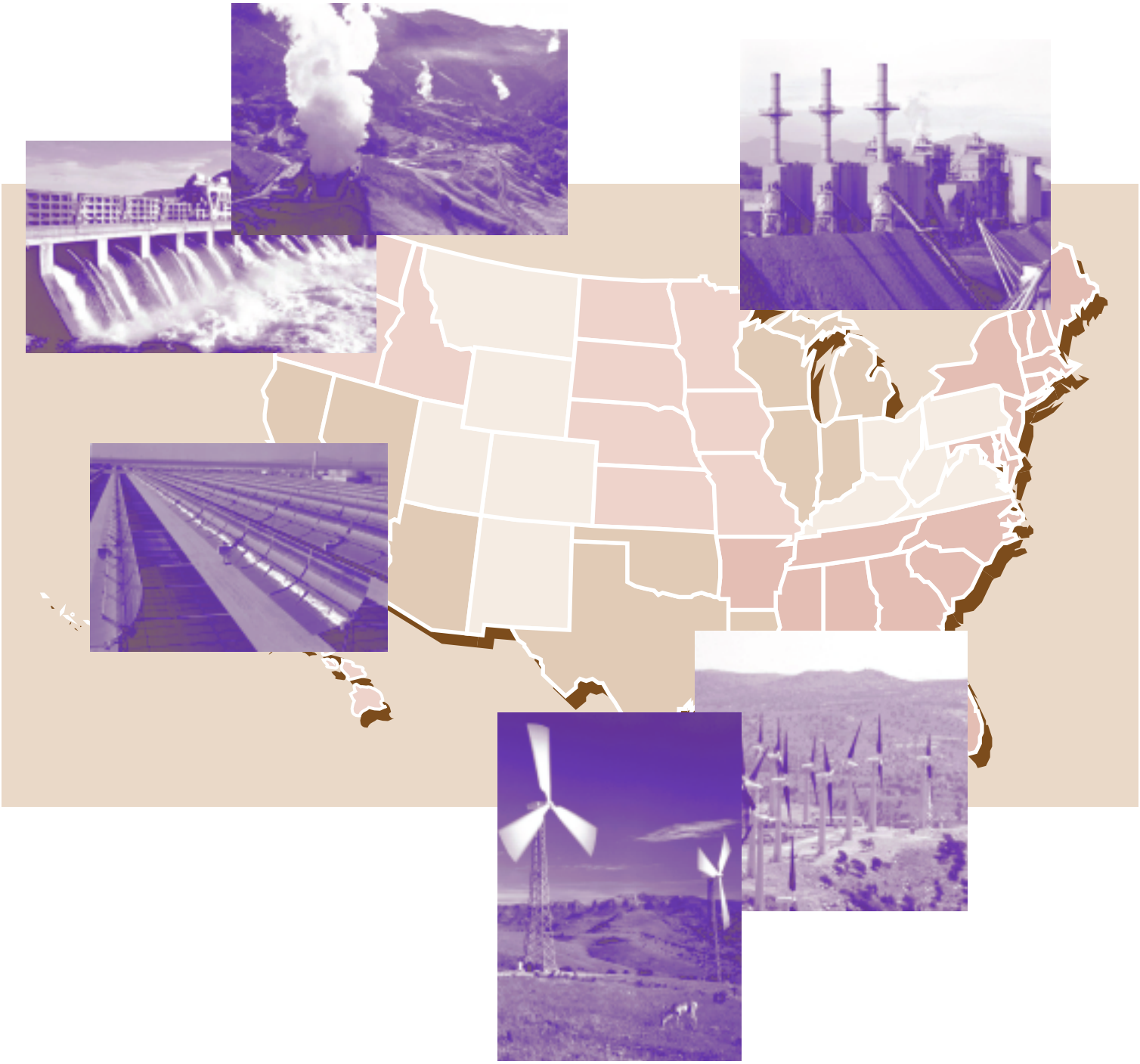
Choices for A Brighter Future

Perspectives on Renewable Energy



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Perspectives on Renewable Energy—A Summary

We have an obligation to act responsibly in assessing potential damages, and to protect our economy and national security by investing in efficient energy technologies. — Vice President Al Gore

Electricity consumers' power to choose suppliers could have dramatic consequences for renewable energy as the nation begins to transition to the next millennium. How can we ensure that the nation will make the most of this new found opportunity? What role can renewable energy play in our future energy system? What approaches and mechanisms will be needed to support renewables in the new energy marketplace? This document identifies and explores some of the major opportunities and challenges surrounding the greater use of renewable energy in the United States.

Perspectives on the Evolving U.S. Electricity Future

The United States relies heavily on fossil fuels for electricity generation. Due to concerns about fossil fuels' environmental effects, and their long-term availability, the U.S. should be moving toward a policy environment that will facilitate a transition to an energy future with an array of choices.

Renewable energy, as a key element of that future, will provide jobs, promote local economic development, and create international business opportunities. In fact, a number of major energy producers are taking a fresh look at renewable energy, as the realities and implications of "business-as-usual" grow more apparent. Renewable energy use lowers concerns about climate change, acid rain, and other environmental effects. As the electric power industry is restructured to facilitate competition in the wholesale and retail markets, the opportunity for renewable energy should grow.

The Renewable Electric Technology Portfolio

The U.S. is blessed with abundant renewable resources. One of the most valuable attributes of renewables is its diversity — creating renewable energy options in every region of the U.S. The renewable electric portfolio includes hydropower, biomass, geothermal, wind, solar thermal, and photovoltaics. Each technology has unique characteristics and can provide high value service to the electric system. The chapter discusses their current status, resource availability, and applications for these technologies.

The Regional Outlook

For this report, the U.S. has been divided into eight regions plus Alaska and Hawaii regions. Each region has unique energy needs, electrical system constraints, policy issues, and environmental problems. The opportunities for renewable energy in each region are as unique as the regions themselves. This chapter provides examples of how renewables are already meeting some regional challenges.

Opportunities to Move Forward In an Era of Change

Renewables are at a critical juncture in today's domestic marketplace. Their competitiveness has improved dramatically over the past decade, yet the pace of market adoption has stalled as the power industry deals with the implications of the emerging competitive marketplace. These issues are often regional in nature and, in many cases, regional solutions will be required. Policy options include tax incentives, Renewable Portfolio Standards, Systems Benefits Charges, and net metering. Policy support is also required to protect customer choice and ensure that green power is available to those who choose to buy it. Support for U.S. industry participation in the global renewable energy marketplace will foster U.S. industry growth and technological superiority. Finally, federal support for U.S. industry research and development (R&D) efforts will accelerate the realization of the economic and environmental benefits of a sustainable energy path.

We can act now to ensure that renewable energy will play a major role in meeting the challenges of the evolving energy future, and the decisions we make today will have implications for many generations. We have the power to choose.

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