

**November 2015 | Research # 97**

Executive Summary  
**Financial Tools for Green Building**

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## About the Milken Innovation Center Fellows Program

The Milken Innovation Center Fellows Program accelerates Israel's economic growth through innovative, market-based solutions for long-term economic, social, and environmental challenges. Our goal is to accelerate Israel's transition from a Start-up Nation to a Global Nation with solutions that others can replicate.

The Program awards annual fellowships to outstanding Israeli graduate students. We train and deploy some of Israel's best and brightest young professionals to create pragmatic financing and economic policy solutions. Our applied research and Financial Innovations Labs® are a launching pad for transformative change, using innovative financing mechanisms, programs and policies to bridge social, regional, economic and productivity gaps within Israel and between Israel and the world.

In addition, Fellows craft their own projects during their internship aimed at barriers to job creation and capital formation in Israel. The Fellows' research, carried out under the guidance of an experienced academic and professional staff, support business and policy makers to shape economic reality in Israel. The program offers the ultimate training opportunity, combining real-life work experience with applied research.

Throughout the year, Fellows receive intensive training in economic and financial analysis, public policy and research methods. They acquire tools for communication and presentation, policy analysis, leadership and project management. The fellows participate in a weekly research training workshop where they work with senior economic and government professionals, business leaders, and top academic and financial practitioners from Israel and abroad. They also participate in an accredited MBA course, taught at the Hebrew University School of Business Administration by Prof. Glenn Yago.

Fellows Program alumni can be found in senior positions in the public and private sectors. Some serve in key positions in government ministries while others work at private-sector companies or go on to advanced graduates studies at leading universities in Israel, the United States and Great Britain.

The Fellows Program is a non-partisan. It is funded, in part, by the Milken Institute and other leading philanthropic organizations and individuals in the United States and Israel.

Buildings are responsible for about 32% of the world's energy consumption (60% in Israel) and contribute 19% of total Greenhouse gas emissions. This reality has led to the growth of the green building market. With the pressing public goals of lowering environment-damaging emissions, building developers and consumers are looking for ways to improve energy efficiency. The payback for private investments in energy efficiency is improving, but it has not yet achieved widespread adoption in Israel. As of 2014, 7% of total residential construction has been certified as green. General trends indicate the situation is growing worse and the needs increasing. Homes are larger and more expensive, increasingly built on the outskirts of urban areas, and are more energy intensive. This market failure and the role of the public sector in leveraging these private investments is increasingly clear.

Even though residential energy efficiency leverages investments in the economy by an estimated 3.2 times the initial public investment, public tools to leverage these investments do not yet exist in Israel. This research examined the financial gaps and needed financial tools to fill this investment gap, leveraging and incentivizing all links in the building value chain to invest in environment in energy efficient buildings.

Nevertheless, Israel is home to robust young companies in the green technology sector, including companies developing passive and active solar power, smart metering and grid management, efficient insulation, building materials, and water savings technologies applicable to commercial, agriculture, and residential markets. Indeed, Israel is ranked number one in the world in clean technology innovations. While these companies create new and compelling economic opportunities, paradoxically, they find difficulty getting traction in the local market.

In order to overcome these obstacles, this research offers several financial approaches to be developed with special tools:

- 1. Tax benefits** - to increase the return on equity for direct capital investments in green technologies.
- 2. Subsidized loans** – to lower the cost of debt with more flexible terms and shift risk from conventional debt sources.
- 3. Discounts and rebates** – provided by suppliers to contractors and consumers to encourage adoption of new green technologies.
- 4. Performance financing** – to provide financing based on the efficient technologies, lower operating costs, and increased cash flow for the consumer that can be used to pay for the initial capital investment.

**5. Regulatory relief** – to provide adjustments and allowances in the building plans and systems for the contractor, including accelerated permitting for energy efficient building plans.

These financial tools and approaches must be tailored for both new construction and renovations. Further, these tools must be structured in a sustainable model, allowing them to meet the needs of market now and in the future to promote the public strategic goals to increase energy efficiency, energy independence, and reducing greenhouse gas emissions.

The benefits from this approach will be a stronger business sector offering sustainable green building solutions, adoption of financially feasible green building systems by developers and contractors, and lower operating costs for consumers – all of which will contribute to the lower overall energy use and a reduction in Israel's carbon footprint.



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