

# ADDRESS CLIMATE CHANGE AND ENVIRONMENTAL PRESERVATION

As a medium- to long-term environmental management plan to contribute to the realization of the NEC Group Vision 2017, NEC developed an action plan in June 2010 called the NEC Group Environmental Management Action Plan 2017/2030. Under the plan, NEC is tackling three key themes—low carbon, ecosystem and biodiversity preservation, and resource recycling and conservation.

## Promoting the NEC Group Environmental Management Action Plan 2017/2030

NEC has set the target of reducing total CO<sub>2</sub> emissions by 15 million tons by fiscal 2018 through the provision of IT solutions that reduce the environmental impact of customers and society, with the aim of realizing a low-carbon society. In fiscal 2013, NEC helped to reduce an additional 2.98 million tons of CO<sub>2</sub> emissions. This represented total CO<sub>2</sub> emission cuts of 7.41 million tons over 3 years from fiscal 2011, so NEC is thus proceeding at a pace ahead of its target, and will continue focusing on these activities.

By fiscal 2018, NEC aims to lower CO<sub>2</sub> emissions at product usage stages by 80% from fiscal 2006 levels through improvements to the energy efficiency of its products. In fiscal 2013, the reduction was 64%. A good example is NEC's Eco Symbol Star-approved, digital terrestrial TV transmitters for TOKYO SKYTREE®, which incorporate an ultrahigh efficiency water-cooled power amplifier. These transmitters consume more than 40% less electricity than conventional counterparts.

From the perspective of ecosystem and biodiversity preservation, NEC has been developing biodiversity conservation solutions that draw on the NEC Group's

advanced technologies and products. In the year under review, NEC started disseminating information on three solutions that contribute to ecosystem and biodiversity preservation.

NEC is employing its NeCycle™ bioplastic in products to encourage the widespread use of this material, as an initiative for promoting recycling and conservation of resources.

### Strengthening Scope 3 Compliance

Since fiscal 2013, NEC has been reinforcing adherence to the Scope 3 Standard under the Greenhouse Gas Protocol, with the aim of cutting overall CO<sub>2</sub> emissions in its supply chain. In fiscal 2013, NEC obtained validations from third-party institutions and confirmed calculation techniques based on the results of the previous term in building a framework to collect information. The NEC Group generated a Scope 3 percentage of 94% for fiscal 2013 against a Scope 1 and 2 aggregate of 6%. Looking ahead, NEC will improve the energy-saving performance of its products, and at the same time work to reduce overall CO<sub>2</sub> emissions in its supply chain.

## Biodiversity Preservation Programs at the Abiko Plant

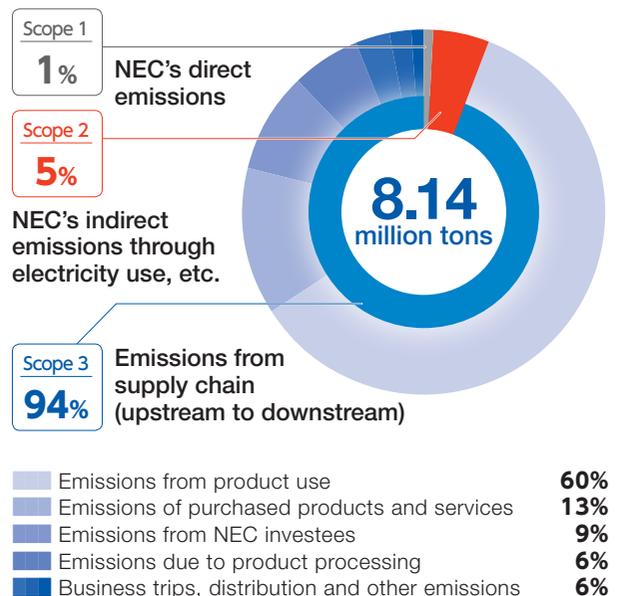
NEC's Abiko Plant is located in a rich natural environment, centered on four ponds. The area around the ponds is home to a brook damselfly (*Coperata tokyoensis*), which is an endangered species. Also inhabiting the ponds are exotic fish that threaten native species and are upsetting the environmental balance.

NEC collaborated with the Teganuma Pond Aquatic Life Research Society in completely draining one of the ponds to remove

numerous exotic fish. Employees and their families took part in an initiative to set up a biotope to protect the brook damselfly. Around 300 people participated in four flora and fauna observation events.



A brook damselfly



## Japan's First Fixed Home Energy Storage System Rental Service\* Begins

Since the Great East Japan Earthquake, there has been a great need for stable electricity supplies, distributed power to address electricity output fluctuations, and to secure emergency power supplies. The uptake of battery storage systems is extremely desirable in this context. Regular households also increasingly need to use less electricity as well as to secure access to power in disasters or outages.

To accommodate such social expectations, NEC joined forces with ORIX Corporation and EPCO Co., Ltd. to establish ONE Energy Corporation, which harnesses the expertise and strengths of all three partners. ONE Energy has launched a service employing a fixed lithium-ion battery storage system. This setup offers new lifestyle alternatives to households by enabling them to “skillfully store and wisely use electricity.”

ONE Energy offers a new energy service that includes fixed monthly rental charges and simulations of installation benefits.

Users of this service can store cheaper off-peak midnight electricity that can be consumed during the day, curbing their power bills, while securing emergency power supplies.

In addition, the operational status of the battery storage system is constantly monitored remotely through cloud services. ONE Energy offers proper support for each user such as replacing batteries if performance deteriorates. A smart house app lets users visualize home energy usage by

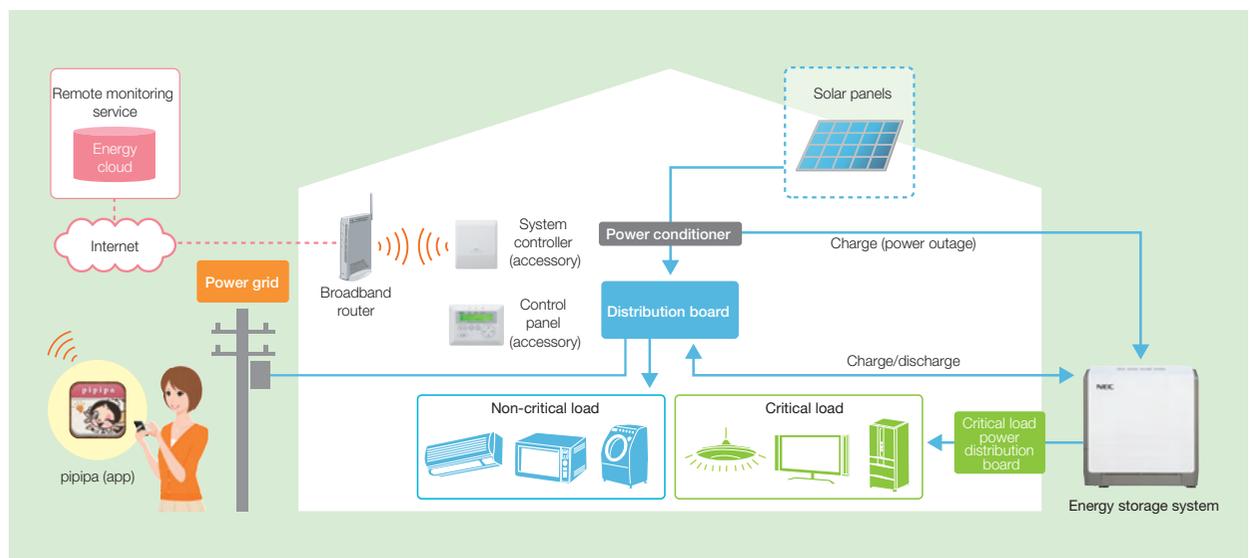


Joint press conference by ORIX, NEC and EPCO

enabling them to check power savings through their smartphones and to be supplied with services such as power savings forecasts and power saving options.

In the future, ONE Energy may explore the provision of more new energy services such as networking smart houses so it can supply low-cost electricity, and buying and trading surplus electricity.

Through these sorts of activities, NEC will promote the uptake of battery storage systems to contribute to the realization of an energy-efficient society.



\* As of April 2013, SVP JAPAN Co., Ltd. survey