

Case study title

Establish environment friendly green hospital in multiple aspects



GGHH Agenda Goals

- Energy efficacy
- Innovative sustainable design of green building

Hospital Goals

- Execute and demonstrate sustainable operation through complete management policy to build low-carbon medical system, connecting to low-carbon society, promoting smart green public works.
- Achieve continuous improvement of energy performances, energy efficacy, and scientific energy audit through systemic management programs.

Progress Achieved

- In 2013, we achieved 10 % reduction of water, natural gas, diesel fuel, electricity, and waste, comparing with the previous year. ☑
- We introduced green building regulations to the latest hospital construction for site choices, designs, plans, and daily operation, and were rewarded by the Ministry of the Interior as Gold class green building for lowering environmental hazards in 2013.

The Issue

- How to reduce energy usage under the special circumstances of medical services?
- Is it possible to effectively achieve energy conservation and carbon reduction of green hospital management through the low carbon consumption equipment of the new construction?

Sustainability Strategy

Social responsibility is the key to sustainable organization development. Under the ground of Green Health Hospital Declaration signed by our superintendent, we have launched comprehensive energy conservation management in medical services, the community, and the staffs' life. To execute environment-friendly promotion with robust strategies, we build up low-carbon medical system and community with smart green public construction promotion as well as intensifying education and communication on energy conservation.

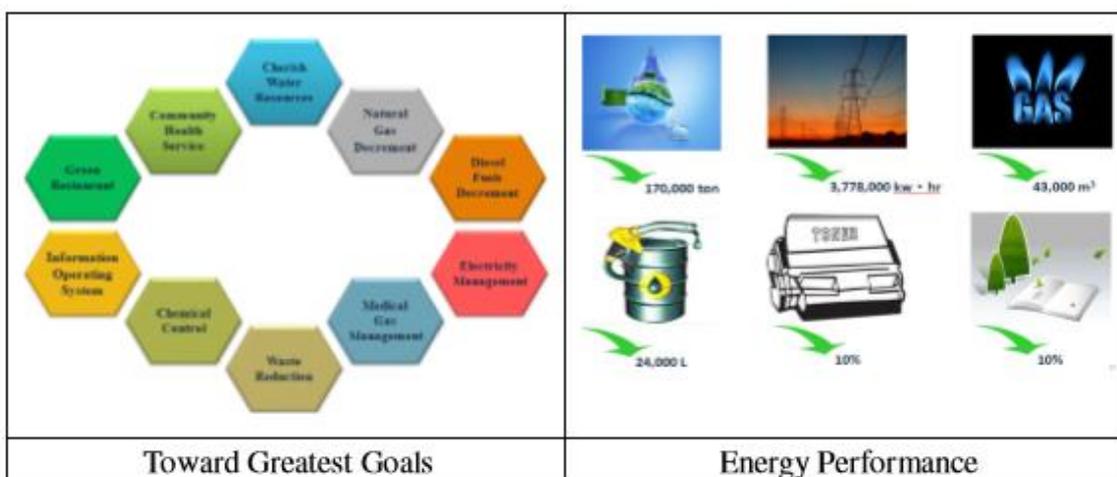


To build a green medical system with “high efficacy, high value, low carbon, low reliance” and formulation of energy conservation management strategies, our principles are energy stewardship, economic prosperity, and social responsibility, converting limited sources to efficient usage, developing clean energy, and continuing with sustainable energy.

Implementation Process

1. Build up an professional energy management team: With the support of the board and the superintendent, we construct an energy management team, commencing with environment-friendly system, management, and education. Leading in International Green Building Evaluation, Leadership in Energy and Environmental Design (LEED), and ISO 50001 energy management system, we have ameliorated energy performance and continue to pursuit energy efficiency. We outsource to professional certification institution for commissioning energy management internal audit training guidance, and to understand and control energy efficacy and management.
2. Construct energy management policy: We develop energy management policies with reference to the most widely used international energy management system standards and green building assessment criteria, combined with existing state laws related to domestic hospitals in Taiwan. Establishing the operation and management processes, setting the operating standard manual, and offering a daily checklist for inspection and monitoring that makes up the basis of future improvements. With a comprehensive policy, procedures, standard operating manual with checklists for hospital energy management quality manual, we can continuously improve the quality of our energy management.
3. All for one: With educational training programs, advocacy activities, standardization of operating procedures, incentives, and inspection work, the better and correct energy use habits will be gradually rooted in energy management staff, patients and the public.
4. Construction of green environment: In order to stabilize sustainable environmental development towards the goals of "ecology, energy saving, waste reduction, healthy", we intended to make 10 major energy-saving improvements, to build smart and modern green hospital.

The latest established hospital district begin with the main concepts of construction of a green environment, from choosing the base of the building site, designing a sustainable low-power operation facility with water conservation and waste reduction self-management, pollution prevention and control during construction, to selecting building materials for green equipment maintenance and repair, without sacrificing indoor environmental quality and comfort. By brainstorming and innovation, we achieve to meet the green building sustainable design.



Tracking Progress

To scientifically prove the energy flow and usage structure, we have energy audit by basic data integration and analysis, to have a breakthrough ground for systemic management model. After the plans of adjustment and correction were carried out, we have follow up commissioning to meet up with our goal.

Challenges and Lessons Learned

The efforts for the promotion of energy management is 80% on establishing management systems and 20% in technology aspects, thus strengthening the management staff to form correct habits is one of the difficulties, including promoting educational training programs for internal energy management, public awareness of the proper use of energy, and working together with the community to construct a green social environment.

Next Steps

Our current improvement goals include stabilization of energy supply, elevation of energy efficiency, carbon reduction, and the development of alternative energy and sustainable development of the hospital environment. Through quality control practices, continuous review and improvement of existing internal energy management policies and audit system, we will implement project reviews of energy performance and indicators, in order to achieve the ultimate goal of energy saving and carbon reduction.

For the impact of the internal implementation and external difficulties we faced, the hospital will review and develop improvement projects, such as taking into consideration the perspective of day length and sunshine to build new renewable energy projects with solar power generation; upgrading the software to improve energy and resource efficient management through sophisticated management hardware facilities; establishing smart building and green modern health care system, to implement energy saving and carbon reduction with corporate social responsibility.

Demographic Information

The bed capacity of China medical university hospital system is 3431, with a staff number of more than 5000. We constitute the system with the mission of improving human basic health rights, and always hold the service philosophy of “patient-centered, staff-valued, quality first, innovation and excellence, social contribution”.

Combing studying researches and clinical medical services, to become an integrated medical care center, providing services as the patient needs.

Keywords / topics:

Green Health Hospital, leadership, hospital management, Taiwan, CMUH, China Medical University Hospital