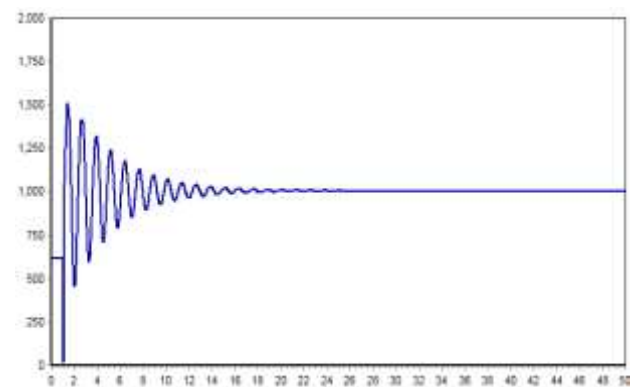


Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Tskaltubo - Akhaltsikhe“

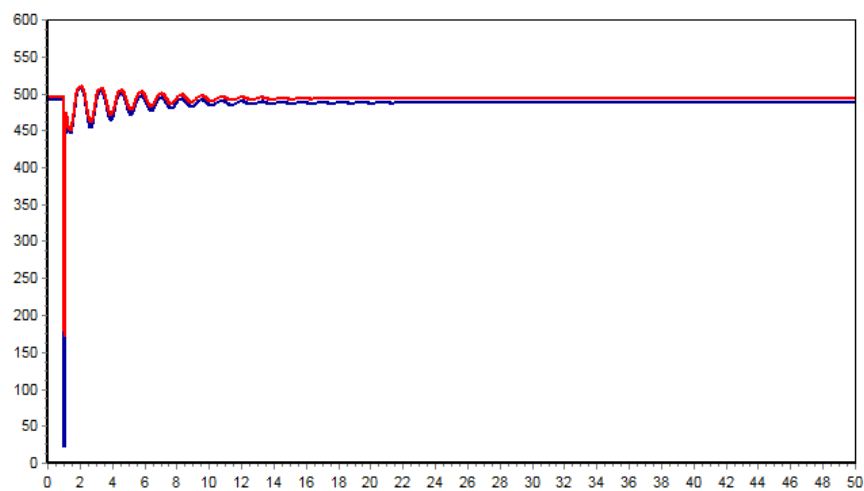
second line:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Tskaltubo 500“ (Blue) and Voltage on „Akhaltsikhe 500“ (Red) nodes:

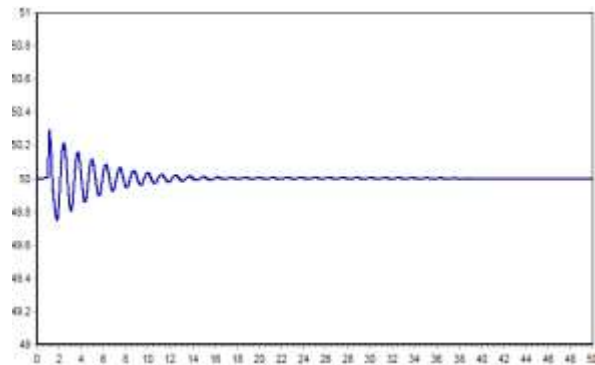


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Lajanuri - Tskaltubo“

Power flow on line is 447 MW.

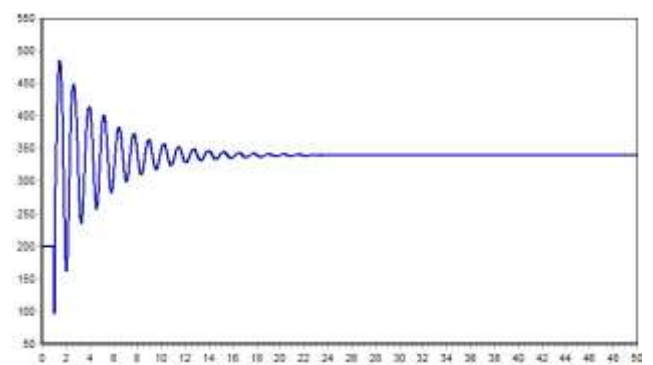
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

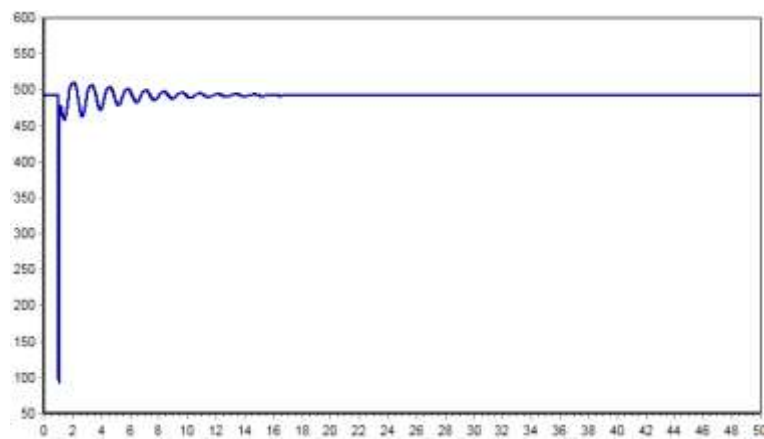
Power flow on OHL „Namakhvani - Tskaltubo“



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Tskaltubo 500“:

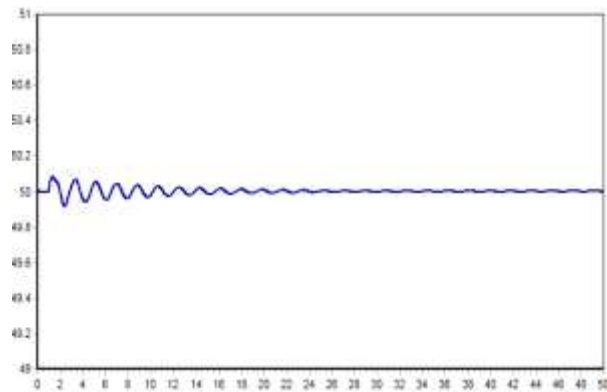


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Batumi - Muratli“ and „Batumi HVDC“

Power flow on line is 352 MW.

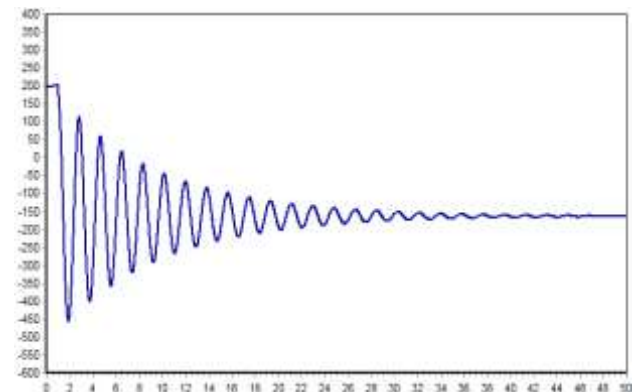
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

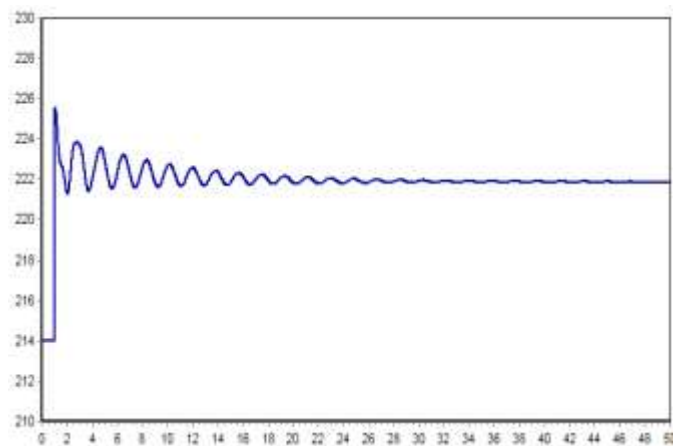
Power flow on OHL „Kazbegi - Mozdok“



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Batumi 220“:

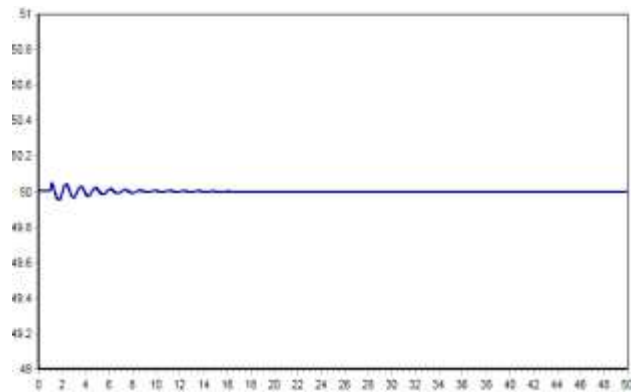


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Ksani - Kazbegi“

Power flow on line is 390 MW.

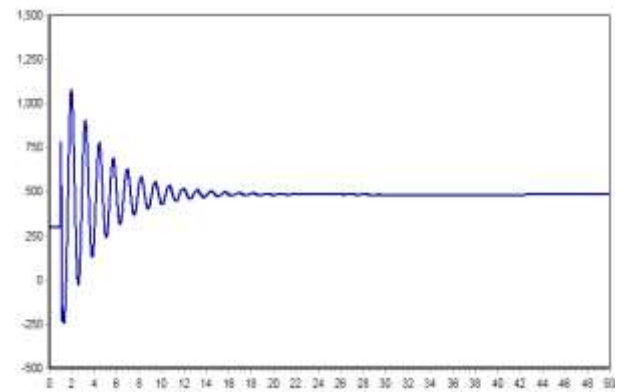
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

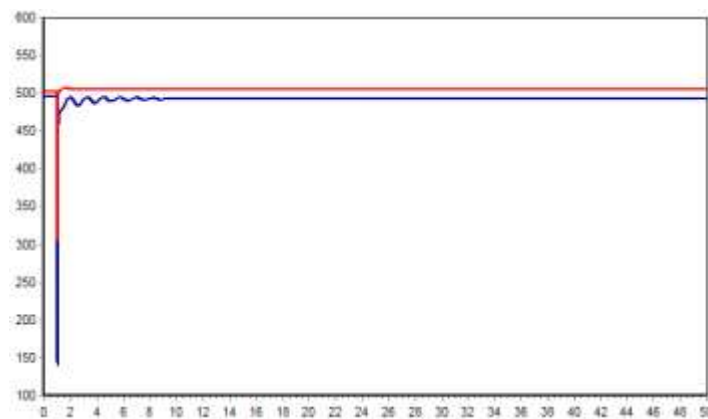
Power flow on OHL „Gardabani - Agstafa“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Ksani 500“ (Blue) and Voltage on „Kazbegi 500“ (Red) nodes:

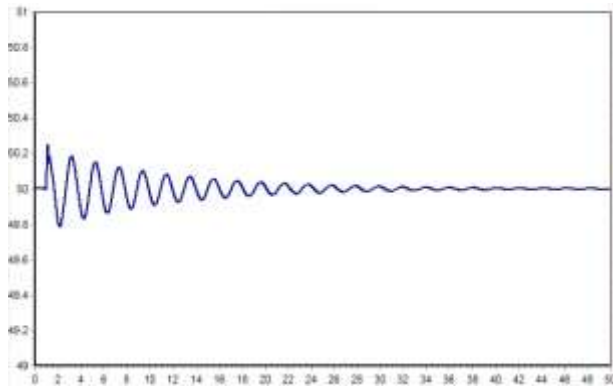


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

Emergency outage of OHL „Kazbegi - Mozdoki“

Power flow on line is 200 MW.

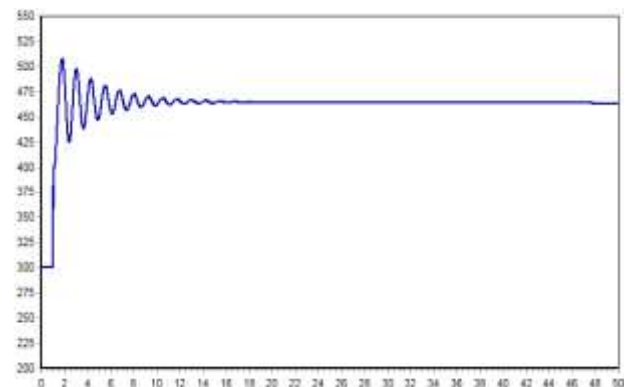
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

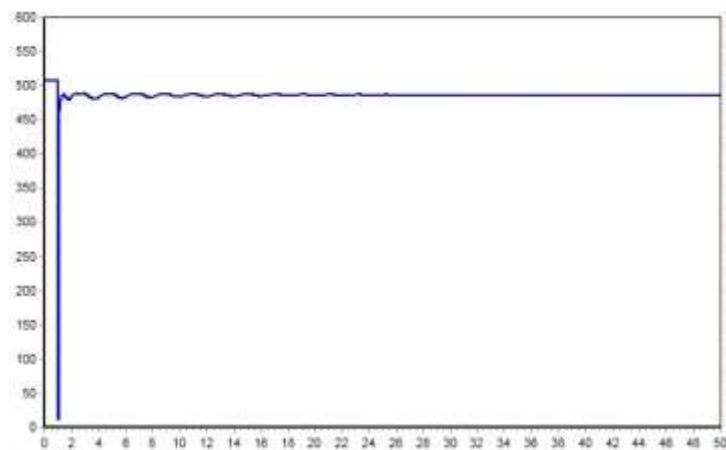
Power flow on OHL „Khudoni – Centralnaia“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

Voltage on „Kazbegi 500“:

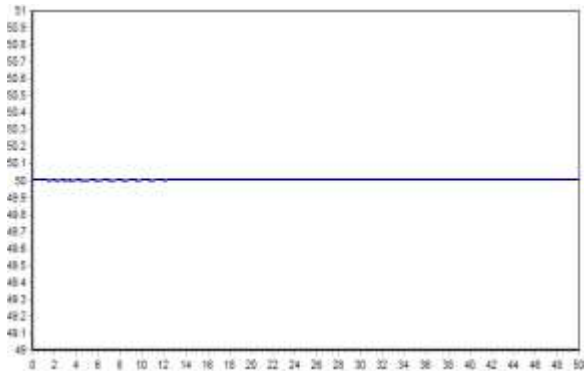


Vertical axis Voltage (kV), Horizontal axis Time (Sec)

500/220 AT „Enguri“

Power flow in AT 365 MW.

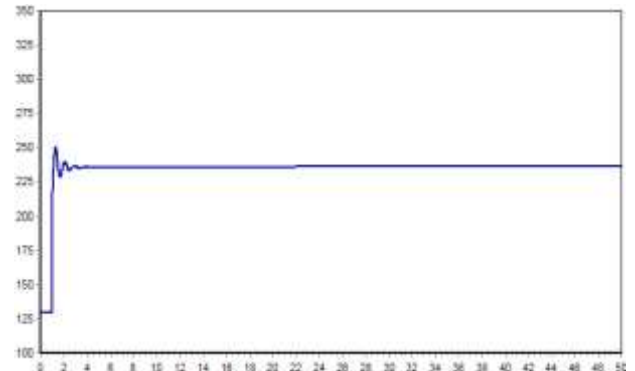
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Jvari“:



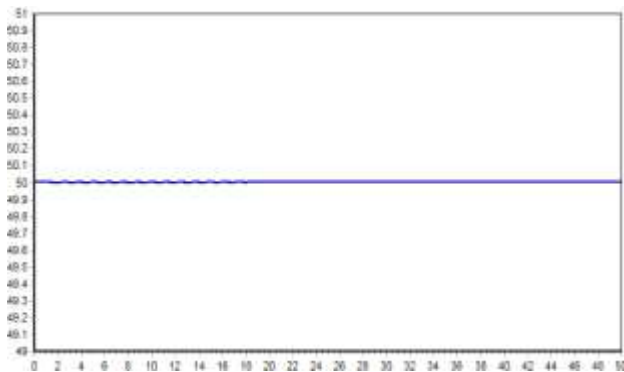
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Zestafoni“

Power flow in AT 63 MW.

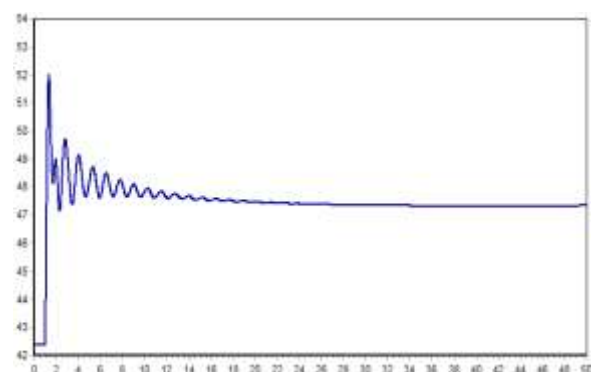
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Tskaltubo“:



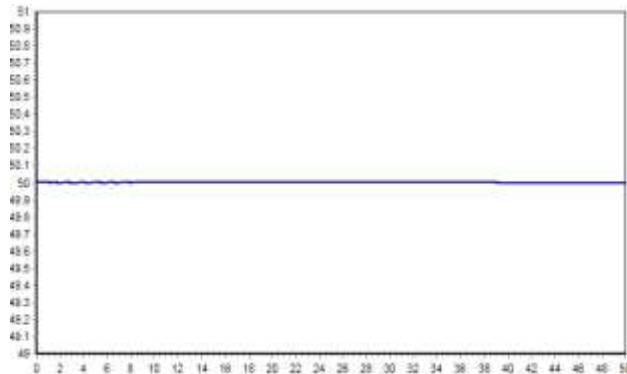
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Ksani“

Power flow in AT 420 MW.

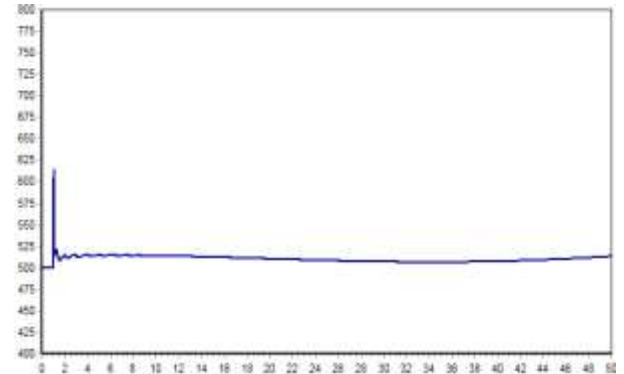
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Gardabani“:



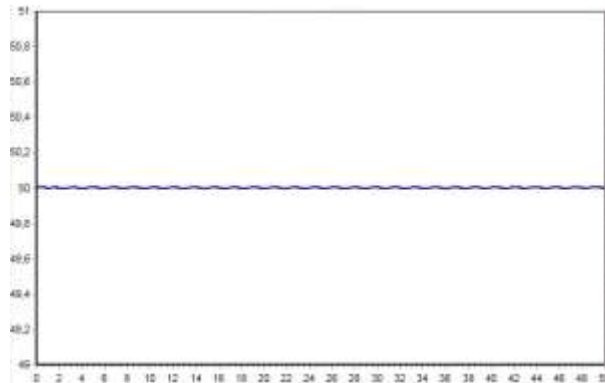
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Gardabani“

Power flow in AT 670 MW.

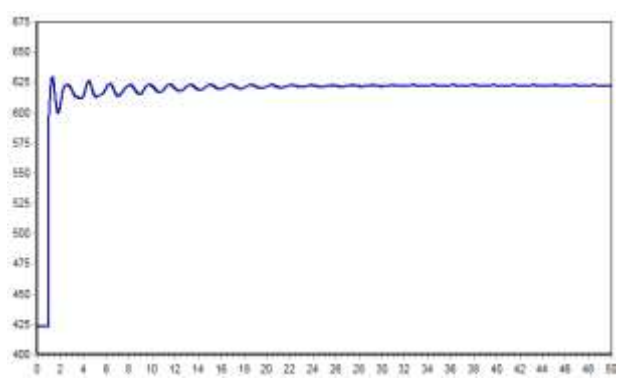
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Ksani“:



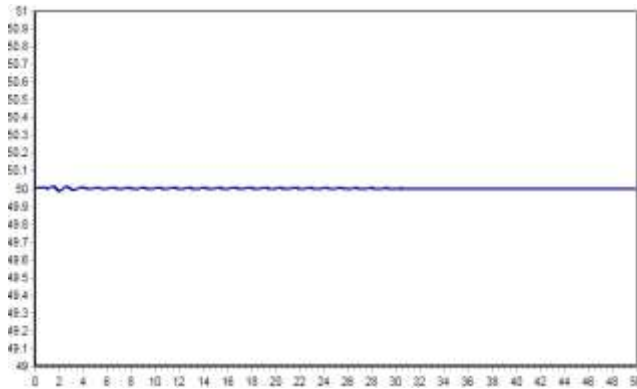
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Akhaltsikhe“

Power flow in AT 146 MW.

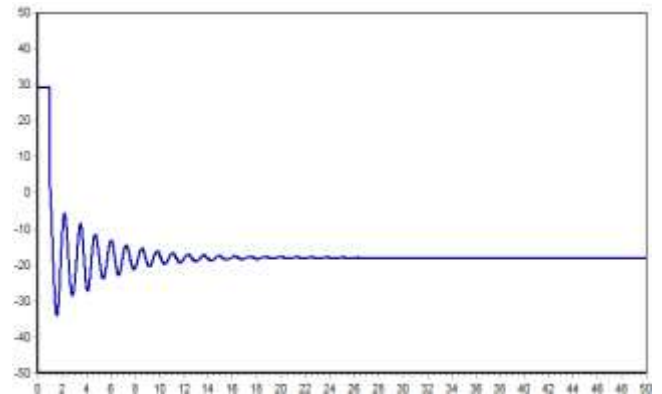
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Zestafoni“:



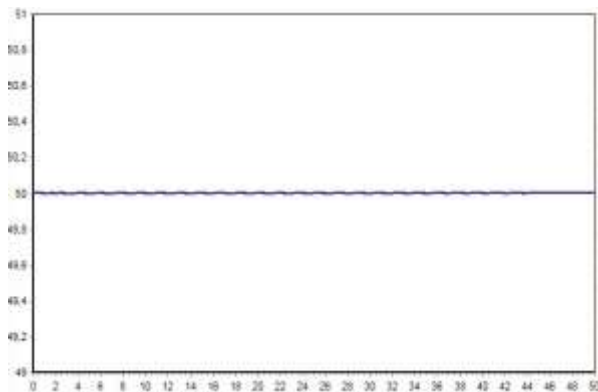
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Marneuli“

Power flow in AT 318 MW.

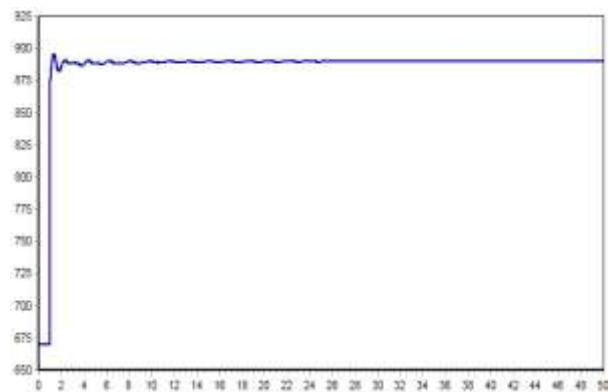
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Gardabani“:



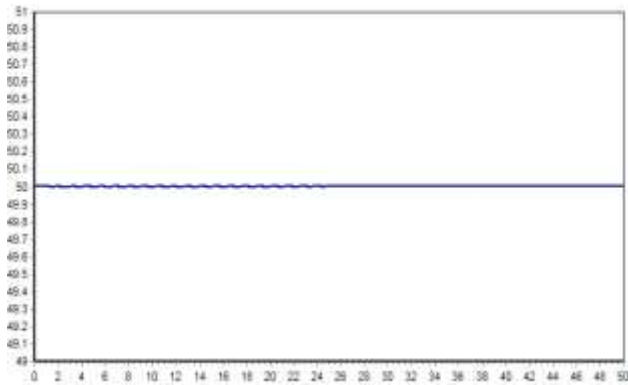
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Jvari“

Power flow in AT 129 MW.

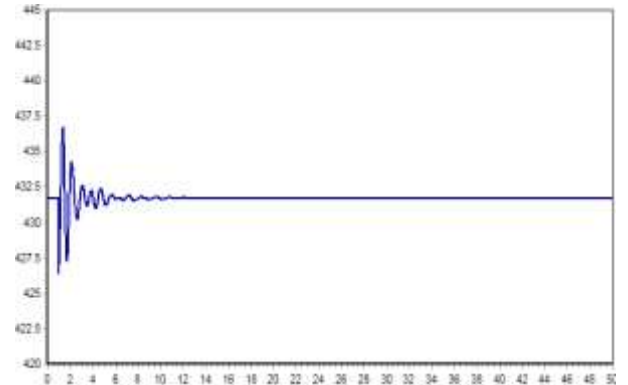
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Nenskra“:



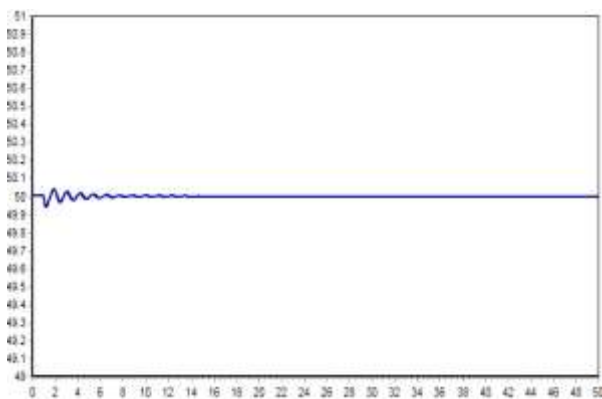
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/220 AT „Nenskra“

Power flow in AT 432 MW.

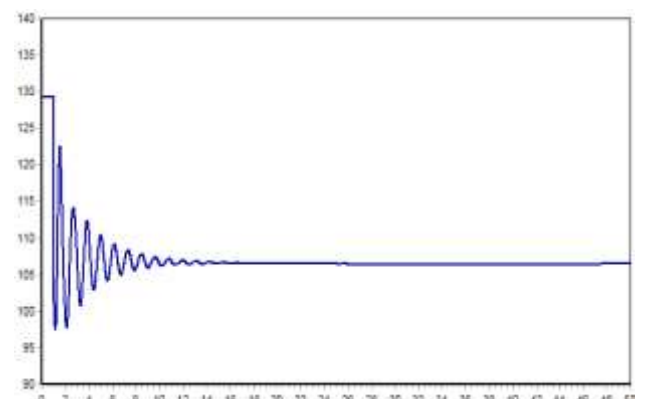
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow of 500/220 AT „Jvari“:



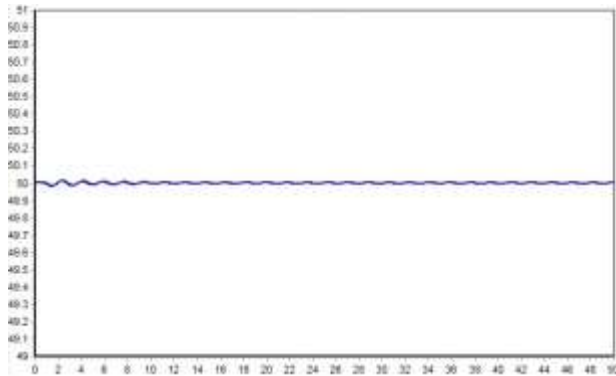
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/110 AT „Kazbegi“

Power flow in AT 174 MW.

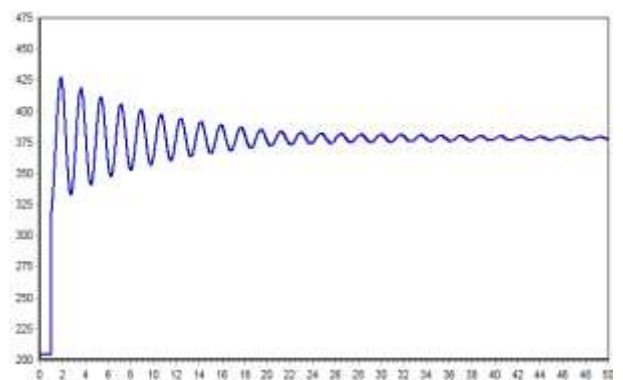
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Kazbegi - Mozdoki“:



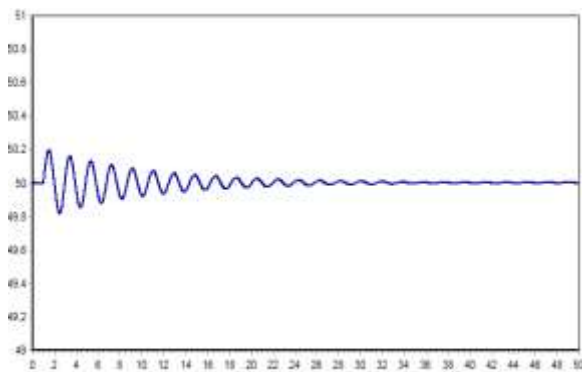
Vertical axis Power (MW),

Horizontal axis Time (Sec)

500/400 HVDC „Akhaltsikhe“

Power flow in AT 1057 MW.

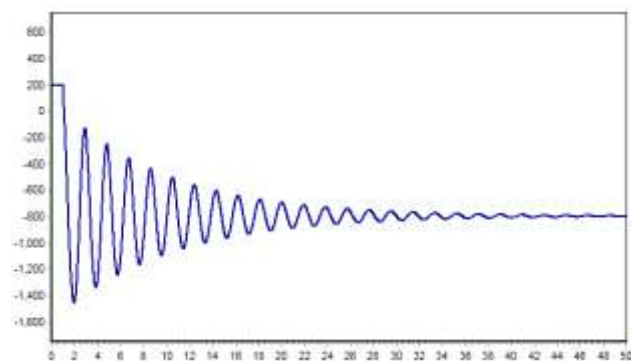
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Kudoni - Novosvobodnaia“:



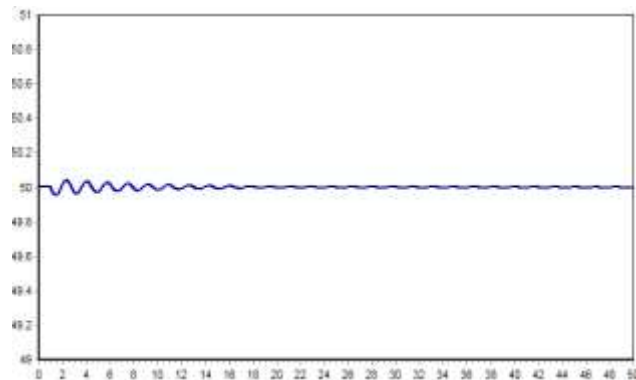
Vertical axis Power (MW),

Horizontal axis Time (Sec)

Generator of HPP Enguri outage

Generator power was 250 MW.

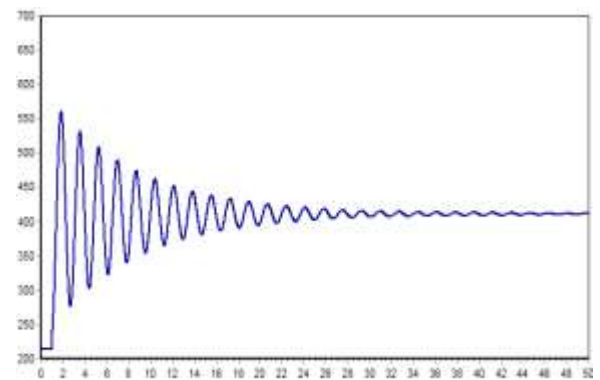
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Kazbegi- Mozdok“:



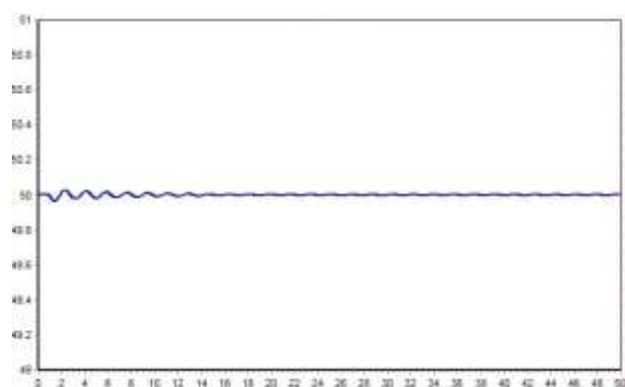
Vertical axis Power (MW),

Horizontal axis Time (Sec)

Generator of HPP Kudoni outage

Generator power was 207 MW.

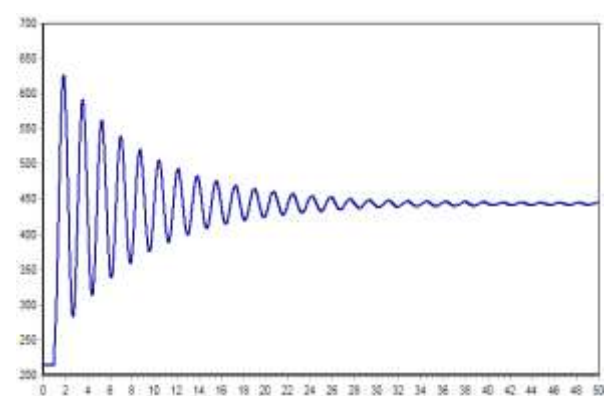
Frequency:



Vertical axis Frequency (Hz),

Horizontal axis Time (Sec)

Power flow on OHL „Kazbegi- Mozdok“:



Vertical axis Power (MW),

Horizontal axis Time (Sec)

2017

MAX						MIN					
BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP	BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	9248.56	10679.3	20000	ENGURI	500	3PH	5473.3	6320
20001	ZESTAFONI	500	3PH	8555.41	9878.9	20001	ZESTAFONI	500	3PH	4727.39	5458.7
20002	QSANI	500	3PH	8278.14	9558.8	20002	QSANI	500	3PH	3731.07	4308.3
20003	GARDABANI	500	3PH	9304.11	10743.5	20003	GARDABANI	500	3PH	3583.08	4137.4
20004	AKHALTSIKHE	500	3PH	7043.55	8133.2	20004	AKHALTSIKHE	500	3PH	4004.56	4624.1
20007	MARNEULI	500	3PH	8852.06	10221.5	20007	MARNEULI	500	3PH	3688.93	4259.6
20008	JVARI	500	3PH	8632.88	9968.4	20008	JVARI	500	3PH	5259.59	6073.3
22221	AKHALTS-RECT	500	3PH	6990.55	8072	22221	AKHALTS-RECT	500	3PH	3986.93	4603.7
20011	AKHALTS-INV	400	3PH	6904.27	9965.5	20011	AKHALTS-INV	400	3PH	6855.99	9895.8
22222	AKHALTS-INV	400	3PH	6853.11	9891.6	22222	AKHALTS-INV	400	3PH	6804.78	9821.8
20020	GARDABANI	330	3PH	4297.97	7519.5	20020	GARDABANI	330	3PH	1799.3	3148
20030	ENGURI	220	3PH	5021.66	13178.4	20030	ENGURI	220	3PH	3714.43	9747.8
20031	VARDNILI	220	3PH	5033.5	13209.5	20031	VARDNILI	220	3PH	3725.9	9777.9
20032	TKVARCHELI	220	3PH	2157.74	5662.6	20032	TKVARCHELI	220	3PH	1863.69	4890.9
20033	SOKHUMI	220	3PH	1025.79	2692	20033	SOKHUMI	220	3PH	950.66	2494.8
20034	BZIFI	220	3PH	604.85	1587.3	20034	BZIFI	220	3PH	576.6	1513.2
20035	XORGA	220	3PH	5482.95	14389	20035	XORGA	220	3PH	4109.12	10783.6
20036	BATUMI	220	3PH	3829.71	10050.4	20036	BATUMI	220	3PH	2957.42	7761.2
20037	ZUGDIDI	220	3PH	3754.95	9854.2	20037	ZUGDIDI	220	3PH	3001.61	7877.2
20038	MENJI	220	3PH	5206.71	13664.1	20038	MENJI	220	3PH	3981.49	10448.7
20039	TSKALTUBO	220	3PH	4207.34	11041.4	20039	TSKALTUBO	220	3PH	3441.09	9030.5
20040	QUTAI	220	3PH	5198.99	13643.8	20040	QUTAI	220	3PH	3950.67	10367.8
20041	ZESTAFONI	220	3PH	5597.94	14690.8	20041	ZESTAFONI	220	3PH	4013.02	10531.4
20042	LAJANURI	220	3PH	2052.6	5386.7	20042	LAJANURI	220	3PH	1895.79	4975.2
20052	KHASHURI	220	3PH	2214.23	5810.8	20052	KHASHURI	220	3PH	1811.53	4754
20053	GORI	220	3PH	2327.17	6107.2	20053	GORI	220	3PH	1830.77	4804.5
20054	QSANI	220	3PH	5988.57	15715.9	20054	QSANI	220	3PH	3247.95	8523.7
20055	JINVALI	220	3PH	2370.27	6220.4	20055	JINVALI	220	3PH	1804.27	4735
20056	GLDANI	220	3PH	4622.42	12130.7	20056	GLDANI	220	3PH	2642.72	6935.3
20057	GURJAANI	220	3PH	1391.64	3652.1	20057	GURJAANI	220	3PH	1124.28	2950.5
20058	NAGTLUGHI	220	3PH	4236.32	11117.5	20058	NAGTLUGHI	220	3PH	2451.56	6433.7
20059	GARDABANI	220	3PH	7965.16	20903.1	20059	GARDABANI	220	3PH	3212.83	8431.5
20060	MARNEULI	220	3PH	6505.05	17071.3	20060	MARNEULI	220	3PH	3111.86	8166.5
20061	LISI	220	3PH	5573.3	14626.1	20061	LISI	220	3PH	3024.58	7937.5
20062	DIDUBE	220	3PH	4747.48	12458.9	20062	DIDUBE	220	3PH	2759.87	7242.8
20063	KHRAMI-2	220	3PH	1907.67	5006.3	20063	KHRAMI-2	220	3PH	1280.21	3359.7
20067	RUSTAVI	220	3PH	5154.24	13526.4	20067	RUSTAVI	220	3PH	2694.4	7071
20072	AXALCIXE	220	3PH	4099.9	10759.5	20072	AXALCIXE	220	2954.51	7753.6	-93.16
20073	MTKVARI-HESI	220	3PH	3316.49	8703.5	20073	MTKVARI-HESI	220	2497.25	6553.6	-92.62
20076	FARAVANI	220	3PH	1750.19	4593.1	20076	FARAVANI	220	3PH	1314.12	3448.7
20078	JVARI	220	3PH	4582.31	12025.4	20078	JVARI	220	3PH	3511.34	9214.9
20082	KHOBI-2	220	3PH	2692.74	7066.6	20082	KHOBI-2	220	3PH	2235.92	5867.8
20084	KOROMKHETI	220	3PH	2294.44	6021.3	20084	KOROMKHETI	220	3PH	1939.05	5088.7
20085	SHUAKHEVI	220	3PH	2650.17	6954.9	20085	SHUAKHEVI	220	3PH	2302.8	6043.3
22223	BATUM-RECT	220	3PH	3819.51	10023.6	22223	BATUM-RECT	220	3PH	2949.54	7740.5
25369	ABULI	220	3PH	1428.93	3750	25369	ABULI	220	3PH	1115.13	2926.5

2018

MAX

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	9248.56	10679.3
20001	ZESTAFONI	500	3PH	8555.41	9878.9
20002	QSANI	500	3PH	8278.14	9558.8
20003	GARDABANI	500	3PH	9304.11	10743.5
20004	AKHALTSIKHE	500	3PH	7043.55	8133.2
20007	MARNEULI	500	3PH	8852.06	10221.5
20008	JVARI	500	3PH	8632.88	9968.4
22221	AKHALTS-RECT	500	3PH	6990.55	8072
20011	AKHALTS-INV	400	3PH	6904.27	9965.5
22222	AKHALTS-INV	400	3PH	6853.11	9891.6
20020	GARDABANI	330	3PH	4297.97	7519.5
20030	ENGURI	220	3PH	5021.66	13178.4
20031	VARDNILI	220	3PH	5033.5	13209.5
20032	TKVARCHELI	220	3PH	2157.74	5662.6
20033	SOKHUMI	220	3PH	1025.79	2692
20034	BZIFI	220	3PH	604.85	1587.3
20035	XORGA	220	3PH	5482.95	14389
20036	BATUMI	220	3PH	3829.71	10050.4
20037	ZUGDIDI	220	3PH	3754.95	9854.2
20038	MENJI	220	3PH	5206.71	13664.1
20039	TSKALTUBO	220	3PH	4207.34	11041.4
20040	QUTAIISI	220	3PH	5198.99	13643.8
20041	ZESTAFONI	220	3PH	5597.94	14690.8
20042	LAJANURI	220	3PH	2052.6	5386.7
20052	KHASHURI	220	3PH	2214.23	5810.8
20053	GORI	220	3PH	2327.17	6107.2
20054	QSANI	220	3PH	5988.57	15715.9
20055	JINVALI	220	3PH	2370.27	6220.4
20056	GLDANI	220	3PH	4622.42	12130.7
20057	GURJAANI	220	3PH	1391.64	3652.1
20058	NAGTLUGHI	220	3PH	4236.32	11117.5
20059	GARDABANI	220	3PH	7965.16	20903.1
20060	MARNEULI	220	3PH	6505.05	17071.3
20061	LISI	220	3PH	5573.3	14626.1
20062	DIDUBE	220	3PH	4747.48	12458.9
20063	KHRAMI-2	220	3PH	1907.67	5006.3
20067	RUSTAVI	220	3PH	5154.24	13526.4
20072	AXALCIXE	220	3PH	4099.9	10759.5
20073	MTKVARI-HESI	220	3PH	3316.49	8703.5
20076	FARAVANI	220	3PH	1750.19	4593.1
20078	JVARI	220	3PH	4582.31	12025.4
20082	KHOBI-2	220	3PH	2692.74	7066.6
20084	KOROMKHETI	220	3PH	2294.44	6021.3
20085	SHUAKHEVI	220	3PH	2650.17	6954.9
22223	BATUM-RECT	220	3PH	3819.51	10023.6
25369	ABULI	220	3PH	1428.93	3750

MIN

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	5473.3	6320
20001	ZESTAFONI	500	3PH	4727.39	5458.7
20002	QSANI	500	3PH	3731.07	4308.3
20003	GARDABANI	500	3PH	3583.08	4137.4
20004	AKHALTSIKHE	500	3PH	4004.56	4624.1
20007	MARNEULI	500	3PH	3688.93	4259.6
20008	JVARI	500	3PH	5259.59	6073.3
22221	AKHALTS-RECT	500	3PH	3986.93	4603.7
20011	AKHALTS-INV	400	3PH	6855.99	9895.8
22222	AKHALTS-INV	400	3PH	6804.78	9821.8
20020	GARDABANI	330	3PH	1799.3	3148
20030	ENGURI	220	3PH	3714.43	9747.8
20031	VARDNILI	220	3PH	3725.9	9777.9
20032	TKVARCHELI	220	3PH	1863.69	4890.9
20033	SOKHUMI	220	3PH	950.66	2494.8
20034	BZIFI	220	3PH	576.6	1513.2
20035	XORGA	220	3PH	4109.12	10783.6
20036	BATUMI	220	3PH	2957.42	7761.2
20037	ZUGDIDI	220	3PH	3001.61	7877.2
20038	MENJI	220	3PH	3981.49	10448.7
20039	TSKALTUBO	220	3PH	3441.09	9030.5
20040	QUTAIISI	220	3PH	3950.67	10367.8
20041	ZESTAFONI	220	3PH	4013.02	10531.4
20042	LAJANURI	220	3PH	1895.79	4975.2
20052	KHASHURI	220	3PH	1811.53	4754
20053	GORI	220	3PH	1830.77	4804.5
20054	QSANI	220	3PH	3247.95	8523.7
20055	JINVALI	220	3PH	1804.27	4735
20056	GLDANI	220	3PH	2642.72	6935.3
20057	GURJAANI	220	3PH	1124.28	2950.5
20058	NAGTLUGHI	220	3PH	2451.56	6433.7
20059	GARDABANI	220	3PH	3212.83	8431.5
20060	MARNEULI	220	3PH	3111.86	8166.5
20061	LISI	220	3PH	3024.58	7937.5
20062	DIDUBE	220	3PH	2759.87	7242.8
20063	KHRAMI-2	220	3PH	1280.21	3359.7
20067	RUSTAVI	220	3PH	2694.4	7071
20072	AXALCIXE	220	2954.51	7753.6	-93.16
20073	MTKVARI-HESI	220	2497.25	6553.6	-92.62
20076	FARAVANI	220	3PH	1314.12	3448.7
20078	JVARI	220	3PH	3511.34	9214.9
20082	KHOBI-2	220	3PH	2235.92	5867.8
20084	KOROMKHETI	220	3PH	1939.05	5088.7
20085	SHUAKHEVI	220	3PH	2302.8	6043.3
22223	BATUM-RECT	220	3PH	2949.54	7740.5
25369	ABULI	220	3PH	1115.13	2926.5

2019

MAX

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	10617.92	12260.5
20001	ZESTAFONI	500	3PH	9884.8	11414
20002	QSANI	500	3PH	10630.78	12275.4
20003	GARDABANI	500	3PH	11079.94	12794
20004	AKHALTSIKHE	500	3PH	9703.1	11204.2
20007	MARNEULI-500500.00	500	3PH	10771.31	12437.6
20008	JVARI	500	3PH	10200.47	11778.5
29898	ქვა ეგბ „ბათუმის-შუახედი	500	3PH	6616.44	7640
20011	AKHALTS-INV	400	3PH	6985.29	10082.4
22222	AKHALTS-INV	400	3PH	6933.53	10007.7
20020	GARDABANI	330	3PH	4406.05	7708.6
20030	ENGURI	220	3PH	5836.48	15316.8
20031	VARDNILI	220	3PH	6019.09	15796
20032	TKVARCHELI	220	3PH	2311.55	6066.2
20033	SOKHUMI	220	3PH	1055.72	2770.6
20034	BZIFI	220	3PH	610.86	1603.1
20035	XORGA	220	3PH	6462.29	16959.1
20036	BATUMI	220	3PH	3755.69	9856.1
20037	ZUGDIDI	220	3PH	3984.79	10457.4
20038	MENJI	220	3PH	5997.23	15738.6
20039	TSKALTUBO	220	3PH	5775.83	15157.6
20040	QUTAISI	220	3PH	6104.55	16020.3
20041	ZESTAFONI	220	3PH	7035.14	18462.4
20042	LAJANURI	220	3PH	5884.42	15442.6
20052	KHASHURI	220	3PH	2300.95	6038.4
20053	GORI	220	3PH	2391.07	6274.9
20054	QSANI	220	3PH	6590.22	17294.8
20055	JINVALI	220	3PH	2480.08	6508.5
20056	GLDANI	220	3PH	4923.39	12920.6
20057	GURJAANI	220	3PH	1393	3655.7
20058	NAGTLUGHI	220	3PH	4559.2	11964.8
20059	GARDABANI	220	3PH	8827.91	23167.3
20060	MARNEULI	220	3PH	7140.57	18739.1
20061	LISI	220	3PH	6030.35	15825.6
20062	DIDUBE	220	3PH	5050.54	13254.2
20063	KHRAMI-2	220	3PH	1912.35	5018.6
20067	RUSTAVI	220	3PH	5461.52	14332.8
20068	ALPANA	220	3PH	6131.7	16091.5
20069	SADMELI	220	3PH	5681.05	14908.9
20072	AXALCIXE-220220.00	220	3PH	4402.83	11554.4
20073	MTKVARI-HESI220.00	220	3PH	3491.86	9163.8
20075	METALURGIA	220	3PH	4413.37	11582.1
20076	FARAVANI220	220	3PH	1766.95	4637
20078	JVARI	220	3PH	6199.47	16269.4
20079	KHUDONI	220	3PH	3580.02	9395.1
20082	KHOBI-2	220	3PH	4186.81	10987.5
20083	OZURGETI	220	3PH	2794.02	7332.4
20085	SHUAKHEVI	220	3PH	2632.54	6908.6
20090	TSAGERI	220	3PH	5820.89	15275.9
21212	TEKHURI	220	3PH	3770.04	9893.8
21456	LENTEKHI	220	3PH	4701.25	12337.6
22223	BATUM-RECT	220	3PH	3744.35	9826.4
25369	ABULI	220	3PH	1435.84	3768.1
28563	MESTIA	220	3PH	3335.86	8754.4

MIN

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	6536.76	7548
20001	ZESTAFONI	500	3PH	5874.85	6783.7
20002	QSANI	500	3PH	4742.46	5476.1
20003	GARDABANI	500	3PH	4599.9	5311.5
20004	AKHALTSIKHE	500	3PH	5806.12	6704.3
20007	MARNEULI-500	500	3PH	4758.95	5495.2
20008	JVARI	500	3PH	6374.89	7361.1
29898	KAZBEGI	500	3PH	2962.26	3420.5
20011	AKHALTS-INV	400	3PH	6941.9	10019.8
22222	AKHALTS-INV	400	3PH	6890.46	9945.5
20020	GARDABANI	330	3PH	2031.43	3554.1
20030	ENGURI	220	3PH	4359.68	11441.2
20031	VARDNILI	220	3PH	4458.2	11699.7
20032	TKVARCHELI	220	3PH	2034.3	5338.7
20033	SOKHUMI	220	3PH	995.87	2613.5
20034	BZIFI	220	3PH	597.57	1568.2
20035	XORGA	220	3PH	4804.56	12608.7
20036	BATUMI	220	3PH	3119.63	8186.9
20037	ZUGDIDI	220	3PH	3262.31	8561.3
20038	MENJI	220	3PH	4564.41	11978.5
20039	TSKALTUBO	220	3PH	4415.88	11588.7
20040	QUTAISI	220	3PH	4552.18	11946.4
20041	ZESTAFONI	220	3PH	4877.04	12798.9
20042	LAJANURI	220	3PH	4227.67	11094.8
20052	KHASHURI	220	3PH	1984.83	5208.8
20053	GORI	220	3PH	2004.9	5261.5
20054	QSANI	220	3PH	3909.51	10259.8
20055	JINVALI	220	3PH	1925.06	5052
20056	GLDANI	220	3PH	3217.76	8444.4
20057	GURJAANI	220	3PH	1162.59	3051
20058	NAGTLUGHI	220	3PH	3056.42	8021
20059	GARDABANI	220	3PH	4019.07	10547.3
20060	MARNEULI	220	3PH	3843.94	10087.7
20061	LISI	220	3PH	3651.88	9583.7
20062	DIDUBE	220	3PH	3276.16	8597.7
20063	KHRAMI-2	220	3PH	1607.05	4217.4
20067	RUSTAVI	220	3PH	3216.55	8441.3
20068	ALPANA	220	3PH	4362.14	11447.6
20069	SADMELI	220	3PH	4115.03	10799.2
20072	AXALCIXE-220220.00	220	3PH	3594.8	9433.9
20073	MTKVARI-HESI220.00	220	3PH	2978.43	7816.3
20075	METALURGIA	220	3PH	3591.93	9426.4
20076	FARAVANI220	220	3PH	1672.91	4390.3
20078	JVARI	220	3PH	4627.98	12145.3
20079	KHUDONI	220	3PH	2963.57	7777.4
20082	KHOBI-2	220	3PH	3392.73	8903.6
20083	OZURGETI	220	3PH	2433.5	6386.3
20085	SHUAKHEVI	220	3PH	2119.56	5562.4
20090	TSAGERI	220	3PH	4226.02	11090.4
21212	TEKHURI	220	3PH	3145.32	8254.3
21456	LENTEKHI	220	3PH	3619.49	9498.7
22223	BATUM-RECT	220	3PH	3111.72	8166.1
25369	ABULI	220	3PH	1376.68	3612.8
28563	MESTIA	220	3PH	2763.97	7253.5

2020

MAX

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	12366.99	14280.2
20001	ZESTAFONI	500	3PH	10488.86	12111.5
20002	QSANI	500	3PH	9863.07	11388.9
20003	GARDABANI	500	3PH	9463.8	10927.9
20004	AKHALTSIKHE	500	3PH	10303.15	11897.1
20007	MARNEULI-500500.00	500	3PH	9656.5	11150.4
20008	JVARI	500	3PH	11756.87	13575.7
29898	KAZBEGI	500	3PH	6606.14	7628.1
24563	CAGERI	500	3PH	5831.2	6733.3
20011	AKHALTS-INV	400	3PH	7009.75	10117.7
20020	GARDABANI	330	3PH	2684.39	4696.5
20030	ENGURI	220	3PH	6132.86	16094.6
20031	VARDNILI	220	3PH	6354.72	16676.8
20032	TKVARCHELI	220	3PH	2391.57	6276.2
20033	SOKHUMI	220	3PH	1088.08	2855.5
20034	BZIFI	220	3PH	632.98	1661.1
20035	XORGA	220	3PH	6999.21	18368.2
20036	BATUMI	220	3PH	4277.67	11226
20037	ZUGDIDI	220	3PH	4184.93	10982.6
20038	MENJI	220	3PH	6509.46	17082.9
20039	TSKALTUBO	220	3PH	6297.1	16525.6
20040	QUTAISI	220	3PH	6670.73	17506.1
20041	ZESTAFONI	220	3PH	7793.18	20451.8
20042	LAJANURI	220	3PH	7145.37	18751.7
20052	KHASHURI	220	3PH	2415.36	6338.7
20053	GORI	220	3PH	2454.87	6442.4
20054	QSANI	220	3PH	6370.52	16718.3
20055	JINVALI	220	3PH	2489.6	6533.5
20056	GLDANI	220	3PH	4695.12	12321.5
20057	GURJAANI	220	3PH	1462.08	3837
20058	NAGTLUGHI	220	3PH	4263.43	11188.6
20059	GARDABANI	220	3PH	7628.85	20020.5
20060	MARNEULI	220	3PH	6582.14	17273.6
20061	LISI	220	3PH	5785.06	15181.8
20062	DIDUBE	220	3PH	4895.44	12847.2
20063	KHRAMI-2	220	3PH	1895.89	4975.4
20067	RUSTAVI	220	3PH	5177.86	13588.4
20068	ALPANA	220	3PH	7521.52	19738.9
20069	SADMELI	220	3PH	6505.58	17072.7
20072	AXALCIXE-220220.00	220	3PH	4665.07	12242.6
20073	MTKVARI-HESI220.00	220	3PH	3665.47	9619.4
20076	FARAVANI220	220	3PH	1812.69	4757.1
20078	JVARI	220	3PH	6668.63	17500.6
20079	KHUDONI	220	3PH	3941.19	10342.9
20082	KHOBI-2	220	3PH	4429.18	11623.6
20083	OZURGETI	220	3PH	2962.61	7774.8
20084	KOROMKHETI	220	3PH	3030.56	7953.2
20085	SHUAKHEVI	220	3PH	2752.9	7224.5
20090	TSAGERI	220	3PH	7465.52	19591.9
21212	TEKHURI	220	3PH	3976.08	10434.5
21456	LENTEKHI	220	3PH	6148.46	16135.5
22223	BATUM-RECT	220	3PH	4263.14	11187.9
25369	ABULI	220	3PH	1469.6	3856.7
28563	MESTIA	220	3PH	3911.51	10265.1

MIN

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	6165.46	7119.3
20001	ZESTAFONI	500	3PH	5817.21	6717.1
20002	QSANI	500	3PH	4729.89	5461.6
20003	GARDABANI	500	3PH	4538.52	5240.6
20004	AKHALTSIKHE	500	3PH	5730.5	6617
20007	MARNEULI-500	500	3PH	4718.35	5448.3
20008	JVARI	500	3PH	6059.43	6996.8
29898	KAZBEGI	500	3PH	2988.77	3451.1
24563	CAGERI	500	3PH	4121.56	4759.2
20011	AKHALTS-INV	400	3PH	6945.96	10025.6
20020	GARDABANI	330	3PH	2064.08	3611.2
20030	ENGURI	220	3PH	4271.44	11209.6
20031	VARDNILI	220	3PH	4416.61	11590.6
20032	TKVARCHELI	220	3PH	2064.48	5417.8
20033	SOKHUMI	220	3PH	1022.6	2683.6
20034	BZIFI	220	3PH	618.42	1622.9
20035	XORGA	220	3PH	4847.22	12720.7
20036	BATUMI	220	3PH	3164.6	8304.9
20037	ZUGDIDI	220	3PH	3287.48	8627.4
20038	MENJI	220	3PH	4656.56	12220.3
20039	TSKALTUBO	220	3PH	4602.25	12077.8
20040	QUTAISI	220	3PH	4817.16	12641.8
20041	ZESTAFONI	220	3PH	5340.58	14015.4
20042	LAJANURI	220	3PH	4750.44	12466.7
20052	KHASHURI	220	3PH	2076.66	5449.8
20053	GORI	220	3PH	2077.56	5452.2
20054	QSANI	220	3PH	3969.24	10416.6
20055	JINVALI	220	3PH	1976.57	5187.1
20056	GLDANI	220	3PH	3228.93	8473.7
20057	GURJAANI	220	3PH	1274.6	3345
20058	NAGTLUGHI	220	3PH	3005	7886.1
20059	GARDABANI	220	3PH	4048.65	10625
20060	MARNEULI	220	3PH	3856.01	10119.4
20061	LISI	220	3PH	3692.59	9690.5
20062	DIDUBE	220	3PH	3321.14	8715.7
20063	KHRAMI-2	220	3PH	1625.23	4265.1
20067	RUSTAVI	220	3PH	3338.29	8760.7
20068	ALPANA	220	3PH	4921.02	12914.3
20069	SADMELI	220	3PH	4516.06	11851.6
20072	AXALCIXE-220220.00	220	3PH	3354.07	8802.1
20073	MTKVARI-HESI220.00	220	3PH	2792.59	7328.7
20076	FARAVANI220	220	3PH	1410.23	3700.9
20078	JVARI	220	3PH	4619.3	12122.5
20079	KHUDONI	220	3PH	3132.51	8220.7
20082	KHOBI-2	220	3PH	3446.51	9044.7
20083	OZURGETI	220	3PH	2462.5	6462.4
20084	KOROMKHETI	220	3PH	2551.9	6697
20085	SHUAKHEVI	220	3PH	1842.75	4836
20090	TSAGERI	220	3PH	4876.87	12798.5
21212	TEKHURI	220	3PH	3209.81	8423.6
21456	LENTEKHI	220	3PH	4355.68	11430.7
22223	BATUM-RECT	220	3PH	3155.63	8281.4
25369	ABULI	220	3PH	1190	3122.9
28563	MESTIA	220	3PH	3099.78	8134.8

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MAX

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	15123.2	17462.8
20001	ZESTAFONI	500	3PH	12263.52	14160.7
20002	QSANI	500	3PH	12603.25	14553
20003	GARDABANI	500	3PH	13325.36	15386.8
20004	AKHALTSIKHE	500	3PH	12195.22	14081.8
20005	KHUDONI	500	3PH	12458.1	14385.4
20007	MARNEULI	500	3PH	12912.76	14910.4
20008	JVARI	500	3PH	15094.11	17429.2
27333	TSKHALTUBO-5500.00	500	3PH	10603.99	12244.4
29898	KAZBEGI	500	3PH	7270.2	8394.9
24563	CAGERI	500	3PH	6368.99	7354.3
20011	AKHALTS-INV	400	3PH	6972.13	10063.4
20020	GARDABANI	330	3PH	4824.03	8439.9
20030	ENGURI	220	3PH	6134.45	16098.8
20031	VARDNILI	220	3PH	6069.75	15929
20032	TKVARCHELI	220	3PH	2361.13	6196.4
20033	SOKHUMI	220	3PH	1085.46	2848.6
20034	BZIFI	220	3PH	627.3	1646.2
20035	XORGA	220	3PH	7349.8	19288.2
20036	BATUMI	220	3PH	4758.81	12488.6
20037	ZUGDIDI	220	3PH	4390.43	11521.9
20038	MENJI	220	3PH	7012.84	18403.9
20039	TSKALTUBO	220	3PH	8906.95	23374.7
20040	QUTAIISI	220	3PH	7787.5	20436.9
20041	ZESTAFONI	220	3PH	8606.14	22585.3
20042	LAJANURI	220	3PH	7837.93	20569.2
20052	KHASHURI	220	3PH	2684.71	7045.5
20053	GORI	220	3PH	2972.49	7800.8
20054	QSANI	220	3PH	7905.88	20747.5
20055	JINVALI	220	3PH	2693.31	7068.1
20056	GLDANI	220	3PH	5640.92	14803.6
20057	GURJAANI	220	3PH	1543.44	4050.5
20058	NAGTLUGHI	220	3PH	5150.49	13516.5
20059	GARDABANI	220	3PH	11364.19	29823.3
20060	MARNEULI	220	3PH	8542.59	22418.5
20061	LISI	220	3PH	7065.04	18540.9
20062	DIDUBE	220	3PH	5804.47	15232.8
20063	KHRAMI-2	220	3PH	2039.37	5352
20067	RUSTAVI	220	3PH	6570.88	17244.1
20068	ALPANA	220	3PH	8286.42	21746.2
20069	SADMELI	220	3PH	6777.28	17785.7
20072	AXALCIXE-220220.00	220	3PH	5695.78	14947.5
20073	MTKVARI-HESI220.00	220	3PH	2214.94	5812.7
20075	METALURGIA	220	3PH	5037.13	13219
20076	FARAVANI220	220	3PH	2274.8	5969.8
20078	JVARI	220	3PH	8761.48	22992.9
20079	KHUDONI	220	3PH	8832.33	23178.9
20082	KHOBI-2	220	3PH	4980.24	13069.7
20083	OZURGETI	220	3PH	2701.2	7088.8
20084	KOROMKHETI	220	3PH	4568.04	11988
20085	SHUAKHEVI	220	3PH	2877.21	7550.7
20087	DUSHETI	220	3PH	3119.75	8187.2
20090	CAGERI	220	3PH	8336.99	21878.9
20122	NENSKRA	220	3PH	7765.07	20378
21212	TEKHURI	220	3PH	4465.31	11718.4
21456	LENTEKHI	220	3PH	7031.68	18453.4
22223	BATUM-RECT	220	3PH	4741.1	12442.2
25369	ABULI	220	3PH	1764.17	4629.7
28563	MESTIA	220	3PH	5361.04	14069.1

MIN

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	8669.83	10011.1
20001	ZESTAFONI	500	3PH	7563.85	8734
20002	QSANI	500	3PH	5770.91	6663.7
20003	GARDABANI	500	3PH	5519.5	6373.4
20004	AKHALTSIKHE	500	3PH	7516.05	8678.8
20005	KHUDONI	500	3PH	7053.5	8144.7
20007	MARNEULI-500	500	3PH	5775.02	6668.4
20008	JVARI	500	3PH	8590.38	9919.3
27333	TSKHALTUBO-5500.00	500	3PH	7073.72	8168
29898	KAZBEGI	500	3PH	3340.46	3857.2
24563	CAGERI	500	3PH	4825.99	5572.6
20011	AKHALTS-INV	400	3PH	6944.9	10024.1
20020	GARDABANI	330	3PH	2213.63	3872.9
20030	ENGURI	220	3PH	4557.7	11960.9
20031	VARDNILI	220	3PH	4442.72	11659.1
20032	TKVARCHELI	220	3PH	2071.23	5435.6
20033	SOKHUMI	220	3PH	1023.69	2686.5
20034	BZIFI	220	3PH	613.24	1609.3
20035	XORGA	220	3PH	5549.58	14563.9
20036	BATUMI	220	3PH	3859.79	10129.3
20037	ZUGDIDI	220	3PH	3569.33	9367.1
20038	MENJI	220	3PH	5421.13	14226.8
20039	TSKALTUBO	220	3PH	6541.31	17166.5
20040	QUTAIISI	220	3PH	6042.87	15858.4
20041	ZESTAFONI	220	3PH	6438.12	16895.7
20042	LAJANURI	220	3PH	5644.17	14812.1
20052	KHASHURI	220	3PH	2363.8	6203.4
20053	GORI	220	3PH	2536.97	6657.8
20054	QSANI	220	3PH	4687.52	12301.6
20055	JINVALI	220	3PH	2100.9	5513.4
20056	GLDANI	220	3PH	3628.03	9521.1
20057	GURJAANI	220	3PH	1338.78	3513.4
20058	NAGTLUGHI	220	3PH	3351.87	8796.4
20059	GARDABANI	220	3PH	4659.31	12227.5
20060	MARNEULI	220	3PH	4451.54	11682.3
20061	LISI	220	3PH	4249.64	11152.4
20062	DIDUBE	220	3PH	3755.6	9855.9
20063	KHRAMI-2	220	3PH	1595.78	4187.8
20067	RUSTAVI	220	3PH	3752.66	9848.2
20068	ALPANA	220	3PH	5889.56	15456.1
20069	SADMELI	220	3PH	5270.32	13831
20072	AXALCIXE-220220.00	220	3PH	4444.87	11664.8
20073	MTKVARI-HESI220.00	220	3PH	1911.58	5016.6
20075	METALURGIA	220	3PH	4179.36	10968
20076	FARAVANI220	220	3PH	1836.56	4819.7
20078	JVARI	220	3PH	6037.22	15843.6
20079	KHUDONI	220	3PH	5818.95	15270.8
20082	KHOBI-2	220	3PH	3991.16	10474.1
20083	OZURGETI	220	3PH	2441.3	6406.8
20084	KOROMKHETI	220	3PH	3886.95	10200.6
20085	SHUAKHEVI	220	3PH	2321.73	6093
20087	DUSHETI	220	3PH	2396	6287.9
20090	CAGERI	220	3PH	5844.66	15338.3
20122	NENSKRA	220	3PH	5209.03	13670.2
21212	TEKHURI	220	3PH	3726.61	9779.8
21456	LENTEKHI	220	3PH	5106.95	13402.3
22223	BATUM-RECT	220	3PH	3846.65	10094.8
25369	ABULI	220	3PH	1476.5	3874.8
28563	MESTIA	220	3PH	4248.07	11148.3

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MAX

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	15489.97	17886.3
20001	ZESTAFONI	500	3PH	12492.82	14425.5
20002	QSANI	500	3PH	12477.79	14408.1
20003	GARDABANI	500	3PH	13194.15	15235.3
20004	AKHALTSIKHE	500	3PH	12439.25	14363.6
20005	KHUDONI	500	3PH	12508.42	14443.5
20007	MARNEULI-500500.00	500	3PH	12801.68	14782.1
20008	JVARI	500	3PH	15472.87	17866.5
24563	CAGERI	500	3PH	6557.94	7572.5
27333	TSKHALTUBO-5500.00	500	3PH	11071.88	12784.7
29898	KAZBEGI	500	3PH	7104	8203
20011	AKHALTS-INV	400	3PH	6972.13	10063.4
20020	GARDABANI	330	3PH	4751.65	8313.2
20030	ENGURI	220	3PH	6153.73	16149.3
20031	VARDNILI	220	3PH	6095.26	15995.9
20032	TKVARCHELI	220	3PH	2336.11	6130.7
20033	SOKHUMI	220	3PH	1068.69	2804.6
20034	BZIFI	220	3PH	616.37	1617.5
20035	XORGA	220	3PH	7560.23	19840.5
20036	BATUMI	220	3PH	4658.55	12225.5
20037	ZUGDIDI	220	3PH	4390.3	11521.5
20038	MENJI	220	3PH	7313.09	19191.9
20039	TSKALTUBO	220	3PH	11306.89	29672.9
20040	QUTAIISI	220	3PH	8215.32	21559.6
20041	ZESTAFONI	220	3PH	9030.59	23699.2
20042	LAJANURI	220	3PH	9756.33	25603.7
20052	KHASHURI	220	3PH	2685.68	7048.1
20053	GORI	220	3PH	2936.22	7705.6
20054	QSANI	220	3PH	7780.06	20417.4
20055	JINVALI	220	3PH	2631.12	6904.9
20056	GLDANI	220	3PH	5531.9	14517.5
20057	GURJAANI	220	3PH	1506.5	3953.5
20058	NAGTLUGHI	220	3PH	5046.57	13243.8
20059	GARDABANI	220	3PH	11205.45	29406.7
20060	MARNEULI	220	3PH	8407.7	22064.5
20061	LISI	220	3PH	6942.55	18219.5
20062	DIDUBE	220	3PH	5693.65	14941.9
20063	KHRAMI-2	220	3PH	1989.03	5219.9
20067	RUSTAVI	220	3PH	6448.95	16924.1
20068	ALPANA	220	3PH	10514.16	27592.5
20069	SADMELI	220	3PH	8122.68	21316.5
20071	ONI	220	3PH	5821.41	15277.2
20072	AXALCIXE-220220.00	220	3PH	5531.13	14515.5
20073	MTKVARI-HESI220.00	220	3PH	2166.77	5686.3
20075	METALURGIA	220	3PH	5145.95	13504.6
20076	FARAVANI220	220	3PH	2226.97	5844.3
20078	JVARI	220	3PH	8872.11	23283.2
20079	KHUDONI	220	3PH	8850.79	23227.3
20082	KHOBI-2	220	3PH	5023.77	13184
20083	OZURGETI	220	3PH	2675.11	7020.3
20084	KOROMKHETI	220	3PH	4269.4	11204.3
20085	SHUAKHEVI	220	3PH	2823.49	7409.7
20087	DUSHETI	220	3PH	3049.06	8001.7
20090	CAGERI	220	3PH	9722.4	25514.7
20122	NENSKRA	220	3PH	7746.18	20328.4
21212	TEKHURI	220	3PH	4569.16	11990.9
21456	LENTEKHI	220	3PH	7635.19	20037.2
22223	BATUM-RECT	220	3PH	4641.45	12180.6
25143	TVISHI	220	3PH	8226.52	21589
25369	ABULI	220	3PH	1728.49	4536.1
27545	NAMAKHVANI	220	3PH	8382.58	21998.6
28100	JONETI220	220	3PH	3837.44	10070.7
28563	MESTIA	220	3PH	5381.93	14123.9

MIN

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	8575.92	9902.6
20001	ZESTAFONI	500	3PH	7880.15	9099.2
20002	QSANI	500	3PH	6131.48	7080
20003	GARDABANI	500	3PH	5903.04	6816.2
20004	AKHALTSIKHE	500	3PH	7887.88	9108.1
20005	KHUDONI	500	3PH	6650.13	7678.9
20007	MARNEULI-500500.00	500	3PH	6168.48	7122.7
20008	JVARI	500	3PH	8474.76	9785.8
24563	CAGERI	500	3PH	5226.29	6034.8
27333	TSKHALTUBO-5500.00	500	3PH	7379.04	8520.6
29898	KAZBEGI	500	3PH	3449.12	3982.7
20011	AKHALTS-INV	400	3PH	6927.02	9998.3
20020	GARDABANI	330	3PH	2319.23	4057.6
20030	ENGURI	220	3PH	4489.15	11781
20031	VARDNILI	220	3PH	4400.73	11548.9
20032	TKVARCHELI	220	3PH	2043.14	5361.8
20033	SOKHUMI	220	3PH	1007.78	2644.7
20034	BZIFI	220	3PH	602.55	1581.3
20035	XORGA	220	3PH	5708.82	14981.8
20036	BATUMI	220	3PH	3881.69	10186.8
20037	ZUGDIDI	220	3PH	3559.78	9342
20038	MENJI	220	3PH	5665.39	14867.8
20039	TSKALTUBO	220	3PH	7895.29	20719.8
20040	QUTAIISI	220	3PH	6348.86	16661.4
20041	ZESTAFONI	220	3PH	6766.99	17758.7
20042	LAJANURI	220	3PH	7241.63	19004.3
20052	KHASHURI	220	3PH	2433.93	6387.4
20053	GORI	220	3PH	2577.46	6764.1
20054	QSANI	220	3PH	4983.74	13078.9
20055	JINVALI	220	3PH	2135.09	5603.2
20056	GLDANI	220	3PH	3838.86	10074.4
20057	GURJAANI	220	3PH	1326.13	3480.2
20058	NAGTLUGHI	220	3PH	3541.58	9294.2
20059	GARDABANI	220	3PH	5175.45	13582
20060	MARNEULI	220	3PH	4806.75	12614.4
20061	LISI	220	3PH	4516.97	11854
20062	DIDUBE	220	3PH	3960.81	10394.4
20063	KHRAMI-2	220	3PH	1622.59	4258.2
20067	RUSTAVI	220	3PH	4031.23	10579.2
20068	ALPANA	220	3PH	7627.63	20017.3
20069	SADMELI	220	3PH	6034.01	15835.2
20071	ONI	220	3PH	4491.91	11788.2
20072	AXALCIXE-220220.00	220	3PH	4360.56	11443.5
20073	MTKVARI-HESI220.00	220	3PH	1888.81	4956.8
20075	METALURGIA	220	3PH	4305.48	11299
20076	FARAVANI220	220	3PH	1813.4	4758.9
20078	JVARI	220	3PH	6052.73	15884.3
20079	KHUDONI	220	3PH	5769.83	15141.9
20082	KHOBI-2	220	3PH	4019.98	10549.7
20083	OZURGETI	220	3PH	2446.91	6421.5
20084	KOROMKHETI	220	3PH	3475.65	9121.2
20085	SHUAKHEVI	220	3PH	2611.84	6854.3
20087	DUSHETI	220	3PH	2448.42	6425.4
20090	CAGERI	220	3PH	7360.46	19316.2
20122	NENSKRA	220	3PH	5161.51	13545.5
21212	TEKHURI	220	3PH	3776.29	9910.2
21456	LENTEKHI	220	3PH	6185.47	16232.6
22223	BATUM-RECT	220	3PH	3868.58	10152.4
25143	TVISHI	220	3PH	6262.49	16434.8
25369	ABULI	220	3PH	1459.26	3829.6
27545	NAMAKHVANI	220	3PH	6216.22	16313.4
28100	JONETI220	220	3PH	3201.07	8400.6
28563	MESTIA	220	3PH	4368.73	11464.9

2023

MAX

MIN

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP	BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	15469.03	17862.1	20000	ENGURI	500	3PH	9046.17	10445.6
20001	ZESTAFONI	500	3PH	12448.75	14374.6	20001	ZESTAFONI	500	3PH	7788.37	8993.2
20002	QSANI	500	3PH	12428.25	14350.9	20002	QSANI	500	3PH	5673.61	6551.3
20003	GARDABANI	500	3PH	13136.77	15169	20003	GARDABANI	500	3PH	5399.74	6235.1
20004	AKHALTSIKHE	500	3PH	12392.4	14309.5	20004	AKHALTSIKHE	500	3PH	7764.33	8965.5
20005	KHUDONI	500	3PH	12486.55	14418.2	20005	KHUDONI	500	3PH	6985.72	8066.4
20007	MARNEULI-500500.00	500	3PH	12745.94	14717.7	20007	MARNEULI-500	500	3PH	5672.49	6550
24563	CAGERI	500	3PH	6528.63	7538.6	24563	CAGERI	500	3PH	5233.22	6042.8
20008	JVARI	500	3PH	15449.16	17839.2	20008	JVARI	500	3PH	8934.29	10316.4
27333	TSKHALTUBO-5500.00	500	3PH	11035.93	12743.2	27333	TSKHALTUBO-5500.00	500	3PH	7506.28	8667.5
29898	KAZBEGI	500	3PH	7089.79	8186.6	29898	KAZBEGI	500	3PH	3285.21	3793.4
20011	AKHALTS-INV	400	3PH	6972.13	10063.4	20011	AKHALTS-INV	400	3PH	6913.89	9979.3
20020	GARDABANI	330	3PH	4726.85	8269.8	20020	GARDABANI	330	3PH	2149.9	3761.3
20030	ENGURI	220	3PH	6146.26	16129.8	20030	ENGURI	220	3PH	5116.37	13427
20031	VARDNILI	220	3PH	6093.35	15990.9	20031	VARDNILI	220	3PH	5136.03	13478.6
20032	TKVARCHELI	220	3PH	2334.5	6126.5	20032	TKVARCHELI	220	3PH	2191.88	5752.2
20033	SOKHUMI	220	3PH	1065.65	2796.6	20033	SOKHUMI	220	3PH	1043.78	2739.2
20034	BZIFI	220	3PH	608.96	1598.1	20034	BZIFI	220	3PH	615.17	1614.4
20035	XORGA	220	3PH	7533.78	19771.1	20035	XORGA	220	3PH	6029.07	15822.2
20036	BATUMI	220	3PH	4638.62	12173.2	20036	BATUMI	220	3PH	3738.64	9811.4
20037	ZUGDIDI	220	3PH	4374.07	11479	20037	ZUGDIDI	220	3PH	3874.72	10168.5
20038	MENJI	220	3PH	7284.4	19116.6	20038	MENJI	220	3PH	5882.63	15437.9
20039	TSKALTUBO	220	3PH	11261.97	29555	20039	TSKALTUBO	220	3PH	8050.81	21127.9
20040	QUTAIISI	220	3PH	8182.19	21472.7	20040	QUTAIISI	220	3PH	6305.15	16546.7
20041	ZESTAFONI	220	3PH	8995.07	23605.9	20041	ZESTAFONI	220	3PH	6681.37	17534.1
20042	LAJANURI	220	3PH	9713.09	25490.2	20042	LAJANURI	220	3PH	7398.8	19416.8
20052	KHASHURI	220	3PH	2671.91	7011.9	20052	KHASHURI	220	3PH	2381.45	6249.7
20053	GORI	220	3PH	2920.35	7663.9	20053	GORI	220	3PH	2470	6482.1
20054	QSANI	220	3PH	7731.06	20288.8	20054	QSANI	220	3PH	4463.85	11714.6
20055	JINVALI	220	3PH	2601.29	6826.6	20055	JINVALI	220	3PH	1885.69	4948.6
20056	GLDANI	220	3PH	5492.53	14414.1	20056	GLDANI	220	3PH	3447.45	9047.2
20057	GURJAANI	220	3PH	1495.87	3925.7	20057	GURJAANI	220	3PH	1259.43	3305.1
20058	NAGTLUGHI	220	3PH	5009.73	13147.1	20058	NAGTLUGHI	220	3PH	3172.29	8325.1
20059	GARDABANI	220	3PH	11138.39	29230.7	20059	GARDABANI	220	3PH	4466.58	11721.7
20060	MARNEULI	220	3PH	8356.37	21929.8	20060	MARNEULI	220	3PH	4285.05	11245.4
20061	LISI	220	3PH	6898.64	18104.2	20061	LISI	220	3PH	4056.6	10645.8
20062	DIDUBE	220	3PH	5655.24	14841.2	20062	DIDUBE	220	3PH	3589.89	9421
20063	KHRAMI-2	220	3PH	1971.52	5173.9	20063	KHRAMI-2	220	3PH	1488.51	3906.3
20067	RUSTAVI	220	3PH	6407.96	16816.5	20067	RUSTAVI	220	3PH	3565.61	9357.3
20068	ALPANA	220	3PH	10468.08	27471.6	20068	ALPANA	220	3PH	7805.04	20482.9
20069	SADMEI	220	3PH	8085.64	21219.3	20069	SADMEI	220	3PH	6090.27	15982.8
20071	ONI	220	3PH	5793.79	15204.8	20071	ONI	220	3PH	4519.2	11859.8
20072	AXALCIXE-220220.00	220	3PH	5507.15	14452.5	20072	AXALCIXE-220220.00	220	3PH	4218.11	11069.7
20073	MTKVARI-HESI220.00	220	3PH	2156.83	5660.2	20073	MTKVARI-HESI220.00	220	3PH	1860.27	4882
20075	METALURGIA	220	3PH	5122.02	13441.8	20075	METALURGIA	220	3PH	4405.47	11561.4
20076	FARAVANI220	220	3PH	2216.78	5817.5	20076	FARAVANI220	220	3PH	1788.62	4693.9
20078	JVARI	220	3PH	8841.21	23202.2	20078	JVARI	220	3PH	6468.49	16975.4
20079	KHUDONI	220	3PH	8821.48	23150.4	20079	KHUDONI	220	3PH	6258.58	16424.5
20082	KHOBI-2	220	3PH	4996.86	13113.4	20082	KHOBI-2	220	3PH	4244.4	11138.7
20083	OZURGETI	220	3PH	2661.88	6985.6	20083	OZURGETI	220	3PH	2445.3	6417.2
20084	KOROMKHETI	220	3PH	4250.79	11155.4	20084	KOROMKHETI	220	3PH	3365.41	8831.9
20085	SHUAKHEVI	220	3PH	2811.74	7378.9	20085	SHUAKHEVI	220	3PH	2266.59	5948.3
20087	DUSHETI	220	3PH	3017.47	7918.8	20087	DUSHETI	220	3PH	2184.12	5731.8
20090	CAGERI	220	3PH	9679.57	25402.3	20090	CAGERI	220	3PH	7529.83	19760.7
20122	NENSKRA	220	3PH	7719.42	20258.2	20122	NENSKRA	220	3PH	5614.18	14733.4
21212	TEKHURI	220	3PH	4545.39	11928.6	21212	TEKHURI	220	3PH	3856.37	10120.3
21456	LENTEKHI	220	3PH	7601.13	19947.8	21456	LENTEKHI	220	3PH	6357.52	16684.2
22223	BATUM-RECT	220	3PH	4621.57	12128.5	22223	BATUM-RECT	220	3PH	3726.5	9779.5
25143	TVISHI	220	3PH	8189.43	21491.7	25143	TVISHI	220	3PH	6360.85	16692.9
25369	ABULI	220	3PH	1720.54	4515.2	25369	ABULI	220	3PH	1442.4	3785.3
27545	NAMAKHVANI	220	3PH	8345.09	21900.2	27545	NAMAKHVANI	220	3PH	6300.21	16533.8
28100	JONETI220	220	3PH	3818.92	10022.1	28100	JONETI220	220	3PH	3217.83	8444.6
28563	MESTIA	220	3PH	5359.65	14065.4	28563	MESTIA	220	3PH	4693.16	12316.3

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MAX

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	15498.3	17895.9
20001	ZESTAFONI	500	3PH	12469.04	14398
20002	QSANI	500	3PH	12430.13	14353.1
20003	GARDABANI	500	3PH	13130.43	15161.7
20004	AKHALTSIKHE	500	3PH	12414.05	14334.5
20005	KHUDONI	500	3PH	12478.32	14408.7
20007	MARNEULI-500500.00	500	3PH	12745.04	14716.7
20008	JVARI	500	3PH	15470.38	17863.7
24563	CAGERI	500	3PH	6548.87	7562
27333	TSKHALTUBO-5500.00	500	3PH	11062.8	12774.2
29898	KAZBEGI	500	3PH	7091.54	8188.6
20011	AKHALTS-INV	400	3PH	6972.13	10063.4
20020	GARDABANI	330	3PH	4725.3	8267.1
20030	ENGURI	220	3PH	6031.38	15828.3
20031	VARDNILI	220	3PH	6020.57	15799.9
20032	TKVARCHELI	220	3PH	2351.17	6170.2
20033	SOKHUMI	220	3PH	1080.35	2835.2
20034	BZIFI	220	3PH	619.58	1626
20035	XORGA	220	3PH	7551.16	19816.6
20036	BATUMI	220	3PH	4654.85	12215.8
20037	ZUGDIDI	220	3PH	4380.93	11497
20038	MENJI	220	3PH	7309.36	19182.1
20039	TSKALTUBO	220	3PH	11300.27	29655.5
20040	QUTAIISI	220	3PH	8207.09	21538
20041	ZESTAFONI	220	3PH	9019.66	23670.5
20042	LAJANURI	220	3PH	9750.65	25588.8
20052	KHASHURI	220	3PH	2675.94	7022.5
20053	GORI	220	3PH	2922.08	7668.5
20054	QSANI	220	3PH	7731.89	20291
20055	JINVALI	220	3PH	2599.88	6822.9
20056	GLDANI	220	3PH	5491.1	14410.4
20057	GURJAANI	220	3PH	1495.01	3923.4
20058	NAGTLUGHI	220	3PH	5007.71	13141.8
20059	GARDABANI	220	3PH	11135.89	29224.1
20060	MARNEULI	220	3PH	8355.22	21926.8
20061	LISI	220	3PH	6899.49	18106.5
20062	DIDUBE	220	3PH	5654.96	14840.4
20063	KHRAMI-2	220	3PH	1970.46	5171.1
20067	RUSTAVI	220	3PH	6405.58	16810.3
20068	ALPANA	220	3PH	10507.86	27576
20069	SADMEI	220	3PH	8116.37	21299.9
20071	ONI	220	3PH	5816.95	15265.5
20072	AXALCIXE-220220.00	220	3PH	5520.86	14488.5
20073	MTKVARI-HESI220.00	220	3PH	2162.26	5674.5
20075	METALURGIA	220	3PH	5146.46	13506
20076	FARAVANI220	220	3PH	2222.33	5832.1
20078	JVARI	220	3PH	8879.34	23302.2
20079	KHUDONI	220	3PH	8864.42	23263.1
20082	KHOB-2	220	3PH	5024.5	13185.9
20083	OZURGETI	220	3PH	2671.86	7011.8
20084	KOROMKHETI	220	3PH	4261.8	11184.3
20085	SHUAKHEVI	220	3PH	2817.73	7394.6
20087	DUSHETI	220	3PH	3016	7914.9
20090	CAGERI	220	3PH	9717.2	25501
20122	NENSKRA	220	3PH	7760.93	20367.2
21212	TEKHURI	220	3PH	4569.54	11991.9
21456	LENTEKHI	220	3PH	7634.27	20034.8
22223	BATUM-RECT	220	3PH	4637.72	12170.9
25143	TVISHI	220	3PH	8222.64	21578.8
25369	ABULI	220	3PH	1724.85	4526.6
27545	NAMAKHVANI	220	3PH	8379.3	21990
28100	JONETI220	220	3PH	3836.62	10068.5
28563	MESTIA	220	3PH	5389.49	14143.7

MIN

BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	8190.16	9457.2
20001	ZESTAFONI	500	3PH	6155.28	7107.5
20002	QSANI	500	3PH	5388.13	6221.7
20003	GARDABANI	500	3PH	5220.83	6028.5
20004	AKHALTSIKHE	500	3PH	6677.88	7711
20005	KHUDONI	500	3PH	6946.14	8020.7
20007	MARNEULI-500500.00	500	3PH	5429.76	6269.7
20008	JVARI	500	3PH	8309.61	9595.1
24563	CAGERI	500	3PH	2900.56	3349.3
27333	TSKHALTUBO-5500.00	500	3PH	7389.27	8532.4
29898	KAZBEGI	500	3PH	3230.57	3730.3
20011	AKHALTS-INV	400	3PH	6904.27	9965.5
20020	GARDABANI	330	3PH	2175.12	3805.5
20030	ENGURI	220	3PH	4566.53	11984
20031	VARDNILI	220	3PH	4499.66	11808.6
20032	TKVARCHELI	220	3PH	2067.85	5426.7
20033	SOKHUMI	220	3PH	1014.14	2661.4
20034	BZIFI	220	3PH	602.36	1580.8
20035	XORGA	220	3PH	5773.2	15150.7
20036	BATUMI	220	3PH	3574.15	9379.7
20037	ZUGDIDI	220	3PH	3607.73	9467.8
20038	MENJI	220	3PH	5697.13	14951.1
20039	TSKALTUBO	220	3PH	7826.25	20538.6
20040	QUTAIISI	220	3PH	6184.14	16229.2
20041	ZESTAFONI	220	3PH	6431.96	16879.5
20042	LAJANURI	220	3PH	6622.61	17379.8
20052	KHASHURI	220	3PH	2383.25	6254.4
20053	GORI	220	3PH	2495.67	6549.4
20054	QSANI	220	3PH	4712.58	12367.3
20055	JINVALI	220	3PH	2281.43	5987.2
20056	GLDANI	220	3PH	3585.96	9410.7
20057	GURJAANI	220	3PH	1341.82	3521.4
20058	NAGTLUGHI	220	3PH	3279.67	8606.9
20059	GARDABANI	220	3PH	4523.92	11872.2
20060	MARNEULI	220	3PH	4340.81	11391.7
20061	LISI	220	3PH	4226.93	11092.8
20062	DIDUBE	220	3PH	3736.08	9804.7
20063	KHRAMI-2	220	3PH	1574.93	4133.1
20067	RUSTAVI	220	3PH	3690.68	9685.5
20068	ALPANA	220	3PH	6975	18304.6
20069	SADMEI	220	3PH	5957.05	15633.2
20071	ONI	220	3PH	4446.47	11669
20072	AXALCIXE-220220.00	220	3PH	4047.73	10622.5
20073	MTKVARI-HESI220.00	220	3PH	1832.72	4809.7
20075	METALURGIA	220	3PH	4313.36	11319.6
20076	FARAVANI220	220	3PH	1795.8	4712.8
20078	JVARI	220	3PH	6323.32	16594.4
20079	KHUDONI	220	3PH	6119.1	16058.5
20082	KHOB-2	220	3PH	4092.24	10739.3
20083	OZURGETI	220	3PH	2377.83	6240.2
20084	KOROMKHETI	220	3PH	3263.48	8564.4
20085	SHUAKHEVI	220	3PH	2232.43	5858.6
20087	DUSHETI	220	3PH	2551.85	6696.9
20090	CAGERI	220	3PH	6332.43	16618.3
20122	NENSKRA	220	3PH	5500.14	14434.1
21212	TEKHURI	220	3PH	3837.16	10069.9
21456	LENTEKHI	220	3PH	5492.87	14415
22223	BATUM-RECT	220	3PH	3562.31	9348.6
25143	TVISHI	220	3PH	6004.13	15756.8
25369	ABULI	220	3PH	1461.54	3835.5
27545	NAMAKHVANI	220	3PH	6005.85	15761.3
28100	JONETI220	220	3PH	3142.87	8247.9
28563	MESTIA	220	3PH	4335.45	11377.6

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MAX						MIN					
BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP	BUS ID	NAME	KV	FAULT TYPE	SC-MVA	SC-AMP
20000	ENGURI	500	3PH	15560.53	17967.8	20000	ENGURI	500	3PH	9707.93	11209.8
20001	ZESTAFONI	500	3PH	12510.76	14446.2	20001	ZESTAFONI	500	3PH	8016.97	9257.2
20002	QSANI	500	3PH	12511.99	14447.6	20002	QSANI	500	3PH	6012.38	6942.5
20003	GARDABANI	500	3PH	13226.86	15273.1	20003	GARDABANI	500	3PH	5741.28	6629.5
20004	AKHALTSIKHE	500	3PH	12452.61	14379	20004	AKHALTSIKHE	500	3PH	7534.62	8700.2
20005	KHUDONI	500	3PH	12537.08	14476.6	20005	KHUDONI	500	3PH	7801.32	9008.2
20007	MARNEULI	500	3PH	12832.47	14817.7	20007	MARNEULI-500	500	3PH	6002.79	6931.4
20008	JVARI	500	3PH	15534.46	17937.7	20008	JVARI	500	3PH	9641.84	11133.4
24563	CAGERI	500	3PH	6555.53	7569.7	24563	CAGERI	500	3PH	2981.22	3442.4
27333	TSKHALTUBO	500	3PH	11083.28	12797.9	27333	TSKHALTUBO-5500.00	500	3PH	7827.13	9038
29898	KAZBEGI	500	3PH	7130.76	8233.9	29898	KAZBEGI	500	3PH	3483.5	4022.4
20011	AKHALTS-INV	400	3PH	6972.13	10063.4	20011	AKHALTS-INV	400	3PH	6941.37	10019
20020	GARDABANI	330	3PH	4756.86	8322.3	20020	GARDABANI	330	3PH	2282.99	3994.2
20030	ENGURI	220	3PH	6069.74	15928.9	20030	ENGURI	220	3PH	5319.88	13961.1
20031	VARDNILI	220	3PH	6061.92	15908.4	20031	VARDNILI	220	3PH	5344.45	14025.5
20032	TKVARCHELI	220	3PH	2363.64	6202.9	20032	TKVARCHELI	220	3PH	2265.23	5944.7
20033	SOKHUMI	220	3PH	1085.91	2849.8	20033	SOKHUMI	220	3PH	1074.92	2820.9
20034	BZIFI	220	3PH	623.83	1637.1	20034	BZIFI	220	3PH	630.77	1655.4
20035	XORGA	220	3PH	7602.4	19951.1	20035	XORGA	220	3PH	6335.17	16625.5
20036	BATUMI	220	3PH	4667.4	12248.8	20036	BATUMI	220	3PH	4009.77	10522.9
20037	ZUGDIDI	220	3PH	4407.74	11567.3	20037	ZUGDIDI	220	3PH	4024.48	10561.5
20038	MENJI	220	3PH	7379.71	19366.7	20038	MENJI	220	3PH	6184.84	16231
20039	TSKALTUBO	220	3PH	11314.12	29691.9	20039	TSKALTUBO	220	3PH	8320.31	21835.2
20040	QUTAISI	220	3PH	8267.21	21695.8	20040	QUTAISI	220	3PH	6695.38	17570.8
20041	ZESTAFONI	220	3PH	9061.37	23779.9	20041	ZESTAFONI	220	3PH	7075.27	18567.8
20042	LAJANURI	220	3PH	9753.38	25596	20042	LAJANURI	220	3PH	6996.47	18361
20052	KHASHURI	220	3PH	2682.56	7039.9	20052	KHASHURI	220	3PH	2448.44	6425.5
20053	GORI	220	3PH	2937.01	7707.7	20053	GORI	220	3PH	2514.21	6598.1
20054	QSANI	220	3PH	7807.52	20489.4	20054	QSANI	220	3PH	4993.15	13103.6
20055	JINVALI	220	3PH	2652.48	6961	20055	JINVALI	220	3PH	2377.31	6238.8
20056	GLDANI	220	3PH	5544.15	14549.6	20056	GLDANI	220	3PH	3793.41	9955.1
20057	GURJAANI	220	3PH	1506.24	3952.9	20057	GURJAANI	220	3PH	1325.88	3479.5
20058	NAGTLUGHI	220	3PH	5062.07	13284.5	20058	NAGTLUGHI	220	3PH	3505.87	9200.5
20059	GARDABANI	220	3PH	11248.25	29519	20059	GARDABANI	220	3PH	4847.81	12722.2
20060	MARNEULI	220	3PH	8431.76	22127.6	20060	MARNEULI	220	3PH	4652.47	12209.6
20061	LISI	220	3PH	6963.95	18275.6	20061	LISI	220	3PH	4486.72	11774.6
20062	DIDUBE	220	3PH	5708.16	14980	20062	DIDUBE	220	3PH	3949.4	10364.5
20063	KHRAMI-2	220	3PH	1993.66	5232	20063	KHRAMI-2	220	3PH	1732.07	4545.5
20067	RUSTAVI	220	3PH	6465.42	16967.3	20067	RUSTAVI	220	3PH	3849.35	10101.9
20068	ALPANA	220	3PH	10512.23	27587.4	20068	ALPANA	220	3PH	7348.02	19283.6
20069	SADMELI	220	3PH	8118.72	21306.1	20069	SADMELI	220	3PH	6063.17	15911.7
20071	ONI	220	3PH	5815.21	15261	20071	ONI	220	3PH	4534.28	11899.4
20072	AXALCIXE	220	3PH	5527.4	14505.7	20072	AXALCIXE-220220.00	220	3PH	4506.29	11825.9
20073	MTKVARI-HESI	220	3PH	2164.07	5679.2	20073	MTKVARI-HESI220.00	220	3PH	2042.56	5360.3
20076	FARAVANI	220	3PH	2223.84	5836.1	20076	FARAVANI220	220	3PH	1974.56	5181.9
20078	JVARI	220	3PH	8889.28	23328.3	20078	JVARI	220	3PH	6795.03	17832.3
20079	KHUDONI	220	3PH	8863.27	23260	20079	KHUDONI	220	3PH	6601.77	17325.2
20082	KHOBI-2	220	3PH	5025.94	13189.7	20082	KHOBI-2	220	3PH	4306.64	11302
20083	OZURGETI	220	3PH	2675.06	7020.2	20083	OZURGETI	220	3PH	2529.25	6637.5
20084	KOROMKHETI	220	3PH	4266.56	11196.8	20084	KOROMKHETI	220	3PH	3547.13	9308.8
20085	SHUAKHEVI	220	3PH	2819.1	7398.2	20085	SHUAKHEVI	220	3PH	2362.55	6200.1
20087	DUSHETI	220	3PH	3069.16	8054.5	20087	DUSHETI	220	3PH	2663.43	6989.7
20090	CAGERI	220	3PH	9720.17	25508.8	20090	CAGERI	220	3PH	6564	17226
20122	NENSKRA	220	3PH	7755.19	20352.1	20122	NENSKRA	220	3PH	5900.94	15486
21212	TEKHURI	220	3PH	4568.98	11990.5	21212	TEKHURI	220	3PH	4020.97	10552.3
21456	LENTEKHI	220	3PH	7631.86	20028.4	21456	LENTEKHI	220	3PH	5717.68	15005
22223	BATUM-RECT	220	3PH	4650.18	12203.6	22223	BATUM-RECT	220	3PH	3996.85	10489
25143	TVISHI	220	3PH	8223.11	21580.1	25143	TVISHI	220	3PH	6292.63	16513.9
25369	ABULI	220	3PH	1727.01	4532.2	25369	ABULI	220	3PH	1569.41	4118.6
27545	NAMAKHVANI	220	3PH	8380.9	21994.2	27545	NAMAKHVANI	220	3PH	6299.34	16531.5
28100	JONETI220	220	3PH	3833.82	10061.2	28100	JONETI220	220	3PH	3253.33	8537.8
28563	MESTIA	220	3PH	5382.17	14124.5	28563	MESTIA	220	3PH	4698.21	12329.6

ANNEX 4 COST ESTIMATES OF PLANNED PROJECTS

Estimated Costs and Commissioning Years				
Project Name	Element of Project			
	Estimated Commissioning Year	Number	Name	Estimated Costs (Euro)
Jvari-Khorga	2017	P.1.1	Double circuit 220 kV OHL "Odishi-1,2" (Jvari- Khorga)	
	2017	P.1.2	Looping of 500 kV OHL "Kavkasioni" in SS "Jvari"	
	Total Project Cost			€ 6,771,692
Batumi-Akhaltsikhe	2017	P.2.1	Arrangement of two 220 kV bays in SS "Akhaltsikhe" for 220 kV OHL Batumi-Akhaltsikhe	
	2018	P.2.2	Double circuit 220-kV transmission line Shuakhevihesi-Akhaltsikhe	
	2020	P.2.3	220/110 kV autotransformer in SS "Skuakhevi"	
	Total Project Cost			€ 25,247,591
Ksani-Stepantsminda-Mozdok	2017	P.3.1	500 kV OHL Ksani-Stepantsminda	
	2021	P.3.2	500/110 kV SS "Stepantsminda"	
	2021	P.3.3	500 kV OHL Stepantsminda-Mozdok, (untill the border of Russia)	
	Total Project Cost			€ 27,869,423
Marneuli	2017	P.4.1	220/110 kV autotransformer in SS "Marneuli"	
	2017	P.4.2	220/110 kV AT N2 and bays in SS "Marneuli"	
	2018	P.4.3	500 kV OHL Marneuli-Ayrum (Armenia)	
	Total Project Cost			€ 7,159,856
Rehabilitaion of Kolkhida-1	2017	P.5.1	Rehabilitaion of 220 kV OHL "Kolkhida-1"	
	Total Project Cost			€ 1,700,000

Jvari-Tskaltubo-Akhaltsikhe	2020	P.6.1	500 kV OHL Jvari-Tskaltubo	
	2020	P.6.2	Double circuit 500 kV OHL Tskaltubo-Akhaltsikhe	
	2020	P.6.3	Extension and arranging of bays in 500 kV SS "Akhaltsikhe" for connection of double circuit 500 kV OHL Tskaltubo-Akhaltsikhe	
	2020	P.6.4	Arranging of 500 kV part in SS "Tskaltubo"	
	2020	P.6.5	500/220 kV AT in SS "Tskaltubo"	
	2020	P.6.6	Variable Reactor in SS "Tskaltubo"	
	Total Project Cost			€ 178,012,588
North-Ring-Tskaltubo	2017	P.7.1	Reinforcement of 110 kV OHL "Khudoni"	
	2019	P.7.2	Double circuit 110 kV OHL Kheledula-Jakhunderi	
	2019	P.7.3	220/110 kV At in SS "Lajanuri"	
	2019	P.7.4	Double circuit 220 kV OHL Nenskra-Kudoni	
	2019	P.7.5	220/110 kV SS "Khudoni"	
	2019	P.7.6	Double circuit 220 kV OHL Kudoni-Jvari	
	2019	P.7.7	Double circuit 110 kV OHL Kudoni-Mestia	
	2019	P.7.8	110/35 kV SS "Mestia"	
	2022	P.7.9	500/220 kV SS "Tsageri"	
	2022	P.7.10	500 kV OHL Tsageri-Tskaltubo	
	2022	P.7.11	Double circuit 220 kV OHL Lentekhi-Tsageri	
	2022	P.7.12	Double circuit 220 kV OHL Oni-Sadmeli	
	2022	P.7.13	Double circuit 220 kV OHL Sadmeli-Zestafoni	
	2023	P.7.14	Double circuit 220 kV OHL Tsageri-Alpana-Sadmeli	
	2023	P.7.15	220 kV SS "Sadmeli"	
	2023	P.7.16	Construction of second circuit of 110 kV OHL Mestia-Ipari-Jakhunderi	
	2024	P.7.17	Construction of tie-line from 500 kV OHL "Kavkasioni" to SS "Khudoni"	
	2024	P.7.18	Installation of 500 kV switchyard and 500/220 kV autotransformer in SS "Khudoni"	
	2024	P.7.19	Tie-lines from double-circuit 110 kV OHL Kheledula-Jakhunderi to HPPs Lentekhi, Mukhra and Luji	
	Total Project Cost			€ 226,040,680

Guria	2019	P.8.1	220/110 kV SS "Ozurgeti"	
	2019	P.8.2	Tie-line from 220 kV OHL "Paliastomi-1" to 220/110 kV SS "Ozurgeti"	
	2019	P.8.3	New 110 kV substation hub "Chokhatauri"	
	2019	P.8.4	2-Circuit 110 kV OHL Ozurgeti-Chokhatauri	
	Total Project Cost			€ 34,754,803
Akhalsikhe-Tortum	2020	P.9.1	400 kV OHL Akhalsikhe-Tortum	
	2020	P.9.2	Extension of 500 kV SS "Akhalsihke" for connecting 400 kV OHL Akhalsihke-Tortum	
	2021	P.9.3	Third 350 MW, 500/400 kV back-to-back link at SS "Akhalsikhe"	
	Total Project Cost			€ 95,414,535
Batumi-Muratli	2020	P.10.1	One 350 MW, 220/154 kV back-to-back DC link at SS "Batumi"	
	2020	P.10.2	154 kV OHL Batumi-Muratli	
	Total Project Cost			€ 59,550,344
Namakhvani-Tskaltubo	2023	P.11.1	Double-circuit 220 kV OHL Namakhvani-Tskaltubo	
	2023	P.11.2	Single-circuit 220 kV OHL Tvishi-Namakhvani	
	2023	P.11.3	Tie-in of 220 kV OHL "Derchi" (Lajanuri-Tskaltubo) into SS "Tvishi"	
	Total Project Cost			€ 10,285,532

Zestafoni	2017	P.12.1	Variable Reactor in SS "Zestafoni-500"	
	2017	P.12.2	Moving reactor from SS "Zestafoni" to SS "Gardabani"	
	2023	P.12.3	Second 500/220 KV autotransformer in SS "Zestafoni"	
	2023	P.12.4	500 KV bay in SS "Zestafoni"	
	2023	P.12.5	220 KV bay in SS "Zestafoni"	
	Total Project Cost			€ 10,849,231
Rehabilitaion of Imereti	2021	P.13.1	Rehabilitation of 500 KV OHL "Imereti"	
	Total Project Cost			€ 16,764,000
Renovation of substations	2022	P.14.1	Rehabilitation of substations: "Tskaltubo-220" and "Gori-220"	
	2022	P.14.2	Replacement of transformers in substations: "Didube-220", "Gori-220," "Menji-220"	
	2023	P.14.3	Renovate of 15 substations	
	Total Project Cost			€ 13,938,468
Reinforcement of Infrastructure Kakheti	2019	P.15.1	Second circuit of 110 kV OHL Akmeta-Telavi	
	2019	P.15.2	Second circuit of 110 kV OHL Telavi-Tsinandali	
	2019	P.15.3	Second circuit of 110 kV OHL Tsinandali-Gurjaani	
	2019	P.15.4	220/110 kV AT in SS "Gurjaani"	
	Total Project Cost			€ 21,000,000
			TOTAL COSTS	€ 735,358,743