



The Bullitt Foundation's "Living Building," Seattle, Washington:
The world's first Metered Energy Efficiency Generator utilizes a breakthrough approach to energy efficiency.

MEETS: The Metered Energy Efficiency Transaction Structure

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About the MEETS™ Accelerator Coalition

The MEETS Accelerator Coalition (“MEETS AC”, or MEETS Coalition) is an organization with the bold mission to materially advance a 21st-century global imperative: the radical reduction of energy waste in the built environment.

This is a huge challenge, and one with which the developed world has struggled for more than three decades--making minimal headway. The regulatory and market mechanisms for promoting energy efficiency that have emerged over the past thirty years have focused on “skimming the cream” from buildings and have been largely successful in that effort.

However, these existing mechanisms cannot support the deep energy efficiency improvements that we now need.

They were not designed for that purpose.

They cannot attract the long-term capital required.

At scale, they would undermine the financial stability of our utilities.

Something new is required.

We need a system that strengthens our utilities, attracts long term capital, stabilizes the grid, and goes deep. From the outset, MEETS has been carefully designed to do just that. MEETS reveals that our utilities and other Load Serving Entities (LSEs) are the solution – not the intractable problem. Their role as aggregation engines of community energy demand will work just as well for “negawatts” as it always has for kilowatts. Utilities/LSEs themselves can enable the cash flows on which investments, jobs, business growth, better and more valuable buildings, and a cleaner and more stable environment, all depend.

To realize this promise, we come together as the MEETS Accelerator Coalition to develop, evolve, and grow the MEETS transaction structure. We expect the path to yield new tools, technologies, best practices, and shared experiences. We expect the path to build the ecosystem that can, at long last, turn this problem into opportunity.

The targeted Coalition membership base is broad. It includes:

- energy utilities—both investor-owned and community-owned, and other load serving entities
- utility regulators
- investors
- building owners
- construction and implementation companies offering value-added technologies, products and services for energy supply, delivery and management—known to the energy sector as ESCOs
- building code and other relevant standards organizations
- building designers and architects
- non-governmental organizations, including non-profits and foundations.

The Problem

The energy efficiency of commercial buildings can readily be substantially improved (in some buildings and markets by 50-70%) and over the life of the building, the energy value will deliver a good ROI on the necessary capital investment.

However, commercial building owners, their tenants, and their utilities typically feel little or no direct financial incentive to make such substantial improvements.

- Most building owners pass through their building's energy costs to their tenants—so owners see no direct benefit from investing in efficiency improvements.
- Even when building owners do pay the energy bills, commercial building owners can only “harvest” those savings for as long as they own the building—their planning horizon is typically less than 5 years.
- Tenants are unlikely to invest in a building they do not own, and are unlikely to continue occupying the building long enough to recognize substantial savings.
- Utilities and LSEs are deeply concerned about the lost retail revenues and lost unit sales that accompany current energy efficiency programs. Decoupling helps correct for these problems, but at the cost of higher rates for customers. Utilities tend to promote energy efficiency up to the levels required by regulators and not beyond.
- Utilities and LSEs may say they want customers to conserve energy; but in practice, many earn money on invested equity. As energy demand decreases, so does investment opportunity – and so will earnings. Neither rate reform nor decoupling solve this problem.
- It has proven both difficult and expensive in practice to measure the actual savings from upgrades accurately—because usage depends not only on building efficiency, but also on occupancy levels, climate and other highly variable factors.
- Building energy efficiency enhancements have a highly-checkered record for meeting design goals, and for persistence of savings over time.

The MEETS paradigm addresses each of these issues.

Overview of MEETS

Key elements of the MEETS framework

A MEETS transaction is one in which:

- The yield from metered energy efficiency from a customer facility is delivered to the utility/LSE – not the facility
- The utility/LSE bills the facility, at retail, for the metered yield of which the utility/LSE took delivery, and
- The metering is done through a dynamic baseline meter that meets utility resource grade standards.

The MEETS transaction need not be limited to energy yield from efficiency, but always includes efficiency.

In a MEETS transaction, the yield can be delivered by any developer/operator who holds an energy tenancy or equivalent rights in the facility (the EnergyTenant™). If that developer/operator is not the utility/LSE, then the delivery to the utility/LSE is under a power purchase agreement (PPA). If the developer/operator is the utility/LSE, then the delivery is akin to any other utility/LSE-owned generation on leased property.

If the above elements are satisfied, the result is MEETS. Below are some subsidiary elements that show how MEETS can be put in place – the kinds of additional elements that can enable it.

MEETS framework - Regulatory

- The utility/LSE must have regulatory authority to bill a customer's upgraded building both for traditionally-measured and baseline-metered energy benefits.

MEETS framework – Investors and Building Owners

- An Investor (for example, an energy-focused private investment fund), delivers the capital financing required to make substantial efficiency upgrades to a building (or facility)—based on a long-term (e.g. 20-30 year) Power Purchase Agreement (PPA) with the utility/LSE for the Metered Energy Efficiency “harvested” by those efficiency upgrades. This agreement is functionally equivalent to a standard PPA for conventionally-generated power; i.e. from a wind-farm, natural gas plant, etc. Utilities wishing to earn their regulated return on capital can also function as the investor, subject to regulator approval, further aligning their long-term interests.
- The Investor secures the rights in the building with a lease (rental agreement) – the energy tenancy – with the building owner. Under it, the Investor pays the owner rent for use of the site. The payments are additional rental income for the building owner. The Investor is functionally another building tenant with a long-term lease (e.g. 20-30 year duration).
- The building owner treats the improvements as other conventional tenant improvements are treated. At the conclusion of the Investor's “tenancy”, the improvements become the unencumbered property of the building owner.

MEETS framework – Utility/LSE Interface

- The utility/LSE bills the building owner as usual—for an amount reflecting the energy the building would have used if it had not been upgraded. This is the sum of the actual consumption and the Metered Energy Efficiency. The bill appears identical to a standard utility/LSE bill—and the building owner continues apportioning the total to the ordinary tenant(s) of the building as usual.
- The utility/LSE receives payment from the building owner for all of the energy benefit supplied to the building. These benefits may come from utility/LSE generated energy, energy efficiency improvements at the building, or other energy generated on the customer site (and delivered to the utility/LSE). So, the utility/LSE experiences no loss of revenue as a result of the energy improvement measures.
- The Investor receives payments from the utility/LSE, under the PPA, for the value of the Metered Energy Efficiency as it is delivered. (If the Investor is the utility, then the capital invested in the building, characterized as tenant improvements, earns the utility's regulated rate of return, and is recaptured through amortization.) The Investor will also provide for the ongoing maintenance of the building upgrades, as the Investor needs to ensure that the Metered Energy Efficiency remains as large as possible for at least the life of the efficiency contract.
- The Utility/LSE counts the Metered Energy Efficiency received under its PPA (or delivered from its rate-based installation) towards its regulatory requirement.

MEETS aligns (for the first time) the interests of all key parties: the utility/LSE, the investor and the building owner.

Each benefits from the largest cost-effective capital investment in the building.

Each benefits from aggressive, ongoing maintenance of the energy efficiency (EE) installation, and the maximum engagement with the tenants to improve and sustain energy-efficient tenant behaviors.

Each party continues to operate within its traditional core competencies.

Benefits of MEETS for Coalition Members

Utilities/LSEs

- Growing revenue and unit sales (not shrinking, as in all current efficiency models)
- Opportunity to invest for regulated rate of return
- Payment system based on proven delivery
- New, reliable, location-specific, at-scale load resource
- Provable measurements, not “deemed” estimates, for reporting to regulators.

Utility Regulators and ISOs

- Location-specific, plannable, and quantifiable energy efficiency reporting, with long-term reliability. (The savings are metered, not “deemed.”)
- Alignment (rather than conflict) between regulatory participants including: Utilities/LSEs, Ratepayer Advocates, Environmental Organizations, ESCOs, Building Owners, etc.

Investors

- Long-term reliable cash-flow from a stable, asset-based investment
- Investment-grade counterparties – Lower and rated payment risk
- Well-understood instruments (PPAs for IPP model, utility equity and bonds for utility-invested model)
- Greater liquidity through utility-level portfolio aggregation.

Building Owners

- More valuable building based on outside investment
- No owner capital placed at risk
- Additional rent and free cash-flow for use of their building as an energy efficiency investment vehicle
- Benefit of upgrade without going into energy business.

Energy Service Companies, Designers and Architects

- Large numbers of new deep retrofit projects
- New long-term operational-services relationship opportunities with building owners and energy tenants.

Energy Management System and Controls Vendors

- Large numbers of new projects in need of monitoring, measurement and verification.

Society, NGOs, Foundations

- Large numbers of new projects, jobs, and “green” economic growth
- New driver of at-scale carbon reduction
- Confidence in persistence of conservation
- Truce – even new opportunity from alliances – between incumbent utilities and recent market entrants in the emerging Distributed Energy Resource industry.

Coalition Core Principles

It is a core premise of the Coalition that the success of each member can and should enhance the opportunities and successes of other members.

The intellectual property comprising the metered energy efficiency transaction structure has been licensed to the Coalition and its members by its original authors, expressly for the purpose of enabling a new transaction standard. That standard will evolve from practical experience. Accordingly, the membership condition is that members share with the Coalition their experiences and insights with the deployment of MEETS, and contribute back functional improvements to core MEETS terms and structures which they have found useful for their own projects.

The Coalition's general activities will be Internet-mediated, using its website¹, email, social networking, and other technologies to promote its mission, recruit new members, and serve its existing membership with maximal efficiency. We anticipate that the needs of the Coalition will evolve over time. Should members desire conferences or other more expensive and time-consuming activities, those can be made available to members at additional cost.

The Coalition aims to be self-sustaining, entirely funded by membership fees.

Coalition Key Activities

MEETS AC connects to, and coordinates with, its members primarily online, by phone and via webinars; it uses the Internet to distribute to them a rich set of tools—and shares the experiences of its members in using those tools.

The initial activities of the Coalition involve:

- the development of a suitable website with the necessary communications, member sign-up, ecommerce & digital resource delivery functions.
- Preparation and maintenance of a library of implementation & training tools and documents that will enable members to rapidly and effectively apply the MEETS paradigm to real-world projects (see below for list).

The Coalition's Director is directly involved in policy discussions across the country and ongoing educational activities to build and nurture each new market, creating opportunities for all members.

Further activities will be planned as progress is made, lessons learned, and budgets are refined.

¹ www.MeetsCoalition.org

Coalition Structure

The Coalition functions as a service offered by Rob Harmon, through Robert K. Harmon & Company, LLC. Rob serves as the Coalition's Executive Director. As of this writing, MEETS AC remains an informal coalition.

Mr. Harmon worked with key pioneering partners, including EnergyRM, the Bullitt Foundation, Equilibrium Capital, the New Building Institute, Oregon BEST, the Northwest Energy Efficiency Alliance, the National Renewable Energy Laboratory, Perkins Coie LLP, Cooley LLP, Ernst & Young, Seattle City Light, and the City of Seattle, to develop and implement metering systems that enable MEETS, and the first MEETS-compliant power purchasing, financing and maintenance agreements for the new high-profile net-zero Bullitt Center in Seattle Washington. This transaction has served as the initial example of the new harvested efficiency paradigm, branded as MEETS™. Seattle City Light has since requested and received regulatory approval to significantly expand the approach. That expansion is now underway.

MEETS AC is providing thought leadership, stakeholder outreach and organizing, deep utility engagement and strong advocacy to ensure a successful expansion in Seattle and elsewhere.

Coalition member EnergyRM owns significant intellectual property in the domain of whole-building thermodynamic analysis, including its patented DeltaMeter™ solution, which is able to consistently and accurately measure actual whole-building energy efficiency yields to utility-grade requirements.

The MEETS paradigm requires just such a "utility-grade" measurement capability to continually quantify delivered energy savings produced by deep investment in energy efficiency measures. EnergyRM's DeltaMeter system was designed specifically to meet the functional specification Equilibrium Capital Group developed for such a meter. However, the MEETS transaction is not specific to the DeltaMeter; nor is it proprietary to EnergyRM or Equilibrium Capital Group. Neither MEETS AC nor any member of the MEETS AC limits the use of the MEETS marks or materials to those installations using EnergyRM's meter systems.

The Coalition exists to educate and promote a successful model for structuring positive partner relationships among participants, thereby encouraging significant new levels of investment in deep energy retrofit projects.

Coalition Membership

Benefits

- 1) The documents listed below are available on the members-only portion of the Coalition website.
- 2) Additional documents will become available as they are created.
- 3) The website also features member pages where members from different sectors can find each other. For instance, project developers may want to find companies interested in financing retrofits.
- 4) Additional items will be developed should revenues from membership support it.
- 5) **Basic Membership Includes:** Access to the Coalition Document Toolbox and all Coalition general communications, facilitation of introductions to Coalition members and other key stakeholders, and invitations to MEETS conferences, webinars and calls. Basic membership also includes quarterly, private discussions with the Coalition Director covering business development, strategy, and custom consulting for your organization.

Gold Membership Includes: All Basic Membership benefits, with the addition of monthly (as opposed to quarterly) private, discussions. This allows for more in-depth collaboration on issues such as specific project consolation, utility, regulatory or other stakeholder strategies, etc.

Membership Dues

Organization Type	Organization Size (Employees)	Basic Membership Annual Dues (US\$)	Gold Membership Annual Dues (US\$)
For-Profit Business	Fewer than 25	\$2,750	\$4,750
For-Profit Business	25 - 299	\$4,000	\$6,000
For-Profit Business or (any) Utility or	300 or more	\$6,000	\$8,000
Not-For-Profit Organization	Fewer than 300	\$1,250	\$3,000
Not-For-Profit Organization	300 or more	\$2,500	\$4,500

The MEETS AC Toolbox

Now at the Coalition Website (partial list)	When Completed (Under Development and/or Dependent on Adequate Membership Revenues)
MEETS AC	
<ul style="list-style-type: none"> ○ MEETS AC Description ○ Terms & Conditions ○ Trademark Use ○ Individual Member Pages 	
About MEETS	
<ul style="list-style-type: none"> ○ MEETS Description (PPT) ○ “Explainer” videos targeted toward different stakeholder groups ○ MEETS webinars for utilities, building owners and the general audience ○ How MEETS Works - Animated Diagram ○ MEETS-a Simple Path to Deep EE and Healthy Utilities ○ Bullitt Center MEETS Case Study ○ ACEEE on MEETS at the Bullitt Center ○ ACEEE MEETS Presentation by NEEA and SCL ○ Power Grid International Article on MEETS <p>There is a set of Slack channels that Coalition members use to discuss relevant topics.</p>	<ul style="list-style-type: none"> ○ PPA pricing philosophy ○ MEETS Q&A ○ Lessons learned from Seattle City Light Pilot
MEETS Economics	
<ul style="list-style-type: none"> ○ MEETS Investor Economics in a Nutshell ○ MEETS Utility Economics in a Nutshell ○ MEETS Utility Death Spiral Comparison 	
Legal Templates	
<ul style="list-style-type: none"> ○ Seattle City Light – Bullitt Center term sheet ○ Seattle City Light – Bullitt Center Executed Contract ○ Seattle City Light – Bullitt Center Model Contract 	
Dynamic Baseline Metering	
<ul style="list-style-type: none"> ○ How Dynamic Baseline Metering Works. ○ Setting the Proper Baseline for a New Building ○ Setting the Proper Baseline for an Existing Building ○ Dynamic Baseline Meter Functional Specification 	
Technology	
<ul style="list-style-type: none"> ○ DeltaMeter Description In One Slide ○ Reflections on the First Nine Months of Bullitt Center Dynamic Baseline Metering ○ DeltaMeter Energy Statement ○ DeltaMeter Utility Bill Template 	
News	
Links to relevant news	