Central Research Institute of Electric Power Industry: Organization and Activities

Three Research Objectives

1. Cost reduction and ensuring reliability
2. Creation of integrated energy service
3. Harmonization of energy and environment

Organization of the Central Research Institute of Electric Power Industry

President
Executive Vice President

[Head Office]
- General Affairs Group
- Management Planning Group
- R&D Planning Group
- Public Communications Group

[Central CS Promotion Office]
- CS Planning Division
- CS Promotion Division

[Research Laboratories and Centers]
- Socio-Economic Research Center
  - Human Factors Research Center
- System Engineering Research Laboratory
- Nuclear Technology Research Laboratory
  - Nuclear Information Center
  - Low Dose Radiation Research Center
- Civil Engineering Research Laboratory
  - Nuclear Fuel Cycle Backend Research Center
- Environmental Science Research Laboratory
  - Solution Center for Environmental Issues
- Electric Power Engineering Research Laboratory
  - High Power Testing Laboratory
  - Shiobara Testing Yard
- Energy Engineering Research Laboratory
- Materials Science Research Laboratory
- Akagi Testing Center
- Komae Operation & Service Center
- Abiko Operation & Service Center
- Yokosuka Operation & Service Center
- Administrative Operations Center

Research Projects Implemented in Fiscal 2004

Total:	925 projects
* In-House Research:	371 projects
(Promotive Subjects:	17 Subjects)
(Base Research Subjects:	58 Subjects)
* Researches Commissioned by Electric Utilities and National Government:	554 projects

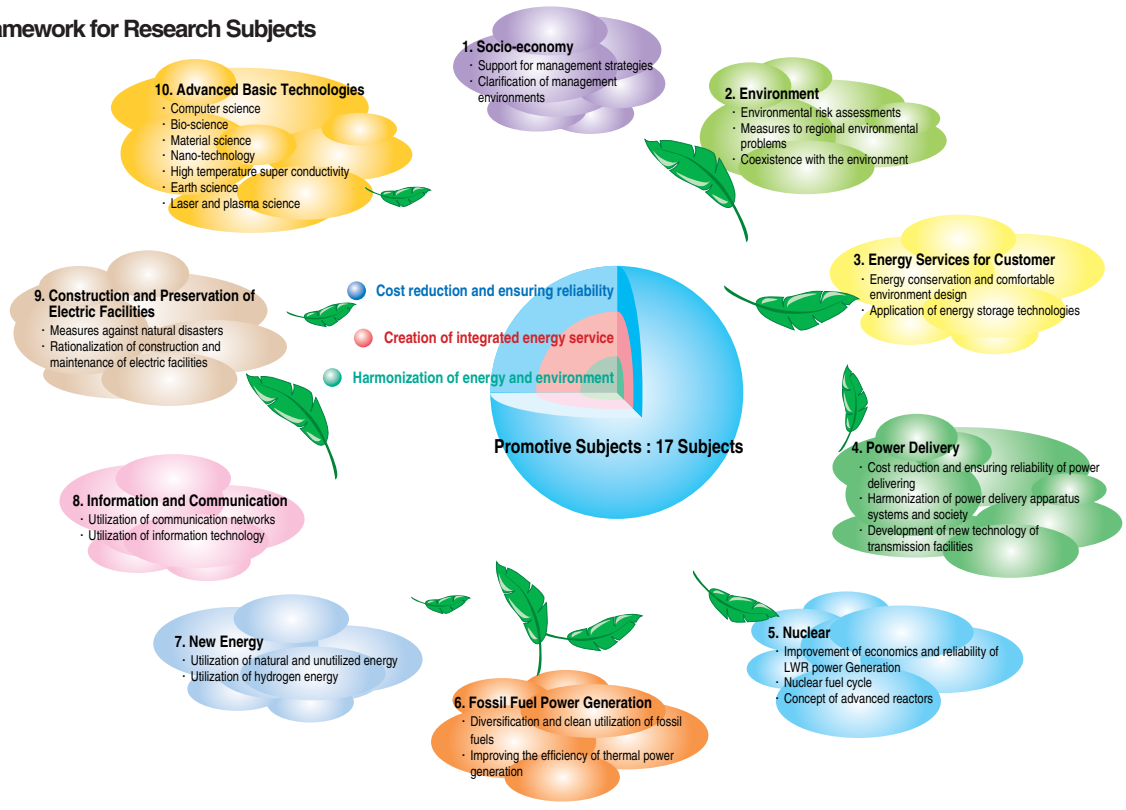
Staff Strength in Fiscal 2004

Total (not including executives)	802
* Research Staff	675
* Administrative Staff	127

Fiscal 2004 Expenditures

Total Expenditure	35.08 billion yen
* In-House Research and Research Commissioned by the Electric Utilities	
· Research Expenditure	15.98 billion yen
· Equipment Expenditure	4.90 billion yen
· Personnel & Overall Expenditure	7.32 billion yen
* Research Commissioned by National Government	6.88 billion yen

2004 Framework for Research Subjects



Promotive Subjects for Three Research Objectives and Base Research Subjects in Ten Fields

On the Publication of the Annual Research Report 2005

Ryoichi Shirato,
President
Central Research Institute
of Electric Power Industry

In the energy market which has begun the path to free competition due to the progress of deregulation, not only electric utilities but also those engaged in self-generation, wholesale of electricity and PPS are now required to conduct their business activities while harmonising economic viability and a stable supply with global environmental issues.

The Central Research Institute of Electric Power Industry (CRIEPI) has long understood these issues as a trilemma and has been acting as a general research organization engaged in all energy-related fields. Since FY 2004, the research structure has been reorganized based on specialist fields to prioritise the research themes and to consolidate the basic research.

Meanwhile, conscious efforts are being made to enhance CS activities, including merchandise development and entrusted research work as well as the consultation function in response to the actual demands with a view to positively contributing to society and solving environmental problems. Through these activities, the CRIEPI aims at establishing itself as “a reliable research institute” for electric utilities as well as electrical manufacturers, other industries, the government and society at large.

The Annual Research Report 2005 outlines the results of the principal research conducted in FY 2004. We would be extremely pleased if this publication further enhances the understanding of the CRIEPI’s activities on the part of its researchers and most grateful for their valuable opinions.

Principal Research Results

In fiscal 2004, the CRIEPI conducted a total of 925 research projects, focusing on the achievement of three goals, i.e. “cost reduction and ensuring reliability”, “creation of integrated energy services” and “harmonization of energy and environment”. Of these 925 projects, the results of 59 projects are compiled in this Annual Report 2005. We believe that these projects particularly contribute to solving a number of technological and economic problems faced by electric utilities. They were selected according to the following criteria and are presented here as our principal research results.

- Projects with a particularly high value in terms of innovation, creativity, scientific and technical achievements, economic efficiency and practicality
- Projects which are timely in view of the current socioeconomic and energy situations
- Projects which demonstrate the CRIEPI’s abilities, such as our general R & D capability and expertise in basic as well as exploratory research

We will be greatly honoured if the reader finds the research results introduced in the Report useful to facilitate the further advancement of knowledge and technology.

Shirabe Akita, Chairman
Annual Research Report 2005 Editing Committee

Contents

Base Research Subjects

1. Socio-economy

2. Environment

3. Energy services for customer

4 Power Delivery

5. Nuclear

6. Fossil Fuel Power Generation

I . Principal Research Results

This Annual Report introduces the principal results of 59 projects conducted in fiscal 2004 in the following fields.

Promotive Subjects

- A Cost reduction and ensuring reliability
- B Creation of integrated energy service
- C Harmonization of energy and environment

Base Research Subjects

- 1 Socio-economy
- 2 Environment
- 3 Energy Services for Customer
- 4 Power Delivery
- 5 Nuclear
- 6 Fossil Fuel Power Generation
- 7 New Energy
- 8 Information and Communication
- 9 Construction and Preservation of Electric Facilities
- 10 Advanced Basic Technologies

Note : The positions of the researchers listed in the principal research results are as of the end of September, 2005.