



May 20, 2021

To whom it may concern

TOKAI Holdings Corporation
Katsuhiko Tokita, President & CEO
(Code No. 3167 Tokyo Stock Exchange First Section)

Formulation of the "Carbon Neutrality Vision"

TOKAI Holdings Corporation today announced the formulation of "Carbon Neutrality Vision."

Under the corporate philosophy, "For customers' livelihood along with the region, together with the earth, we will continue to grow and develop," the TOKAI Group has been working to expand the use of clean gas and to promote the use of high efficiency gas equipment. In response to the growing social demand for measures to cope with global warming, we will further promote the use of environmentally friendly energy equipment. We will also utilize renewable energy and electric vehicles in our business activities, and achieve carbon neutrality by 2050.

1. By promoting carbon neutralization of gas with the introduction of innovative technologies
The TOKAI Group will achieve carbon neutrality by 2050
2. By making efforts to reduce CO2 emissions even before the introduction of innovative technologies, In 2030, the TOKAI Group will
 - (1) Reduce household gas CO2 emissions by 170,000 tons
(Equivalent to 50% of household gas CO2 emissions of 360,000 tons in FY2020)
 - i. Reduce CO2 emissions by 70,000 tons through the widespread use of high efficiency gas equipment and others
 - ii. Reduce CO2 emissions by further 100,000 tons by facilitating the residential installation of solar power systems
 - (2) Reduce CO2 emissions generated from its operating activities by 13,000 tons
(Equivalent to 70% of CO2 emissions of 18,000 tons in FY2020)
3. Decarbonization is not a constraint or cost but an opportunity for future growth
 - (1) The TOKAI Group will promote decarbonization of households that combine renewable energy with high efficiency gas equipment and storage batteries.
The Group will also propose new energy utilization compatible with carbon neutrality
 - (2) Gas continues to play an important role for resilience such as disaster response

The TOKAI Group will continue to promote efforts to achieve carbon neutrality and contribute to resolving social issues such as climate change as a company that supports the comfortable lives of local communities.

For details, please refer to the attached "TOKAI Group's Carbon Neutrality Vision."

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TOKAI Group

Carbon Neutrality Vision



TOKAI Holdings Corporation

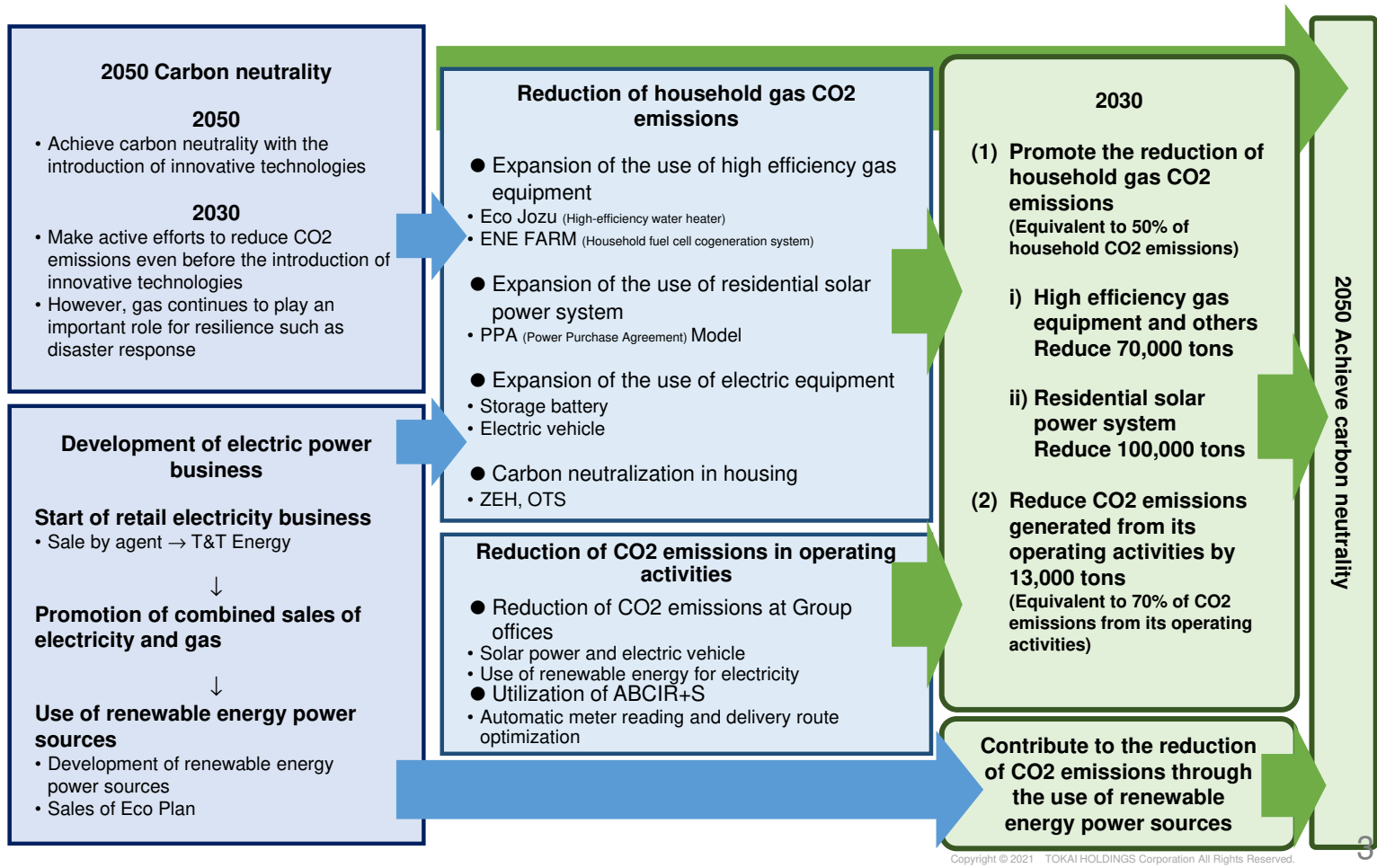
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Policy for Carbon Neutrality Initiatives

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 - ii) **Reduce CO₂ emissions by 100,000 tons by facilitating the residential installation of solar power systems.**
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Carbon Neutrality Vision (Framework)



Achievement of Carbon Neutrality

- The Japan LP Gas Association promotes research and development of carbon neutral LP gas in the "Green LP Gas Study Group." They aim to achieve carbon neutralization of LP gas by 2050 with the introduction of innovative technologies such as propanation*1 and bio LP gas*2.
- In the city gas business, research and development of methanation and CCUS (Carbon dioxide Capture, Utilization and Storage)*3 have been promoted to achieve carbon neutralization of city gas in 2050.
- The TOKAI Group actively cooperates with the gas industry initiatives from the standpoint of a retailer that sells gas to customers. We will decarbonize gas sold through the procurement and sale of carbon neutral gas, and will achieve carbon neutrality by 2050.






*1 Technology to synthesize propane artificially from hydrogen and carbon dioxide

*2 Technology to generate propane from livestock manure and others

*3 Technology to separate, recover, use and store carbon dioxide

Measures to Reduce Household Gas CO2 Emissions

- By making active efforts for decarbonization and low carbonization even before the introduction of innovative technologies, the TOKAI Group will intend to significantly reduce CO2 emissions by 2030.
 - However, energy supply requires resilience at the time of a disaster such as earthquakes and typhoons. Gas energy continues to play an important role in the stable energy supply.
- We will reduce household gas CO2 emissions by **70,000 tons** by Eco Jozu and others. We will also promote the use of residential solar power systems, storage batteries, electric vehicles, and other electric equipment.

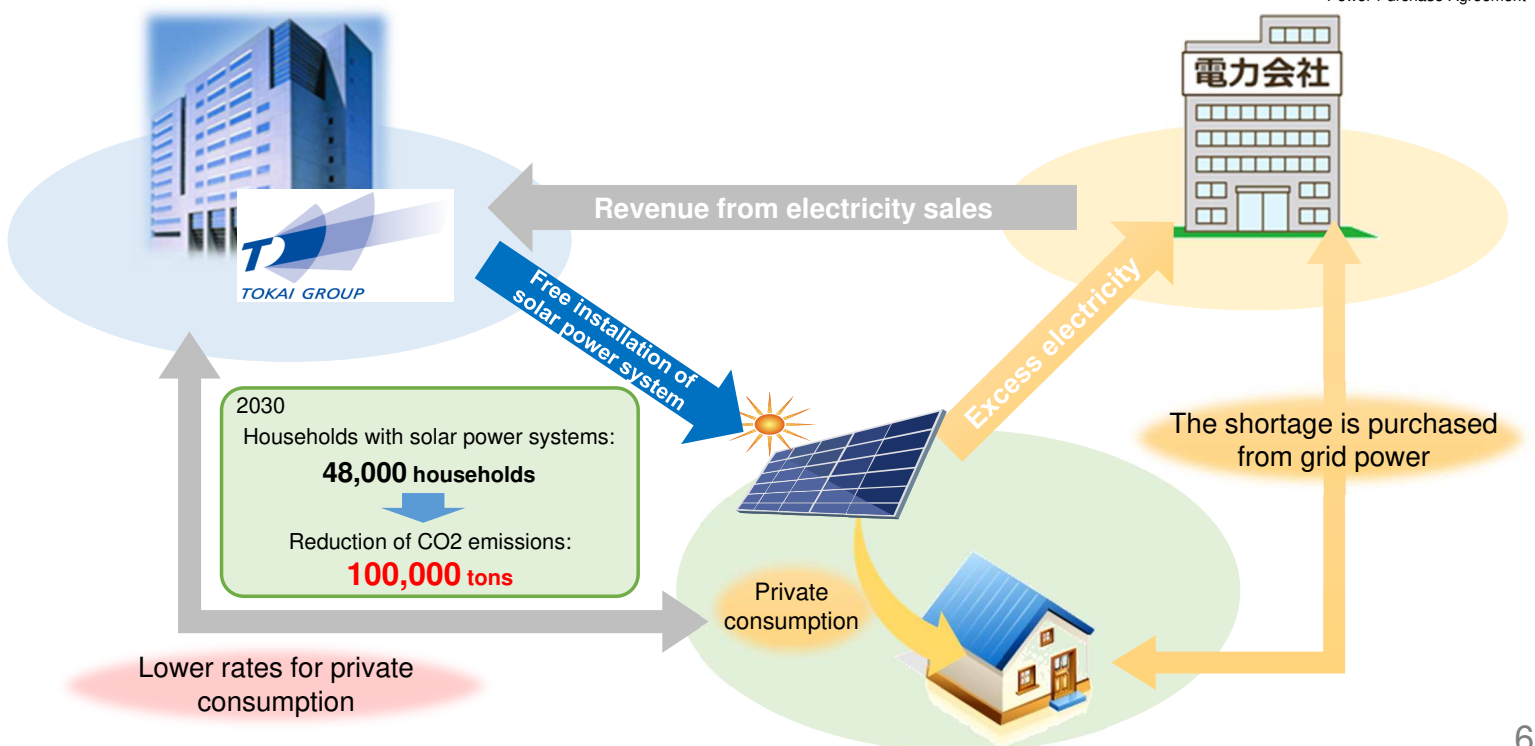
<h3>Eco Jozu</h3>  <ul style="list-style-type: none"> Improvement of energy efficiency by utilizing waste heat Promotion of hybrid water heaters 	<h3>ENE FARM</h3>  <ul style="list-style-type: none"> Efficient use of electricity and heat Promotion of decarbonization combined with solar power 	<h3>Solar power</h3>  <ul style="list-style-type: none"> Major tool for decarbonization <ul style="list-style-type: none"> PPA Model Departure from FIT 	<h3>Storage battery</h3>  <ul style="list-style-type: none"> Storage for in-house consumption Essential to expansion of renewable energy use 	<h3>Electric vehicle</h3>  <ul style="list-style-type: none"> Substitute for gasoline-powered vehicles Useful as storage battery
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PPA Model for Promotion of Solar Power Systems

- We use PPA Model* to promote the use of solar power systems. In the PPA model, providers install solar power generation equipment at houses free of charge to enable sale of excess electricity (FIT) and supply cheaper electricity for private consumption.
- We will reduce CO2 emissions by **100,000 tons** by 2030 by installing solar power systems at 48,000 households.

*Power Purchase Agreement



Carbon Neutralization in Residences

- We promote the installation of gas equipment and residential solar power systems that will lead to reduction of CO2 emissions, and advance initiatives to realize CN for the entire house.
- As a home seller, we have been working on Zero Energy House (ZEH) from early on, but last year we developed and launched OTS House, which is self-sufficient in water and electricity.

ZEH (Net Zero Energy House)



A house whose annual energy consumption balance comes out even by improving the insulation and airtightness, reducing "energy used" through a variety of eco technologies, and "creating energy" by solar power

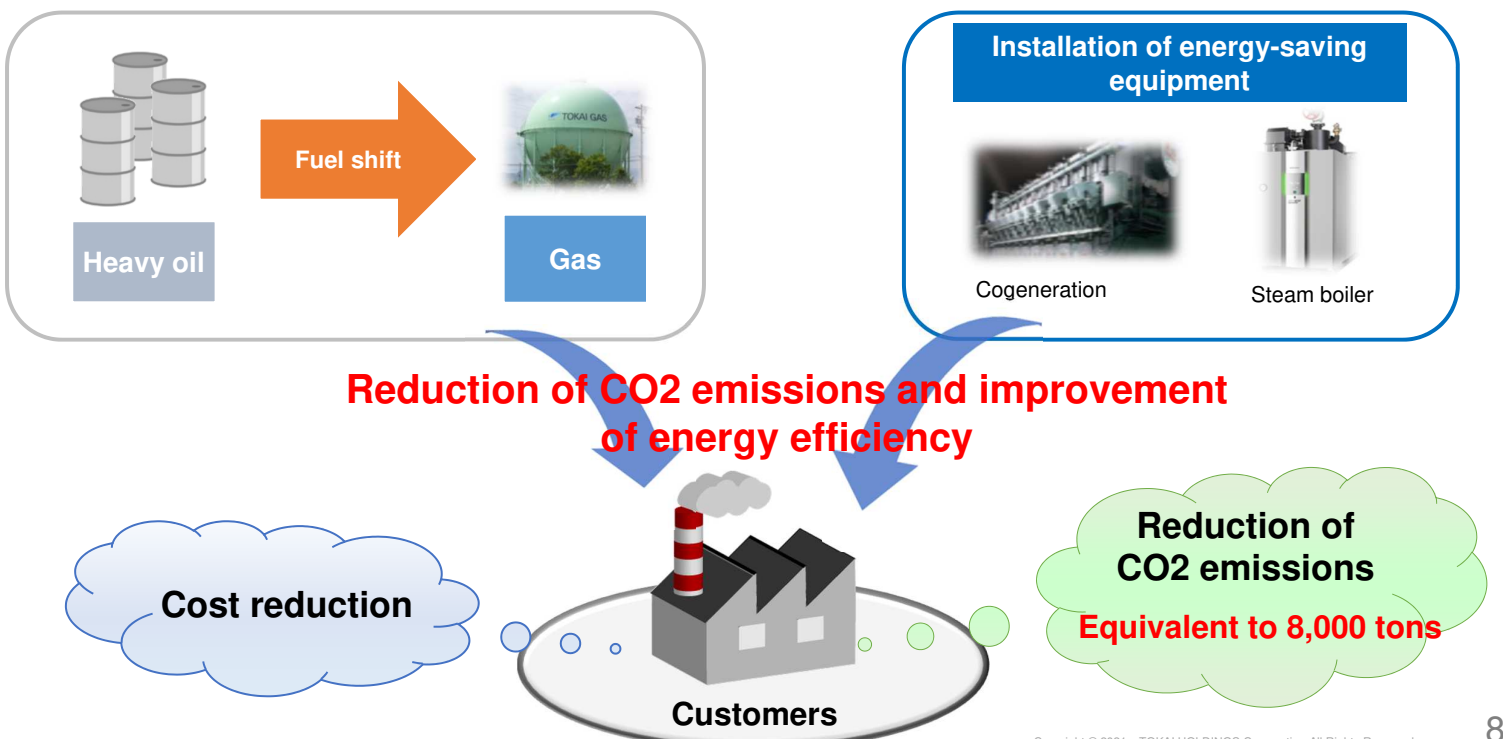
OTS House (ON THE SPOT)



A house that is completely self-sufficient in water and electricity, so that it is possible to live a normal life even in the event of a power failure or water outage due to a natural disaster

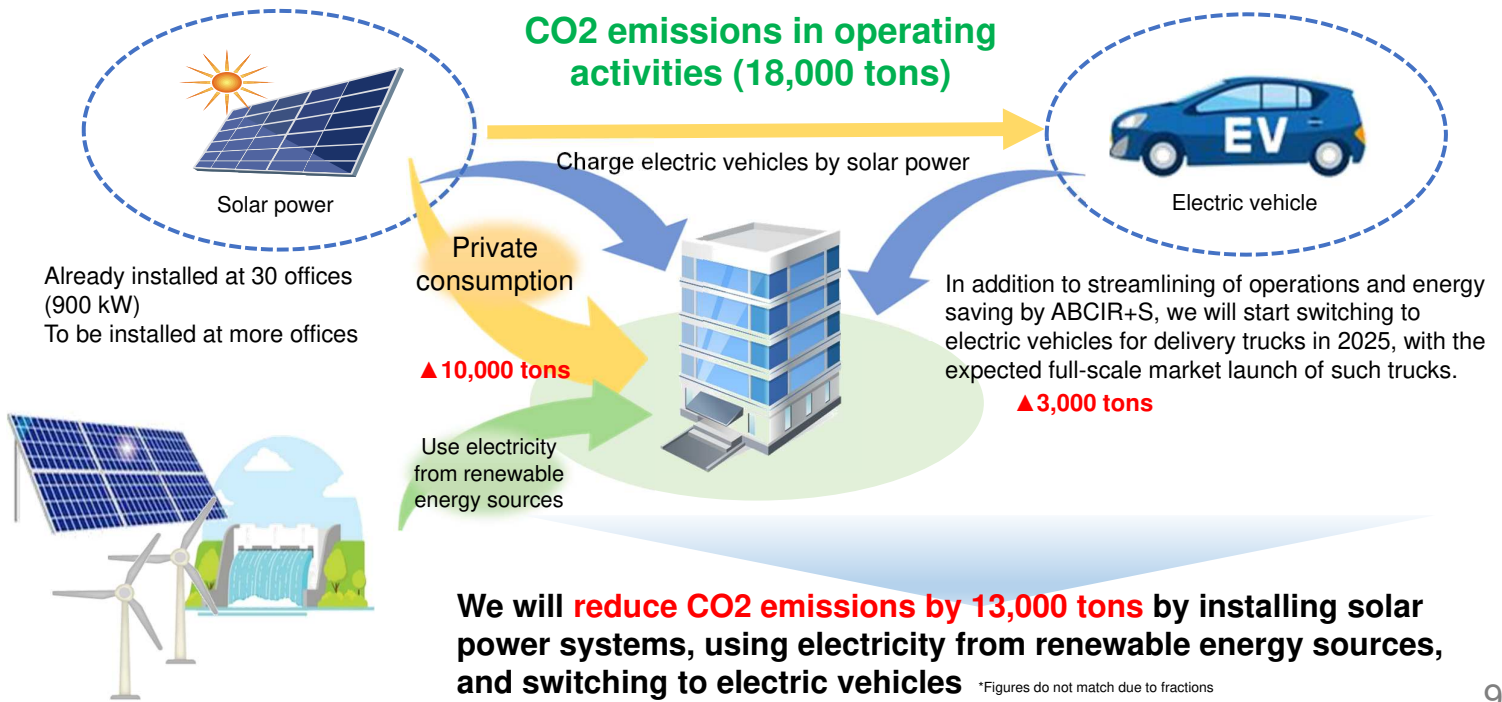
Reduction of Industrial and Business Gas CO2 Emissions

- We will cut down customers' expenses and reduce CO2 emissions (equivalent to **8,000 tons**) by promoting the shift to gas fueling, cogeneration and installation of GHP.
- We will propose the reduction of CO2 emissions also to industries and business customers that use gas.



Use of Renewable Energy and Introduction of Electric Vehicles at Group Offices

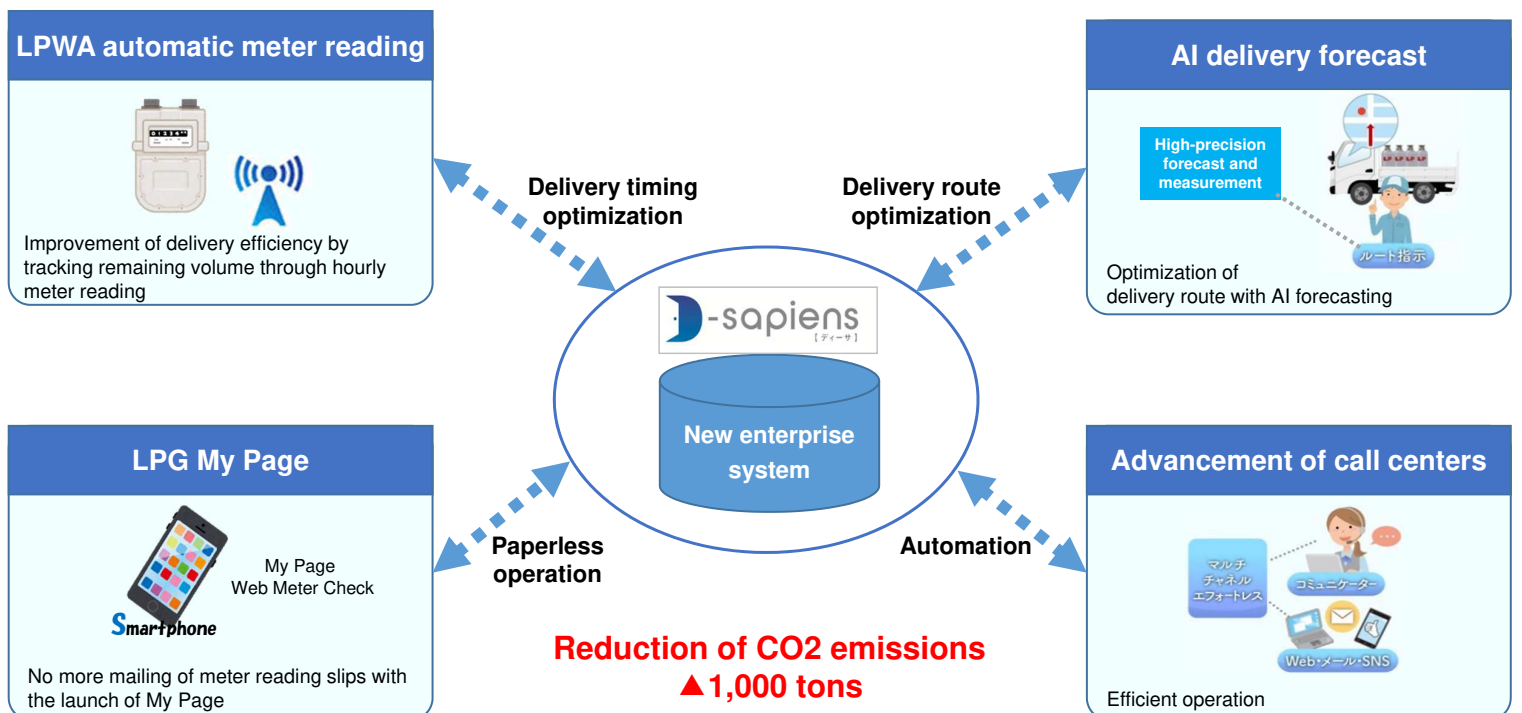
- For the CO2 emissions of 18,000 tons from our operating activities, we will reduce them by **10,000 tons** in 2030 by installing solar power systems at Group offices and using electricity from renewable energy sources. In addition, we will switch to electric vehicles given the advancement of technological innovations and aim to reduce the CO2 emissions by **3,000 tons** (70% reduction in total).



Reduction of CO2 Emissions by ABCIR+S

- By promoting automatic meter reading using LPWA* terminals and analyzing the obtained meter reading data using AI, we can improve the efficiency of delivery operations, such as optimizing delivery timing and routes, and thus reduce CO2 emissions by **1,000 tons**.

*Low Power Wide Area: Technology that enables long distance and wide range communications with low power consumption



Development of Renewable Energy Power Sources

- We already have six mega solar plants and are engaged in solar power generation business. (▲6,000 tons)
- We will continue to identify solar power, wind power, and small hydro power projects to contribute to the promotion of renewable energy power generation.

TOKAI mega solar plants (six locations): Total electric-generating capacity 10,309kW

i) Mt. Fuji Shizuoka Airport
(Electric-generating capacity 1,525 kW)

ii) Toyokin Ishino
(Electric-generating capacity 1,646 kW)

iii) Nasushiobara
(Electric-generating capacity 1,989 kW)



Mt. Fuji Shizuoka Airport

iv) Susono Chabatake
(Electric-generating capacity 1,653 kW)

v) Hamamatsu Tenryu
(Electric-generating capacity 1,872 kW)

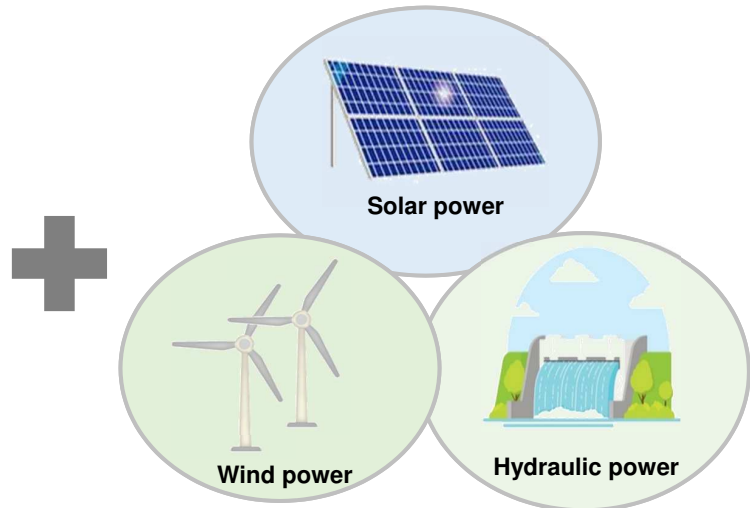
vi) Susono Ichibadaira
(Electric-generating capacity 1,624 kW)



Susono Ichibadaira

Reduction of CO2 emissions: 6,000 tons

Expansion of power source types



Promote renewable energy power generation

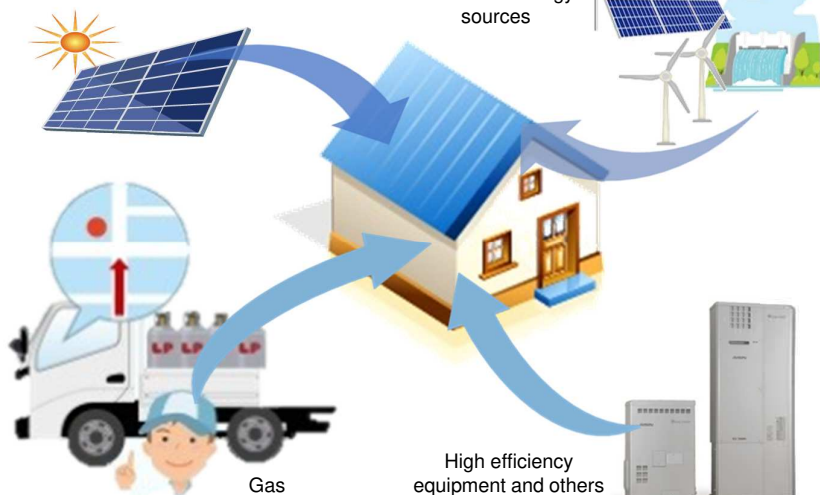
Proposal for Optimal Energy Use for Electricity and Gas

- T&T Energy started retail electricity business in January 2020.
- We promote Eco Plan that uses renewable energy power sources and the introduction of distributed renewable energy power generation (PPA), thereby contributing to the reduction of CO2 emissions. In addition, we propose total solutions for optimum energy use that combines gas and electricity.



Residential solar power system

Electricity from renewable energy sources



Contribute to the reduction of CO2 emissions

Proposals for electricity

- Eco Plan utilizing renewable energy sources
- Distributed renewable energy power generation (PPA)

Proposals for gas

- Proposal of energy use that combines a residential solar power system, storage battery, hybrid water heater and others
- Response to disasters and power outages