

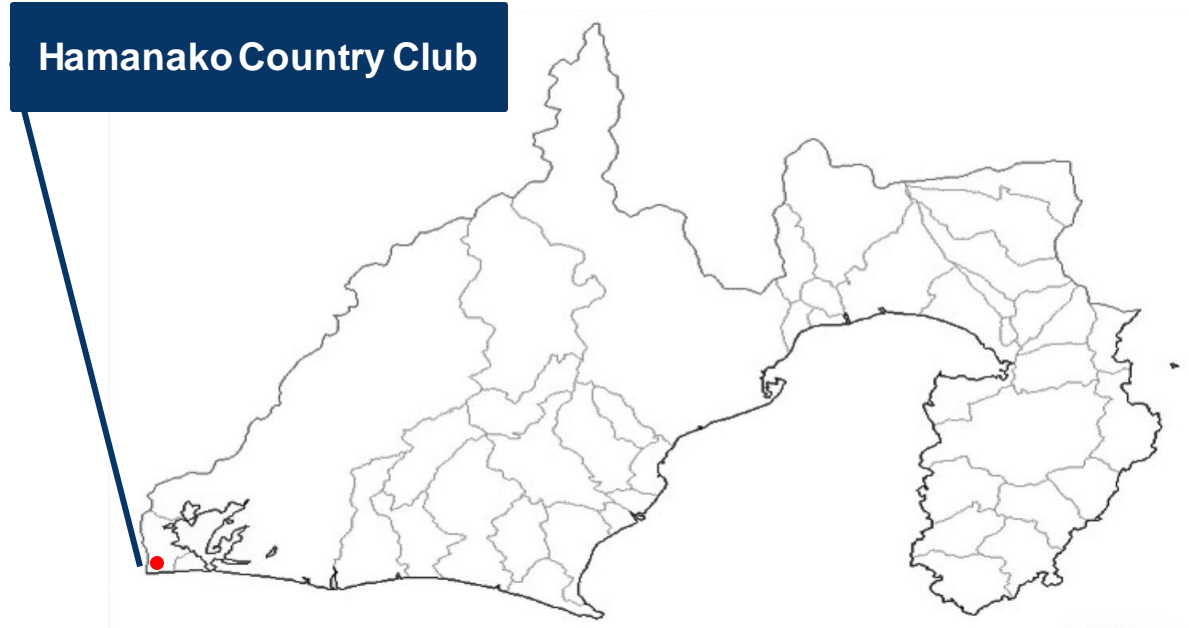
Wind/Solar Power Generation: Efficient management and regional contribution

Masaharu Fujita
Hamanako Country Club

5th Golf Innovation Symposium

USGA®

Hamanako Country Club



Hamanako Video here



- Shelter
- Halfway house
- Practice area
- Hamanako course
- Naka course
- Shiomi course













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Decision-Making Process

THE CLUB'S CHALLENGES

- Since 2002, the club had been operating in a deficit, and making a profit became the most important priority
- We reviewed the club's and expenses and determined that the annual cost of electricity, which was 20 million yen per year, was too burdensome
- While we had 800 million yen in cash reserves in a low interest account

We determined that installation of solar and wind power generation could result in positive return on investment in 14 years

GOVERNMENT REGULATION AND SUPPORT

- Construction of this was project accredited by the Ministry of Economy, Trade, and Industry
- Subsidies from the government (NEDO) covered 26% of the investment
- Under Shizuoka Prefecture's Shizuoka Wind Topair Route Promotion Plan, the club was evaluated as a suitable place for a wind power generation project

GEOGRAPHIC ADVANTAGES

- This district faces the Pacific Ocean to the south; there is plenty of wind and sunlight throughout the year
- There are few private houses in the vicinity, allowing for approval of the project

Decision-Making Process

CONTRIBUTION TO THE LOCAL COMMUNITY

The local municipality, Kosai in Shizuoka Prefecture, has added the following to the city charter: “Let’s take advantage of our natural surrounding to create a beautiful green city. The city recognized that this project can contribute to this goal and has shown great support for this project.

ECO ENERGY

The project is expected to reduce 1,250 tons of CO₂ emissions annually, providing environmental benefits and contributing to golf’s image

SALE OF ELECTRICITY

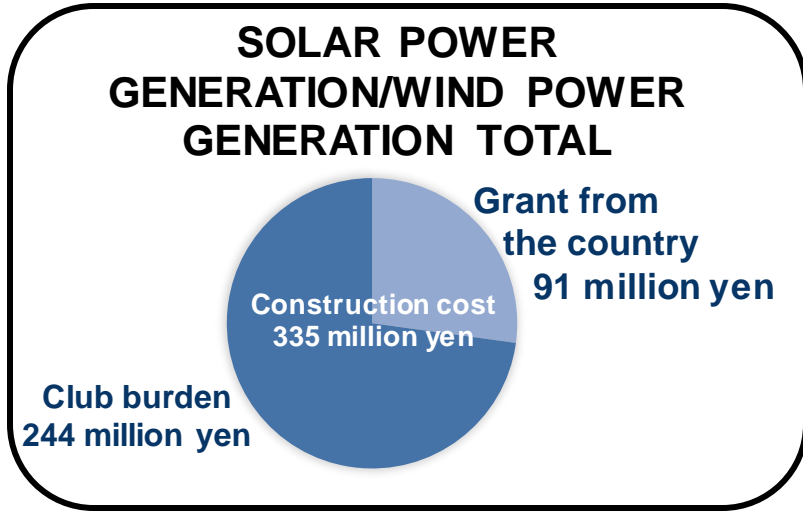
To Chubu Electric Power, a local electric power company.

**Based on the reasons above, we decided to undergo
the wind and solar generation project**

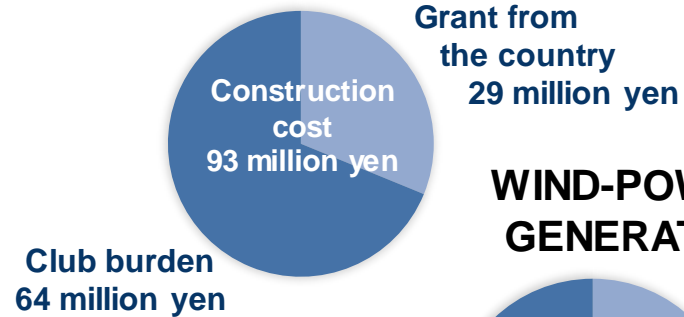
Project Outline

April 2003–April 2004	NEC conducted the wind observation survey for the wind power generation facility in the Shirasuka district of Kosai city
2004 May	.....Obtain the above wind speed survey result, discussion started
2005 January	.....Examination based on construction experience of nearby wind power generation facility
March 30	.....Explanation to Mayor of Kosai/Mayor's consent
April 10 & 12	.....Shirasuka district council meetings conducted/Get approval
May 12	.....Business application to the Ministry of Economy, Trade, and Industry
May 16	.....Pre-study results received from Chubu Electric Power Co.
Sept. 13	.....Contractor bidding open
Sept. 30	.....Business certification issuance from the Minister of Economy, Trade, and Industry
Nov. 13	.....Decide business approach, select builder (Nihondensetsukogyo Co., Ltd.)
Dec. 23	.....Groundbreaking for wind turbine construction
2006 Dec. 28	.....Power distribution project started
2007 Jan. 23	.....Completion ceremony

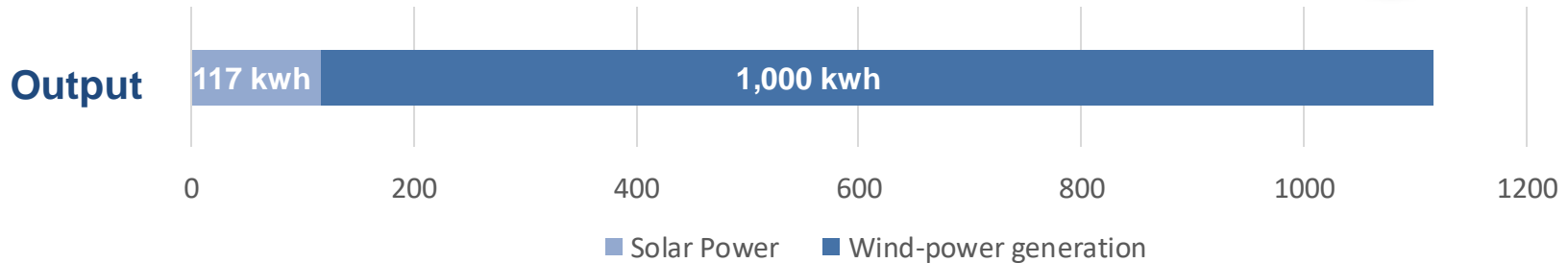
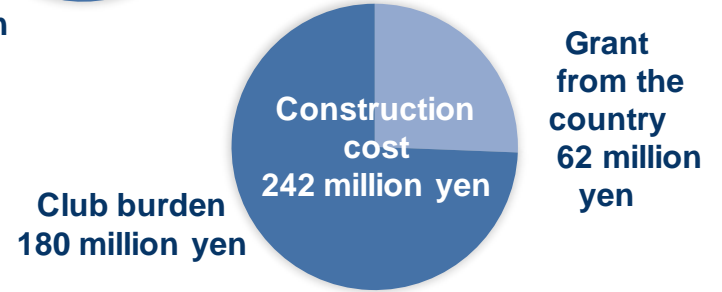
Project Outline



SOLAR POWER



WIND-POWER GENERATION

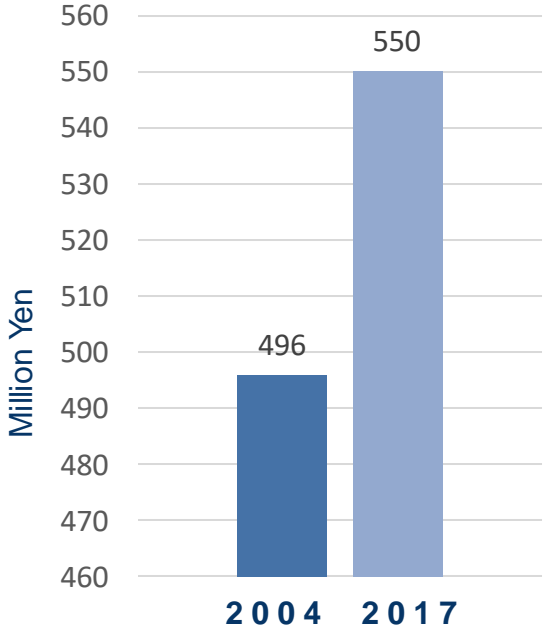


Benefits and Profitability

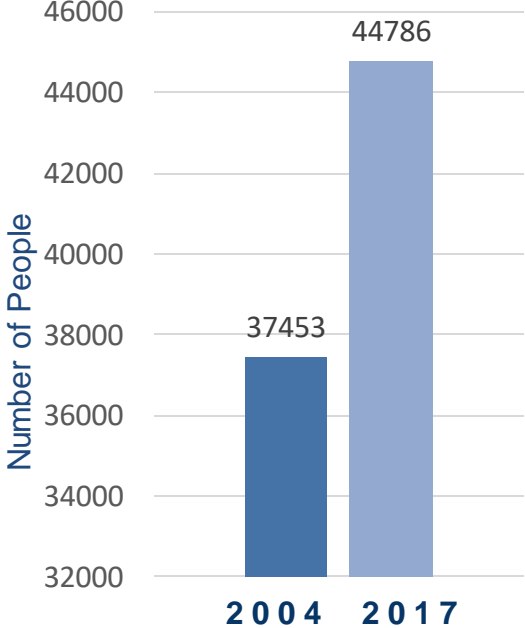
- Substantial subsidies from Japanese Government reduced the real burden. It was advantageous as a way to improve the operating budget.
- “Wind power generation is possible at the golf course.” At the beginning, there was opposition to the project by our members. But now the wind turbine is a symbol of clean energy and our members are satisfied. The system is also an attraction among our guests.

Benefits and Profitability

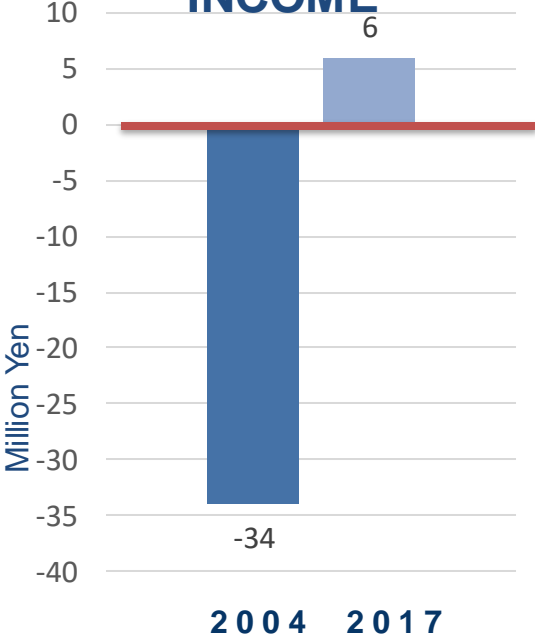
SALES



VISITORS



ORDINARY INCOME

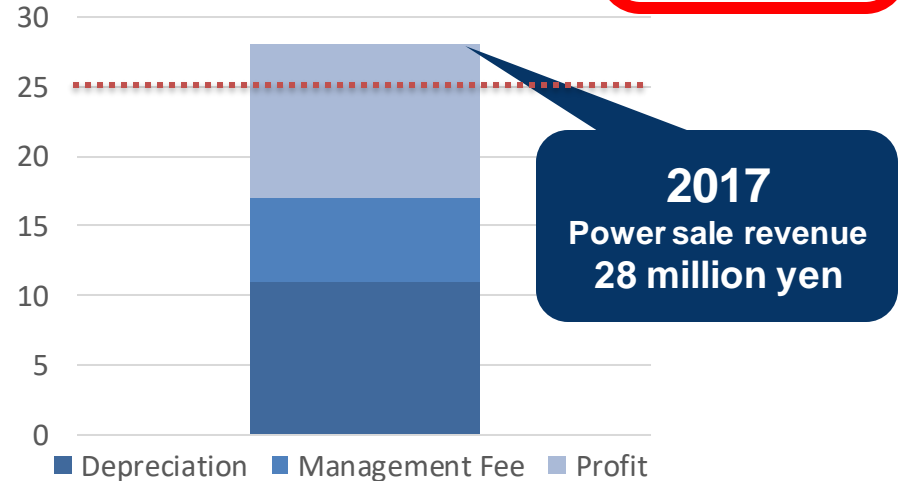
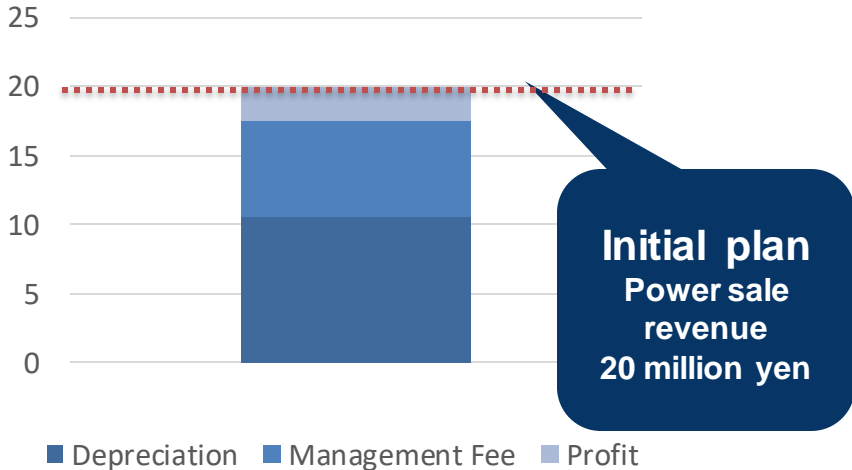


Benefits and Profitability

About 40% of club's electricity consumption is covered by wind/photovoltaic power. We can also secure profits from electricity sales. We expect to recover investment in 16 years based on actual income and expenditures.

Electricity sales business balance

	Generation	Revenue	Management fee	Depreciation	Profits
Initial business plan	1,923,000 kWh	20 million yen	7 million yen	10.5 million yen	2.5 million yen
2017	1,748,000 kwh	28 million yen	6 million yen	11 million yen	11 million yen



Benefits and Profitability

FUTURE GOALS

Our club building is designated as a local disaster prevention base as a municipal shelter in case of a major disaster. The wind turbine supplies electrical power to neighboring areas, allowing them to securing drinking water by pumping well water, etc. To further contribute to the region, we aim to enhance facilities (power storage equipment, etc.) that can respond to emergencies.

CURRENT ISSUES

Twelve years have passed since the introduction of wind power generation facilities, and it is necessary to replace some parts due to aged deterioration. Maintenance will be a future task. In addition, the revision of the Electricity Business Law has strengthened wind turbine safety measures that will require an increase in inspection burden.

A wide-angle photograph of a golf course at sunrise. The sky is a warm, hazy orange. In the background, there are rolling hills and a line of trees. A misty or foggy layer hangs over the middle ground. In the foreground, two people are walking away from the camera on a lush green fairway, each carrying a golf bag. The person on the left is wearing a blue jacket and dark pants, while the person on the right is wearing a light blue jacket and white pants. The overall mood is peaceful and serene.

Thank you!

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