

## Ishigaki City × euglena Group × Challenergy Signing of Disaster Support Agreement

~Public-private cooperation in providing electricity and communication environment through wind power generation during disasters such as typhoon~

Ishigaki City  
euglena Co., Ltd.  
Yaeyama Shokusan Co., Ltd.  
Challenergy, Inc.

Ishigaki City (Ishigaki City, Okinawa Prefecture; Mayor: Yoshitaka Nakayama), euglena Co., Ltd. (Headquarters: Minato-ku, Tokyo; President: Mitsuru Izumo; hereinafter, “euglena”), Yaeyama Shokusan Co., Ltd. (hereinafter, “Yaeyama Shokusan”), and Challenergy Inc. (Headquarters: Sumida-ku, Tokyo; President: Atsushi Shimizu; hereinafter, “Challenergy”) have recently concluded an agreement on mutual support such communication facilities and information transmission during times of disaster.



Vertical Axis Magnus-Type Wind Turbine of Challenergy Inc.

This agreement is intended to ensure the safety of the citizens, tourists and business establishments in Ishigaki City in the event of a typhoon or other disasters. The main idea is that when a communication failure occurs due to a disaster such as typhoon, Ishigaki City, euglena, Yaeyama Shokusan, and Challenergy will promptly share information; and by using facilities such as the “vertical axis Magnus-type wind turbine”, communication between the parties will be secured. It will also ensure that Ishigaki’s administrative functions will not stop during these calamities.

On September 30, 2019, Typhoon No. 18, which landed on Ishigaki Island, observed a maximum instantaneous wind speed of 43.2 meters in Tono Castle in Ishigaki City, and about 120mm per hour of heavy rain in Taketomi Town in Shinshiro Island. Because of the typhoon, communication failures occurred

in Ishigaki City and Taketomi Town, and fixed telephones, mobile phones and the Internet were temporarily unavailable from the night of September 30. All flights were also cancelled at the New Ishigaki Airport. However, at that time, the “vertical axis Magnus-type wind turbine” operated without any problems, and the power lines and communication environment were maintained. As a result, this agreement was concluded to ensure the safety of citizens and tourists.

Ishigaki City, euglena, Yaeyama Shokusan, and Challenergy will continue to cooperate with each other in dealing with disasters for the society’s sustainable growth and development.

■ About the “Vertical Axis Magnus-type Wind Turbine”

This is a next-generation wind turbine without a propeller that combines the Magnus force and the vertical-axis type wind turbine. The wind speed range that can be controlled is wide by using the Magnus force generated by rotating the cylinder instead of the lift by the propeller. In general wind turbines, there is a risk of breakage and failure once the wind speed exceeds 25m/s; so, it is designed to automatically stop under this condition. However, the vertical axis Magnus-type wind turbine is stable up to a wind speed of 40 m/s, allowing for continuous delivery of electricity. In addition, by using a vertical axis type, it can respond to any wind direction. And since the rotation speed is slower than that of a general wind turbine, it can be expected to reduce environmental effects such as noise and bird strikes.

About euglena Co., Ltd.

In 2005, the company succeeded in establishing the world’s first edible outdoor mass culture technology for the microalga Euglena in Ishigaki Island. In addition to developing and selling food products and cosmetics that utilize microalgae Euglena and Chlorella produced in Ishigaki Island, we are conducting research on biofuel production. The company was listed in the Tokyo Stock Exchange on December 2012 and was added to the First Section of TSE on December 2014. The company’s management philosophy is “to make the people and the earth healthy.” <https://euglena.jp>

About Challenergy, Inc.

Established in 2014 after the Great East Japan Earthquake, the company, with its vision of “innovating wind power generation to deliver safe energy to humankind,” developed a “vertical axis Magnus-type wind generator.” The first demonstration test of the wind turbine started in Ishigaki City in 2018. The company’s aim is to be the leader in realizing the global energy shift through mass productions of 10kW machines by 2020 and 100kW machines by 2025. <https://challenergy.com>

— For inquiries regarding this matter —

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