EV Charging Demonstration for Effective Use of Surplus Solar Power by EV Users Nationwide

~Together with everyone for "Deco-Katsu" promoted by the Ministry of the Environment~

March 2025

ENEGATE Co., Ltd.

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ENEGATE

Outline of Demonstration (1)

1. Purpose

We will call on a wide range of EV users to expand the consumption of surplus power through EV charging during the seasons and times of the year when surplus solar power is likely to be generated, and check the extent to which it is effective.

2. Significance

It is widely known that the electricity that EV users charge during discount hours is clean electricity from solar power.
In addition, we believe that it will be an opportunity for each and every EV user to take a step toward a decarbonized society.

This activity is part of the Ministry of the Environment's "Deco-Katsu" (a national movement to create a new affluent lifestyle that leads to decarbonization), and we participate together with EV users and charger installers.

Outline of Demonstration (2)

3. Implementation details

・Divide the country into 10 areas, and set charging discount times and charging discount rates that take into account the amount of solar surplus power generated based on the weather forecast for each region.

・Demonstration participants will be notified in advance of the charging discount time and charging discount fee for each of the 10 areas.

・Demonstration participants will be asked to confirm the charging discount fee and charge with a quick charger compatible with "Eco-Q Den" nationwide.

・ Demonstration participants will be charged at a discount on the charging fee, but charger installers will be refunded the equivalent of the charging fee before the discount, so there will be no inconvenience.

・Demonstration participants will be asked to answer a questionnaire and use it to analyze the demonstration results.

Details of the implementation (1)

Details of the implementation

(1) Implementation period

Saturday, April 26, 2025 ~ Tuesday, May 6, 2025

(2) Demonstration participants

・EV users who are already using the "Eco-Q Den" card or appli
Number of users who have charged at least once in the last one year
(Approx 24,500)
・EV users who are not using the "Eco-Q Den" card or appli
Please register (free of charge) from the "Eco-Q Den" appli in advance.

(3) Applicable chargers

Approx. 3,100 units (quick chargers that can be charged with Eco-Q cards or appli nationwide)

(4) Discount time zone

8 a.m. ~ 5 p.m. (Set by 10 areas)

(5) Discount rate

0%~50% (set by 10 areas)

Details of the implementation

(6) Notification to Demonstration Participants

If the scheme is to determine the discount time zone and discount rate in consideration of the weather the next day, it is basic to inform the public on a daily basis.
On the other hand, there is also a hypothesis that EV users who are traveling or returning home on a long vacation may be able to plan their charging if they show a discount a few days in advance.
Therefore, notifications are made in three patterns as follows.

(1) April 26 (Sat) ~ April 30 (Wed) ⇒ Notification the day before each

(2) May 1 (Thu)~May 2 (Fri)⇒ Collective notification on April 30

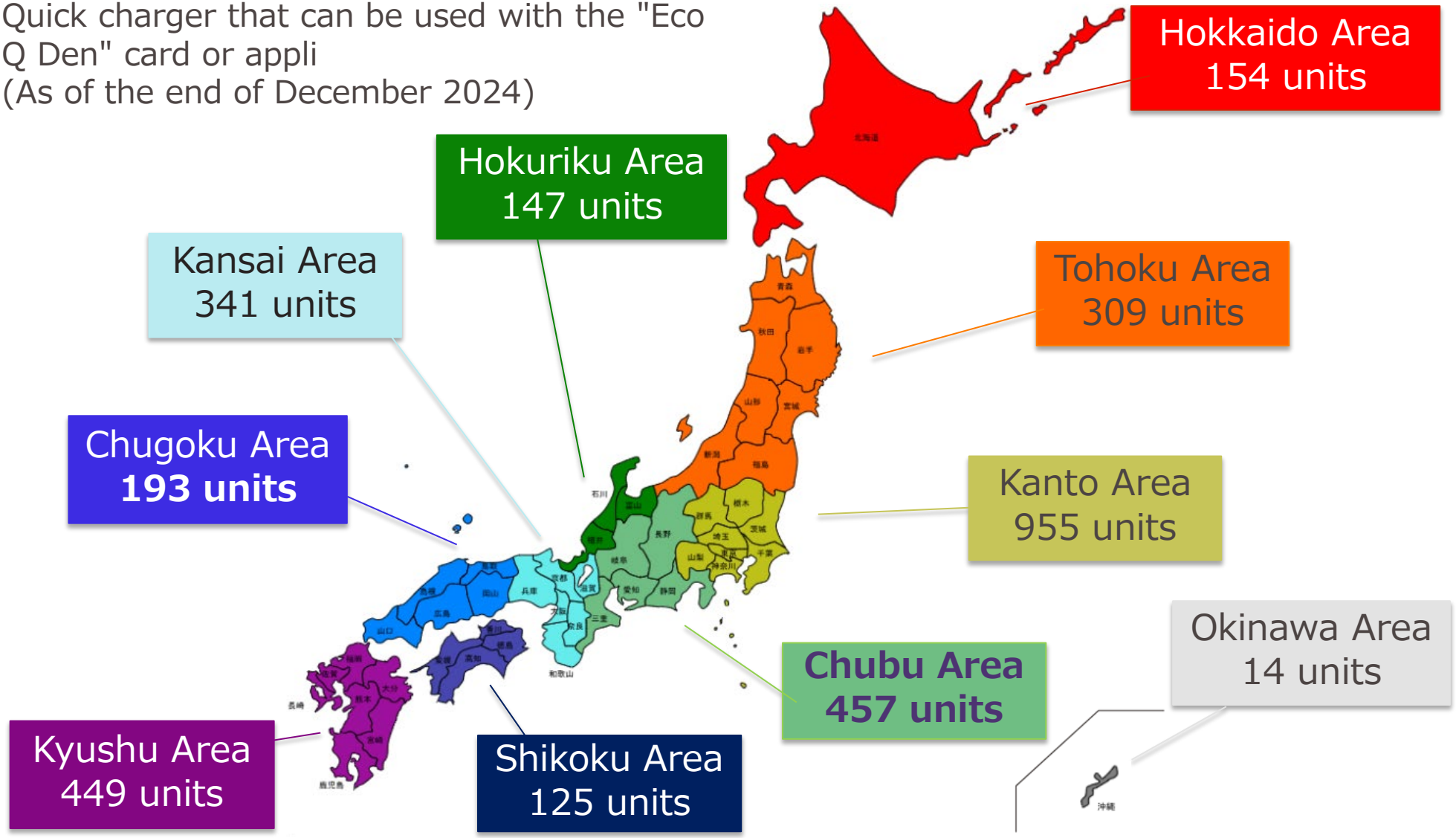
(3) May 3 (Sat) ~ May 6 (Tue) ⇒ Collective notification on May 2

(7) Reimbursement to the installer

The discounted amount will be borne by us, and the charger installer will be refunded the equivalent of the pre-discounted charging fee.

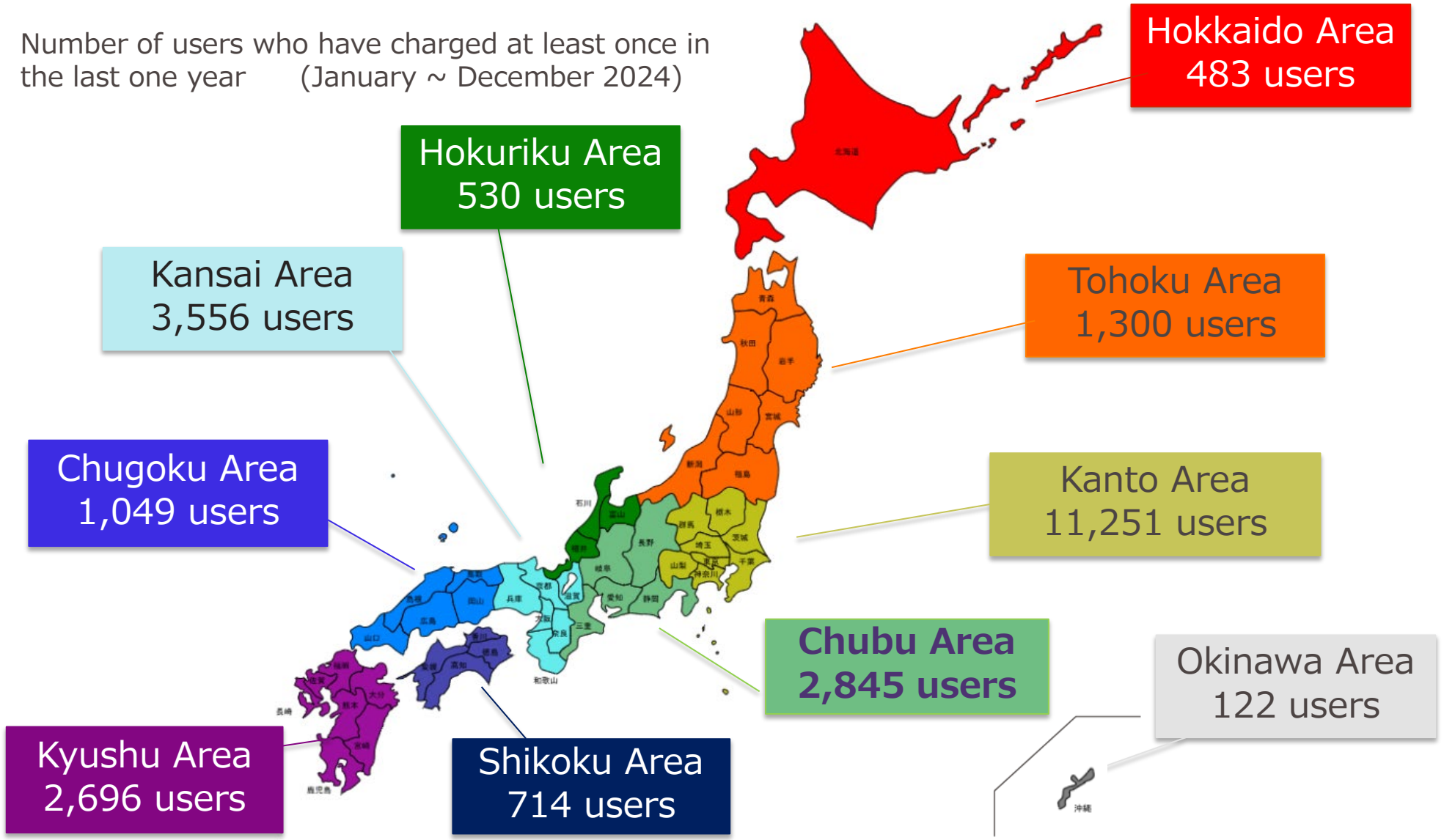
Nationwide Rapid Charger (3,144 units)

Quick charger that can be used with the "Eco Q Den" card or appli
(As of the end of December 2024)

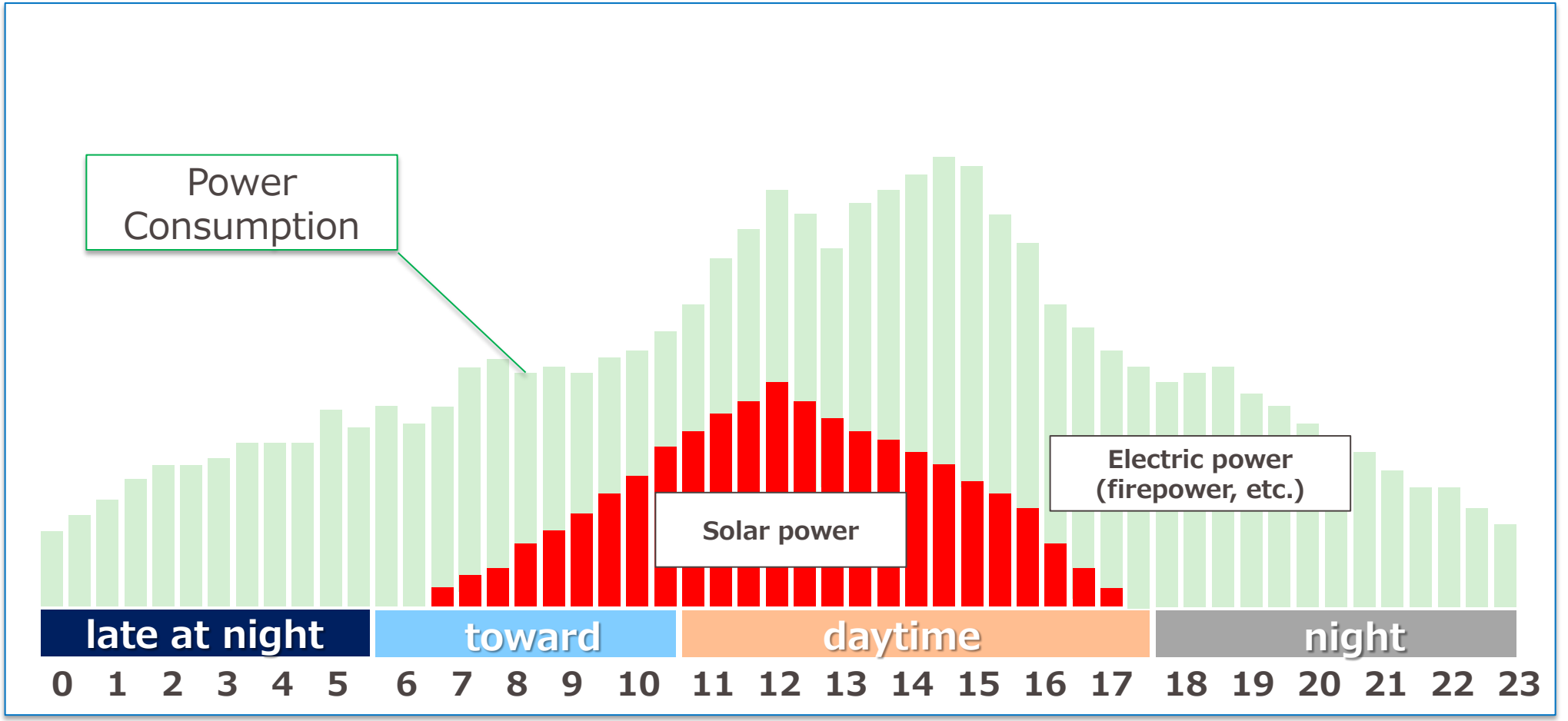


Registered users nationwide (24,500 active users)

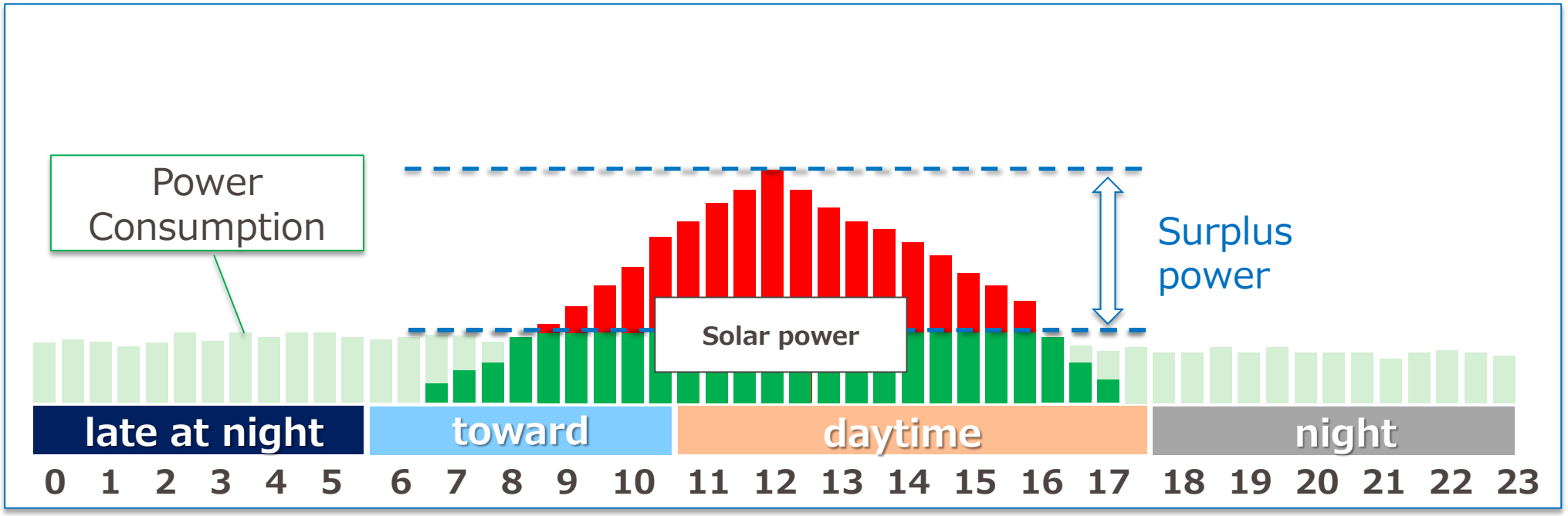
Number of users who have charged at least once in the last one year (January ~ December 2024)



On weekdays, the amount of electricity consumed is overwhelmingly higher than the amount of solar power generated.

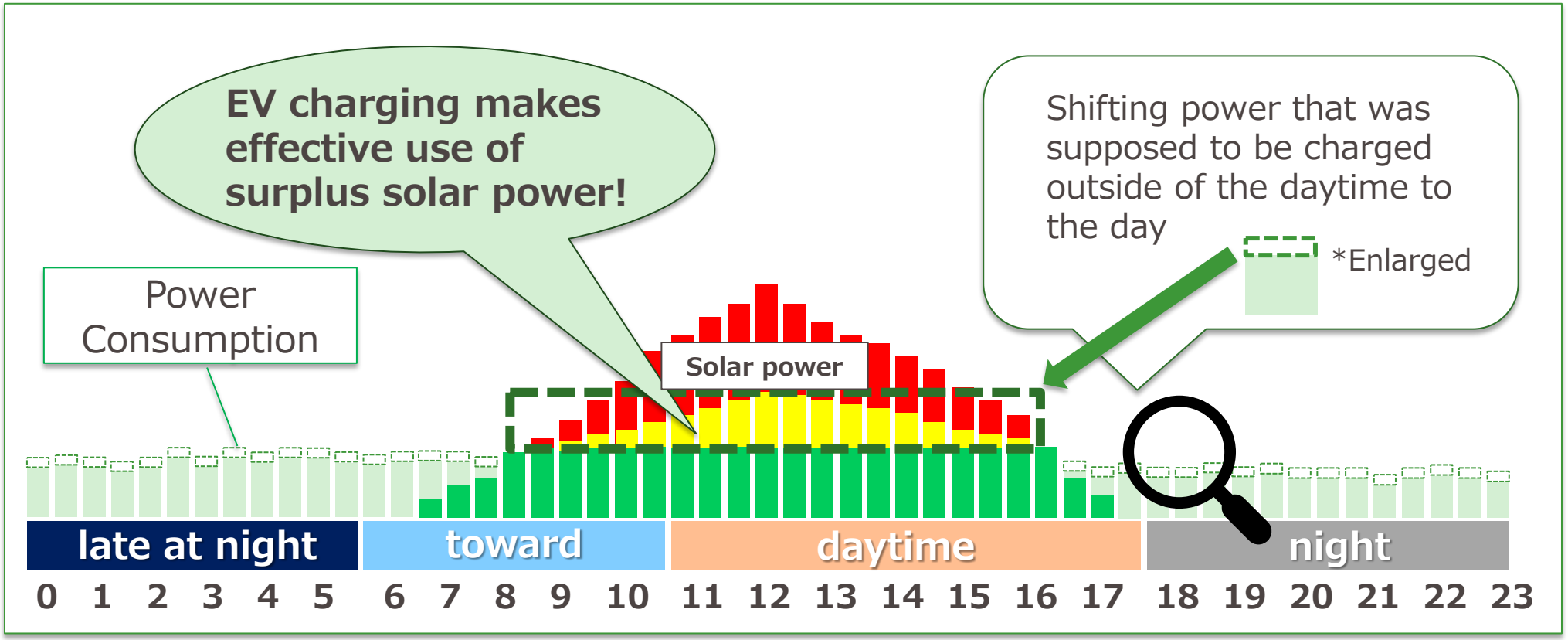


On holidays, the amount of electricity consumed is less than the amount of solar power generated, so surplus electricity from sunlight is generated. In this demonstration, instead of suppressing the amount of solar power generated, it is an initiative to effectively utilize the surplus power for EV charging.



Cases of Effective Use of Solar Surplus

In this demonstration, EV charging will be induced during the day when surplus solar power is generated by discounting the EV charging fee during the day.



Implementation of the questionnaire

We will conduct a questionnaire to "Eco-Q Den" members and prepare a report based on the empirical data and questionnaire results.

Questions to ask

・ Did you understand the demonstration and charge it?

・Where did you charge the battery?

・Did you charge the battery within the discount target time?

・ How much discount would you like to charge?

・Did you understand that this demonstration is part of your environmental activities?

・If we continue to conduct demonstrations in the future, will you participate in them?

etc

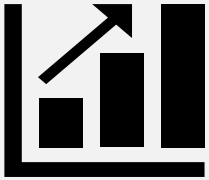
Merits of the demonstration

user

It can be charged at a lower rate than usual, and it can also contribute to decarbonization

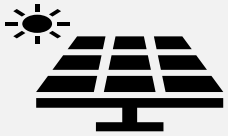
Installer

Profits increase due to the increase in the number of charges



Electric power companies

It contributes to the stability of power supply and demand by reducing the surplus power of solar power



Demonstration Collaborators

Various analyses are possible by providing reports from our company