

Refined Approaches to Green Premiums and Energy-Saving Tax Mechanisms in the Building Sector

Yu-Chun Ma | Assistant Research Fellow of Taiwan Institute of Economics Research, CIER

Ruei-He Jheng | Senior Analyst of Taiwan Institute of Economics Research, CIER

Ping-Fung Chou | Research Associate of Taiwan Institute of Economics Research, CIER


Guan-Han Chen | Associate Analyst of Taiwan Institute of Economics Research, CIER

Chi-Yuan Liang | Advisor, CIER

Chih-Hsun Lin | Chief Energy Strategy Officer, Industrial Technology Research Institute, ITRI

The building sector is a critical domain for countries worldwide in achieving their net-zero emission targets. Globally, approximately 39% of carbon emissions originate from buildings, while building-related emissions account for about 28.8% of the national total in Taiwan. Consequently, enhancing building energy efficiency has become a core carbon-reduction strategy. In Taiwan's Pathway to Net-Zero Emissions by 2050, the National Development Council outlines that buildings must first achieve a 50% energy savings before utilizing renewable energy to reach net-zero. This goal is to be driven through 4 primary directions: improving the efficiency of new and existing buildings, enhancing equipment energy efficiency, and advancing technological research and development.

However, achieving higher energy efficiency or acquiring green building certifications typically incurs additional costs. If property owners cannot pass costs on or reflect them in market prices, their incentive to invest will decrease. International research shows that a "green premium" exists. Studies conducted in the EU indicate that for each one-level improvement in energy efficiency, property prices increase by 2.9% to 8%, while rents rise by 1.5% to 4.4%. Research in the U.S. reveals that high-efficiency buildings can command a sales premium of about 3% to 5%; office buildings that obtain LEED certification can even see a rental premium of up to 21%. U.K. data also demonstrates significant increases in the prices and rents of highly energy-efficient buildings. The primary drivers are the growing demand for sustainability among corporate tenants and regulation tightening, which exposes low-efficiency buildings to the risk of depreciation.

A green abstract graphic consisting of several curved lines that form a shape resembling a stylized letter 'A' or a fan-like structure, located in the top left corner of the page.

Domestic research exhibits a similar trend. For instance, the green premium for green-certified residential buildings in New Taipei City is approximately 7.5%, while the rental premium for office buildings in Taipei City is around 7.9%; in certain areas, residential premiums even exceed 13%. Recent literature indicates that Grade A commercial office buildings in Taipei City command a rental premium of 10% to 15%, and buildings lacking green building certification may face a “brown discount.” Overall, the green premium already reflects a substantive market demand for energy-efficient buildings.

To enhance incentives for building energy efficiency, the policy tools currently proposed in Taiwan include floor area ratio bonuses, building energy-efficiency regulations, and equipment subsidies. For example, the central government offers floor area ratio bonuses for green buildings while local governments mandate through regulations that new buildings meet specific energy-efficiency standards, alongside providing subsidies for equipment replacement. However, subsidy measures are constrained by budgets and are highly competitive; buildings that fail to secure subsidies face difficulties in pursuing improvements.

In contrast, tax instruments possess universality and offer long-term incentive effects. Yet, currently, only Taichung City provides a House Tax reduction for those obtaining the Green Building Label. Taipei City plans to implement a House Tax discount mechanism based on the Building Energy-Efficiency Rating System in July 2026. Other municipalities have not yet introduced related systems, which hinders the broader promotion of building energy conservation.

In summary, the key to improving building energy efficiency lies in bolstering the investment incentives for property owners. While the current system has established a foundation, a lack of sufficient incentives remains a critical issue. It is recommended that future policies adopt a “differentiated House Tax reduction” framework based on the building energy-efficiency rating or green building level. This would allow higher-rated buildings to receive greater tax benefits, reflecting their heavier investment costs and strengthening market incentives. By coupling tax mechanisms with existing policy tools, the government can accelerate energy-saving improvements in existing buildings and propel the building sector’s transition toward net-zero.