

Who Plays and Who Decides: The Structure and Operation of the Commercial Building Market

Report Summary

Introduction

The purpose of this report is to characterize the commercial new construction market in order to better understand the needs and operation of the market, to more effectively identify needed technologies, and to identify effective strategies to diffuse the technologies being developed by the U.S. Department of Energy.¹ The report is primarily based on the analysis of secondary data collected from the Internet, the analysis of data from the Department of Energy, Energy Information Administration, Commercial Building Energy Conservation Survey, and other available data.

The study examines the social and cultural trends that will influence how buildings will be constructed and used in the future. It also examines how decisions are made with respect to the design, construction, and renovation of buildings. Seven sub-markets within the commercial building market – office, retail, food sales and service, lodging, healthcare, warehouses, and education – are examined in detail. The size and characteristics of buildings in each sub-market are described along with the ownership of the buildings and the operation of the sub-markets. The report contains detailed lists of large players. The energy use characteristics of the buildings in the market and the penetration of energy efficient measures into the sub-markets are discussed as well.

Major Findings

Three important themes emerged from this analysis.

- The use, design, construction, and operation of commercial buildings will change significantly in the next 25 years in response to dynamic forces within culture and society.
- There is significant potential to promote a substantial amount of energy efficiency by targeting the relatively few large players in each sub-market.
 - In nearly every sub-market, there is a relatively high degree of concentration of ownership or franchising of establishments.
 - These owners/users are large national and regional firms.
 - The extent to which these large players may already be attending to energy efficiency is not known. Some players seem quite sophisticated in this regard while others do not.

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- There are large numbers of smaller independent players at the regional and local level that can benefit from energy efficiency as well.
 - Within the various sub-markets, these players are fairly homogeneous.
 - Strategies to target the independent players need to be implemented by public benefits agencies, energy efficiency organizations and utilities at the local level.
 - The understanding of these local commercial establishments and the sophistication of the strategies presently being used to deal with them vary but are typically not high.

Recommendations

While there have been large numbers of successful energy efficiency programs and hundreds of evaluations of these programs, program design and implementation are still largely ad-hoc processes that often fail to build upon lessons of the past. DOE can provide a leadership role in using the results of the many evaluations to systematically build scientifically based program designs and implementation strategies for the commercial sector and then propagate those designs in order to accelerate the adoption energy efficiency.

Key recommendations from this report are that DOE:

- Develop a plan and commit resources to continuously and systematically update its understanding of the commercial building market, to make greater use of commercially available secondary information to increase DOE's understanding of the commercial building market, and to access secondary information through partnerships and relationships with firms and associations that are already collecting this data.
- Develop a plan and commit resources to continuously and systematically identifying and tracking trends that will influence the construction and use of buildings in the future and systematically incorporate this information into planning efforts. This includes closely tracking emerging efforts to design and build commercial buildings using component methods, the use of high tech materials in buildings, and the social and cultural trends that may result in changes to building use patterns and the need for commercial buildings.
- Commit resources to increasing DOE's understanding of the decision makers in the commercial building community and identifying the parameters and value propositions that inform decision-making across situations.
- Initiate support, and/or participate in sub-market specific events such as workshops, strategy forums, and conferences that involve the largest players and their trade associations in each of the major sub-markets to increase DOE's understanding of relevant issues in the major sub-markets, the long-term direction of the sub-markets, sub-market technology needs, changing decision-making structures, and key decision criteria.
- Commit to planning, developing, and implementing a national energy efficiency strategy that targets large national firms that franchise or have large property holdings in the major commercial sub-markets through one-to-one national level marketing ef-

forts. Effectively targeting large national and regional firms requires a national strategy that involves partnering with the major players, the trade associations to which they belong, other Federal agencies, national and regional market transformation organizations, state energy offices, and others.

- Target smaller regional and local players by:
 - Partnering and coordinating with other government agencies, regional and local energy efficiency organizations, trade associations and others to develop science based implementation strategies, programs, and materials that can be adapted by energy efficiency, environmental, and or utility organizations at the state regional and local levels.
 - Developing and implementing a strategy to recruit regional and local organizations to implement the science based strategies.