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Total Cost of Firing Biomass and Prices for Renewable-Electricity Credits CHAPTER FOUR: Near-Term Potential Demand for Biomass for Cofiring Applications; Introduction; Methodology and Data for Estimating Potential Biomass Demand; Current Biomass Energy Use; Near-Term Potential Demand for Biomass Energy Resources for Cofiring; Near-Term Potential Supply Constraints; CHAPTER FIVE: Logistical Considerations; Introduction; Costs of Handling, Processing, and Transporting Biomass; Loading and Unloading Biomass; Transportation; Storage Requirements and Costs; Densification Costs Biomass Sourcing Scenarios Scenario 1: Local Supply of Biomass Energy; Scenario 2: Local and External Supply of Biomass Energy; Scenario 3: External Supply of Biomass Energy; CHAPTER SIX: Reductions in Life-Cycle Greenhouse-Gas Emissions from Cofiring with Biomass; Introduction; Estimating Greenhouse-Gas Emissions from Cofiring; Implications of Biomass Life-Cycle Greenhouse-Gas Emissions of Cofiring; CHAPTER SEVEN: Factors Influencing the Development of Biomass Markets; Introduction; Limiting Factors for Biomass Markets; Biomass Prices and Production Costs Technological Constraints on Biomass Production Asymmetric Information; The Potential for Processing to Facilitate Biomass Market Expansion; What Would Cause Biomass Markets to Grow?; CHAPTER EIGHT: Conclusions; Plant Operators' Experiences Cofiring Biomass; The Principal Challenge with Respect to Cofiring Biomass Is Maintaining a Consistent Fuel Supply; The Choice to Cofire Biomass Depends on a Confluence of Technical and Regulatory Factors; Plant-Site Costs of Cofiring; Cofiring Biomass Results in Increased Capital and Operating Costs and Lost Revenues Densification of Biomass Does Not Result in Plant-Site Cost Savings

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Sommario/riassunto

Biomass is an increasingly important source of electricity, heat, and liquid fuel. One near-term option for using biomass to generate electricity is to cofire biomass in coal-fired electricity plants. This report focuses on two aspects of biomass use: plant-site modifications, changes in operations, and costs associated with cofiring biomass; and the logistical issues associated with delivering biomass to the plant.

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