

Reduction of heat losses in the distribution networks of Moldova due to installation of the apartment heat metering system BALANCE and payment for the actually consumed heat.

Description of the project, type and schedule of implementation of the "BALANCE" system

Objective of the project	Installation of a remote metering system and control of the balance of supplied and consumed heat in distribution networks, can significantly reduce heat losses and, accordingly, CO2 emissions into the atmosphere.																		
Description	<p>The loss of heat during its transportation and distribution is a significant source of greenhouse gas emissions. Loss of heat occurs with poor thermal insulation of buildings, leaks in windows and doors, in the wrong mode of heating appliances, improper ventilation and unauthorized connections.</p> <p>The project will record, measure, localize and eliminate losses based on monitoring the balance of daily and hourly consumption in heating networks. The absence of heat metering devices leads to its overestimated consumption. A study conducted by Thermocom showed that when heat meters are installed and when paying for the actually consumed heat, heat consumption drops by an average of 45%.</p> <p>There are about 200 thousand subscribers in Thermocom. Sales of heat are 1.35 million Gcal / year. When implementing the BALANCE system, heat consumption is reduced by 45%, which is a decrease in losses by 0.61 million Gcal / year. In the CO2 equivalent, this amounts to 210 000 tons of CO2 per year.</p> <p>Additionally, at a heat cost for the population of \$ 62 per Gcal, the savings from loss reduction will be \$ 37,820,000 per year or \$ 189 per subscriber per year. At an average cost of equipment 360 USD \$ (counter for risers + "BALANCE" system + costs for insulation), the payback period of the metering system installation will be about 24 months. In case of participation in the program of CO2 emission reduction, the installation of the metering system "BALANCE" can be performed exclusively at the expense of the grant and will not require any additional costs from the Thermocom.</p>																		
The program for the implementation of the "BALANCE" system	<p>With a 5-year program to install equipment for 200,000 meters, you need to install 3333 subscribers per month + equip risers with balance counters, which will cost \$ 1.2 million per month. Below is a table of monthly costs for installation the BALANCE system.</p> <p>For the further operation of heat networks, with a drop in sales of the coolant by 45%, it is necessary to allocate a separate item from the operating costs of heating networks to a separate article!</p>																		
Month	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32			
Expenses USD/month	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2		
Savings (mln.USD)	0,10	0,20	0,30	0,40	0,50	0,60	0,70	0,80	0,90	1,00	1,10	1,20	1,30	1,40	1,50	1,60			
Cost per month	1,10	1,00	0,90	0,80	0,70	0,60	0,50	0,40	0,30	0,20	0,10	0,00	-0,10	-0,20	-0,30	-0,40	15,0		
Results of the application of the "BALANCE" system	<p>The total project costs for the first 24 months will be USD 15.0 million, and in the next 24 months USD 15.0 million can be returned by reducing heat losses and reducing subsidy payments.</p> <p>Termokom will get an automated heat metering system on the scale of the city of Chisinau and reduce heat losses by 0.61 million Gcal / year.</p> <p>In case of participation in the program of CO2 emission reduction, Thermocom will receive the BALANCE accounting system exclusively at the expense of the grant, and will also receive an additional 37 820 000 US \$ per year for the development of heating systems.</p>																		
Location	The Republic of Moldova. Thermocom. Number of subscribers 200 000																		
Category	Equivalent to CO2 emissions from electricity losses																		
Current status	PROJECT																		
Schedule	Project start date										2012								
	The duration of the project										5 years (installation of the BALANCE system)								
Reduction of GHG emissions (tonnes of CO2 equivalent)																			
Before and including 2017 (indicative estimate)												525 000						tons of CO2	
Period 20 years - until 2032 (indicative estimate)												3 675 000						tons of CO2	
Finance																			
The cost of the grant at the rate of 10 USD / ton of CO2												36 750 000						USD	
Total investment for the system BALANCE and thermal insulation (USD)												15 000 000						USD	
Profit from the project (USD)												21 000 000						USD	
Contact Information																			
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