# Contents

1 Introduction .................................................. 1
   1.1 Objectives, Motivation and Potential Use of the WtE Approach .................................. 1
   1.2 Waste Processing and WtE ............................ 4
   1.3 Waste-to-Energy Unit .................................. 6
   1.4 New Terminology for Up-to-Date Approach .......... 11
   1.5 Alternative Methods .................................. 12

2 Conceptual Approach ........................................... 13
   2.1 Waste Availability .................................... 15
   2.2 Energy Utilization ...................................... 17

3 Investment Planning Based on NERUDA System .............. 19
   3.1 Optimization Computational Tool NERUDA .......... 22
   3.2 Results of Calculations ............................... 25

4 WtE as Integrated Items—REGION and EVELINE Systems .... 31
   4.1 Characteristics of Region/Micro-region .......... 31
   4.2 REGION and EVELINE as Its Part .................. 32
   4.3 A Case Study: Application of REGION and EVELINE in a Micro-region with Thirty Thousand Inhabitants ...... 34

5 Selection of Convenient Technology .......................... 37
   5.1 Large or Small Capacity Incinerators? .............. 37
   5.2 “Conventional” Versus Up-to-Date Technologies .... 39
   5.3 Tailor-Made Technology as the Core of EVELINE ... 41

6 Subsystems, Equipment and Other Aspects .................. 45
   6.1 Thermal System ....................................... 46
       6.1.1 Combustion Chamber ............................ 46
       6.1.2 Burners ......................................... 48
Up-to-Date Waste-to-Energy Approach
From Idea to Industrial Application
Stehlik, P.
2016, XIV, 101 p. 64 illus., 4 illus. in color., Softcover
ISBN: 978-3-319-15466-4