1. Record Nr. UNINA9910824204703321 Autore Kaplan Stan <1947-> Titolo Power plant characteristics and costs // Stan Kaplan New York,: Nova Science Publishers, c2010 Pubbl/distr/stampa **ISBN** 1-61122-346-6 Edizione [1st ed.] Descrizione fisica 1 online resource (140 p.) Energy policies, politics and prices series Collana 621.31/210973 Disciplina Soggetti Electric power-plants - United States Electric power-plants - United States - Cost of operation Electric power-plants - United States - Design and construction Electric power production - United States - Forecasting Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia "This is an edited, excerpted and augmented edition of a United States Note generali Congressional Research Service publication, report order code RL34746, dated November 13, 2008 by Stan Kaplan"--Pref. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Intro -- POWER PLANT CHARACTERISTICS AND COSTS -- POWER PLANT CHARACTERISTICS AND COSTS -- CONTENTS -- PREFACE --INTRODUCTION AND ORGANIZATION -- TYPES OF GENERATING TECHNOLOGIES -- Electricity Demand and Power Plant Choice and Operation -- Generation and Load -- Economic Dispatch and Heat Rate -- Capacity Factor -- Utility Scale Generating Technologies --Supercritical Pulverized Coal -- Integrated Gasification Combined Cycle (IGCC) -- Natural Gas Combined Cycle -- Nuclear Power -- Geothermal Power -- Wind Power -- Solar Thermal and Solar Photovoltaic (PV) Powe -- FACTORS THAT DRIVE POWER PLANT COSTS -- Government Incentives -- Renewable Energy Production Tax Credit -- Nuclear Energy Production Tax Credit3 -- Loan Guarantees for Nuclear and Other Carbon-Control Technologies -- Energy Investment Tax Credit -- Clean Coal Technologies Investment Tax Credit -- State and Local Incentives -- Capital and Financing Costs -- Construction Cost Components and Trends -- Financing Power Plant Projects -- Fuel Costs -- Air Emissions Controls for Coal and Gas Plants --Conventional Emissions -- Carbon Dioxide -- CO2 Removal for Pulverized Coal and Natural Gas Plants -- CO2 Removal for IGCC Coal

Plants -- CO2 Allowance Costs -- FINANCIAL ANALYSIS

METHODOLOGY AND KEY ASSUMPTIONS -- ANALYSIS OF POWER PROJECT COSTS -- Case 1: Base Case -- Case 2: Influence of Federal and State Incentives -- Case 3: Higher Natural Gas Prices -- Case 4: Uncertainty in Capital Costs -- Case 5: Carbon Controls and Costs -- POWER GENERATION TECHNOLOGY PROCESS DIAGRAMS AND IMAGES -- Pulverized Coal -- Integrated Gasification Combined Cycle Coal (IGCC) -- Natural Gas Combined Cycle -- Nuclear Power -- Wind -- Geothermal -- Solar Thermal Power -- Solar Photovoltaic Power -- ESTIMATES OF POWER PLANT OVERNIGHT COSTS -- ESTIMATES OF TECHNOLOGY COSTS AND EFFICIENCY WITH CARBON CAPTURE. FINANCIAL AND OPERATING ASSUMPTIONS -- LIST OF ACRONYMS AND ABBREVIATIONS -- INDEX.