Biological Effects of Power Frequency Electric and Magnetic Fields

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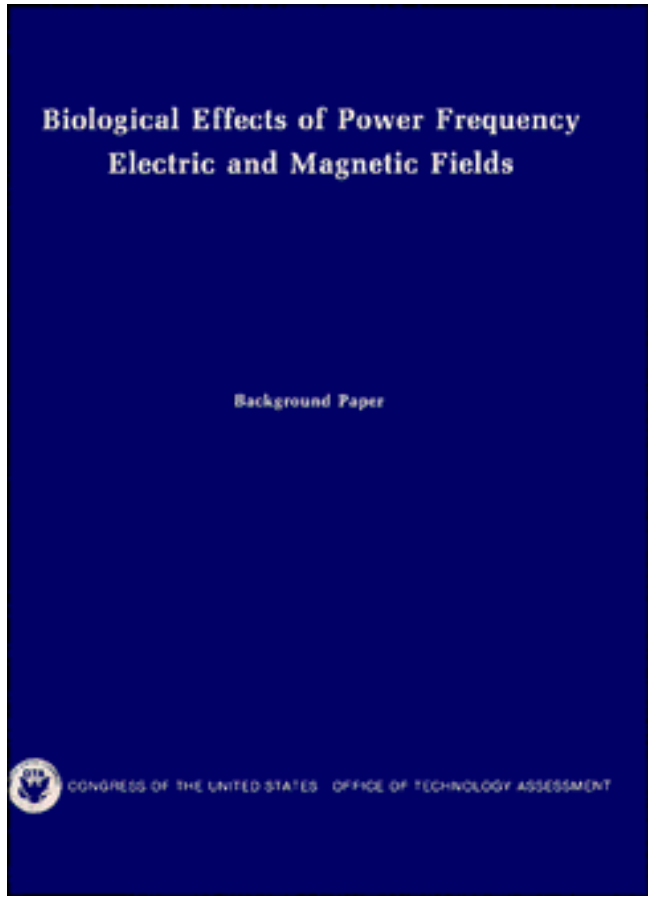

Biological Effects of Power Frequency Electric and Magnetic Fields

Background Paper

This background paper was performed as part of OTA'S assessment of

Electric Power Wheeling and Dealing:

Technological Considerations for Increasing Competition

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Foreword

This background report responds to a request by the Subcommittee on Water and Power Resources of the House Committee on Interior and Insular Affairs. The subcommittee asked that OTA review the health effects of high-voltage transmission lines. To provide background information for its assessment on electric power wheeling, OTA contracted with the Carnegie-Mellon University. This report was used in the preparation of OTA's final assessment Electric Power Wheeling and *Dealing: Technological Considerations for Increasing Competition.*

For about two decades, there has been some concern about the health effects of electric and magnetic fields produced by transmission lines. Recent studies have heightened this concern. Health effects research is still preliminary and inconclusive, but a growing number of studies suggest that under certain circumstances even relatively weak electric and magnetic fields can produce biologic changes. This report discusses the present state of knowledge on the health effects of low-frequency electric and magnetic fields and describes current U.S. funding levels and research programs. Also, the report provides information on regulatory activity, including existing and proposed field exposure standards.

OTA acknowledges the generous help of the reviewers who gave their time to ensure the accuracy and completeness of this report. In particular, OTA thanks the project's distinguished advisory panel and workshop participants.

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