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HEAT SUPPLY
IN THE CITY OF
ODESA

NATIONAL ACADEMY
OF SCIENCES OF UKRAINE
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THERMOPHYSICS

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**HEAT SUPPLY
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KYIV • NAUKOVA DUMKA • 2024

UDC 332.8

This monograph is dedicated to the development of scientific principles and analysis of measures aimed at enhancing energy efficiency, reducing fuel consumption, increasing the share of heat energy from renewable sources, improving the quality, environmental sustainability and reliability of consumer heating systems. This includes addressing increased risks due to the aggression against our country, particularly as reflected in the heat supply scheme of the city of Odesa.

The monograph is intended for specialists in the fields of thermal physics, municipal and industrial heat power engineering, postgraduate students and students of relevant specialties, as well as for potential investors in heat supply projects.

*Recommended by the Institute
of Engineering Thermophysics
of NAS of Ukraine
(protocol No.4 of February 22, 2024)*

Scientific&publishing department of natural and technical literature
Redactors *O.A. Mukutenko, V.V. Verotska*

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"Naukova Dumka" of the National Academy
of Sciences of Ukraine", design, 2024

ISBN 978-966-00-1919-5

TO THE READER

If you have opened this book, you are either:

- a resident of the city of Odesa interested in how your city, your district, and your house will be heated. What are the risks of being left without centralized heating, and what do the local authorities plan to do?
- or a potential investor interested in how to profit from municipal heat supply projects, as these projects have the lowest investment risks (the loan is repaid by the entire population of the city through tariffs, and the probability of such a city as Odesa suddenly becoming depopulated is very low).

If you are a heat power engineering specialist, we are pleased to provide you with useful insights for your work, and are grateful for your professional comments and advice.

This book is based on the new Heat Supply Scheme of the city of Odesa, developed by the author teams under the guidance of Liudmyla Synetska, Oleksandr Sigal, Mykhailo Rybachuk, Igor Slipets, Igor Kozlov, Dmytro Paderno, and Ganna Pozdniakova.

Among the specialists who made significant contributions to the development of the new Heat Supply Scheme are Alla Minulina, Ihor Sklianichenko, Natalia Nizhnyk, Serhiy Plashykhin, Volodymyr Tsybanov, Oleh Gayan.

The authors would like to express their gratitude to the Mayor of the city of Odesa, Gennady Trukhanov, and the deputies of the Odesa City Council for their constant and comprehensive support of the city's heat supply system.

INTRODUCTION

In 2022, the new “Heat Supply Scheme of the City of Odesa” was developed, agreed by the order of the Ministry of Communities and Territories Development of Ukraine dated 03.06.2022 No. 98, and approved by the decision of the Odesa City Council No. 982-VIII dated 28.09.2022. The following organizations have participated in the preparation of this document:

- Institute of Engineering Thermophysics of the National Academy of Sciences of Ukraine;

- Institute of Engineering Ecology,

- Science park of Odesa Polytechnic University,

- “Ricom” company,

- State Enterprise “Kyiv Regional Expert Energy Efficiency Center”,

as well as specialists of the municipal enterprise “Teplopostachannia Mista Odesy” (“Heat supply of the city of Odesa”).

Of course, this document is a development program and can be implemented only if the population of the city is interested, which is, through the tariff, the only possible source of all improvements, because finding investors for each of the projects included in this program and critically needed for the city, requires answering the question: “what guarantees of return of investment does the investor have?”. In municipal projects, the answer is obvious, because the population of a city like Odesa will not disappear. Odesa has been, is and will be, and it will not want to live without quality heating. That is why the program outlined in the book you hold in your hands will be embodied as a series of separate feasible projects, about which the authors are trying to inform city’s residents, potential investors and heat energy engineering specialists by this book.

The implementation of some of the measures envisaged in the “Heat Supply Scheme of the City of Odesa” (hereinafter referred to as the Scheme) has already begun, and the state of the city’s heat supply system is now already somewhat different from the state in the base year. Moreover, the aggression against our country and the imposed martial law forced changes in the priorities and timelines for the implementation of the measures envisaged in the Scheme, and necessitated additional measures aimed at improving the city’s energy security. This is also reflected in this book.

TABLE OF CONTENTS

TO THE READER	3
INTRODUCTION	4
CHAPTER 1. GENERAL INFORMATION ABOUT THE CITY OF ODESA	5
1.1. History of the foundation of the city	5
1.2. General information about the current state of the city	7
1.3. The main infrastructure facilities of the city	11
1.3.1. The power supply system	11
1.3.2. The gas supply system	11
1.3.3. The water supply system	12
1.3.4. The waste management system	12
1.3.5. The heat supply system	13
1.3.6. Ecology of the city	13
CHAPTER 2. HISTORY OF THE DEVELOPMENT OF HEAT SUPPLY IN THE CITY OF ODESA	16
2.1. Historical chronology of the development of heat supply in the city	16
2.2. Sources of heat supply for consumers in the city	22
2.2.1. Odesa CHP plant from construction till today	22
2.2.2. ME "Teplopostachannia Mista Odesy"	29
2.2.3. Departmental heat sources of the city	29
2.2.4. Autonomous heat sources in the city	31
2.2.5. Individual heat sources in the city	33
CHAPTER 3. THE EXISTING DISTRICT HEATING SYSTEM OF THE CITY OF ODESA	34
3.1. Consumers of the heat energy from the district heating system of the city	35
3.2. Heat energy generation system for centralized heat supply to consumers of the city	36
3.3. Heat energy transportation system for centralized heat supply to consumers of the city	44
3.4. The main existing problems in the city's heat supply system	46
CHAPTER 4. MODERN TECHNOLOGIES APPLICABLE IN THE HEAT SUPPLY OF THE CITY OF ODESA	52
4.1. Fuel and other energy sources	52
4.1.1. Traditional fuels and energy	52
4.1.2. Alternative and renewable energy sources	54

AFTERWORD	154
LIST OF REFERENCES	156
ANNEXES	158
Annex 1. The Main Heat Sources Participating in the District Heating in the City of Odesa as of 2023	158
Annex 2. The planned redistribution of loads of heat sources of the DHS of the city of Odesa	182
Annex 3. List of potential projects for the construction of new heat-generating capacities	196
Annex 4. List of potential projects for the rehabilitation of heat-generating equipment of existing heat sources	198

AFTERWORD	154
LIST OF REFERENCES	156
ANNEXES	158
A n n e x 1. The Main Heat Sources Participating in the District Heating in the City of Odesa as of 2023	158
A n n e x 2. The planned redistribution of loads of heat sources of the DHS of the city of Odesa	182
A n n e x 3. List of potential projects for the construction of new heat-generating capacities	196
A n n e x 4. List of potential projects for the rehabilitation of heat-generating equipment of existing heat sources	198



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