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# EU4ENERGY PHASE II

## «Electric Networks of Armenia» CJSC





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# BASIC INFORMATION ABOUT THE COMPANY

- Electric Networks of Armenia Company carries out activities on transmission and distribution of electricity across the territory of the Republic of Armenia. The company operates its own overhead and cable transmission lines, substations and distribution points from 0.4 to 110 kV.
- The company was established in May 2002 and has two licenses: the first as a Distribution System Operator and the second as a Guaranteed Supplier.
- Power distribution is implemented at tariffs confirmed by the Public Services Regulatory Commission of RA.
- The company serves over **1 million consumers**.
- The company owns more than **30 thousand km** overhead transmission lines, more than **9 thousand substations**, and transformer stations.
- It is one of the largest employer in the country with **6,817 employees**.

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# FINANCIAL AND ECONOMIC RISKS OF THE COMPANY AND THEIR MANAGEMENT.

- **Legal and regulatory environment risks**
- **Risks associated with licenses**
- **Tariff regulation risks**
- **Financial risks**
- **Debt burden risks**

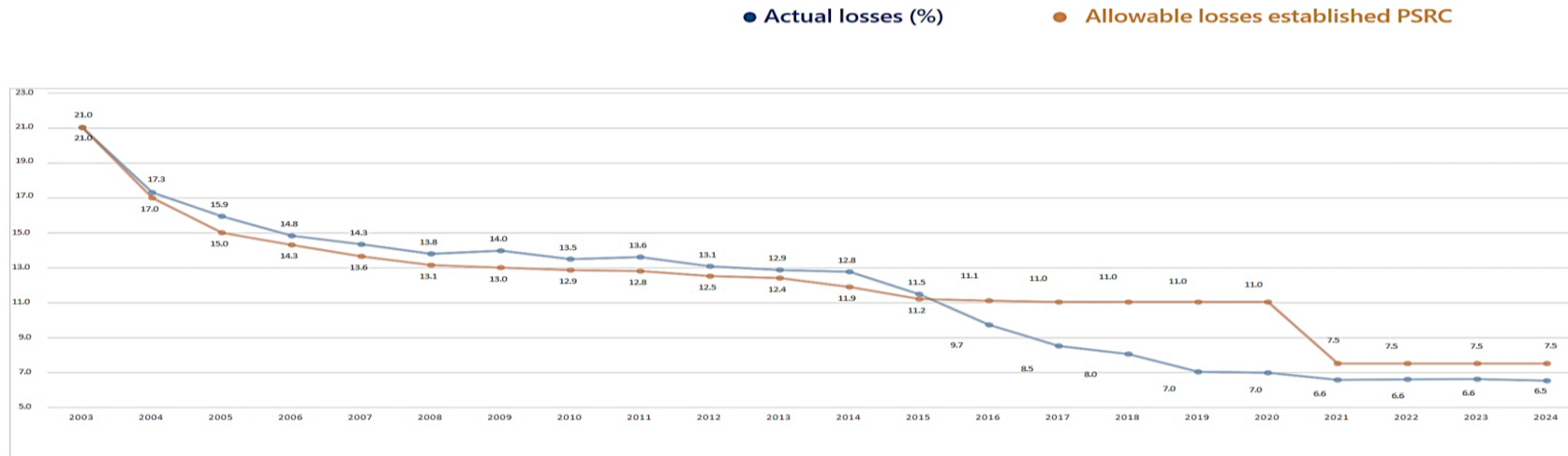


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# ENERGY BALANCE

Item	measurement unit	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Supply to the distribution network	mln. kWh	6 207	6 040	6 339	5 907	6 358	6 366	6 795	6 954	6 945	7 342
Useful delivery	mln. kWh	5 495	5 454	5 799	5 432	5 916	5 922	6 349	6 496	6 486	6 864
Losses in the distribution network	%	11.5%	9.7%	8.5%	8.0%	7.0%	7.0%	6.6%	6.6%	6.6%	6.5%

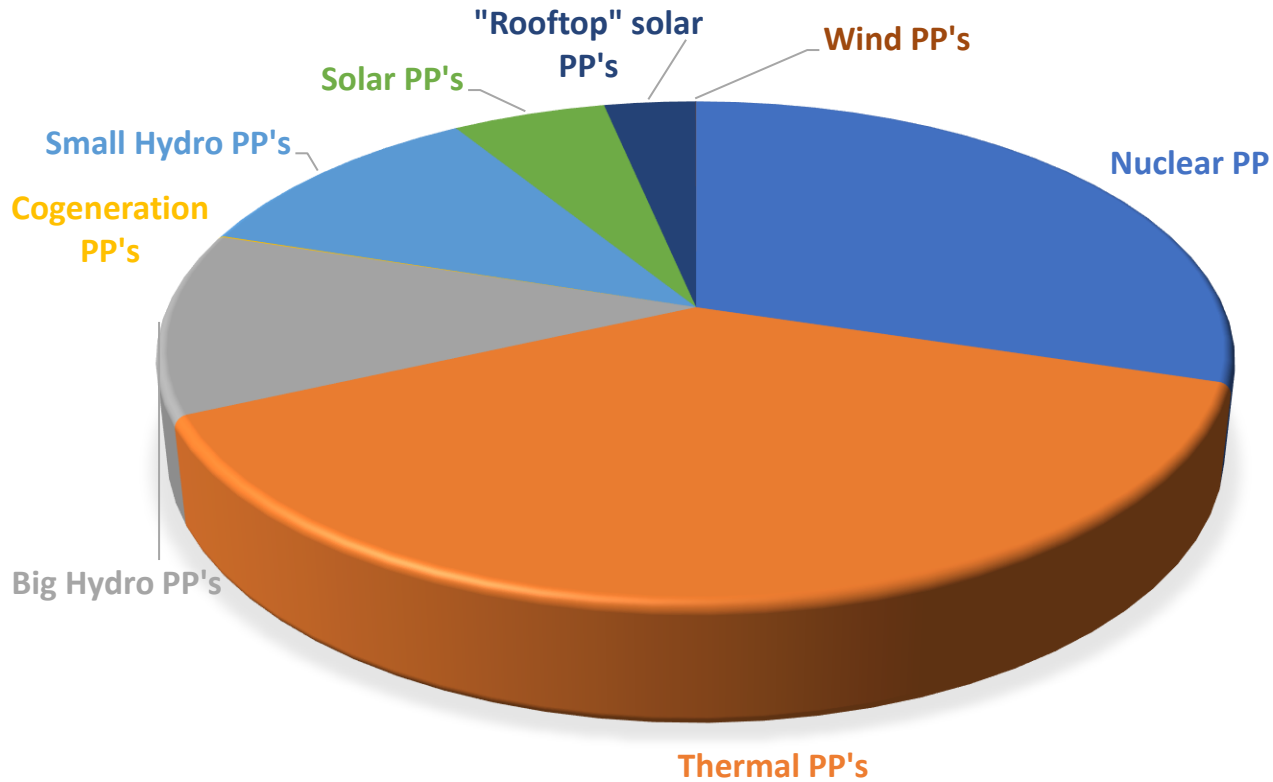
## DYNAMICS OF LOSSES OF ENERGY IN THE DISTRIBUTION NETWORK (%)





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# ELECTRICITY GENERATION STRUCTURE 2024

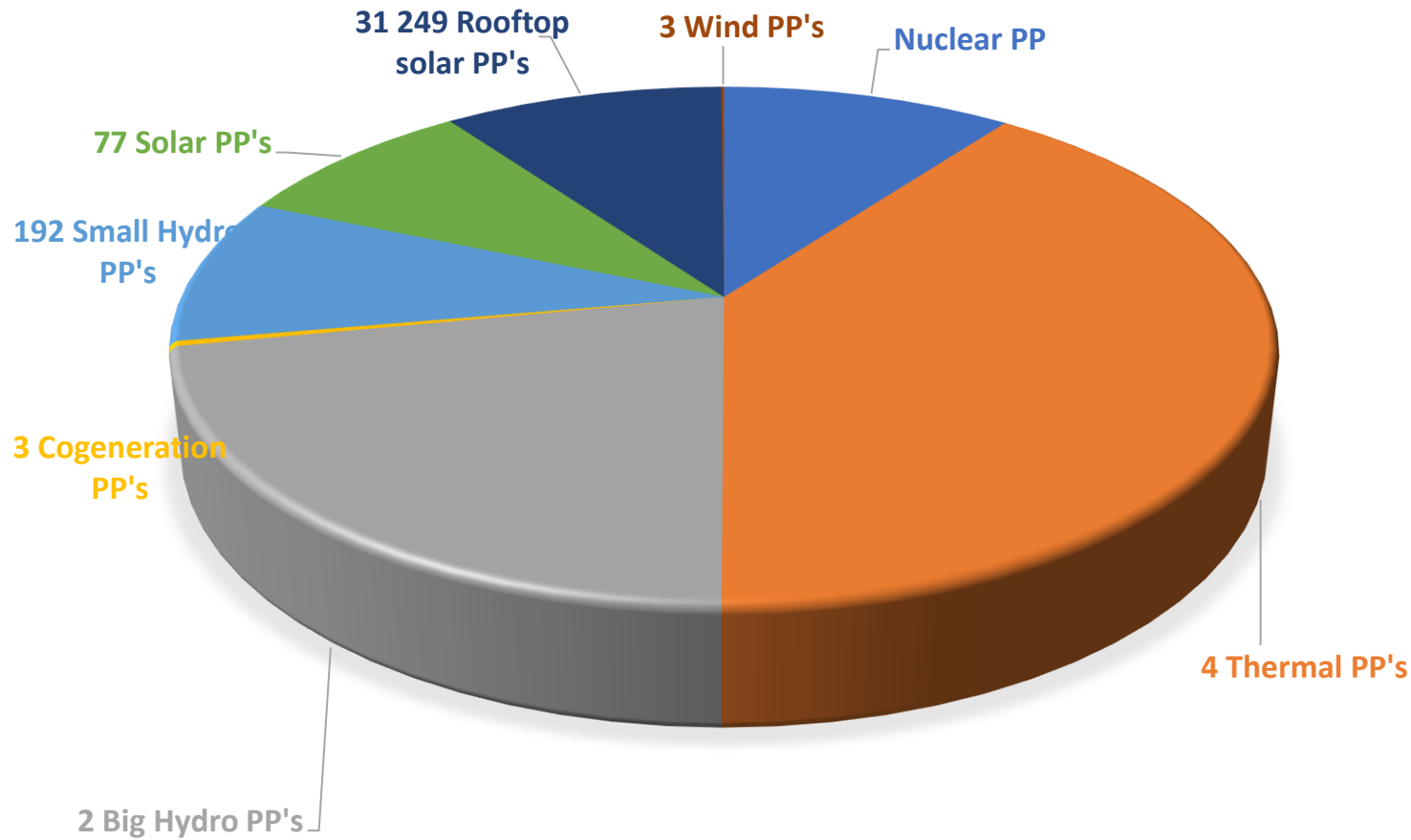


Power plants	mln.kWt.h.
Nuclear PP	2629
Thermal PP's	3387
Big Hydro PP's	1041
Cogeneration PP's	6
Small Hydro PP's	987
Solar PP's	487
Rooftop solar PP's	290
Wind PP's	1
<b>Sum</b>	<b>8828</b>



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# INSTALLED PRODUCTION CAPACITY 2024



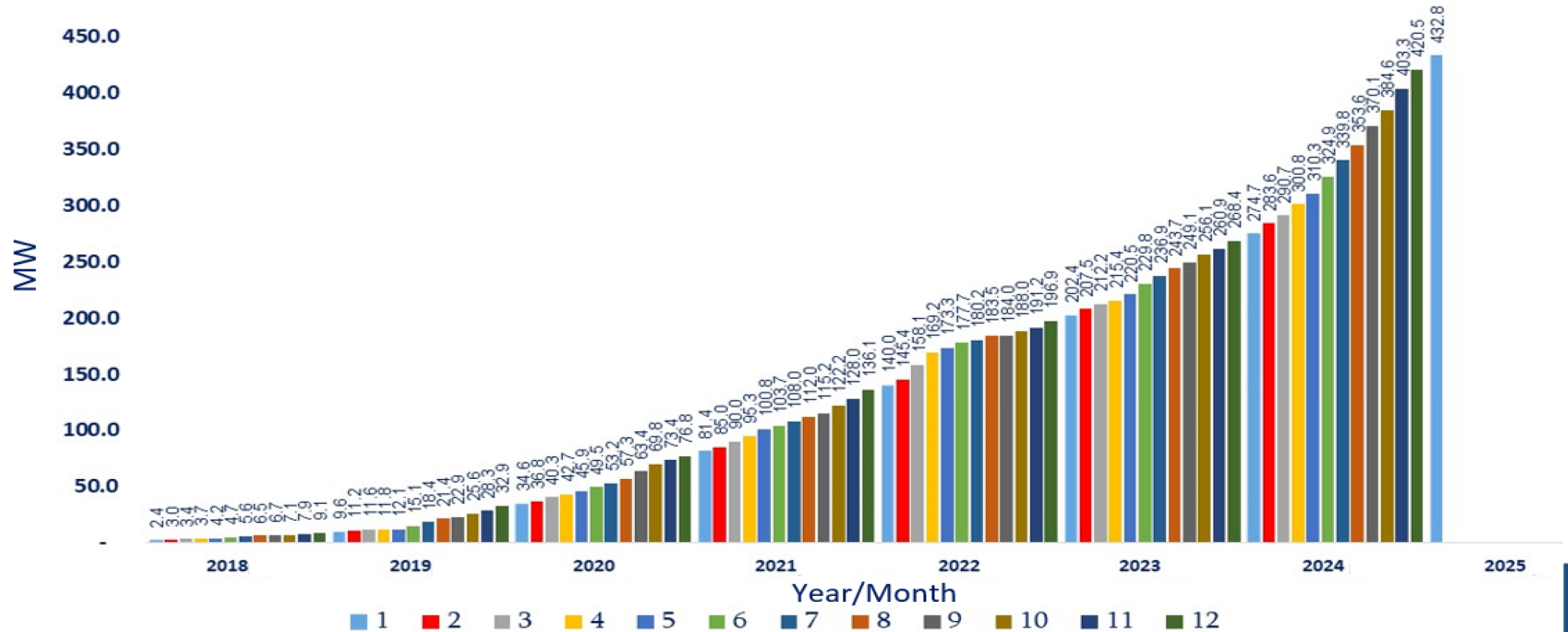
Power plants	MW
1 Nuclear PP	448
4 Thermal PP's	1755
2 Big Hydro PP's	963
3 Cogeneration PP's	14
192 Small Hydro PP's	404
77 Solar PP's	381
31 249 "Rooftop" solar PP's	432
3 Wind PP's	4
<b>Sum</b>	<b>4401</b>

Constructed	MW
1 Thermal PP	50
1 Solar PP	200
1000 "Rooftop" solar PP's every month	10



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# DYNAMICS OF THE GROWTH OF ROOFTOP SOLAR POWER PLANTS





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# THE CHALLENGES THAT NEED TO BE OVERCOME IN THE PROCESS OF SOLAR ENERGY GROWTH

- Condition of the power system,
- Control and normalization of electricity quality indicators in In 0.4/0.22 kV networks,
- Generation of reactive power by inverters of solar power plants,
- Increasing the cross-sections of 0.4/0.22 kV lines,
- Creation of mechanisms for the installation of battery stations,



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# SMART METERING SYSTEM INSTALLATION

Title	2002-2015	2016-2024	2025	2026-2030	Σ	Quantity
Generating plants	100%				100%	282 Power plants (w/o "rooftop" solar plants)
substations 220kV	100%				100%	14 (High volt.el.net CJSC)
substations 110kV	100%				100%	127 (102 ENA's)
substations 35kV	100%				100%	350 (226 ENA's)
substations 6(10)kV	0%	40%	5%	55%	100%	more than 17000 (about 9000 ENA's)
0.4kV/0.22kV Consumer's meters	0%	64%	6%	30%	100%	more than 1 000 000

Over 700 000 smart meters installed during 2016-2024.



Thank you for your attention



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