# The Accuracy of This Report

To ensure the accuracy and comprehensiveness of important environmental and societal data as well as performance indicators (hereinafter "sustainability information") contained in the J-POWER Group Sustainability Report 2014, the sustainability information herein has been independently reviewed and certified by Ernst & Young Sustainability Co., Ltd. in accord with the sustainability report review and registration system of the Japanese Association of Assurance Organizations for Sustainability Information (J-SUS). As a result of this review, an "Independent Assurance Report" has been received.

The J-SUS mark on the back cover indicates that the sustainability information contained in this report fulfills the reliability criteria established by the Association for its sustainability report review and registration system.



### Translation

## Independent Assurance Report

04 July, 2014

President Electric Power Development Co., Ltd.

Ernst & Young Sustainability Co., Ltd.

We, Ernst & Young Sustainability Co., Ltd. have been commissioned by Electric Power Development Co., Ltd. (hereafter the "Company") to provide limited assurance on the Key Sustainability Performance Indicators (hereafter the "Indicators") of the Company and its major subsidiaries for the year ended March 31, 2014 included in the Company's Sustainability Report 2014 (hereafter the "Report").

#### The Company's Responsibilities

The Company is responsible for the preparation of the Report in accordance with the Company's policies and standards found at page 2 and 49 of the Report as criteria.

### Our Independence and Quality Control

Our independence and Quainy Control

We have compiled with the independence and other ethical requirements of the Code of Ethics for
Professional Accountants issued by the International Ethics Standards Board for Accountants, which is
founded on fundamental principles of integrity, objectivity, professional competence and due care,
confidentiality and professional behavior.

We apply International Standard on Quality Control 1 and accordingly maintain a comprehensive system
of quality control including documented policies and procedures regarding compliance with ethical
requirements, professional standards and applicable legal and regulatory requirements.

## Our responsibilities

Based on the assurance procedures performed, nothing has come to our attention that caused us to believe that the Indicators of the Company and its major subsidiaries for the year ended March 31, 2014 included in the Report were not measured and reported in accordance with the Company's policies and standards in all material respects.





Document review (Towa Power Administration Office, Iwate Prefecture)



Site inspection (Matsushima Thermal Power Station, Nagasaki Prefecture)

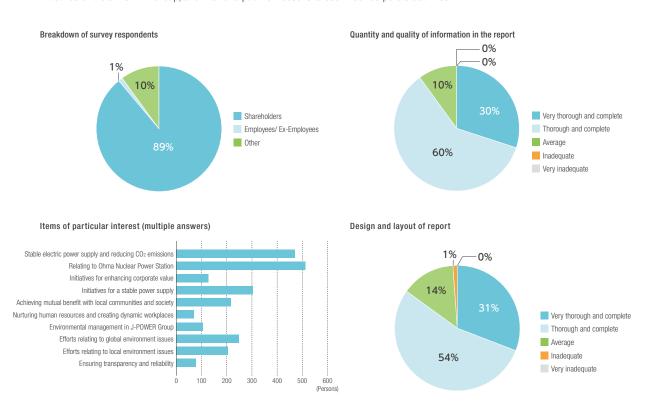
Independent third-party certification of J-POWER Group Sustainability Report 2014

# **External Evaluation and Outside Opinions**

The J-POWER Group strives to incorporate third-party evaluations and recommendations, as heard in Sustainability Report questionnaires, reviews, and so on, into our activities. By means of these evaluations and opinions, we determine the kind of business development and environmental activities that others expect of the J-POWER Group and work to improve our business activities. We also enhance our transparency and reliability by making such comments public.

# Readers' Opinions

We received many comments from readers in response to the J-POWER Group Sustainability Report 2013 (published July 2013) (849 respondents). We consider these valuable comments to be important guidelines for compiling subsequent reports and for the future initiatives of the J-POWER Group, and intend to put their lessons to use in our corporate activities.



## Expectations for the J-POWER Group

Typical Comments	Typical Comments
Global warming is a major issue, and consequently, I would like J-POWER, a coal-fired power station operator, to describe in detail its measures to reduce CO <sub>2</sub> .	In light of the seriousness of global warming, this report contains a special feature on the J-POWER Group's new plans concerning coal-fired power, technology development, and various other measures.  Please refer to the special feature on pp. 7-12 of this report.
The Ohma Nuclear Power Station has not yet started commercial operation, but I do not think that supplementary information has been adequate. It is desirable for the company to fulfill its responsibilities regarding transparency and accountability to shareholders and society, taking into account the risks.	With regard to the Ohma Nuclear Power Station, we have implemented consistent safety measures based on full use of the latest knowledge and the new safety standards of the Nuclear Regulatory Authority in an effort to create a power station that is trusted by local residents. We have made efforts to augment the information included in this report in order to fulfill our disclosure responsibilities.  Please refer to the information on the Ohma Nuclear Power Station on pp. 13-16 of this report.
Employment of women is lower than expected. We are now in a time when calls are being made for women to be employed in greater numbers in business, and I believe that this is particularly necessary for electric power companies that have an image as traditional heavy industry.	The J-POWER Group encourages diversity so that we can make use of a wide range of human resources without regard for gender, age, or other such characteristics. The comment sections of this report include statements from various personnel within the J-POWER Group.  Please refer to Recruiting and Developing Human Resources and Creating Dynamic Workplaces on pp. 36-38 of this report.
It is good that the report contains a lot of information, but there are too many pages and there is too much text, making it difficult to read in its entirety. A more compact report is desirable.	In the interests of making it easier to read, this report has approximately half of the number of pages than the report from two years earlier and the text size has been enlarged. The report also uses more charts and tables. Going forward, we will continue our efforts to prepare reports from the perspective of the readers.

# **Third-Party Opinion**

To help us meet society's expectations regarding our corporate social responsibility (CSR) and play our part in the sustainable development of Japan and the world, in June 2014, the J-POWER Group asked outside experts who specialize in energy, the environment, and CSR to give their opinions concerning the Group's business efforts and the disclosure of information through this sustainability report from the perspective of achieving harmony between energy and the environment.

In the lead-up to the release of the fifth assessment report of the IPCC\*1 scheduled for October 2014, much information concerning the effects of global warming and measures to mitigate them as well as responsive measures has been publicly released. Mitigation measures will require the pursuit of comprehensive policies that address both greenhouse gas sources and sinks. Considering that coal-fired power generation accounts for a large portion of CO<sub>2</sub> emissions, a strategy for global adoption of effective source countermeasures made possible by J-POWER's advanced technological capabilities would be expected to contribute significantly to global warming mitigation measures.

J-POWER is conducting research and development on the use of CCS technology for underground storage of the CO2 currently released into the atmosphere from the combustion of fossil and other fuels, but I believe that it will be necessary for industry and academia to collaborate in the search for means of using CO2 such as integrating new biomass technologies. This will become comprehensive technology that generates new value by linking sources and sinks, and if such technology spreads on a global scale as a part of the clean coal technologies that J-POWER is pursuing, I believe significant contributions would be made to mitigation.

With regards to biomass, in addition to biomass mixed combustion,

J-POWER is also conducting research and development on biomass power generation\*2 using perennial vegetation. Measures that integrate this type of electric power generation through local production for local consumption with preservation and management of semi-natural areas used by local communities and job creation efforts will be highly significant from the perspectives of mutual benefit for local communities and the natural environment. I have high expectations that J-POWER will play a role as a sustainability coordinator for energy, the environment, and local communities

- Intergovernmental Panel on Climate Change
- \*2 Technology for generating electricity by converting grassland plants that can be repeatedly harvested such as reeds, silver grass, or plume grass to gas for combustion

Professor and Doctor of Science. Department of Ecosystem Studies. Graduate School of Agricultural and Life Sciences, The University of Tokyo





The Japanese Stewardship Code released by the Financial Services Agency in February 2014 includes the environment, society, and governance (ESG) as indicators of corporate status that institutional investors should understand, and I examined the direction of the content of the J-POWER Group Sustainability Report keeping in mind that investor interest in ESG will increase in the future.

The social portions of the Report are easy to understand and contain specific information, but the governance portions focus on organizational structures. From an international perspective, governance is not limited to internal organizations, and there is a tendency for the content to be broad with a focus on the impacts of systemic requirements on governance. For example, it would be desirable to include information on the direction and impact of reform of electric power systems.

In the environmental portion, the feature on coal-fired power provides detailed information on new projects and the status of technology development, but considering that interest is rising in the financial effects of global warming countermeasures including the need for new CO2 reduction targets and CCS facilities, J-POWER could describe substantive management issues by combining previously disclosed risk information and breakdowns of facility investments and research and development expenditures with financial information such as electric power unit prices.

With regard to the Ohma Nuclear Power Station, there is detailed information on the effects regarding global warming as well as efforts to enhance safety, but the public remains uneasy about nuclear power in general, and it is expected that investors will be increasingly interested in expenses relating to compliance with the new regulatory standards for improving safety and recycling nuclear fuel. From the perspective of the long-term creation of value, it is necessary for J-POWER to carefully and in good faith disclose information concerning its business implementation intentions as well as risks such as potential financial impacts and changes in policy.

> Director and Certified Public Accountant PricewaterhouseCoopers Sustainability Co., Ltd.

> > Ryoji Terada



The Sustainability Report is a tool for J-POWER to convey information. on its activities to the general public. For this reason, the information and messages in the report should be specific and quantitative and explain in an easy-to-understand manner J-POWER's approaches.

For example, I expect J-POWER to explain more clearly whether it has chosen to increase the efficiency of coal-fired power generation rather than switching to gas-fired thermal power generation and, with regard to curtailing CO<sub>2</sub> emissions, how much those increases in efficiency can match the introduction of renewable energy.

There is much specific content concerning the roles and responsibilities of J-POWER facilities in Japanese society. Coal-fired power contributes to the trade balance, and can also be praised for contributing to the enhancement of Japan's energy security through the diversification of energy sources. With regard to regional cooperation, the Sakuma Frequency Converter Station makes it possible to link the power grids of eastern and western Japan, which utilize different frequencies, and the Hokkaido-Honshu Electric Power Interconnection Facility, which links Hokkaido with Honshu, contributes to the introduction of renewable

energy in Hokkaido.

Nuclear power is CO2-free power source and makes various other contributions including contributing to bargaining power with regard to imported resources such as LNG, which is maintained in an operable form, and J-POWER should continue actively disseminating information throughout the process of constructing the Ohma nuclear power station.

Associate Professor and Doctor of Engineering Graduate Course of Technology Management for Innovation, School of Engineering, The University of Tokyo

Gento Mogi



Japan is highly reliant on coal-fired power as a baseload power source, and a similar trend can be seen throughout Asia. As a result, the presentation of detailed information concerning J-POWER efforts to promote low-carbon power generation including measures to increase efficiency in a feature of this report is important from the perspective of disseminating information to the general public.

Mercury is one of the environmental impacts resulting from coalfired power generation. It is my understanding that emissions in Japan are extremely low as a result of outstanding equipment that removes mercury, but coal-fired power generation is a major source of atmospheric releases of mercury around the world. The Minamata Convention on Mercury adopted in 2013 strictly regulates the manufacture and release of mercury globally. It would be beneficial for J-POWER to respond to growing public interest in this issue by providing information concerning its mercuryrelease countermeasures.

In light of the need for large-scale power sources to support stable electric power supplies, J-POWER discloses information concerning its efforts to implement adequate safety measures concerning the Ohma Nuclear Power Station, but further efforts concerning risk communications with the local community are desirable.

From the perspective of the future of energy in Japan, there are expectations that J-POWER will adopt approaches that enable cooperation with regional revitalization through its electricity business in the form of social contribution programs and that it will develop technology relating to hydrogen energy.

I expect that J-POWER will provide information in its reports on its responses concerning the future full-scale reform of electric power systems.



Journalist, Environmental Counselor Yuko Sakita

## A Response to Opinions

Thank you for these valuable opinions. All members of the J-POWER Group at each worksite are committed to performing their work with an understanding of the increasing importance of stable electric power supplies in Japan and environmental preservation including reducing CO2 in order to conscientiously fulfill the diverse and increasing responsibilities that society expects of businesses.

Going forward, we will continue reporting on the J-POWER Group's activities through sustainability reports.

Executive Vice President and Chairman of J-POWER Group Environmental Management Promotion Board

Yoshihiko Sakanashi







## **Electric Power Development Co.,Ltd.**

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## Reliability Assurance



Inspection/Registration Mark Indicates that the report has been inspected by a third party organization and satisfies "Sustainability Report Inspection and Registration Mark Conferment Standards."