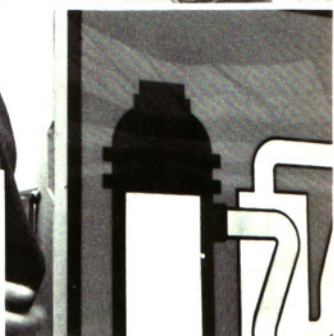


# Public Information Resources

**Publications • Films • Videotapes • Speakers' Bureau  
• Exhibits • Slide Presentations • Demonstrations •**



The  
Clinch River  
Breeder Reactor  
Plant Project



A Step Toward Energy Independence



The  
Clinch River  
Breeder Reactor  
Plant Project

Oak Ridge, Tennessee

Breeder Reactor Corporation (BRC) is a nonprofit group that provides senior counsel on behalf of the utility industry and disseminates information to both the electric power industry and the public. BRC is composed of 753 electric systems from across the country that have pledged \$257 million to build the nation's first large-scale demonstration breeder reactor—the Clinch River Plant—in Oak Ridge, Tennessee.

# Publications



1

AN ALTERNATIVE LONG TERM ENERGY SUPPLY OPTION

March 1980

Atomic Industrial Forum, Inc.

2

A MANUFACTURER'S VIEW OF THE U.S. BREEDER PROGRAM



3



4

- 1 **A World of Energy—The Breeder Reactor.** This booklet reproduces in printed form the film **A World of Energy**, which takes viewers on a trip around the world to view international advancements in breeder technology through the medium of the 1982 World's Fair in Knoxville, Tennessee. The film features one of the pioneers of nuclear energy, Dr. Alvin Weinberg, who explains what the breeder means to Americans. A Study Guide is included in the booklet. **A World of Energy** is available in two audiovisual formats—16mm film and ¾-inch videotape. (For complete information see the Audiovisual section.) General interest. 1982. Breeder Reactor Corporation.
- 2 **An Alternative Long Term Energy Supply Option.** Examines U.S. energy needs and options and the potential role of the breeder reactor. Particular emphasis is given to the contribution that could be made to energy independence by the Clinch River Breeder Reactor. General interest. 1980. Atomic Industrial Forum, Inc.
- 3 **A Manufacturer's View of the U.S. Breeder Program.** In this speech, Dr. W. Howard Arnold, General Manager of Westinghouse's Advanced Reactors Division, discusses the role to be played by the Clinch River Project in developing a breeder program that will be attractive commercially while contributing to energy independence. Presented at the 9th Energy Technology conference in Washington, D.C. General and technical audiences. 1982. Breeder Reactor Corporation.
- 4 **Breeder Basics.** A basic information primer on the breeder. Explains how a breeder creates more fuel than it uses, traces the steps in breeder development and reports on breeder progress here and abroad. Summarizes the purpose and objectives of the Clinch River Project and describes the organization of the Clinch River Project and the plant itself. Presents key operational, design and safety facts and features. General interest. 1982. Breeder Reactor Corporation.





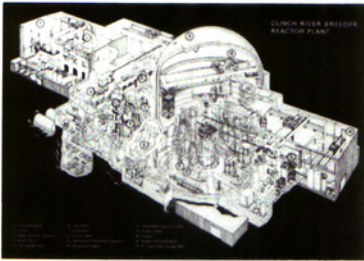
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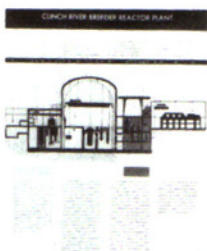


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- 5 **Breeding New Fuel From Waste.** A reprint from **Engineering Science & Technology News** based on a conversation between William F. Rolf, General Manager of Project Management Corporation, and Dr. William White, Jr., Publisher of the Franklin Institute Press. Traces the potential of breeder reactors and their ability to utilize the nation's uranium resources fully. General and technical audiences. 1981. **Engineering Science & Technology News.**
- 6 **Breeder Reactor Corporation Speakers' Bureau.** A brochure on the speakers' program sponsored by BRC. (See **Speakers' Bureau** section for more complete information.) General interest. 1981. Breeder Reactor Corporation.
- 7 **Breeder Reactors: Renewable Energy Resource.** A policy statement issued by the American Nuclear Society outlining the role of breeders in extending uranium resources and recommending the construction of the Clinch River Project as an essential element of an ongoing U.S. breeder development program. General interest. 1981. American Nuclear Society.
- 8 **Clinch River Breeder Reactor Plant Cutaway.** A large cutaway view of the Clinch River Plant listing key areas and components. General and technical audiences. 1977. Breeder Reactor Corporation.
- 9 **Clinch River Breeder Reactor Plant Design Description.** A detailed description of the plant layout, systems and components. Complete with diagrams and illustrations, design data and other plant information. Technical audiences. 1982. Breeder Reactor Corporation.



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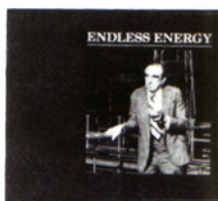
#### DESIGN DATA

CLINCH RIVER  
BREEDER REACTOR  
PLANT

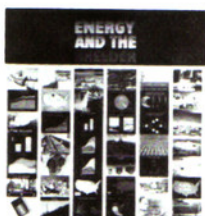
THE NATION'S FIRST LARGE SCALE  
DEVELOPMENT OF BREEDER REACTORS



11



12



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- 10 **Clinch River Breeder Reactor Plant Diagram.** Identifies the major buildings in the Clinch River Plant, their purpose and major equipment and components in each area. Summarizes the organization and purpose of the project and pictures the site, the plant rendering and the project office. General interest. 1980. Breeder Reactor Corporation.
- 11 **Design Data—Clinch River Breeder Reactor Plant.** This pocket-sized folder lists key facts, design and engineering data. Technical audiences. 1982. Breeder Reactor Corporation.
- 12 **Endless Energy.** Dr. Edward Teller, one of the world's most respected scientists, envisions a future with virtually limitless energy and explores a number of promising energy options that will allow the United States to produce adequate supplies of electricity for future generations. This booklet reproduces in printed form a film/videotape presentation entitled **Endless Energy** and also includes several photographs taken from the film. Also useful, especially for classroom situations, is a **Discussion Guide** published to accompany the film. **Endless Energy** is available in two audiovisual formats—16mm film and ¾-inch videotape. (For complete information see the Audiovisual section.) General interest. 1981. Breeder Reactor Corporation.
- 13 **Energy and the Breeder.** This booklet reproduces the script and slides from a sound/slide presentation entitled **Energy and the Breeder**. The presentation discusses breeding, the outlook for major energy resources, and how the breeder can extend uranium supplies. (See Audiovisual section of this publication for information on complete audiovisual presentation.) General and technical audiences. 1981. Breeder Reactor Corporation.
- 14 **Energy for the Future—The Breeder Reactor.** A brochure on the education program conducted by Oak Ridge Associated

Universities and sponsored by BRC. (See Demonstrations and Displays sections for more complete information.) General interest. 1979. Oak Ridge Associated Universities.



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- 15 **Facts About the Clinch River Project.** A concise booklet of facts and figures on the breeder, the purpose and objectives of the Clinch River Project, the organization of the project, the features of the Clinch River Plant and basic information on breeder safety, sodium and plutonium. General interest. 1982. Breeder Reactor Corporation.
- 16 **Highlights of "The Liquid Metal Fast Breeder Reactor—Options for Deciding Future Pace and Direction"** is a summary of a General Accounting Office (GAO) report which evaluates the merits of the project and states the Agency's conclusions about the nation's LMFBR program. **Highlights** gives an overview of past GAO findings and the position of the Department of Energy. Also summarized in the report are GAO findings on the need for nuclear energy, the U.S. LMFBR program, the role of Clinch River, factors affecting the pace and direction of the LMFBR program, uranium supplies, economics of the breeder, and breeder options. General interest. Breeder Reactor Corporation. 1982.
- 17 **How Much Radiation?** Facts on radiation including a do-it-yourself form to compute the amount of radiation a person is normally exposed to in the course of day-to-day activities. Compares a person's annual dose with radiation from the Clinch River Plant. General interest. 1981. Breeder Reactor Corporation.
- 18 **Let's Talk About Energy and the Atom** describes different energy sources and the importance of nuclear energy and the breeder. The booklet explains how breeding works and discusses the fuel cycle, waste treatment, and nuclear weapons proliferation. 1982.





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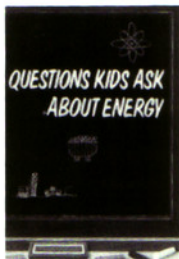


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- 19 **Overview and Update of the Clinch River Breeder Reactor Plant Project—A Utility Perspective.** In this speech Robert D. Partridge, Executive Vice President and General Manager of the National Rural Electric Cooperative Association, emphasizes the importance of the Clinch River Project to the nation's ongoing program to advance breeder reactor technology to the point of commercial feasibility. He reiterates the utility industry's strong support for the project and for the cooperative structure that is responsible for it. Presented at the 9th Energy Technology Conference in Washington, D.C. General and technical audiences. 1982. Breeder Reactor Corporation.
- 20 **Plutonium: Energy Insurance for the Future.** Facts about plutonium—what it is, why plutonium is needed, how it is produced and processed, health effects, safeguards, the proliferation issue, benefits and risks. General interest. 1978. Westinghouse Electric Corporation.
- 21 **Progress Report—Clinch River Breeder Reactor Plant Project.** An annual report on project progress. General interest and technical audiences. Current and previous year reports available. Breeder Reactor Corporation.



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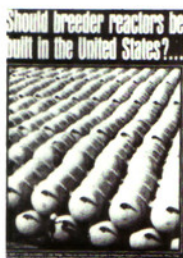


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- 22 **Project Management Corporation Annual Report.** Project Management Corporation (PMC) is a nonprofit organization that represents the interests of the utility industry in the Clinch River Project. General interest. Current and previous year reports available.
- 23 **Questions Kids Ask About Energy.** A colorfully illustrated brochure answering common questions about energy in kids' terms. For children. 1982. Westinghouse.



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- 24 **Revitalizing the National Breeder Program.** In this speech Shelby T. Brewer, Assistant Secretary for Nuclear Energy, U.S. Department of Energy, discusses the need for the Clinch River Project and its role in the ongoing research and development program and the importance of government participation in advancing this technology. Presented at the 9th Energy Technology Conference in Washington, D.C. General and technical audiences. 1982. Breeder Reactor Corporation.
- 25 **Should Breeder Reactors Be Built in the United States?** W. B. Behnke, Chairman of the Board of Project Management Corporation, presents a forceful argument for the expeditious construction of the Clinch River Project—"the single most important objective for the U.S. breeder program." General interest. Reprinted from the May/June 1981 issue of **Public Power** magazine.
- 26 **Answers to Your Questions About the Breeder and Nuclear Energy.** Answers frequently asked questions about breeders. Provides concise answers on how a breeder works, economics, waste, worldwide breeder development, how breeders affect jobs, and more. General interest. Available early 1983. Breeder Reactor Corporation.
- 27 **The Clinch River Breeder Reactor—Should The Congress Continue to Fund It?** A report on the Clinch River Project by the General Accounting Office (GAO)—the independent, watchdog agency created by Congress to audit government programs and make recommendations for more efficient and effective operations. GAO evaluated the merits of the project and issued its conclusions in this report. The GAO stated that the Clinch River Project should be built "if this nation wishes to maintain a strong breeder reactor research and development program" and concluded that "breeders are the essential ingredient of making nuclear fission a long-term energy source." General interest. 1979.





- 28 **The LMFBR: Key to Our Energy Future.** Describes the Liquid Metal Fast Breeder Reactor (LMFBR), the status of breeder technology, and the benefits of and need for the breeder. General interest. 1978. Westinghouse Electric Corporation.
- 29 **The Next Step.** A current report on the status of the Clinch River Project, the need for the breeder, breeder development around the world, and the benefits the breeder offers to consumers. This booklet is the printed form of a multimedia presentation entitled **The Next Step** and reproduces the entire script and accompanying visuals side-by-side. The booklet can stand alone or augment the audiovisual presentation. Also useful for the classroom. **The Next Step** is available in three audiovisual formats—film, videotape and slides with cassette. (For complete information see the Audiovisual section.) 1980. Breeder Reactor Corporation.
- 30 **The Technical Accomplishments of the Clinch River Breeder Reactor Plant Project.** A comprehensive treatment of the significant technical advancements in breeder technology made by the Clinch River Project. The report was prepared by breeder experts from industry and private research and support institutions. Technical audiences. 1981. Atomic Industrial Forum, Inc.
- 31 **U.S. Fast Breeder Reactor Program Needs Direction.** A report on the Clinch River Project by the General Accounting Office (GAO)—the independent, watchdog agency created by Congress to audit government programs and make recommendations for more efficient and effective operations. The report analyzes the status of the U.S. fast breeder program and its role in the nation's energy mix. General interest. 1980.



32

- 32 **Using What We've Got: The LMFB and Full Utilization of Uranium Reserves.** A reprint from **Electric Perspectives** which details the value of the vast amounts of already mined, purified and stored uranium "tails." If used in breeder reactors, this valuable resource could yield the energy equivalent of almost twice the U.S. coal reserves. General and technical audiences. 1982. Edison Electric Institute.

## Periodicals



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- 33 **Breeder Backers.** Presents the statements of knowledgeable individuals, organizations, and respected authorities from many fields on nuclear power and the breeder reactor, and the Clinch River Project. General interest. Monthly. Breeder Reactor Corporation.
- 34 **Breeder Briefs.** The news publication about the Clinch River Project. Published primarily for the electric power industry and participants in the project. General interest. Monthly. Breeder Reactor Corporation.
- 35 **Clinch River Currents.** The employee newsletter for project participants. General interest. Monthly. Project Management Corporation.

## Speakers' Bureau

- 36 **The BRC Speakers' Bureau** provides specially trained speakers free-of-charge to present information on nuclear energy, breeder reactors and the role of the Clinch River

Breeder Reactor Plant. Topics range from a general overview of the status and scope of the project to highly technical discussions in the areas of engineering, licensing, public safety and construction. Speakers are senior staff members from all divisions of the project. Presentations are designed for consumer groups, labor organizations, women's groups, professional societies, academic institutions, civic, fraternal and church groups and service clubs. Films, slide presentations and other audiovisuals, information packages, and other aids are available for use in conjunction with the presentations. (See Publications section for **Breeder Reactor Corporation Speakers' Bureau** booklet.)

## Demonstration Programs

- 37 **Energy for the Future—The Breeder Reactor.** An educational project of Oak Ridge Associated Universities sponsored by Breeder Reactor Corporation. Oak Ridge Associated Universities is a private, independent research and education consortium of 50 colleges and universities. The 25- or 40-minute programs focus on the breeder reactor and the Clinch River Breeder Reactor Plant. The demonstrations are dramatized with lighted panels and other action-oriented aids that illustrate the "breeding" process, the physics of breeder reactors and other aspects of energy production. For information or scheduling contact Energy Education Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37830, (615) 576-0341. (See Publications section for **Energy for the Future** booklet.)

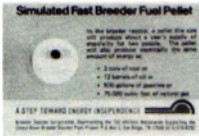
## Displays and Models, Educational and Visual Aids



- 38 **Displays and Models** illustrate how the Clinch River Plant will look, how a breeder works, the fuel used in the breeder, and the benefits that the breeder offers consumers and the economy. Illuminated panels feature the plant and its components. Modular design makes it possible to set up the display to fit the configuration and size of exhibit areas including those with limited space and large convention sites. Several smaller displays and suitcase models are also available. Requests should be made at least two months in advance of actual need.



# Educational Aids



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- 39 Breeder Fuel Pellet card.** An education aid for the general public and students. Simulates how breeder fuel looks and states the equivalent energy its pellets would display compared to coal, oil, gasoline or natural gas. 1980. Breeder Reactor Corporation.
- 40 How To Handle Nuclear Waste card.** A companion piece to the **Breeder Fuel Pellet** card. The waste disk illustrates how nuclear waste can be encapsulated in glass and safely isolated from the environment. Shows the amount of waste from a breeder for a family of four. 1980. Breeder Reactor Corporation.
- 41 Plant and Component Photos and Diagrams.** A wide range of photos and diagrams are available on a loan basis for conferences and seminars, educational projects and special information programs for the public. Visual aids include the architectural rendering of the Clinch River Plant, diagrams of the plant and its components and photos of major components.

# Film, Videotape, Sound/Slide Presentations

- 42 A World of Energy—The Breeder Reactor.** Takes viewers on a trip around the world to view international advancements in breeder technology through the medium of the 1982 World's Fair in Knoxville, Tennessee. With its theme of "Energy Turns the World," the fair is the setting for international pavilions and energy exhibits that display the latest breeder technology. In the French Pavilion, the focus is on the Super Phenix breeder reactor. In the U.S. pavilion, Dr. Alvin Weinberg, the Director of the Institute for Energy Analysis, explains what the breeder means to Americans. The Clinch River Plant is highlighted in America's Electric Energy Exhibit. President Reagan closes the film in a dedication ceremony where he calls for the development of safe nuclear energy including the Clinch River Breeder Reactor Plant Project. Available in 16mm film and ¾-inch videotape. A complete transcript and **Study Guide** are also available. (See Publication section). General interest. 1982. Breeder Reactor Corporation.



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- 43 Endless Energy.** Dr. Edward Teller, one of the world's most respected scientists, explores our energy future in this audiovisual presentation. He speaks his mind openly on controversial aspects of nuclear technology . . . safety . . . radioactivity . . . regulatory concerns. Dr. Teller displays a sample of plutonium and examines the myths and facts surrounding this valuable element. Standing next to an experimental fusion device, he explains how a fusion reactor works and its vast potential. In a nuclear control room, on a visual tour through a national laboratory, and on the site of the Clinch River Plant, Dr. Teller describes his vision of how the invisible world of the atom could fuel our energy future from "now to forever."

In two formats—16mm film and ¾-inch videotape, each 26 minutes long. Designed for general interest groups, consumers, students. A complete script and a **Discussion Guide** are available and are especially helpful for classroom use. (See Publication section for **Endless Energy** script and **Discussion Guide**.) 1981. Breeder Reactor Corporation.

- 44 Energy and the Breeder.** An audiovisual presentation that describes the breeder reactor's potential/contribution to the solution of long-range U.S. energy problems. The presentation points out that the U.S. is not only depleting its fossil fuel resources such as oil, gas, and coal, but that uranium ore for fueling light-water reactors could be in short supply by the end of the century. However, breeders could supply the fuel for the nuclear reactors for the foreseeable future. The uranium "tails" already stockpiled and the low-grade uranium ore that is currently uneconomical to mine and use in conventional reactors represent energy resources greater than all the known reserves of coal, oil, and gas in the world. **Energy and the Breeder** is offered on a free loan basis in two formats. It is available already packaged in a ready-to-play carousel with audio-cassette, or in a binder. An illustrated script comes with both formats. (See Publications section for script alone.) General and technical audiences. 1981. Breeder Reactor Corporation.

- 45 Progress Report '82.** A current report on the status of the Clinch River Project. Covers component manufacture, delivery, testing, and project milestones. Concise statement of project's status. Available in videotape and film. To be updated to include significant events as they occur. General and technical audiences. 1982. Breeder Reactor Corporation.



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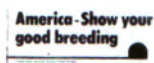


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- 46 **The Next Step.** Newscaster Calvin Sneed of ABC-TV in Knoxville, takes viewers on a tour that includes a visit to the Clinch River site, the Project Office and facilities where components for the nation's first large-scale demonstration breeder are being fabricated. In the process, he explains how a breeder works and shows viewers the enormous energy reserves locked up in the cylinders of U-238 fuel that could be used in the breeder. Sneed demonstrates why the Clinch River Project remains at the forefront of worldwide breeder technology. The presentation traces the history of breeder development from the 1940s to today and relates advances taking place around the world in building breeders.

In three formats—16mm film, videotape ( $\frac{3}{4}$ - and  $\frac{1}{2}$ -inch) and slides with cassette. The videotape and film are 14 minutes long. The 12-minute slide presentation comes with a cassette that carries the narration and automatically advances the slide carousel. Designed for general interest groups, consumers, students. An illustrated booklet with the script and accompanying slides is also available. The booklet is especially helpful for classroom use. (See Publications section for **The Next Step Script**.) 1980. Breeder Reactor Corporation.

## Bumper Stickers



SUPPORT  
THE  
BREEDER  
REACTOR



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49

- 47 **America—Show Your Good Breeding. Support the Breeder Reactor.** (rectangular)
- 48 **Clinch River Breeder Reactor Plant Project: A Step Toward Energy Independence.** (circular)
- 49 **A Step Toward Energy Independence—The Clinch River Breeder Reactor Plant Project.** (rectangular)



# Order Form

These information resources are available free. To order, fill in information requested. Print or type name, address, and other information and mail to Breeder Reactor Corporation, Information Division, P.O. Box U, Oak Ridge, TN 37830, or Call (615) 576-6202.

Number ☐ Title

## Publications

- ☐ 1. A World of Energy—The Breeder Reactor
- ☐ 2. An Alternative Long-Term Energy Supply Option
- ☐ 3. A Manufacturer's View of the U.S. Breeder Program
- ☐ 4. Breeder Basics
- ☐ 5. Breeding New Fuel From Waste
- ☐ 6. Breeder Reactor Corporation Speakers' Bureau
- ☐ 7. Breeder Reactors—Renewable Energy Resource
- ☐ 8. Clinch River Breeder Reactor Plant Cutaway
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- ☐ 10. Clinch River Breeder Reactor Plant Diagram
- ☐ 11. Design Data—Clinch River Breeder Reactor Plant
- ☐ 12. Endless Energy
- ☐ 13. Energy and the Breeder
- ☐ 14. Energy for the Future—The Breeder Reactor
- ☐ 15. Facts About the Clinch River Project
- ☐ 16. Highlights of the Liquid Metal Fast Breeder Reactor
- ☐ 17. How Much Radiation?
- ☐ 18. Let's Talk About Energy and the Atom
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- ☐ 22. Project Management Corporation Annual Report
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- ☐ 26. Answers to Your Questions About the Breeder and Nuclear Energy
- ☐ 27. The Clinch River Breeder Reactor—Should The Congress Continue to Fund It?
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- ☐ 31. U.S. Fast Breeder Program Needs Direction
- ☐ 32. Using What We've Got: The LMFBR and Full Utilization of Uranium Reserves

## Periodicals

- ☐ 33. Breeder Backers
- ☐ 34. Breeder Briefs
- ☐ 35. Clinch River Currents

## Speakers' Bureau

- ☐ 36. Breeder Reactor Corporation Speakers' Bureau

## Demonstration Programs

- ☐ 37. Energy for the Future—The Breeder Reactor

## Displays, Models, Educational and Visual Aids

- ☐ 38. Displays and Models
- ☐ 39. Breeder Fuel Pellet
- ☐ 40. How to Handle Nuclear Waste
- ☐ 41. Plant Component Photos and Diagrams

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- ☐ 46. The Next Step

## Bumper Stickers

- ☐ 47. America—Show Your Good Breeding (rectangular)
- ☐ 48. A Step Toward Energy Independence (circular)
- ☐ 49. A Step Toward Energy Independence (rectangular)

Name \_\_\_\_\_

Street address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Business or Organization \_\_\_\_\_

Telephone (Area Code \_\_\_\_\_) \_\_\_\_\_

**For additional copies or further information contact  
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P.O. Box U, Oak Ridge, TN 37830  
615/576-6202**

**The Nation's First Large-Scale Demonstration  
Breeder Reactor Plant  
An Equal Employment Opportunity Employer**

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