



EVN Macedonia a part of EVN Austria



EVN AG countries (North Macedonia location)

Year
2006

⋮

Through
years

⋮

Future

→ Privatization and found poor state in terms of:

- Collection
- Losses
- Low quality infrastructure
- Poor financial results
- Other negative indicators

→ Complete reorganization with:

- Major investments
- Modern organizational and management setup
- Use of latest technological developments

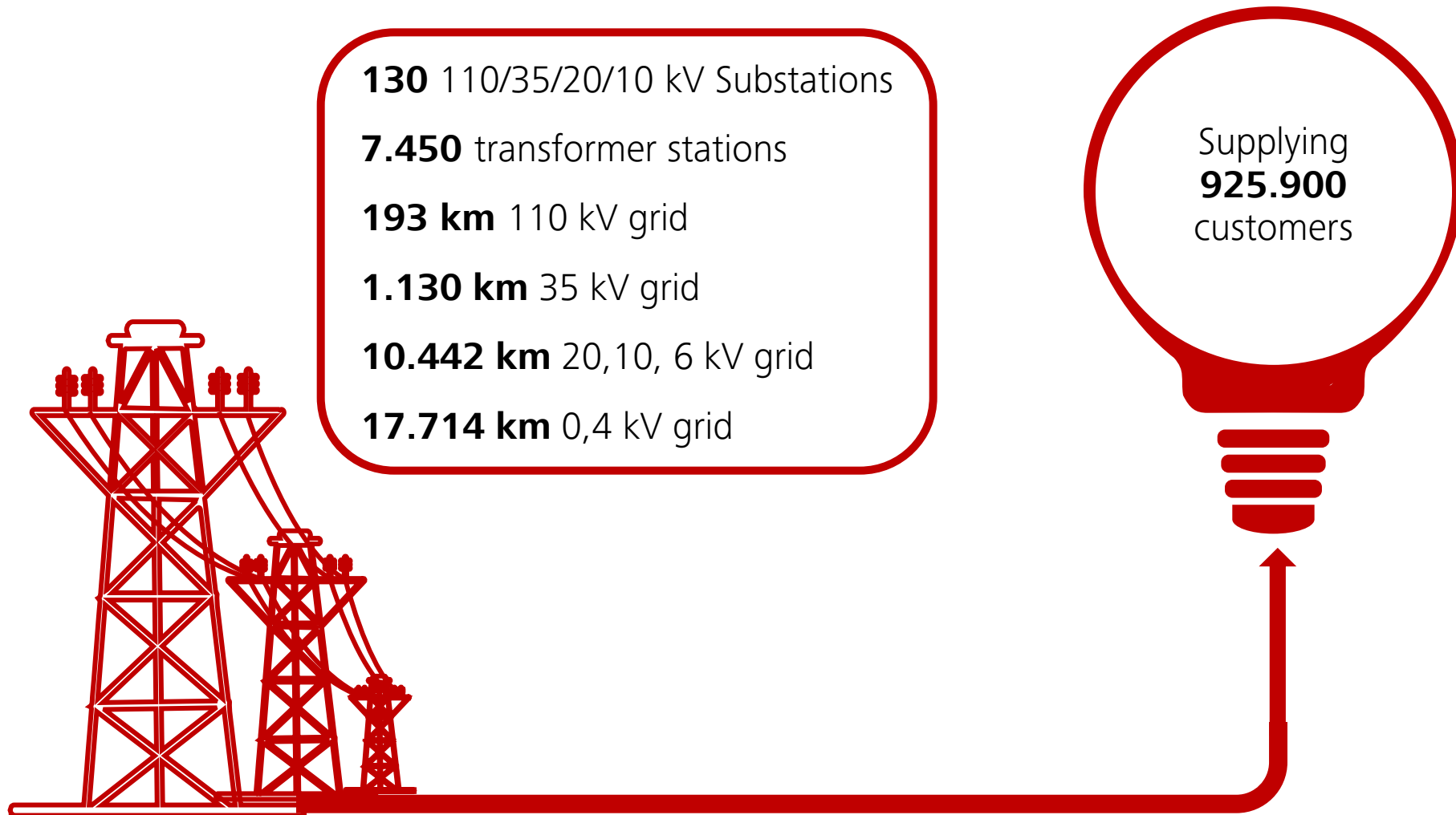
→ Facing all future challenges

EVN Macedonia subsidiaries



	Company name	Business segment	Customer segment	Products offered
	EVN Home Ltd.	Electricity Supply	Regulated Market and SoLR	Regulated supply for Households and small businesses
	ELEKTRODISTRIBUCIJA Ltd.	Electricity distribution	35 kV, 20(10) kV, 0,4 kV customers	Distribution services New customer connections Grid services
	EVN Supply Ltd	Electricity supply	Liberalized Market (Business customers)	Electricity supply PV - Turn key solutions Energy efficiency management Electro mobility
	EVN Elektrani Ltd.	Electricity production from renewable sources	Wholesale market	Electricity generation

ELEKTRODISTRIBUCIJA DOOEL Skopje network figures

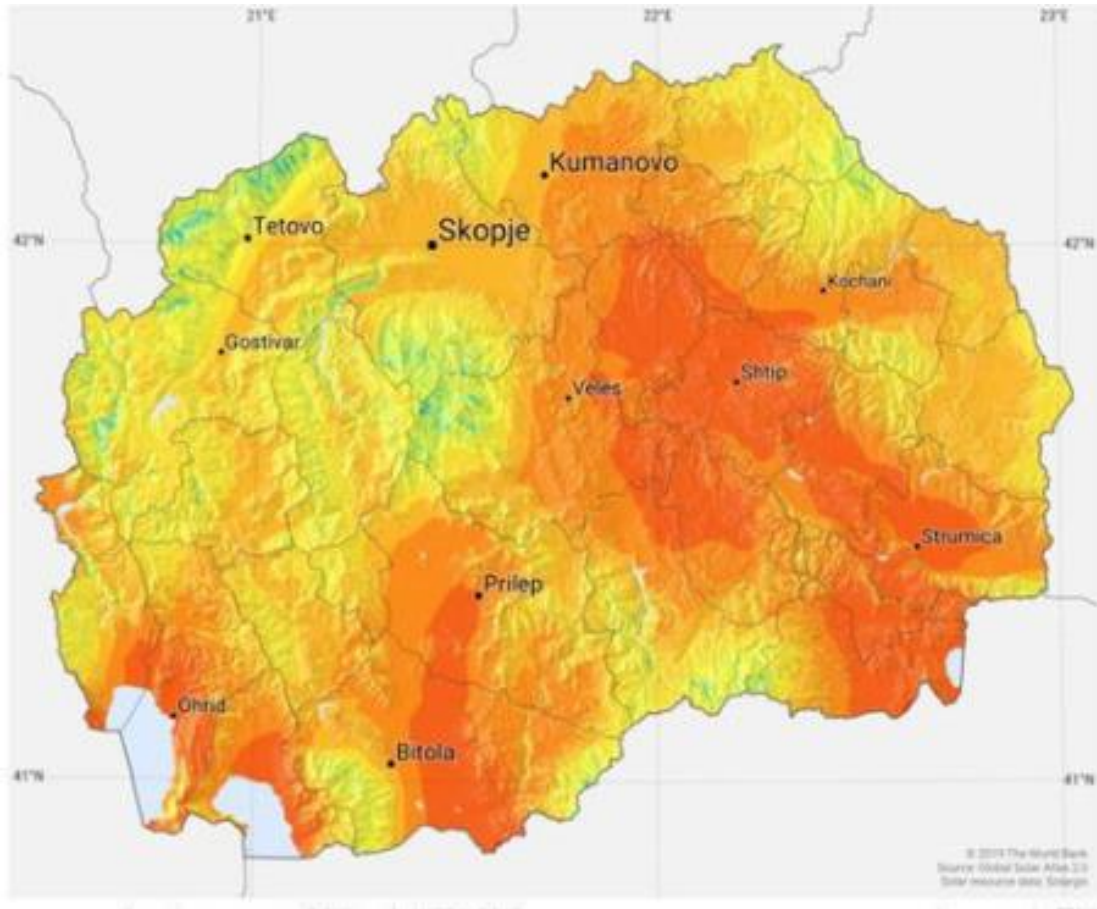


Producers on the Distribution Grid

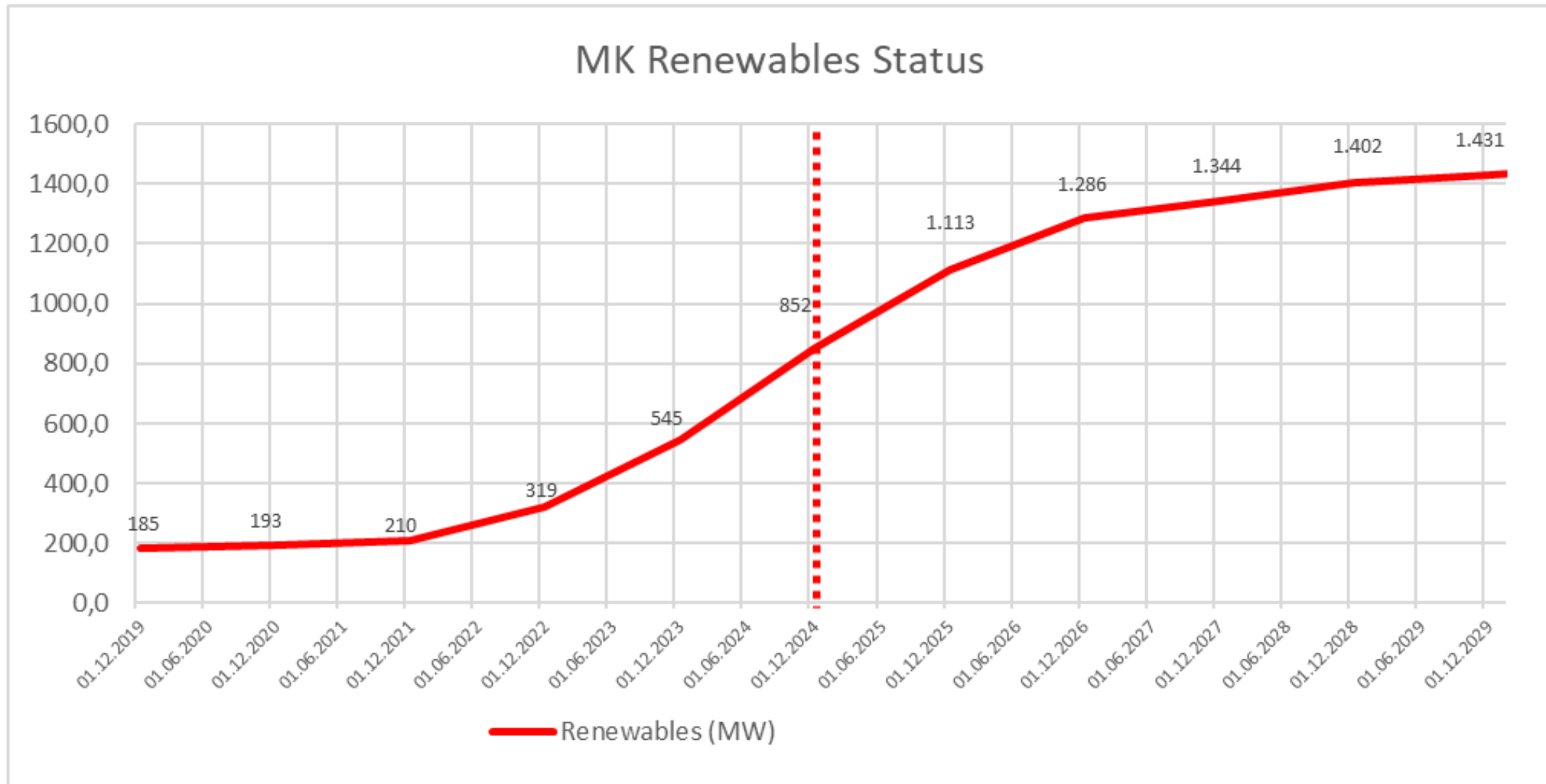
Distributed producers until 2018



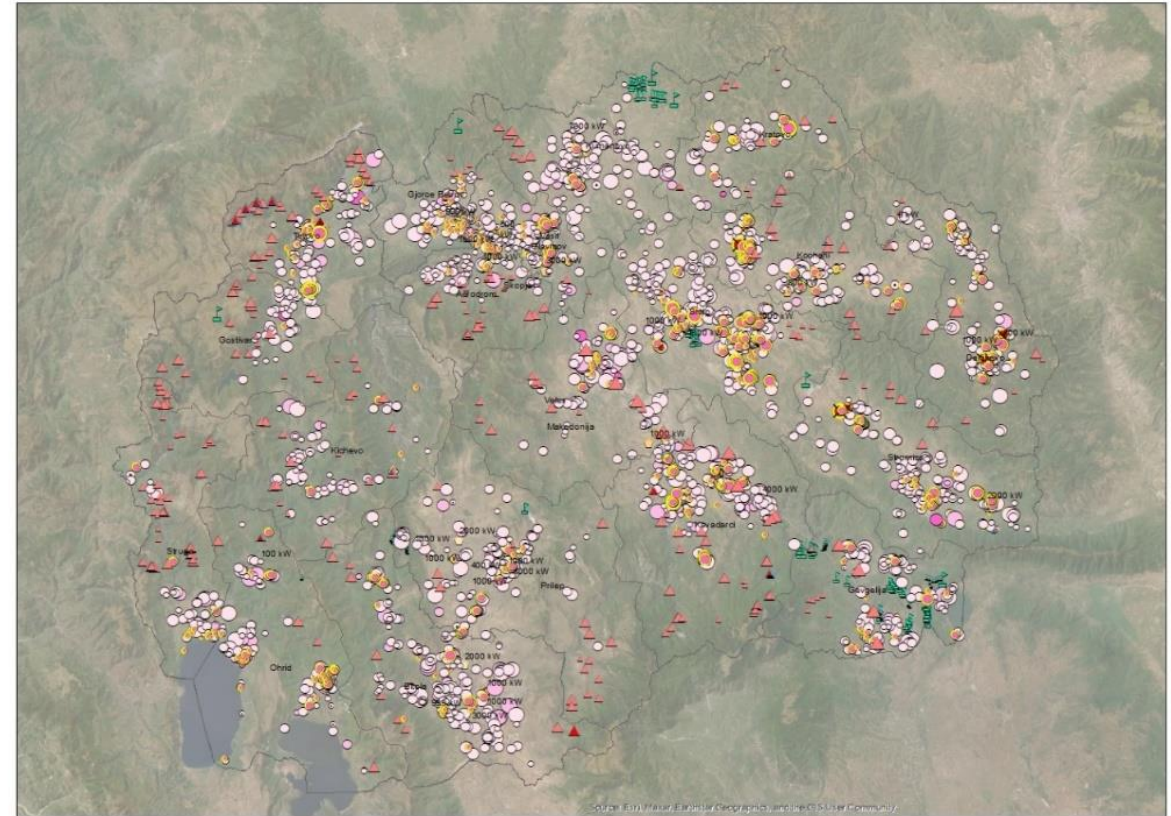
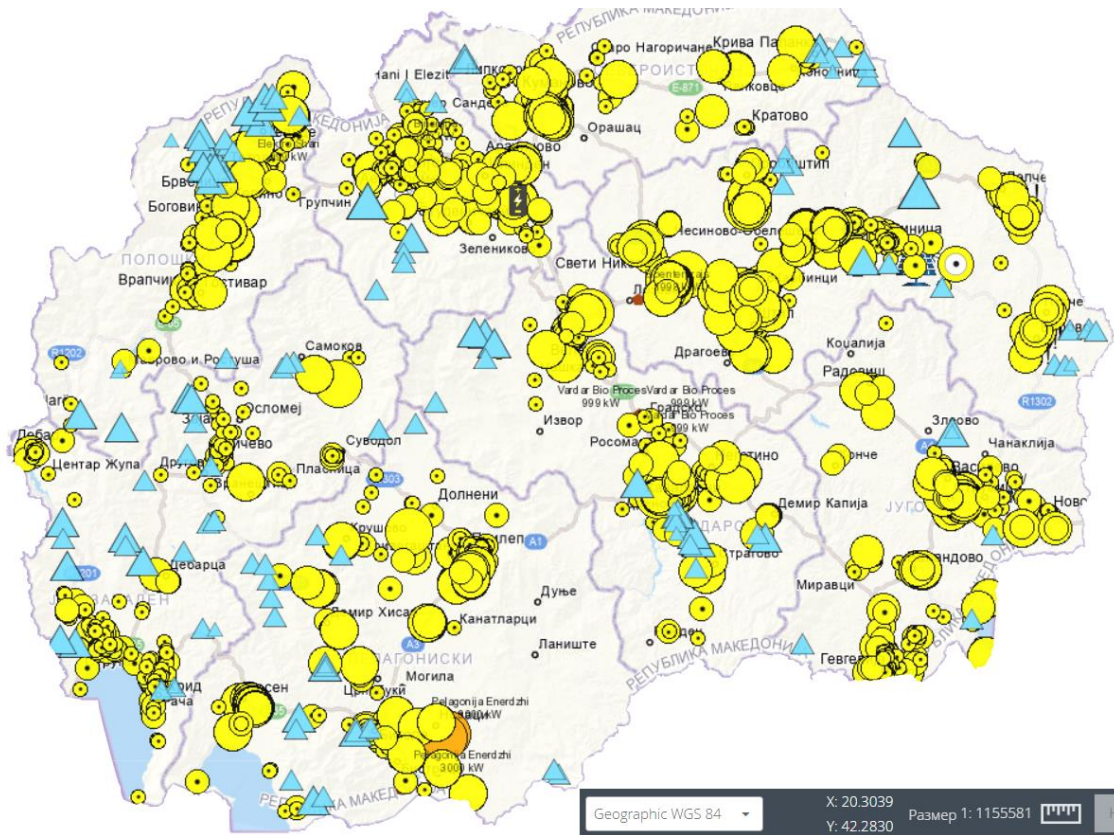
- Distributed producers subsidized with feed-in tariffs
- SHPP= 101MW
- PV=18MW
- Biogas=13MW



- Premium tariff for Photovoltaics (PVs) on state owned land 35 MW
- PVs on private land without using support mechanisms



Connected and potential distributed producers

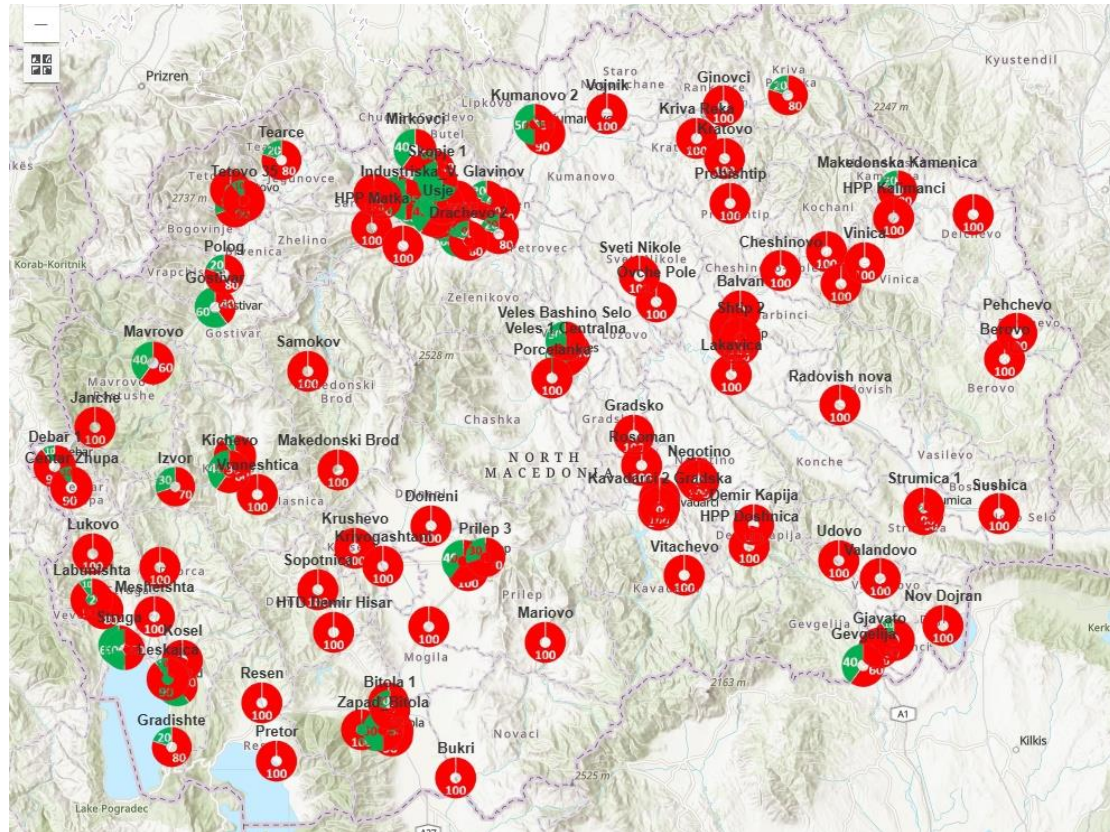
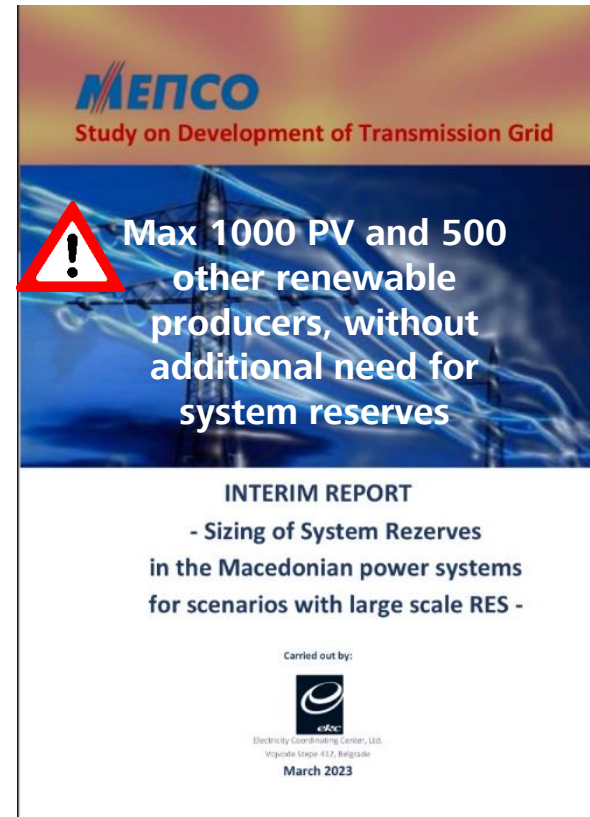


- ▲ Hydroelectric power plant
- Photovoltaic power plant
- Photovoltaic power plant_Prosumer
- ◆ Biomass power plant
- ⚡ Wind power plant
- Coal-fired power plant

Producers on the Distribution Grid Status & challenges

February, 2025	Connected			Contracted			In pipeline		
	PV	Other	Total	PV	Other	Total	PV	Other	Total
DSO [MW]	709	161	870	553	60	613	2.352	137	2.490
TSO [MW]	175	73	248	162	84	246	3.603	732	4.335
Total [MW]	884	233	1.118	715	144	859	5.955	869	6.825

RES Development Scenarios for 2025, 2030 and 2040 [MW]									
Type	2025			2030			2040		
	Slow	Green	Rapid	Slow	Green	Rapid	Slow	Green	Rapid
Wind	50	170	460	170	410	944	446	750	1509
Solar	95	246	903	315	630	2228	806	1383	3941
Total	145	416	1363	485	1040	3172	1252	2133	5450

Menco
Study on Development of Transmission Grid

Max 1000 PV and 500 other renewable producers, without additional need for system reserves

INTERIM REPORT
- Sizing of System Reserves in the Macedonian power systems for scenarios with large scale RES -

Carried out by:
eEAC
Electricity Coordinating Center, Ltd.
Vojvodina Stepa 412, Belgrade
March 2023

- Coordinative meetings among Ministry, ERC, DSO and TSO
- DSO has submitted to TSO 16 requests for transformers capacity increase
- Expected positive answers for max 2-3, due to pressure from high level representatives
- Stakeholders with opinion for "moratorium" is rising
- Batteries (flexibility services) as part of the solution

Losses reduction projects

Overview of losses and activities

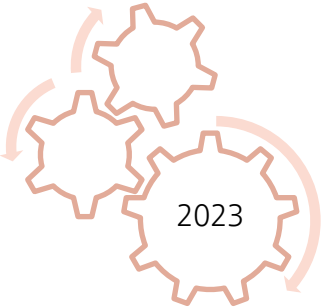
Technical losses

- Substation reconstruction
- Cabling and reconstruction of MV and LV lines
- Transition 10kV to 20kV grid

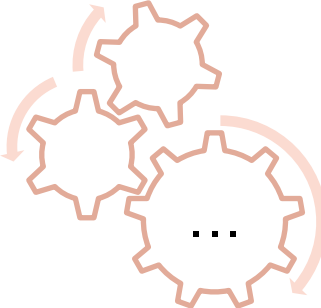


- Group dislocation
- Single dislocation
- Technical controls

Non-technical losses



Master plan
Non-technical losses



Master plan
Non-technical losses

Year 2006
Losses 24%



Year 2033
Losses <10 %



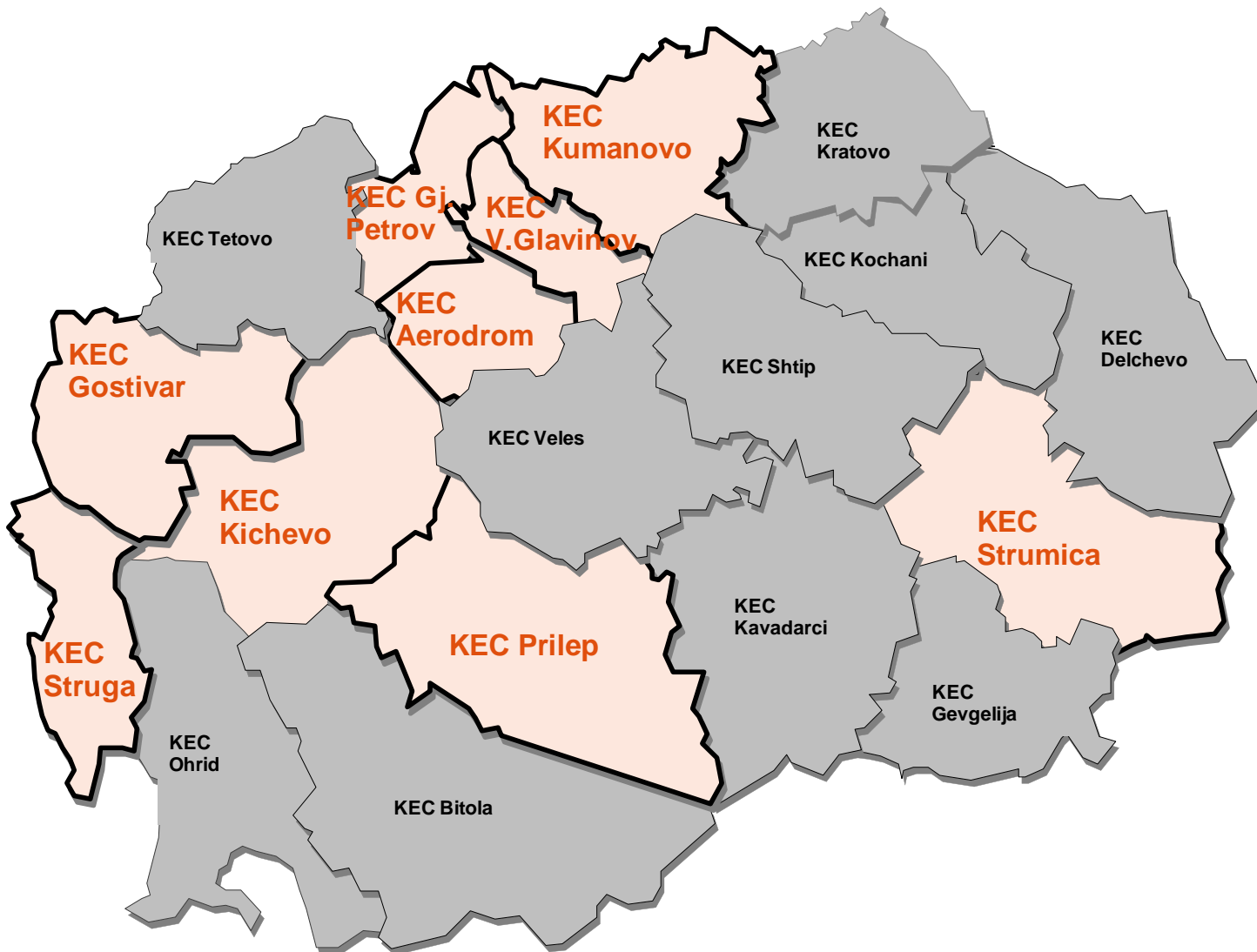
Losses reduction measures and realization on field







MEASURES:

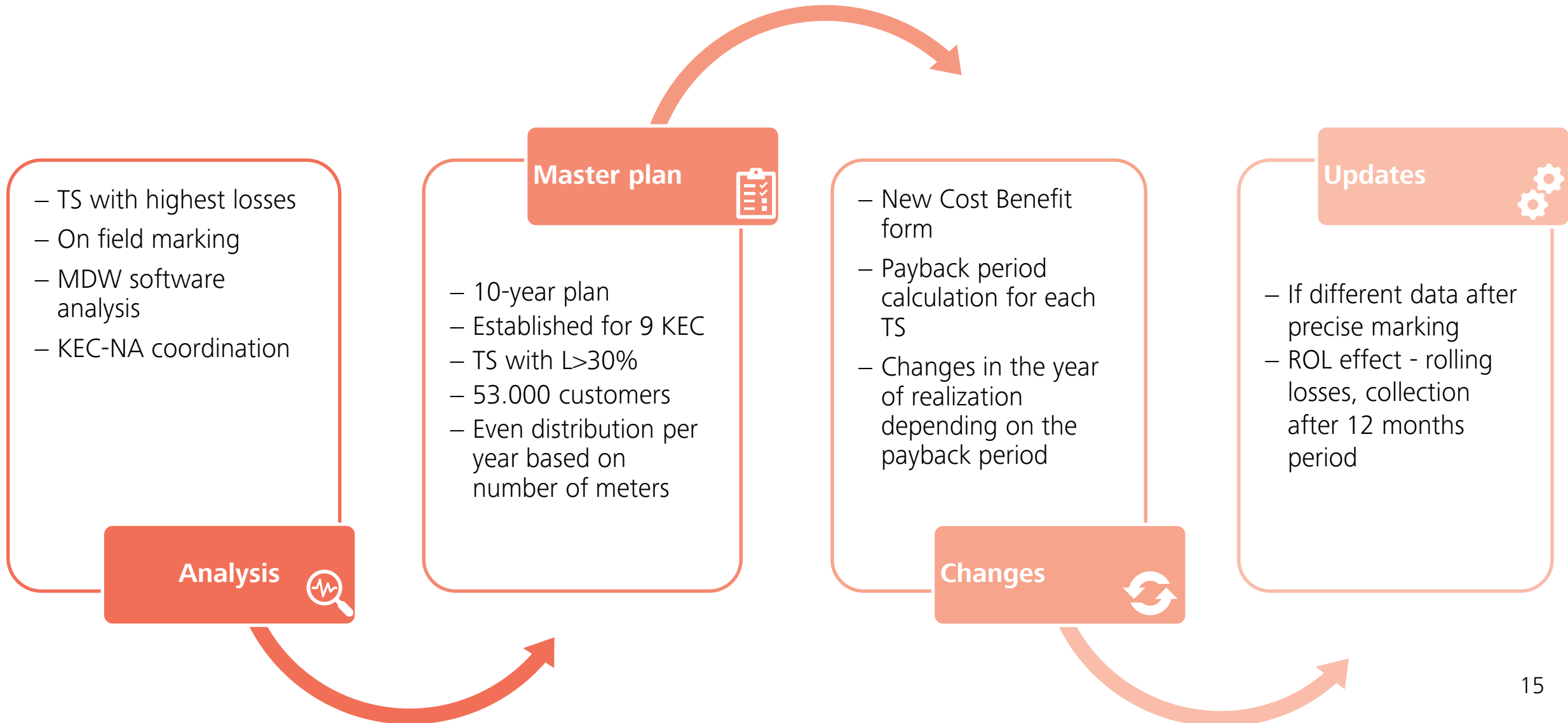
- Group dislocations:
 - Remote meters;
 - Special meter cabinets;
 - Additional equipment – alarms and special meter cabinet locks;
- Single dislocations:
 - Standard/remote meters;
 - Standard/special meter cabinets;
- Presence on field and regular technical controls

Master plan for reduction of losses

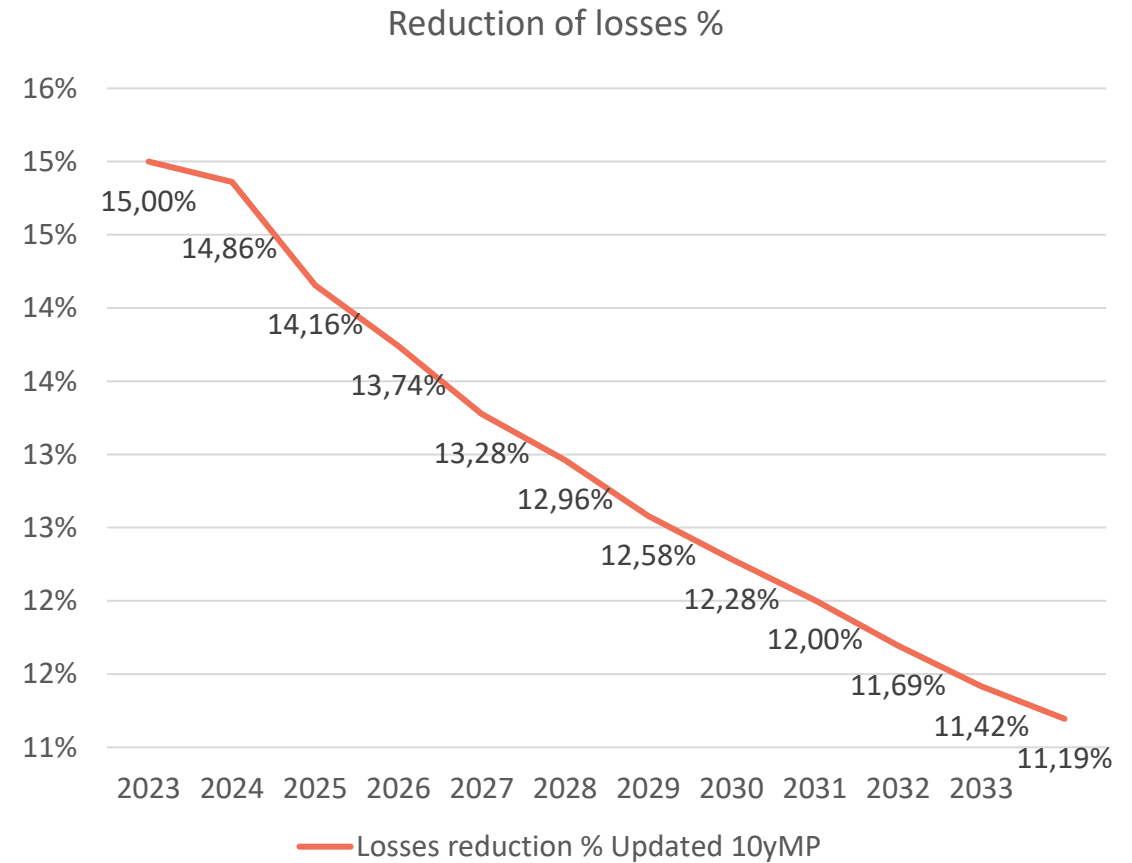
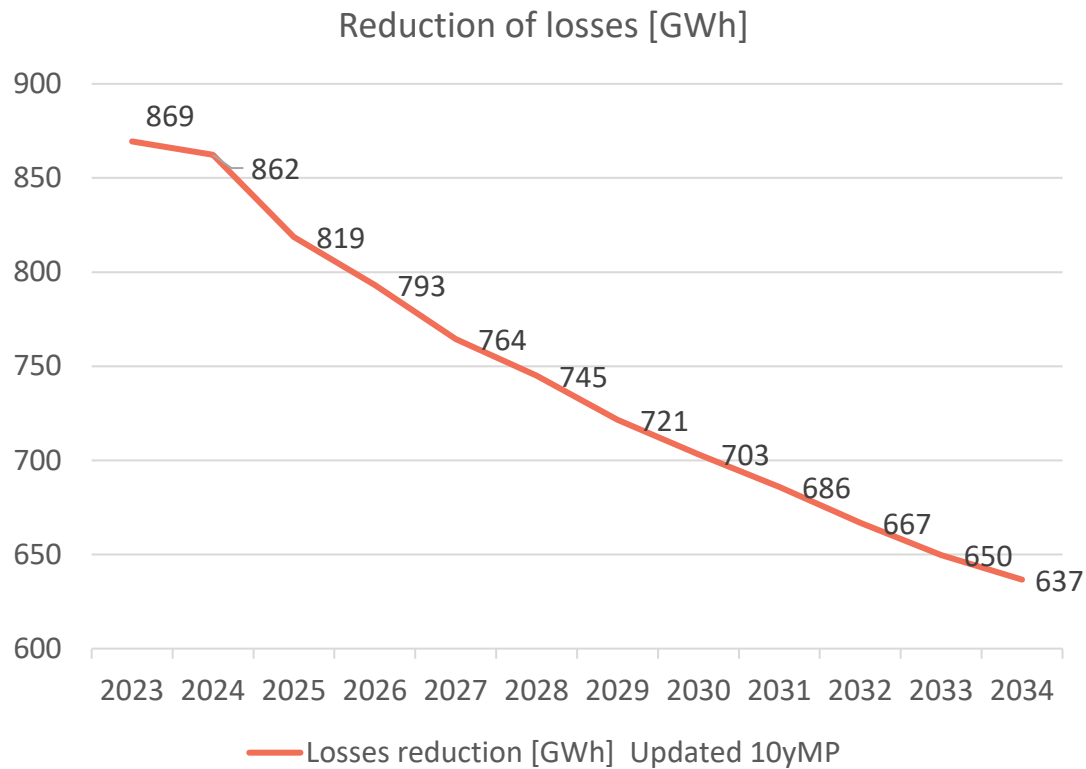


-  → 9 KEC with highest losses part of 10-year MP
-  → 370 TS, with losses >30%
-  → Updated according to the realization
-  → Over 15000 customers for group dislocation 2023-2025

Master plan for reduction of losses



Reduction of losses according 10-year Master Plan



Roadmap RoL 2025

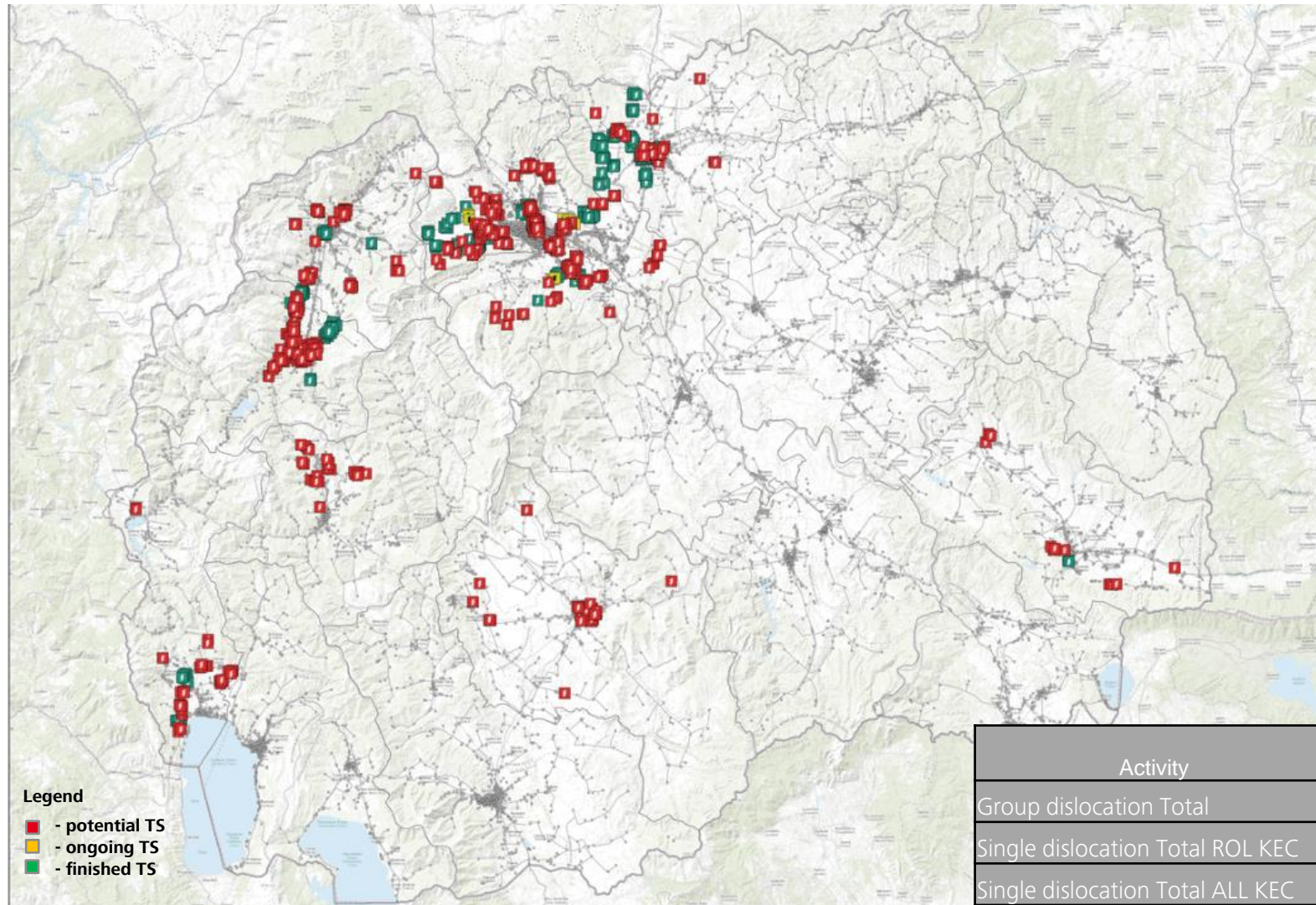
KEC Gostivar
Number of TS: 10

KEC Kicevo
Number of TS: 1

KEC Bitola
Number of TS: 1

KEC Struga
Number of TS: 1

KEC Gj. Petrov
Number of TS: 7



KEC Kumanovo
Number of TS: 3

KEC Veles
Number of TS: 1

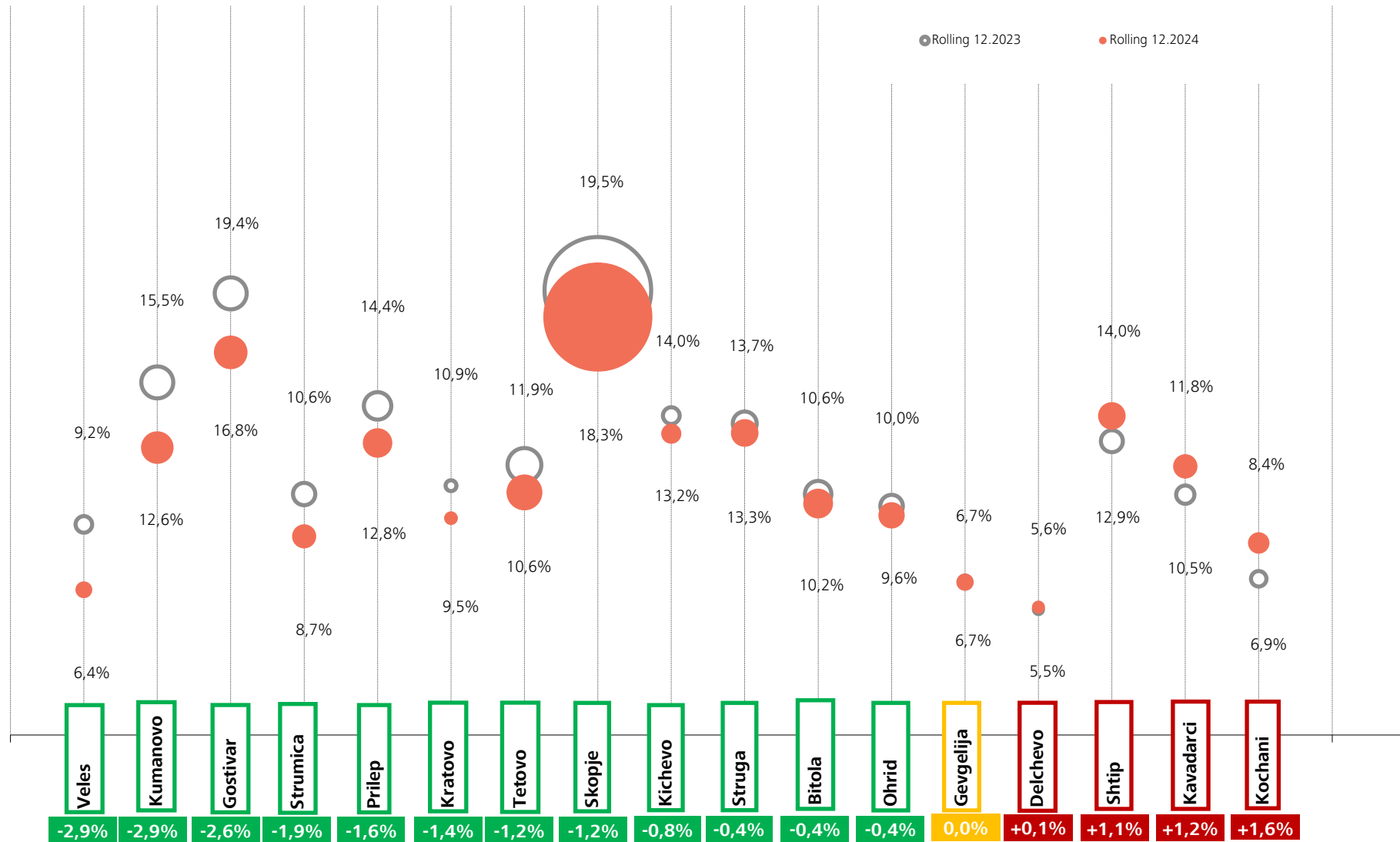
KEC Strumica
Number of TS: 1

KEC Aerodrom
Number of TS: 6

KEC V. Glavinov
Number of TS: 8

Activity	Mio. EUR
Group dislocation Total	7,35
Single dislocation Total ROL KEC	1,28
Single dislocation Total ALL KEC	1,71

Rolling losses 2023-2024



Projects Network Digitalization

Projects portfolio MK

	Nr.	Title	One EVN	2023				2024				2025				2026				2027				
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
In Realization	1	Field Service Management (FSM)	<input checked="" type="checkbox"/>	System prep.				Phase 1				Phase 2				Phase 3								
	2	Asset & Performance Management (APMS)	<input checked="" type="checkbox"/>					Definition & tender				Sys.& data				Phase 1				Phase 2				P
	3	Digitalization of the New connection process (NCC)	<input type="checkbox"/>	Implementation								Version 2				Version 3								
	4	DSO customer E-portal (New conection process)	<input type="checkbox"/>	Implementation								Online payments												
	5	Billing system (kVAsy) upgrade	<input type="checkbox"/>	Phase 2								Phase 3												
	6	Meter reading and change of meters with android devices	<input checked="" type="checkbox"/>	Analyse and Requir.								Implement												
	7	SCADA upgrade	<input checked="" type="checkbox"/>	Implementation																				
	8	DSO customer E-portal (Customer change process)	<input type="checkbox"/>	Analyse				Requirement				Implem.												
	9	E-mail, SMS & Viber invoice delivery	<input type="checkbox"/>					Requirement				Implementati												
	10	Invoice correction process on EVN online E-portal	<input type="checkbox"/>					An. Req				Imp												
	11	Outage Management System (OMS) upgrade	<input checked="" type="checkbox"/>									Req				Implementa								
Plan	12	DSO customer portal (Additional services to customers)	<input checked="" type="checkbox"/>									Analyse				Requirement				Implementation				
	13	Document management & archiving	<input type="checkbox"/>					Analy.				Req.				Implementation								
Pipeline	14	Supplier communication (additional services)	<input type="checkbox"/>																					
	15	Meter Data Warehouse (MDW) modules optimization	<input type="checkbox"/>																					
	16	Corporate reporting services (PowerBI reporting)	<input checked="" type="checkbox"/>																					
	17	Meter Data Management (MDM)	<input type="checkbox"/>																					
	18	Grid maintenance supporting system	<input type="checkbox"/>																					
	19	Existing customers supporting system	<input type="checkbox"/>																					
	20	DSO web site relaunch	<input checked="" type="checkbox"/>																					
	21	Reconnections one app	<input type="checkbox"/>																					
	22	Customer Relations Management (CRM) - new system	<input checked="" type="checkbox"/>																					
	23	Contract management	<input type="checkbox"/>																					
	24	E-learning platform	<input type="checkbox"/>																					
	25	Smart meters project	<input type="checkbox"/>																					

Completed phase

Running phase

Planned phase

New DSO customer E-platform from 1st of April 2024



New DSO customer E-platform

- Online submission of requests for new connections
- Online tracking of the realization
- Digital documents archive
- One-click approval of documents



New back-office application

- Management of the requests submitted through the E-platform
- Digital process workflow
- Creation of digital documents for the customer
- Digital and simple internal approval process



Benefits for us and the customers

- No need the customer to visit the Front office (saving time and costs)
- Transparency (procedure, documents, data)
- Immediate notification for every change in the status of the request



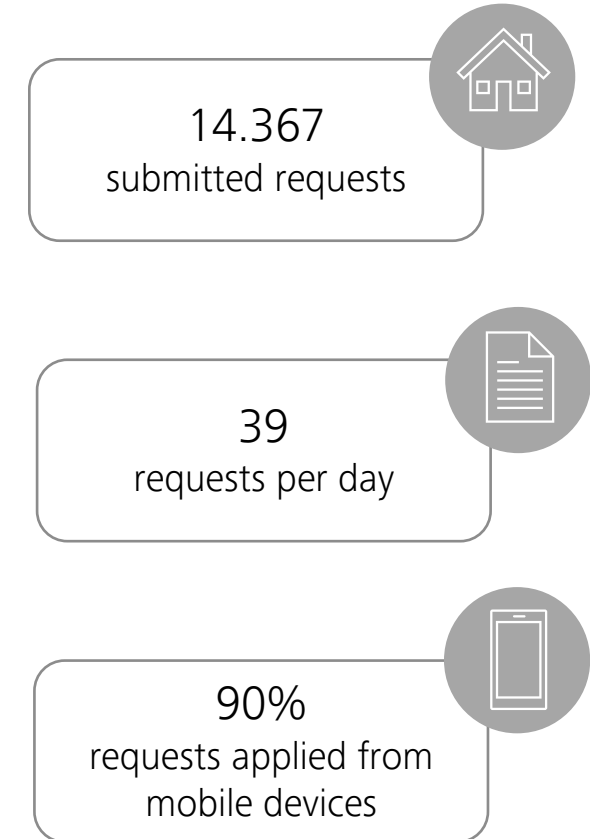
Future services on the E-platform

- Implementation of online payments for new connection requests
- Submission of customer change requests
- Other DSO technical services according to the standard price list

We will continue working on digitalization of other direct customer related processes

Digitalization of the new connection process

- New digital new connection process from 1 April 2024
- Functionalities on the DSO customer E-platform:
 - Online submission of requests and digital tracking of the realization
 - Digital documents archive and one-click approval of documentation
- Functionalities in the new back-office system
 - Digital process workflow with included notifications & KPI's
 - Creation of documents in digital form, including internal approval



Submitted requests for new connection in the period of April 2024 – March 2025

Complete paper-less digital new connection process

Implementation of Field Service Management (FSM)

- Implemented FSM software
 - The FSM software is locally implemented and connected with our IT systems
 - HV overhead lines inspection process is the first implemented FSM process
- Next processes for implementation
 - Outage management processes (2026)
 - Maintenance of the distributive grid processes (2028)
 - Processes related to existing customers (2029)

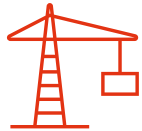


Implementation of the FSM in EVN MK, AT and BG

With the digital work order we expect to be more sustainable, digital and efficient !

Implementation of Asset and performance management (APMS)

APM system functionalities



Asset planning and construction



Asset maintenance and operation



Dispatching of work orders to FSM



Outages management

Goals of the APMS project

- Centralized data storage for all technical assets
- Performance and utilization of assets
- Automatic creation of asset work orders to FSM
- Predictive asset maintenance
- Ensuring transparent overview of the progress of measures and activities for the assets

We plan to implement all assets and processes in APM system until end of 2029