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[\[Carbon Reduction\] TaiPower Develops New Method of Microalgae Carbon Capture](#)[Carbon Reduction] TaiPower Develops New Method of Microalgae Carbon Capture ([Chinese Version](#))

China Times E-paper & udn.com (2010/10/26) TaiPower company has spent effort on innovating the methods of microalgae carbon capture during these years, finding that a hectare of microalgae farm can capture 58 to 90 tons of carbon dioxide per year while a hectare of forest can only capture 25 tons per year, i.e., the carbon capture capacity of microalgae is twice to fourfold higher than that of ordinary trees.

Taiwan Power Research Institute of TaiPower Company recently released the findings about the microalgae's carbon capture capacity. The researchers caught smoke in the flues of the power plant, and used the desulphurized smoke through sea water to culture microalgae, which can produce oxygen through photosynthesis when they absorb the nature light, heat and the carbon dioxide captured from the power plant. With the process, the power plant could nurture a sustaining microalgae system and, instead of producing the carbon emission, contribute the oxygen in the air.

The researchers of TaiPower pointed out, Taiwan is located in the subtropical zone with sufficient sun exposure so it is more suitable than most of the countries or areas in Europe, America or Japan, to develop microalgae applications. Hence, the institute spent a lot of effort investigating native microalgae and identifying the suitable species for the high temperature and acidic environment in the power plant. Scaling up the nurturing systems step by step, an open photosynthesis cultivation system was designed and built.

By now, TaiPower has completed the construction of a massive photosynthesis equipment in the Dalin Plant, and it is estimated that each hectare of the equipment can regularly capture about 74 tons of carbon dioxide per year.

Besides, since the algae are in possession of rich proteins, lipid and carbohydrates, the microalgae applications could reach some highly commercial areas such as biotech skin care products, functional foods or animal nutrition enhancers. TaiPower has begun to develop relevant biotech skin care products.

Reference:

[China Times E-paper 2010/10/26](#) (Chinese)[Udn.com 2010/10/26](#) (Chinese)

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[National Science Council International Cooperation Sci-Tech Newsbrief](#)

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