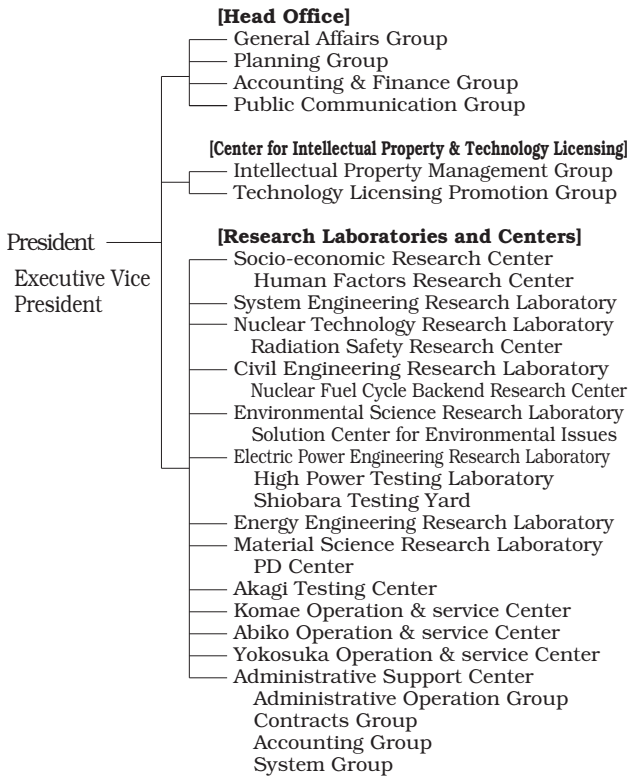


Central Research Institute of Electric Power Industry: Organization and Activities

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



Research Projects Implemented in Fiscal 2006

Total	636 projects
* Research Subject	78 projects
(Project Research Subjects to Respond to the Field Requirements	41 Subjects)
(Basic Research Subjects to Back the Fields up	37 Subjects)
* Funded Researches by Electric Utilities and National Government and others	558 projects

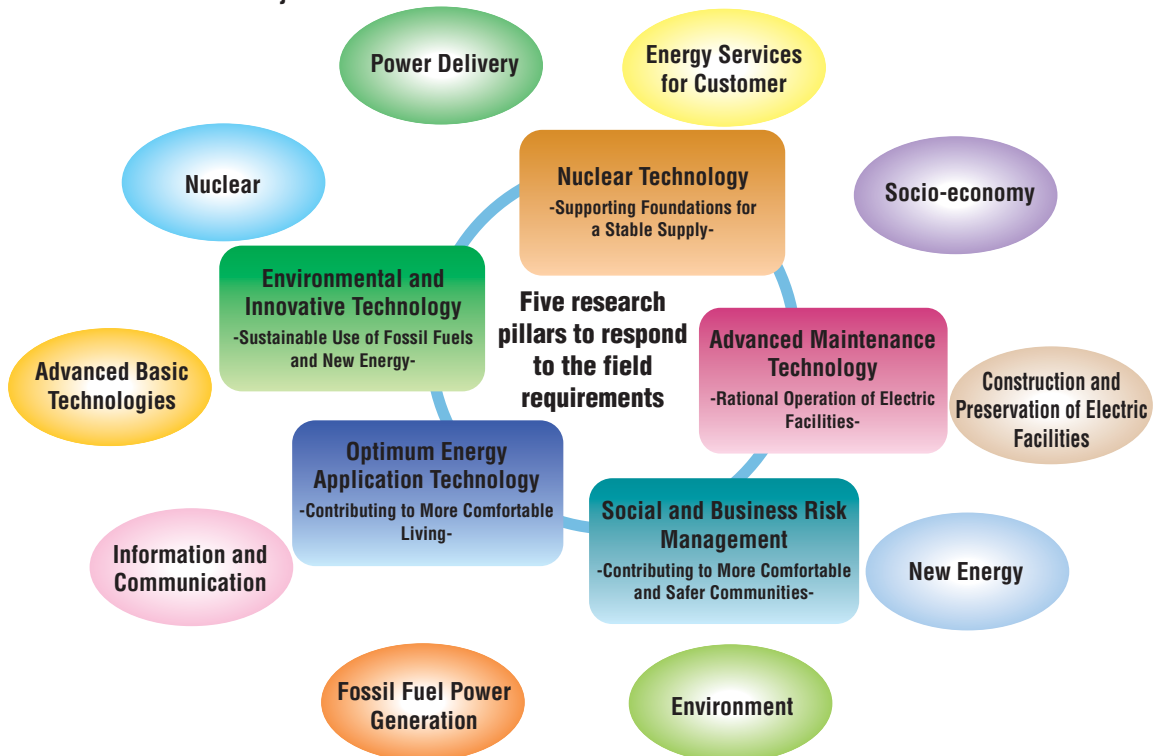
Staff Strength in Fiscal 2006

Total (not including executives)	785
* Research Staff	676
* Administrative Staff	109

Fiscal 2006 Expenditures

Total Expenditure	343.7 billion yen
* Business Activity Expenditure	266.0 billion yen
(Business Expense Expenditure	244.4 billion yen)
(Management Cost Expenditure	21.6 billion yen)
* Investment Activity Expenditure	
(Research Facility Acquiring)	77.7 billion yen

2006 Framework for Research Subjects



Ten Research Fields to back Five Research Pillars up

On the Publication of the Annual Research Report 2007



Ryoichi Shirato,
President
Central Research Institute
of Electric Power Industry

Today, Japan is facing a serious problem of energy security as a result of the falling operating rate of nuclear power generation in the aftermath of the Niigata-Chuetsu earthquake and the globally increasing demand for and price hike of energy resources. Meanwhile, global environmental issues are attracting unprecedented interest as an unavoidable, critical risk while a global framework to deal with such issues is being developed as seen with the publication of the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC).

Under these circumstances, the Central Research Institute of Electric Power Industry has been conducting a wide range of research activities as a general research institute for all energy-related fields while focusing on the integration of the need for a stable energy supply and solutions to global environmental issues as an urgent task.

In FY 2006, research activities centered on five pillars, i.e. nuclear technology, advanced maintenance technology, environmental and innovative technology, optimum energy application technology and social and business risk management, to respond to the actual needs in the field. Moreover, through the activities of the Intellectual Property Centre established last year, intellectual properties are being created while ensuring that the outcomes of our research activities contribute to society. At the same time, based on our belief that the fundamental technologies which support our research activities are the real assets of the CRIEPI, we are striving to make the CRIEPI a highly dependable research institute for not only the electric power industry but also for electrical manufacturers, other industries and society in general.

The Annual Research Report 2007 outlines the principal research results in FY 2006. We will be extremely pleased if this publication further enhances the understanding of the CRIEPI's activities on the part of the reader and will be most grateful for your valuable opinions.

Preface

In fiscal 2006, the CRIEPI conducted a total of 78 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 78 projects, the results of 50 projects are compiled in this Annual Report 2007. 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 2007 Editing Committee

Annual Research Report 2007

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I . Principal Research Results

This Annual Report introduces 50 principal results of the projects conducted in fiscal 2006 in the following fields.

General Overview

- A Promoted project subjects / project subjects
- B Base research subjects

Research Fields

- 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, 2007.