



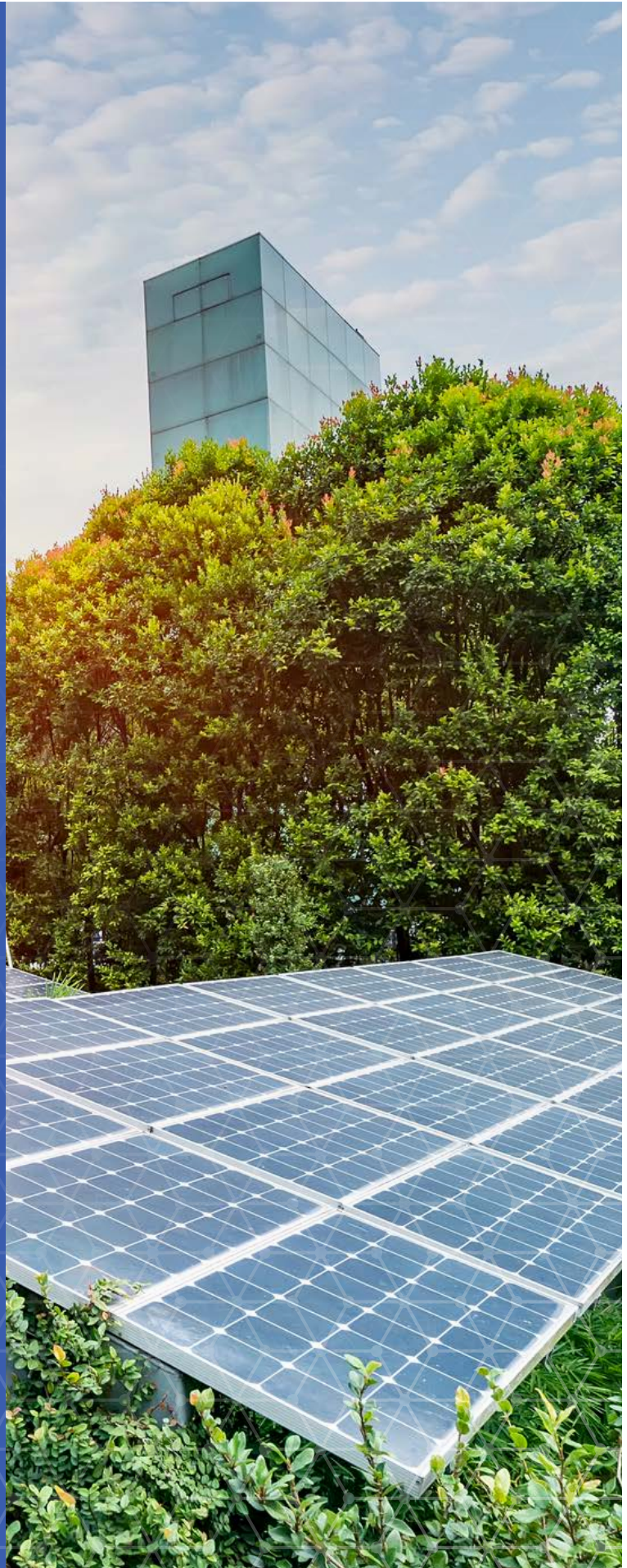
RETAIL INDUSTRY  
LEADERS ASSOCIATION

---

# WHOLE FOODS MARKET - MAKING THE CASE FOR RAPID SOLAR ROLL-OUTS

---

RILA Retail Energy  
Management Program:  
September 2016



# WHOLE FOODS MARKET – MAKING THE CASE FOR RAPID SOLAR ROLL-OUTS

Implementation Model:  
Portfolio Approach and Standardized Lease Language  
Help Rapidly Expand Solar Rooftop Installations



## BARRIER

Leases & landlord concerns, roof quality, installation oversight.

## SOLUTION

Draw on lessons learned from ad hoc installations to align landlord and tenant interests and create a portfolio approach to realize economies of scale.

## OUTCOME

Developing approximately 100 new rooftop solar systems through third-party power purchase agreement (PPA) contracts with NRG Energy and SolarCity. Projects will cover 25% of all Whole Foods Market stores and warehouses and are expected to provide a favorable return on investment, predictability in future energy procurement, and environmental benefits.

## OVERVIEW

Whole Foods Market is a major natural and organic grocer with 450 stores, including 430 in the U.S., 11 in Canada, and nine in the UK. Founded in 1980 in Austin, Texas as a single store, Whole Foods Market has experienced rapid growth, much of which has been through mergers and acquisitions. The company's experience with rooftop solar power began in the early 2000s with a series of single store installations initiated by local solar developers and led by onsite managers. Subsequently, Whole Foods Market's regional offices took the lead on new solar project management, working with a variety of solar developers. By the end of 2015, Whole Foods Market had completed almost 40 solar installations. Motivated by this progress and a corporate commitment to sustainability, the company recently announced a plan to retrofit approximately 100 facilities (both stores and distribution centers) with rooftop solar.



**If we hadn't [negotiated leases with standard solar language], we couldn't have undertaken such aggressive solar development today."**

**Aaron Daly**  
**Global Energy Coordinator**  
**Whole Foods Market**

## PROCESS

In order to successfully facilitate the rapid solar roll-out, Whole Foods Market has to address several challenges that it has encountered during the previous 40 installations including: (1) lease and landlord concerns, (2) roof quality, and (3) installation oversight responsibilities.



This Implementation Model was completed with support from the Department of Energy's Office of Energy Efficiency and Renewable Energy and the Better Buildings Initiative to highlight innovative proven energy solutions from market leaders in the Retail sector. Find more ideas at the Better Buildings Solution Center at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

Like many retailers, Whole Foods Market leases their facilities' building shells subject to tenant improvements. This constrains the company's ability to make changes like installing a solar array. Further, many properties are part of multi-tenant or mixed-use projects where Whole Foods Market is located next to other building tenants, increasing landlord concerns. For example, landlords might require Whole Foods Market to negotiate the use of a staging area because it is part of a shared space with other tenants. Negotiating separate arrangements with landlords for each unique solar project can be time-intensive and consequently expensive.

Second, solar projects are complicated by concerns about the roof and related conditions, especially in older buildings. About two-thirds of the combined completed and planned solar projects are retrofits on existing buildings with the remaining one-third additions to new buildings. Challenges include determining liability and maintenance responsibility for the roof and overcoming age and condition of the roof membrane and electrical switch gear. For example, an older roof may be unable to support the weight of a solar array; therefore, the developer, landlord, and tenant must negotiate liability and responsibility for making improvements. A largescale solar roll-out inevitably means discovering more buildings with these or similar issues. Ultimately, lease and roof compatibility were the biggest determinants in selecting the locations for installation.

Finally, Whole Foods Market must oversee installation. For the initial 40 installations, installation oversight responsibilities such as financing and equipment procurement varied across systems, making Whole Foods Market's costs inconsistent and uncertain. The initial 40 solar developments were primarily financed either through power purchase agreements (PPAs) or with internal capital. Of those financed through a PPA, Whole Foods Market opted for a third party ownership variation, whereby a third party solar developer finances, installs, and operates the system and provides power to the store at a guaranteed price that is typically below the market price. Consequently, stores with a short lease term remaining usually require renegotiation to accommodate the 10

years or more length of a typical PPA. There were other challenges such as equipment procurement. For example, one store experienced considerable difficulty replacing its inverters because the inverter manufacturer went out of business.

While these challenges remain, the experience gained from the last 15 years of solar development is helping Whole Foods Market conduct an efficient rollout. One of their most successful actions occurred before the rollout. About seven years ago, Whole Foods Market began to establish standard solar language in store leases, reserving the option to install, operate, maintain, and remove solar power provided that it isn't visible from the ground. The solar installation was classified as personal, not real property.<sup>1</sup> The standardized lease language helps to streamline project implementation since leases don't have to be renegotiated later when solar is installed.

## BY THE NUMBERS

Number of rooftop installations (2000-2015)	40
Approximate number of planned installations (2016 - 2017)	100
Size of typical store installation (kilowatts)	100 - 150
Expected energy offset <i>Per Store</i>	7%-8%
<i>Per distribution center</i>	30% - 50%

1. Real property is attached to the land and thus includes the building. Personal property, such as furniture, can be moved. Leases typically cover real property leaving the management of personal property to the discretion of the tenant.



## OUTCOMES

The decision to move forward on the roll-out was primarily based on:

1. Declining solar development costs,
2. The prevalence of leases with established solar language, and
3. Confidence that a portfolio model would provide greater efficiencies.

The system roll-out strategy was two years in the making. After six months of planning and internal deliberations, Whole Foods Market selected two firms, NRG and SolarCity, to develop the 100- to 150-kilowatt rooftop store solar systems for the retail store installations. Select distribution centers will also house arrays of about four times that size. The approximate 100 systems are expected to start generating power in 2017.

Unlike past ad hoc installations, this installation process was designed for efficiency. By working with two vetted system providers, Whole Foods benefits from better terms, volume pricing, and consistent, field-tested hardware. The broader roll out will also benefit from an average installed cost decline of 58% between 2010 and 2015 for non-residential solar,<sup>2</sup> giving a boost to investment returns.

All projects will be third-party-owned with PPAs or leases for sites where PPAs aren't allowed. The installers have partnered with finance companies to provide this service. While Whole Foods Market might realize greater returns through direct ownership, third-party ownership reduces capital investment and is generally easier to execute. Given the inherent challenges in securing internal capital and scaling up, Whole Foods Market was drawn to the relative ease of third-party ownership through PPAs.

Since the corporate office will coordinate the roll-out rather than the regional offices, obtaining regional office buy-in was essential. The project team had to identify and convey the value proposition to a diverse group of regional players, recognizing which aspects of the project were most compelling and of greatest concern within a distributed decision-making culture. As such, the value propositions varied among the regional leadership team, but all eleven regions needed to see the benefit. One significant benefit of a headquarters led project is the reduced demand on the regional offices. Furthermore, with such a large portfolio of projects, Whole Foods Market can balance easier projects with those in the more difficult locations, so all regions benefit and the overall return on investment is positive.

Based on their experience, Whole Foods Market urges other retailers interested in rolling out solar rooftop installations to:

1. Start as early as possible to vet leases, establish solar-enabling lease language in new leases and lease renewals, and talk with landlords to gauge their interest in solar;
2. Understand the building stock. Obtain structural and electrical plans, roof membrane warranties, and determine the expected life of the roof; and
3. Consider a limited vendor, multi-location approach to achieve economies of scale.

2. SEIA/GTM, *Solar Market Insight report series, 2010 – 2015*. This figure is a capacity-weighted

# INTERNAL PROCESS SPOTLIGHT: DEVELOPING STANDARD LEASE LANGUAGE IN A PORTFOLIO APPROACH

Negotiating separate lease language for solar projects at the time of installation can be extremely time intensive and consequently expensive. Therefore, establishing company-wide standardized lease language can greatly assist a portfolio-wide solar roll-out with provisions like reserving the option to install, operate, maintain, and remove solar power and classifying the installation as personal, not real property.

## BENEFITS

- Give tenants flexibility to install and operate solar panels at a future date
- Streamline project implementation and allow for faster future project roll-out across company
- Lower overall project cost by removing labor required to re-negotiate leases
- Removes uncertainty as to whether the landlord will agree to solar installation



Our purpose is to accelerate adoption of the world's most abundant energy source. Through our leadership, research, and capacity building, we create transformative solutions to achieve a prosperous future in which solar technology is integrated into all aspects of our lives. Learn more at [TheSolarFoundation.org](https://TheSolarFoundation.org).



# RILA ENERGY MANAGEMENT AT RILA

## PROGRAM BACKGROUND

Retailers have a significant opportunity to reduce energy consumption and associated greenhouse gases across their portfolios, to the benefit of both companies and the environment. RILA is committed to helping its members overcome barriers to enhanced energy performance across their building portfolio. RILA has several resources available to help members optimize their energy programs.

## ENERGY MANAGEMENT COMMITTEE:

The Energy Management Committee is a community composed of retail energy practitioners who work to improve energy efficiency and procurement at their companies – including the procurement of renewable and alternative energy. Energy practitioners address issues that affect the management of energy consumption as a retail operational expense and capital investment opportunity as well as performance related to efficiency, emissions, and/or renewable energy that may be framed by a sustainability goal. The Committee benchmarks regularly via calls, meetings and surveys.

## RETAIL COMPLIANCE CENTER

[Retail Compliance Center](#) (RCC) Program Management Tools:

- [RILA Retail Advisor for Energy](#): Free analytical platform that provides program evaluation, customized guidance, peer benchmarking and goal setting for retail energy management programs.
- [Retail Energy Management Leadership Model](#): Roadmap to help retail energy managers optimize their energy programs.
- [Energy Management Resource Library](#): Provides specific tools, case studies, and opportunities to help progress the maturity of energy programs.

For more information on RILA's Energy Management Committee, contact Erin Hiatt, Senior Director, Sustainability and Innovation at [erin.hiatt@rila.org](mailto:erin.hiatt@rila.org).

For more information on RCC resources and tools contact Kaela Martins, Manager, Environmental Programs RCC at [kaela.martins@rila.org](mailto:kaela.martins@rila.org).

Find more Better Buildings resources at [betterbuildingsolutioncenter.energy.gov](http://betterbuildingsolutioncenter.energy.gov)

*This material is based upon work supported by the Department of Energy, Office of Energy Efficiency and Renewable Energy (EERE), under Award Number DEEE0007062.*

*This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.*