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Nota di contenuto	Front Cover; Waste-to-Energy; Copyright; Contents; Preface; About the Authors; Chapter 1 -Introduction and overview; 1.1 -The growing solid waste disposal problem; 1.2 -The trends towards WTE; 1.3 -Climate change and WTE; References; Chapter 2 -Project implementation concepts; 2.1 -Introduction; 2.2 -Developing the project team; 2.3 - Risk assessment; 2.4 -Implementation process; 2.5 -Implementation project scheduling; 2.6 -Implementation project costs; 2.7 -Public information programs; References; Chapter 3 -WTE technology; 3.1 - Introduction; 3.2 -Basic combustion system 3.3 -Stages of combustion3.4 -Mass-burning; 3.5 -Modular combustion; 3.6 -Refuse derived fuel (RDF) systems; 3.7 -Fluidized bed systems; 3.8 -Emerging waste conversion technologies; 3.9 -Summary; Chapter 4 -Solid waste composition and quantities; 4.1 -Introduction; 4.2 -Types of solid waste; 4.3 -Solid waste quantities; 4.4 -Waste composition methodology; 4.5 -Waste sorting; References; Chapter 5 - Waste flow control; 5.1 -Introduction; 5.2 -Flow control mechanisms;

References; Chapter 6 -Selecting the facility site; 6.1 -Introduction; 6.2 -The site selection process
6.3 -Site screening process6.4 -Use of Geographic Information Systems (GIS) technology in siting; References; Chapter 7 -Energy and materials markets; 7.1 -Introduction; 7.2 -Energy markets; 7.3 -Materials markets; 7.4 -Projected energy production from a proposed WTE facility; References; Chapter 8 -Permitting issues; 8.1 -Introduction; 8.2 -US solid waste combustor air emissions; 8.3 -International air emission regulations; 8.4 -Solid waste combustor ash management; References; Chapter 9 -Procurement of WTE systems; 9.1 - Introduction; 9.2 -Procurement approaches
9.3 -Procedures for conducting the procurement process9.4 -Preparing the request-for-proposals; 9.5 -Proposal evaluation; 9.6 -Negotiations process; References; Chapter 10 -Ownership and financing of WTE facilities; 10.1 -Introduction; 10.2 -Ownership alternatives; 10.3 - Prerequisite to financing; 10.4 -Financing options; 10.5 -Private equity; 10.6 -Costs and facility operation; 10.7 -Initial capital equipment; 10.8 -Operating costs; 10.9 -Estimated annual debt service and annual operating costs; 10.10 -Equipment life and replacement; 10.11 -Zero tip fee for a developing nation
Chapter 11 -O&M of WTE facilities11.1 -Introduction; 11.2 -Key aspects of the O&M approach for WTE facilities; Appendix A -WTE Case Studies; Hillsborough County, Florida; City of Baltimore, Maryland; City of Commerce, California; City of Spokane, Washington; Pinellas County, Florida; City of Portsmouth, Virginia; RenWu, Taiwan; Rozenburg, the Netherlands; Nice, France; Index

Sommario/riassunto

This book covers in detail programs and technologies for converting traditionally landfilled solid wastes into energy through waste-to-energy projects. Modern Waste-to-Energy plants are being built around the world to reduce the levels of solid waste going into landfill sites and contribute to renewable energy and carbon reduction targets. The latest technologies have also reduced the pollution levels seen from early waste incineration plants by over 99%. With case studies from around the world, Rogoff and Screve provide an insight into the different approaches taken
