



NEXT GENERATION SMART METERING



NEXT GENERATION SMART METERING IN DTEK GRIDS

SUMMARY OF THE PROJECT



Issues / prerequisites

Low level of meters reading (77 %)

High level of actual losses in the DSO grid (9,24 %)

High level of OPEX:
- for maintenance of existing metering systems (usage of PLC communication modules only)
- for receiving data from the non-system meters

Objectives

1

- Create an updated ToR for procurement of the Smart Metering (PLC + RF communication channels).
- Selecting a supplier, implementing pilot project and conducting transition to the Smart Meters of Second Generation.
- Conducting analysis of the existing software solutions for localization of losses in the 0.4 kV grid
- Implementing a system of analysis of losses in the DSO grid.

2

- Implementing a model of comprehensive investment in automaton
- Improving DSO customers automation to 100 %

1 PROJECT SCOPE

It is necessary to implement the Smart Meters for 100% of DSO's customers to reduce commercial losses in the distribution grid and the costs of obtaining data from meters.

2 PROGRESS TO-DATE

The level of DSO metering automation on the first-generation meters is 15% of the total amount.

3 TIMEFRAME

The project is to be implemented in 10 years.

Overview of current parameters

DTEK Kyiv Grids

Number of customers:
Household – 1 204 376
Legal – 107 645

DTEK Kyiv Regional Grids

Number of customers:
Household – 1 019 375
Legal – 70 345

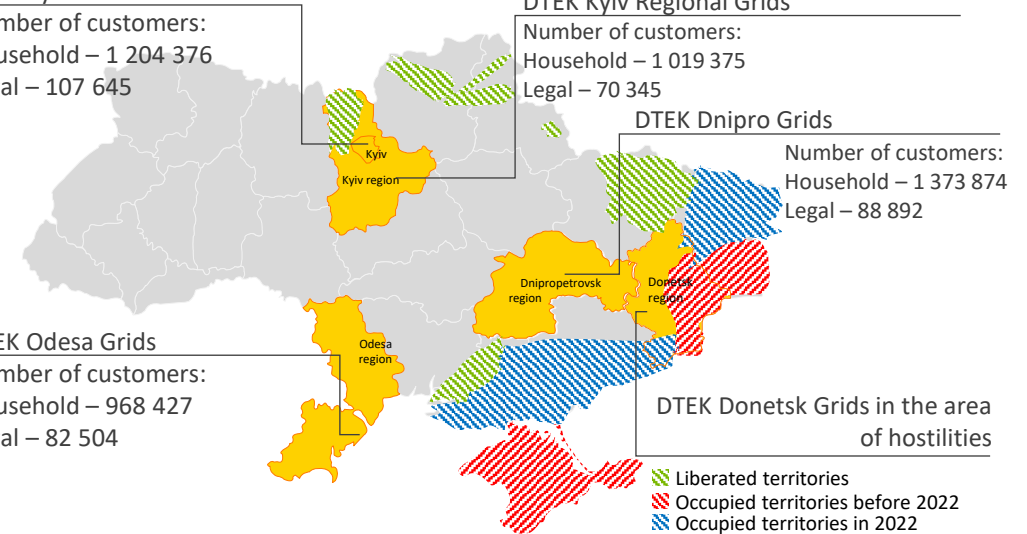
DTEK Dnipro Grids

Number of customers:
Household – 1 373 874
Legal – 88 892

DTEK Odesa Grids

Number of customers:
Household – 968 427
Legal – 82 504

DTEK Donetsk Grids in the area of hostilities



Project KPI

	CURRENT		GOAL
Automation of the legal customers metering	27 %	10 years	100 %
Automation of the household customers metering	23 %	10 years	100 %
Receiving a signal about emergency shutdown of customers	0 %	10 years	76 %
Implementing a system of analysis of losses in the grid	20 %	3 years	100 %
Level of actual losses in the DSO grid	9,24 %	10 years	6,4 %



INVESTMENT PROFILE

PROJECT IMPLEMENTATION IN DTEK GRIDS



Roadmap / stages of project coverage

- Creating Terms of Reference for the purchase of Smart Metering of Second Generation
- Conducting tenders for the purchase of software equipment and second-generation communication equipment
- Conducting analysis of existing software solutions for localization of losses in the grid
- Installation of Smart Meters: **42 702** meters

- Implementing pilot project and conducting transition to the Smart Meters of Second Generation
- Selecting the software for analysis of losses in the 10/6/0,4 kV DSO grid
- Installation of Smart Meters: **480 540** meters

- Implementing the software for analysis of losses in the 10/6/0,4 kV grid
- Installation of Smart Meters of Second Generation: **4 383 759** meters

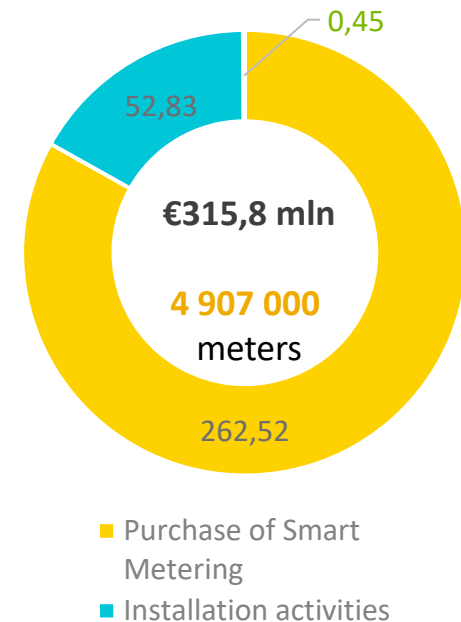
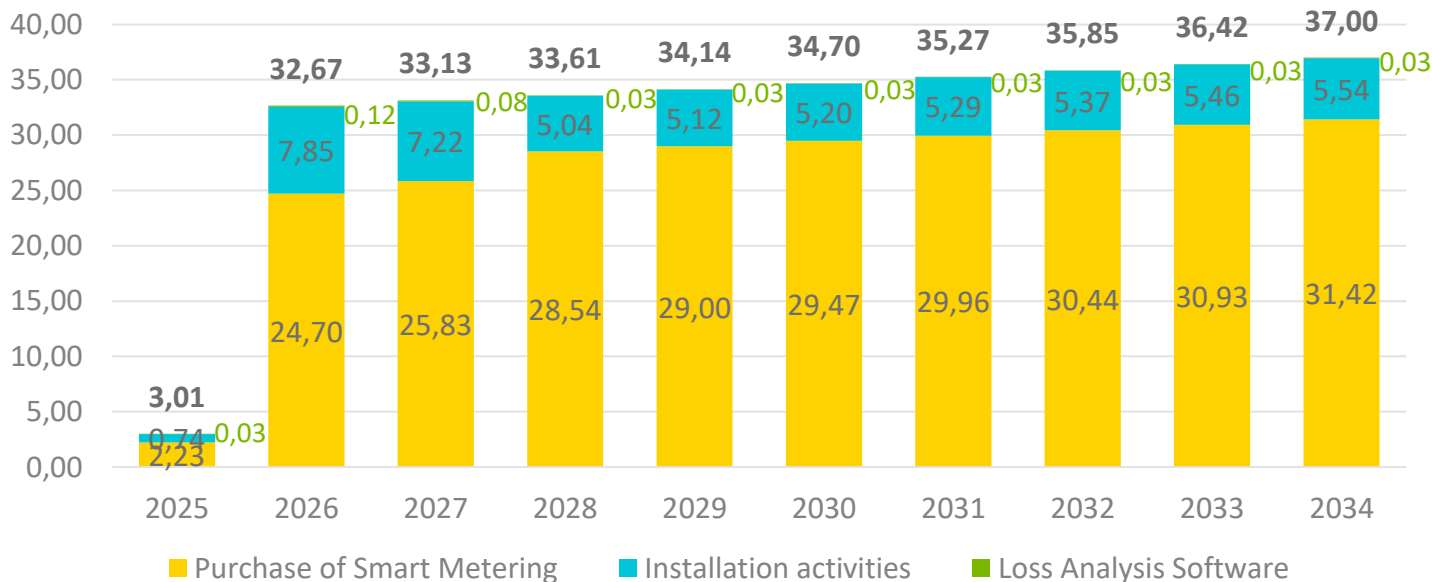
2025

2026

2027-2034

Project investment plan

mln EURO





INVESTMENT PROFILE

PROJECT IMPLEMENTATION IN DTEK KYIV REGION GRIDS



Roadmap / stages of project coverage

- Creating Terms of Reference for the purchase of Smart Metering of Second Generation
- Conducting tenders for the purchase of software equipment and second-generation communication equipment
- Conducting analysis of existing software solutions for localization of losses in the grid
- Installation of Smart Meters: **42 702** meters

- Implementing pilot project and conducting transition to the Smart Meters of Second Generation
- Selecting the software for analysis of losses in the 10/6/0,4 kV DSO grid
- Installation of Smart Meters: **105 609** meters

- Implementing the software for analysis of losses in the 10/6/0,4 kV grid
- Installation of Smart Meters of Second Generation: **944 869** meters

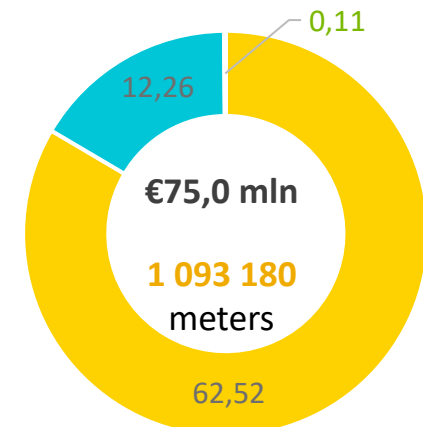
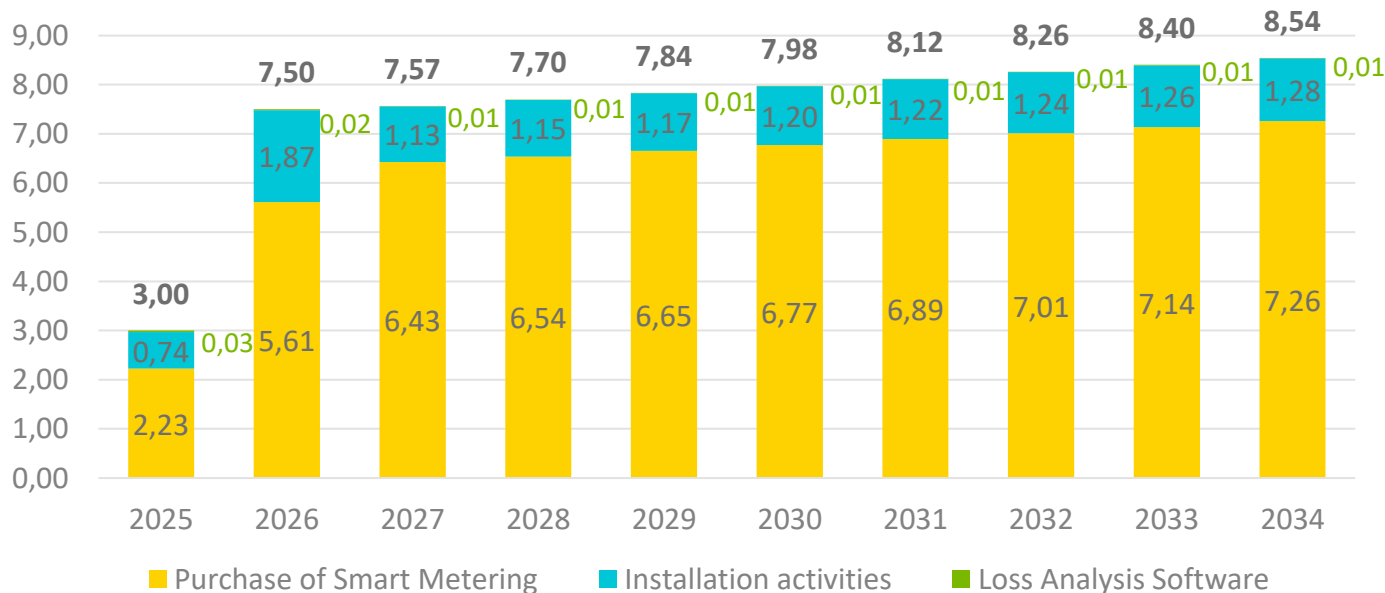
2025

2026

2027-2034

Project investment plan

mln EURO



- Purchase of Smart Metering
- Installation activities
- Loss Analysis Software



FINANCIAL PROFILE

PROJECT IMPLEMENTATION IN DTEK GRIDS



Target regulatory assumptions

Rate of return (UAH) equals **WACC, 19,9% from 2026 to 2030; and 14,9% from 2031 and further**

In contrast to current regulatory regime, **amortization of project assets will be allowed to use on loan payment**

Potential usage of the mechanism of state guarantees will help to further decrease risks of the project

Financial assumptions

Schedule	Pilot in 2025 amount €3 mln Full project €315,8 mln in 2025-2034
Debt period	10 years
Interest rate (EUR)	7%
leverage	Debt: expected at the level of 70%
Electricity prices	According to DTEK macro forecast

IRR (EUR)

Levered

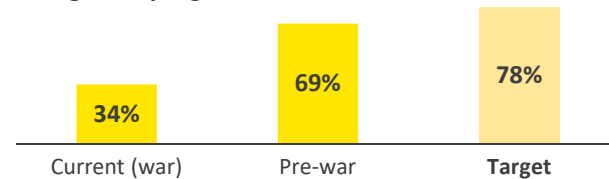
78%

Unlevered

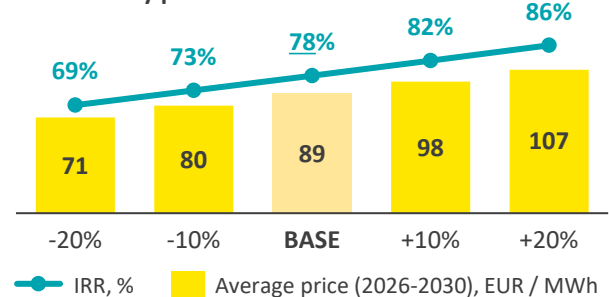
30%

Levered IRR sensitivity

to regulatory regime



to electricity prices



Financial indicators (pilot)

		2025	2026	2027	2028	2029	2030	2031	2036	2041	ΣHTL
Losses saving	MWh	-	5 395	5 395	5 395	5 395	5 395	-	-	-	26 976
RoR (UAH)	%	3,0%	19,9%	19,9%	19,9%	19,9%	19,9%	14,9%	14,9%	14,9%	-
Electricity price	EUR/MWh	97,0	88,8	86,2	90,3	90,3	91,5	96,6	111,9	122,2	-
EBITDA	EUR mln	-	1,3	1,4	1,4	1,4	1,3	0,6	0,3	0,2	11,8
RAB profit	EUR mln	-	0,6	0,5	0,5	0,4	0,4	0,3	0,2	0,2	5,2
Losses saving	EUR mln	-	0,5	0,5	0,5	0,5	0,5	-	-	-	2,4
OPEX efficiency	EUR mln	-	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,0	1,5
Other tariff sources*	EUR mln	-	0,1	0,2	0,3	0,3	0,3	0,3	0,1	0,0	2,7
Income tax	EUR mln	-	(0,2)	(0,2)	(0,2)	(0,2)	(0,2)	(0,1)	(0,1)	(0,0)	(2,0)
Investment cash flow	EUR mln	(3,0)	-	-	-	-	-	-	-	-	(3,0)
FCFF	EUR mln	(3,0)	1,1	1,1	1,2	1,1	1,1	0,5	0,3	0,2	6,8
Loan	EUR mln	2,1	(0,2)	(0,2)	(0,2)	(0,2)	(0,2)	(0,2)	-	-	0,0
Interest	EUR mln	(0,1)	(0,1)	(0,1)	(0,1)	(0,1)	(0,1)	(0,1)	-	-	(0,8)
FCFE	EUR mln	(1,0)	0,7	0,8	0,9	0,8	0,8	0,3	0,3	0,2	6,0

*tax and amortization in tariff

