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EU4ENERGY PHASE II

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PREMIER ENERGY DISTRIBUTION
REPUBLIC OF MOLDOVA

Status quo of DSO new roles implementation and regulations

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Contents:

- DSO Premier Energy Distribution
- Legal and regulatory rules governing the DSOs tasks and duties
- Technical readiness of DSOs for green transition and decentralization
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Premier Energy Group Moldova

EMMA

BUCHAREST STOCK EXCHANGE

PREMIER ENERGY MOLDOVA

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NAVITAS

Fundația PREMIER ENERGY

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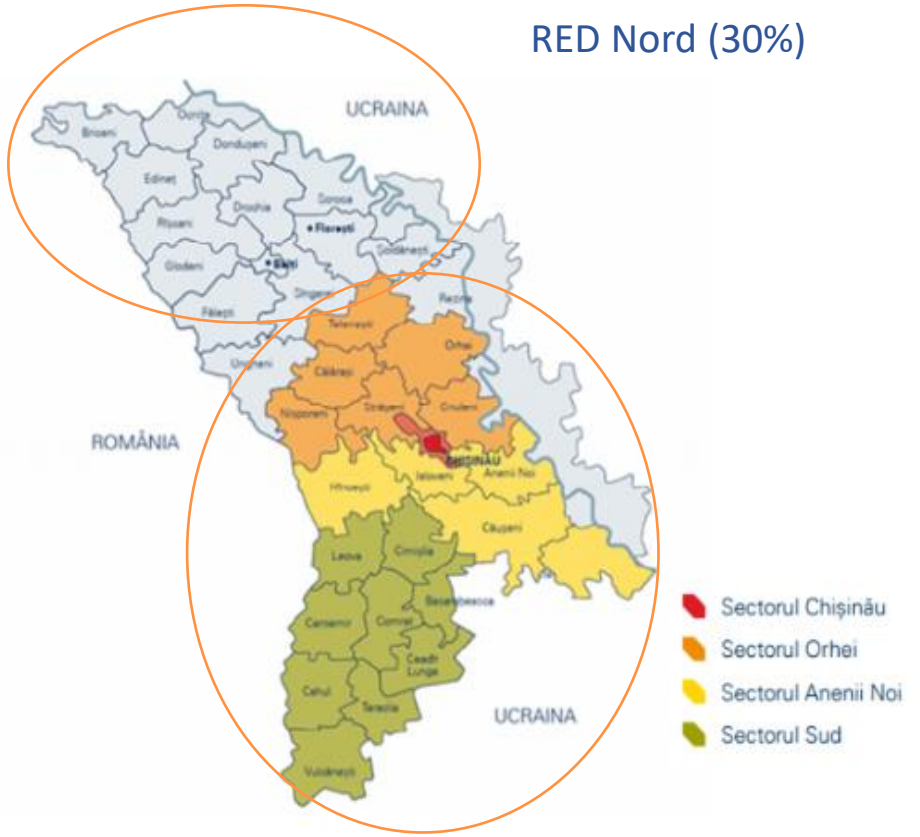
DSO Premier Energy Distribution

- **Situation at the end of 2024**

955 563 No. of managed consumption points	**3.122 GWh** Distributed energy 2024	**110 – 0.4 kV** Voltage levels	**35.806 km** Electrical lines
95 No. of managed substations 110-35 kV	**7 777** No. of managed unit substations 10-6/0.4	**9 637** No. of Power transformers	**3 706 MVA** Installed capacity of Power Transformers
240 No. of RES Power Plants connected	**214 MW** Installed capacity of RES Power Plants	**4 983** No. of Prosumers	**114 MW** Installed capacity of Prosumers

RED Nord (30%)



Premier Energy Distribution (70%)

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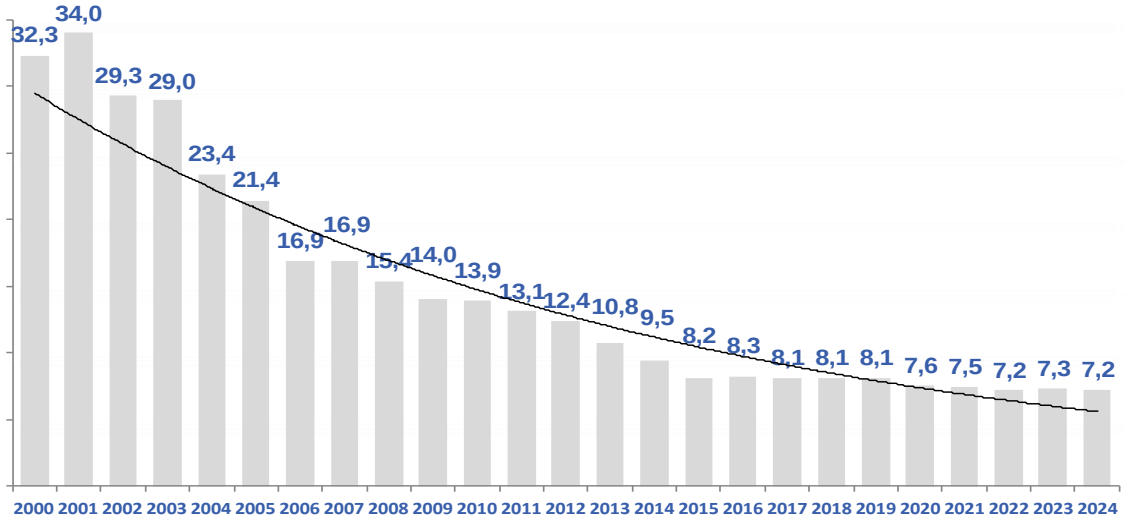
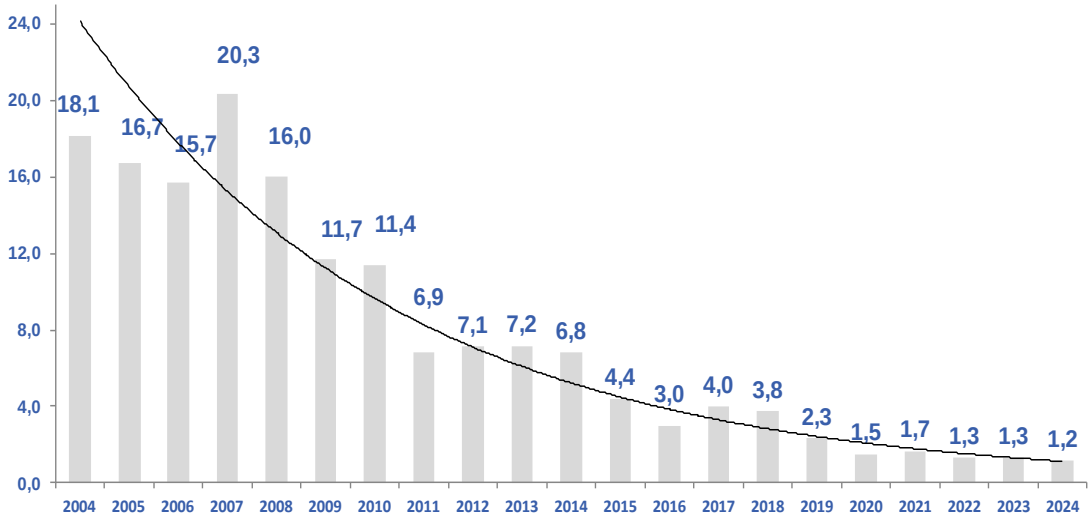
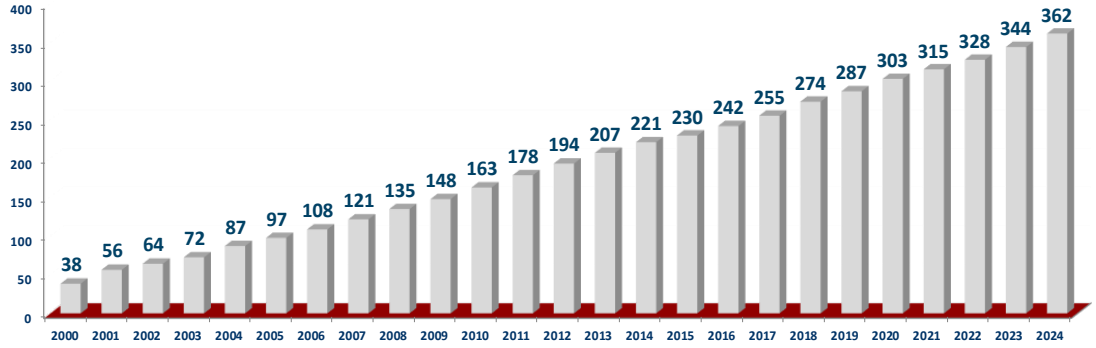
Energy Losses Evolution 2000-2024, %



SAIDI (disconnections - hours/consumer) 2004-2024





Cumulative **CAPEX**: **€362 mil.**
- mainly in the network modernization and development
On average: €14 - €15 mil./year

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Legal and regulatory rules governing the DSOs tasks and duties

- Legal and regulatory framework governing the DSOs main tasks:
  - Law no. 107 on Electricity (27.05.2016)
  - Law no. 10 regarding the promotion of energy use from RES (26.02.2016)
  - Regulation on grid connection and provision of transmission and distribution services no. 168 (19.04.2019)
  - Grid Code no. 423 (22.11.2019)
  - Electricity Market Rules no. 283 (07.08.2020)

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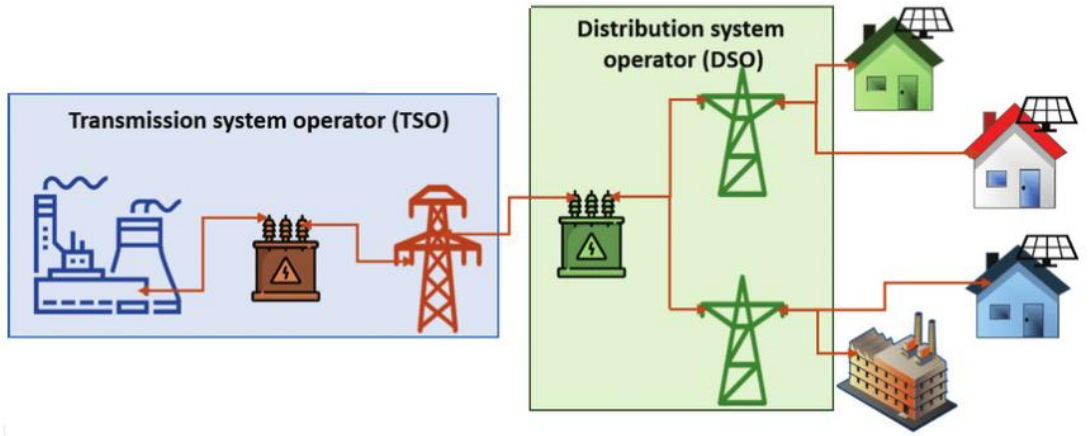
Legal and regulatory rules governing the DSOs tasks and duties

- DSO role in integrating Distributed RES:
  - Connection Permit Issuing
  - Coordination with the TSO
  - Design Phase Coordination
  - Works Execution Phase Check
  - Commissioning Phase
  - Energization Phase



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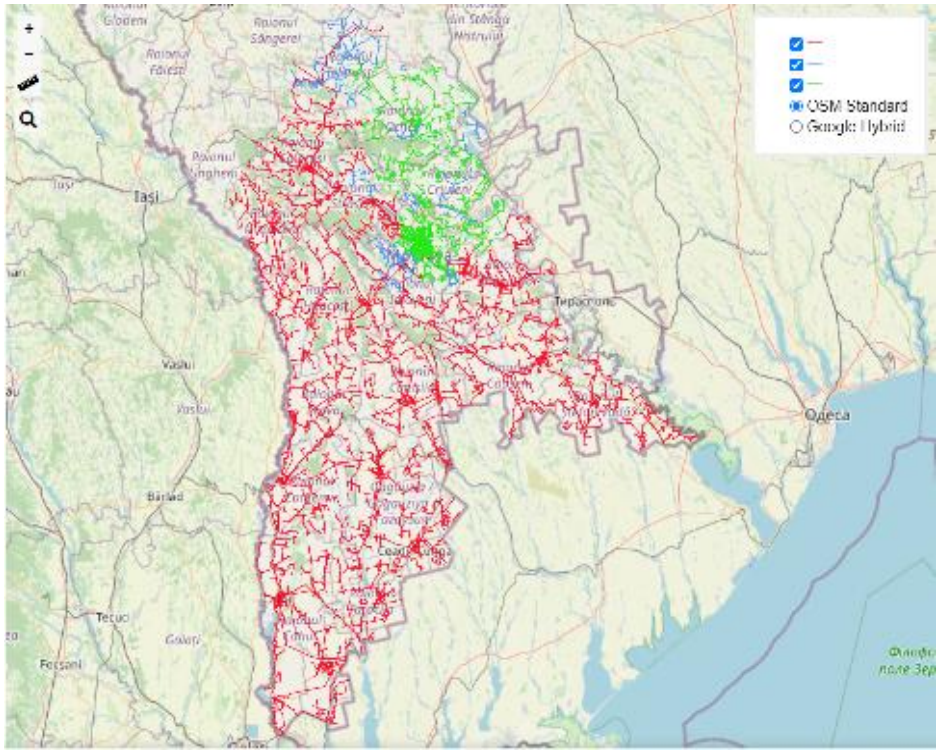
Technical readiness of DSOs for green transition and decentralization

- For prior information of potential applicants:
  - Connection permit application form
  - List of required documents
  - Electrical diagram of the 6-35 kV **available distribution networks**
- For information of actual applicants:
  - Issued connection permits - potential consumers
  - Rejected applications
  - Issued Connection permits - potential producers/prosumers
  - Waiting list for rejected applications for lack of network capacity



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Technical readiness of DSOs for green transition and decentralization

- ## Renewables Integration

RES Producer Valid Connection Permits								
Month	Solar		Wind		Biogas		TOTAL	
	Valid Issued Capacity MW	Number of customers	Valid Issued Capacity MW	Number of customers	Valid Issued Capacity MW	Number of customers	Valid Issued Capacity MW	Number of customers
01.2025	216	147	40	12	48	6	304	165
02.2025	209	141	46	14	48	6	303	161
03.2025	258	144	46	14	48	6	352	164

Prosumers Valid Connection Permits				
Month	Net billing		Net mettering	
	Valid Issued capacity MW	Number of customers	Valid Issued capacity MW	Number of customers
01.2025	45	1 379	30	903
02.2025	50	1 631	25	811
03.2025	58	1 857	24	739

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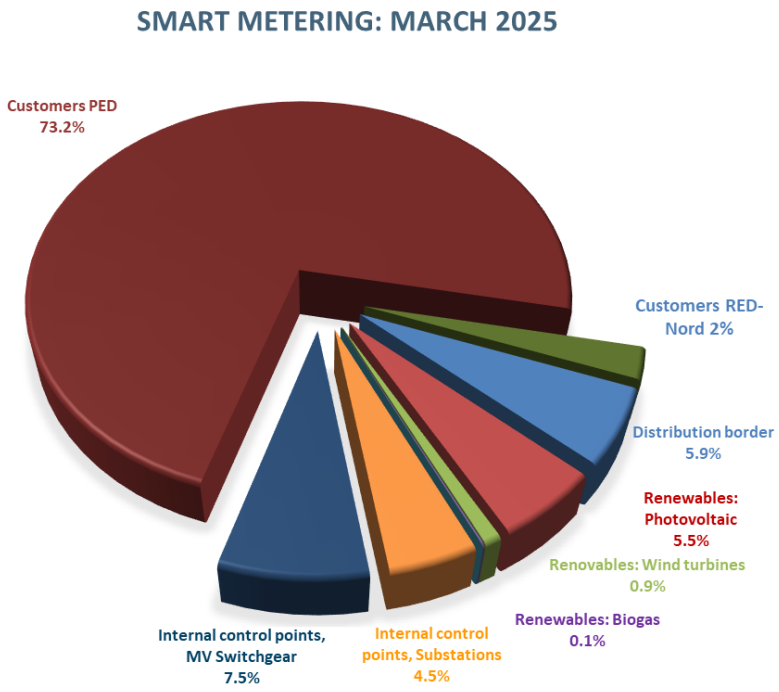
- ## Smart Metering Status

Smart Metering	2025	2024	2023	2022
Distribution border	236	236	236	236
Renewables: Photovoltaic	220	205	109	44
Renovables: Wind turbines	35	30	30	29
Renewables: Biogas	4	4	4	4
Internal control points, Substations	180	180	183	183
Internal control points, MV Switchgear	300	300	225	225
Customers PED	2 927	2 534	1447	1 250
Customers RED-Nord	98	0	0	0
TOTAL	*4 000*	*3 489*	*2234*	*1 971*



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- **Renewables Integration**

RES Producers												
Year	Solar			Wind			Biogas			TOTAL		
	Installed capacity [MW]	Quantity	Generation [GWh]	Installed capacity [MW]	Quantity	Generation [GWh]	Installed capacity [MW]	Quantity	Generation [GWh]	Installed capacity [MW]	Quantity	Generation [GWh]
2022	25	46	21	54	28	75	2.9	5	0.5	82	79	96
2023	64	106	60	54	28	97	2.8	4	0.8	121	138	158
2024	154	206	141	65	30	103	2.8	4	0.6	222	240	245

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- ## Renewables Integration

Net Metering: Household customers				
Year	2024	2023	2022	2021
Total number of customers	3 122	3 135	1383	264
Installed generation capacity [MW]	28	29	12	2
Contracted consumption capacity [MW]	29	29	12	2
Consumed energy [GWh]	27	12	3	1
Injected energy [GWh]	30	19	4	1

Net Metering: Non-household customers				
Year	2024	2023	2022	2021
Total number	875	886	274	122
Installed generation capacity [MW]	60	60	16	6
Contracted consumption capacity [MW]	129	130	28	11
Consumed energy [GWh]	99	41	13	6
Injected energy [GWh]	43	22	5	3

Net Billing: Household customers	
Year	2024
Total number	660
Installed generation capacity [MW]	5
Contracted consumption capacity [MW]	6
Consumed energy [GWh]	1
Injected energy [GWh]	2

Net Billing: Non-household customers	
Year	2024
Total number	326
Installed generation capacity [MW]	21
Contracted consumption capacity [MW]	48
Consumed energy [GWh]	16
Injected energy [GWh]	7

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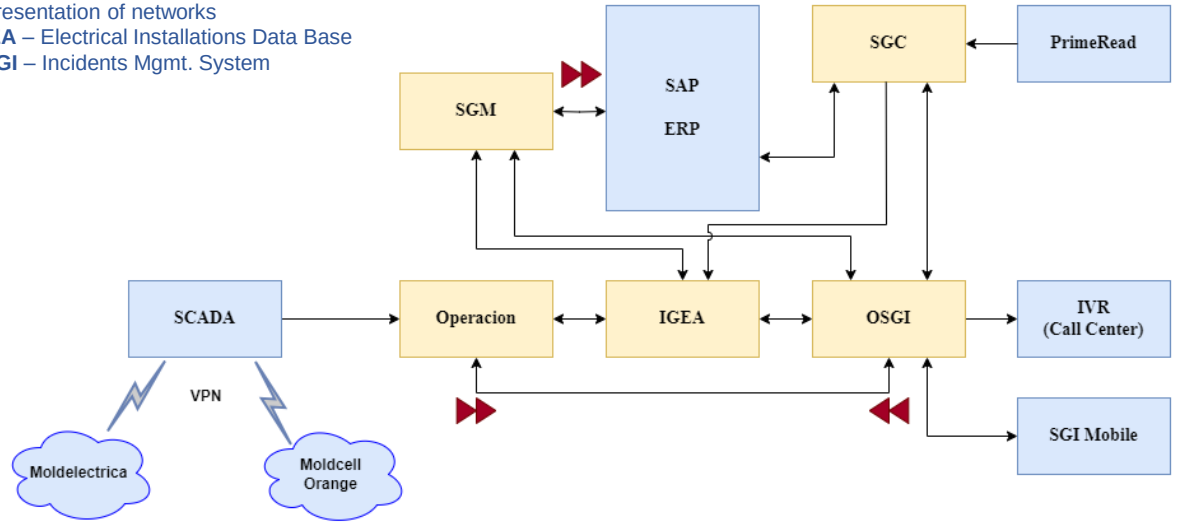
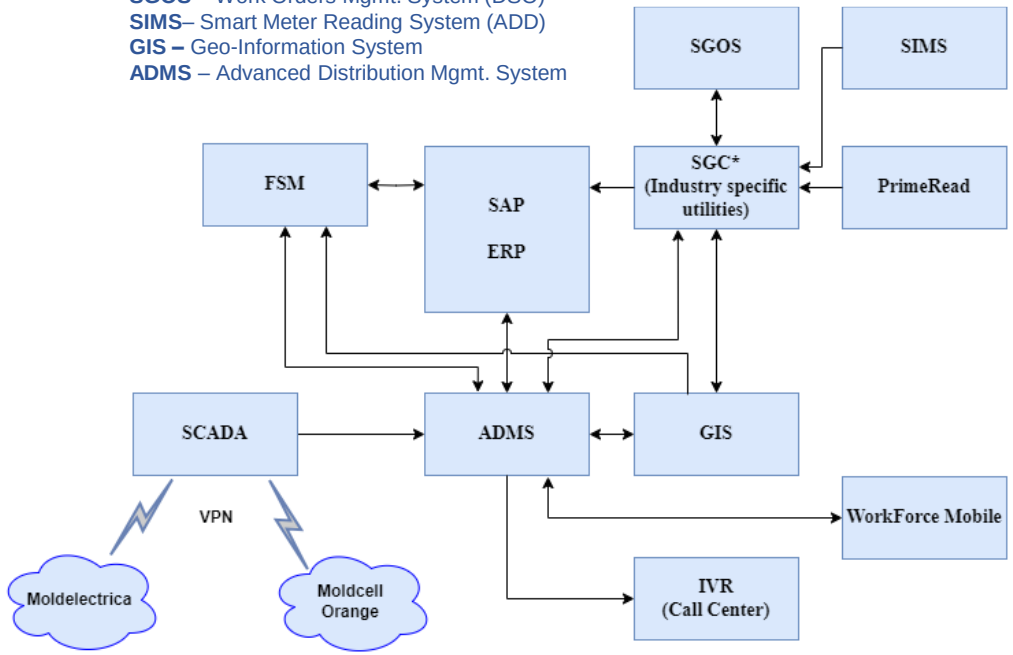
Technical readiness of DSOs for green transition and decentralization

- ## Core Systems and Interfaces

SGM – Works Mgmt. System
SAP – Financial, Procurement and Logistics
SGC – Customer Commercial Mgmt. System
PrimeRead – Smart Meter Reading System
Operacion – Real-time graphical representation of networks
IGEA – Electrical Installations Data Base
OSGI – Incidents Mgmt. System



FSM – Field Service Mgmt.
SGC* - Customer Mgmt. System (supplier)
SGOS – Work Orders Mgmt. System (DSO)
SIMS– Smart Meter Reading System (ADD)
GIS – Geo-Information System
ADMS – Advanced Distribution Mgmt. System



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Technical readiness of DSOs for green transition and decentralization

- **Remote monitoring and real-time control of substations**
  - SCADA Remote monitoring:
    - Substation diagram
    - Electrical parameters
    - Switchgear position
    - Control signals
    - Interconnection with TSO SCADA
    - RES (>500kW) electrical parameters and CB status
  - SCADA Real-time control of substations:
    - Remote operation of CBs
- **Smart Grid development**
  - Over 100 Reclosers and RCCBs
  - Target: FLISR implementation

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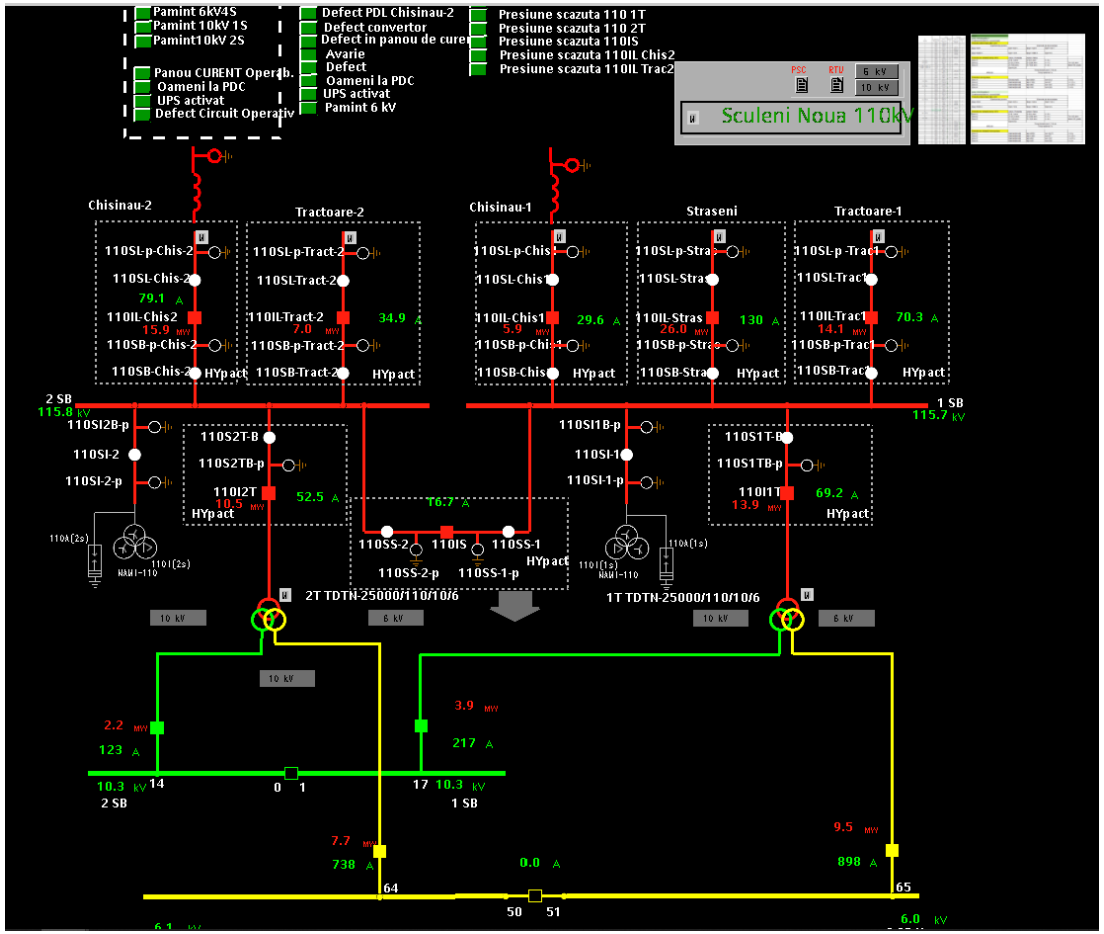

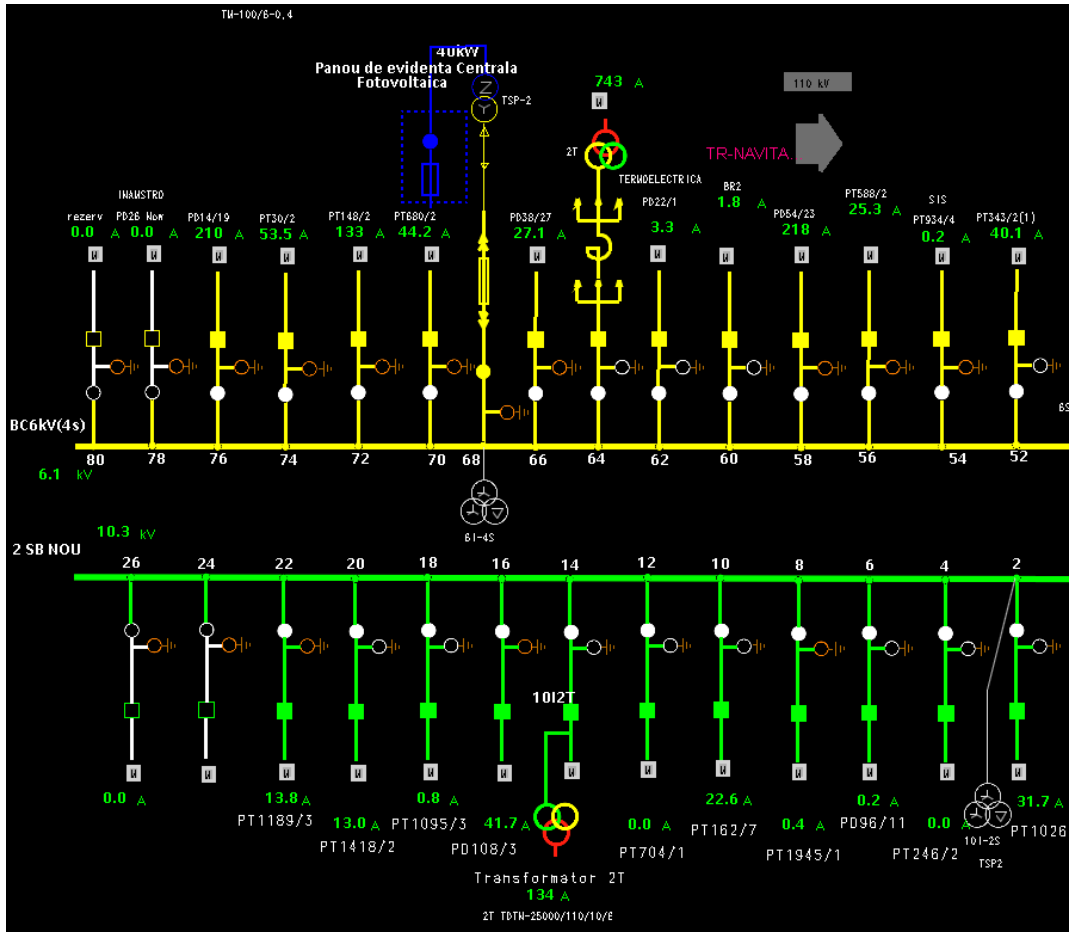

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Examples of specific projects or initiatives aiming at implementation of new roles of DSOs in energy transition

- SMART METERING PILOT PROJECT - Implemented by the Ministry of Energy of Moldova in collaboration with DSOs, with the support of UNDP Moldova and funded by the Government of Italy (2024-2028)
  - ***Current implementation milestones and potential for smart metering extension until 2028:***

3 000
meters installed in 2024, Demonstration phase

35 000
over 32 000 meters will be installed in 21 districts in 2025

60 000
Additional 25000 meters planned for installation in year 2026

100 000
*Additional 40 000 meters planned for installation in 2026/2027 (tbc) ~7% of total 1.4 mil. consumers (*in final negotiation process)*

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Examples of specific projects or initiatives aiming at implementation of new roles of DSOs in energy transition

- Regulatory framework update and proposals:
  - Introduction of financial guarantees for issued connection permits
  - Introduction of „self-consumption” term and limitations
  - System flexibility market (generation dispatch, storage, customer demand response, energy communities, EV charging)
  - Smart grid investments incentives (recognize digital infrastructure investments as regulated assets)
  - Need for joint action and investment

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Thank you for your attention!

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