



NYSERDA

Opportunities for Affordable Housing Owners: Multifamily Performance Program & Real Time Energy Management

Low-Income Forum on Energy 2018 Statewide Conference

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Introduction and Agenda

Brian Cabezas

Senior Project Manager,
Multifamily
NYSERDA

Agenda

1 – MPP Existing Buildings

2 – MPP High Performance Component

3 – MPP Solution Providers Network

4 – Energy Use Snapshot

5 – RTEM – Real Time Energy Management

Multifamily Performance Program: Existing Buildings

A whole-building approach

MPP Existing Buildings – Program Overview

- Provide incentive funding for energy efficiency projects in affordable, multifamily building in NYS
- Whole building approach to retrofits
- Multifamily Building Solutions Provider
- Minimum projected energy savings of \geq **20%**

MPP Website, nyserdera.ny.gov/mpp

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Multifamily Performance Program: Existing Buildings

The way your building works is directly tied to your bottom line. And whether you're looking to boost profitability or simply make necessary equipment repairs, you can make your building work better by increasing your energy performance. As a result, you'll experience higher operational efficiency, higher net operating income, lower energy bills, and more satisfied tenants.

The Multifamily Performance Program (MPP) lets you incorporate energy efficiency into your affordable building that makes sense for you. And with each upgrade you decide to make, your building gets more efficient, marketable, and profitable.

[Find a Provider](#)

A Multifamily Building Solutions Provider will work with you to evaluate your building's systems holistically, creating a customized plan aimed at giving you a minimum of 20% energy savings along with reduced energy bills. The Providers in NYSERDA's Network are energy efficiency professionals experienced at handling challenges specific to multifamily building projects. As a result, you'll experience higher operational efficiency, greater property value, lower energy bills, and more satisfied tenants.

High Performance Component

For building owners looking for deeper energy savings, our High Performance Component targets a



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MPP Existing Buildings – Eligibility Requirements

- Only available to:
 - Existing buildings
 - 5+ residential units
 - Pay into electric System Benefits Charge
 - At least 50% of building residential space
 - Affordable buildings meet LMI definition
- Work with Provider to identify a minimum 20% projected energy savings

MPP Incentives

Projected Energy Savings Target	Total Incentive (per unit)	Construction Incentive @ 100% Completion* (per unit)	Performance Incentive (per unit)
20% - 24%	\$700	\$600	\$100
25% - 29%	\$800	\$700	\$100
30% - 34%	\$1,000	\$800	\$200
35%+	\$1,500	\$1,000	\$500
High Performance Component 40%+ & EUI ≤ 100	\$3,500	\$3,000	\$500

*Incentive at 50% completion is also available if a Construction Manager oversees the project.

Coordination with Other Programs or Previous Measures

	Measure savings applied to Performance Target	Measure costs applied to Incentive Cap
Previously Installed Measures, including previous WAP*	Yes	No
Utility Programs	Yes	Yes
Other NYSERDA Programs	Yes	Yes
WAP concurrently with MPP	Yes	Yes

*Previously installed measures are those installed and operating up to one year prior to MPP Application Approval.

Common Energy Efficiency Measures

In-Unit Measures

- Low flow aerators & showerheads
- Lighting upgrades

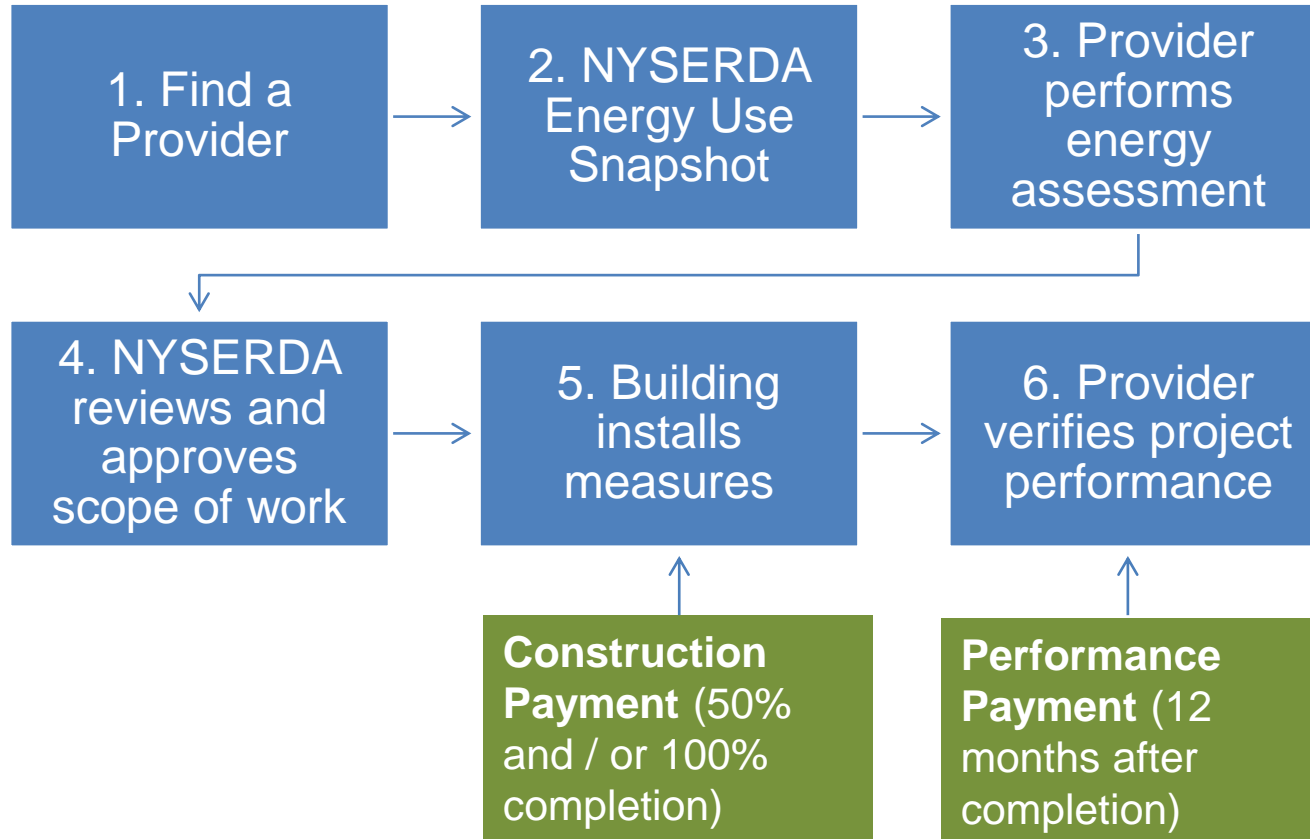
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- Insulation (roof/attic)
- Air sealing

Heating Upgrades

- Boiler replacements
- Furnace replacements
- Hot water heaters
- Pipe insulation
- Thermostatic Radiator Valves
- Thermostats

MPP – Process



High Performance Component

*The next generation of deep energy
savings*

High Performance Component – Overview

- Same process as Multifamily Performance Program
- Projected to achieve significant energy savings by:
 - 40% Source Energy Savings from EE only and
 - 100 EUI (kBtu/sf/year)
 - Integrate Renewables or CHP
 - Or Passive House Standard
- Incentives of \$3,500/unit

Multifamily Building Solutions Network

*Providing solutions to improve your
building*

Find a Provider

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Multifamily Building Solutions Network

Multifamily Building Solutions Providers work hand-in-hand with you to find ways for your building to use energy more efficiently. Choose a county below to display a list of Providers servicing that county.



Multifamily Building Solutions Providers

- Network of Providers throughout NYS
- NYSERDA vets Providers
 - Certifications, Accreditations, Licenses
 - Experienced
 - Local
 - Sound
- Minimizes the effort a building owner needs to undertake to select a qualified professional

Energy Use Snapshot

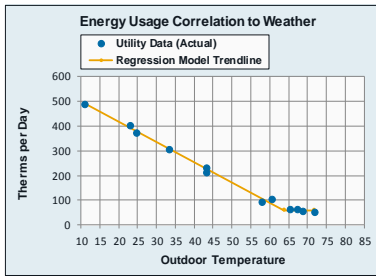
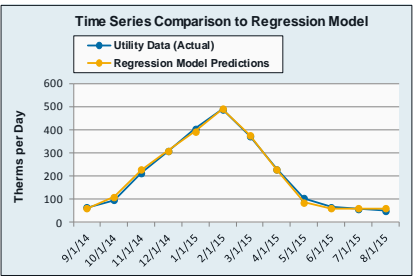
Energy Use Snapshot – What is it

A free report for MPP participants showing:

- Heating
- Cooling
- Baseload

Regression Model Results		
Winter (Heating) Slope	8.11	Therms/day per °F
Winter changepoint temp	63.8	°F
Summer (Cooling) Slope	0.00	Therms/day per °F
Summer changepoint temp	63.8	°F
Baseload	60.1	Therms/day
# of baseline data points (n)	12	
# of parameters (p)	3	
r-squared	1.00	
Coefficient of Variation	5.1%	

Source for Typical Weather Information	
Weather Station Locality	Weather File Publication Source
Syracuse	NOAA 1981-2010 Climate Normals



Utility Billing Data (Actual)				Actual Weather			
From	To	Days	Therms	Therms/Day	Average Temp (°F)	HDD ref 65°F	CDD ref 65°F
8/23/14	9/24/14	33	2,097.0	64	65.4	108	118
9/25/14	10/23/14	29	2,769.0	95	57.8	224	14
10/24/14	11/21/14	29	6,218.0	214	43.2	632	0
11/22/14	12/23/14	32	9,845.0	308	33.3	1,015	0
12/24/14	1/26/15	34	13,744.0	404	22.9	1,431	0
1/27/15	2/24/15	29	14,124.0	487	11.0	1,566	0
2/25/15	3/25/15	29	10,788.0	372	24.8	1,166	0
3/26/15	4/24/15	30	6,910.0	230	43.2	655	0
4/25/15	5/26/15	32	3,328.0	104	60.6	211	69
5/27/15	6/24/15	29	1,911.0	66	67.2	45	112
6/25/15	7/24/15	30	1,751.0	58	68.8	20	134
7/25/15	8/25/15	32	1,644.0	51	71.9	0	223
		Total Days	Total (Therms)			Total HDD	Total CDD
		368	75,129			7,074	670

Regression Model Projected to Actual Weather					
Heating (Therms)	Cooling (Therms)	Baseload (Therms)	Total (Therms)	Total Therms/Day	
0	0	1,983	1,983	60	
1,428	0	1,742	3,170	109	
4,858	0	1,742	6,601	228	
7,934	0	1,923	9,856	308	
11,294	0	2,043	13,337	392	
12,435	0	1,742	14,177	489	
9,191	0	1,742	10,933	377	
5,034	0	1,802	6,837	228	
846	0	1,923	2,768	87	
0	0	1,742	1,742	60	
0	0	1,802	1,802	60	
0	0	1,923	1,923	60	
Heating (Therms)	Cooling (Therms)	Baseload (Therms)	Total (Therms)		
53,018	0	22,111	75,129		

These totals are not normalized to a typical weather year.

Energy Usage Normalized to a Typical Weather Year							
From	To	Days	Typical Average Temp (°F)	Typical HDD ref 65°F	Typical CDD ref 65°F		
1/1/10	1/31/10	31	26.0	1,209	0		0
2/1/10	2/28/10	28	25.4	1,110	0		0
3/1/10	3/31/10	31	37.4	860	6		6
4/1/10	4/30/10	30	47.9	518	6		6
5/1/10	5/31/10	31	59.9	191	32		32
6/1/10	6/30/10	30	66.4	66	112		112
7/1/10	7/31/10	31	71.8	4	213		213
8/1/10	8/31/10	31	68.0	31	123		123
9/1/10	9/30/10	30	60.7	181	53		53
10/1/10	10/31/10	31	49.5	481	0		0
11/1/10	11/30/10	30	40.9	723	0		0
12/1/10	12/31/10	31	27.7	1,155	0		0
		Total Days		Total HDD	Total CDD		
		365		6,529	545		

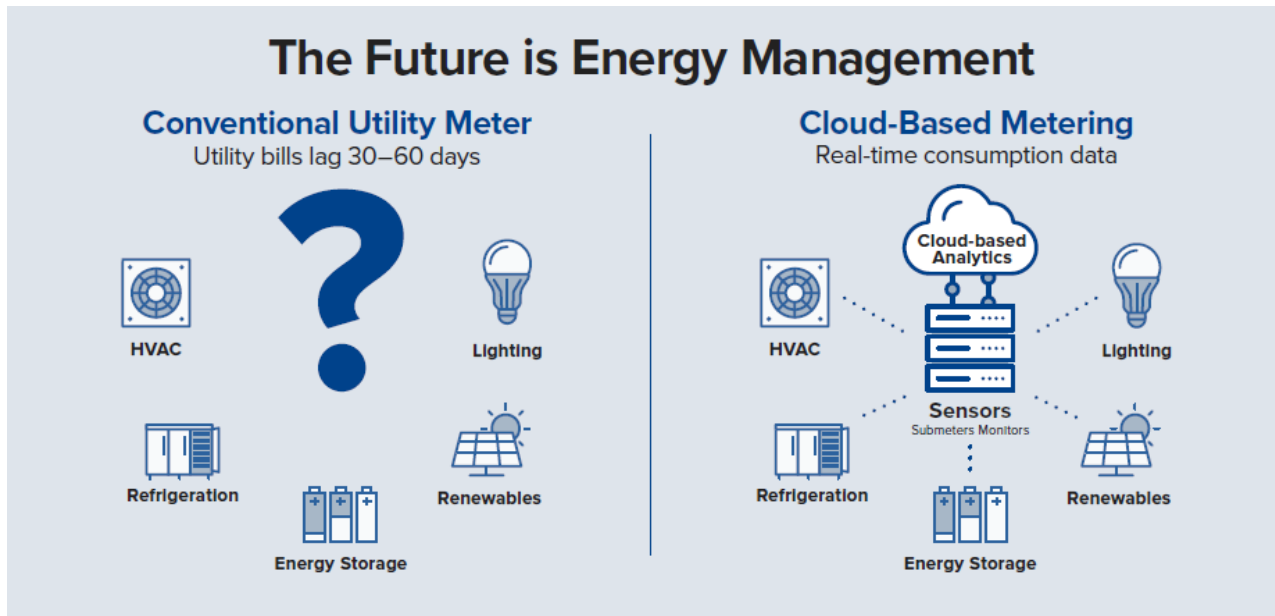
Energy Use Snapshot – Benefits

Cuts your project costs because NYSERDA:

- Obtains electricity and gas usage histories from utility companies
- Compiles all billing data into a single workbook
- Scales up sampled apartment meters
- Disaggregates heating, cooling and baseload usage
- Weather-normalizes per industry standards
- Graphs usage patterns
- Calculates useful metrics

Real Time Energy Management

Real Time Energy Management



Cutting-edge technology that continuously sends site's historical & live equipment performance data to advanced cloud-based system.

- Pay SBC on electric

Monitor Performance at Equipment Level



- Remote, real-time visibility & analytics
- Fault detection and diagnostics
- Predictive maintenance
- Automated control of equipment
- Better data to inform capital investments
- Strengthen existing BMS/BAS



- Operational optimization
- Better performing buildings

How Can We Help?

- RTEM Qualified Vendors
- Cost-share of system and service costs
- Two cost-share incentive options available

Customers pay upfront costs for RTEM system installation

	NYSERDA Cost-Share
System Installation	30%
Service Years 1-3	30%
Service Years 4-5	20%

RETM system costs are embedded in the RETM services costs

	NYSERDA Cost-Share
Service Years 1-3	30%
Service Years 4-5	20%

Questions?

Websites

MPP: nyscrda.ny.gov/mpp

RTEM: nyscrda.ny.gov/rtem

Email

MultifamilyPrograms@nyscrda.ny.gov