

# HUD EPC VIRTUAL INDUSTRY DAY

NOVEMBER 16, 2021  
11AM-5PM EST

Hosted By  
Office of Public  
and Indian  
Housing  
Financial  
Management  
Division  
Energy Branch

**SESSION TWO** - 1:30pm – 3:00pm

*ESCOs and the EPC – 1:30pm – 2:15pm*

*Moderated by Dick Santangelo, President and CEO, Apollo Engineering Solutions*

Mary Fox, Vertical Market Director, Johnson Controls

Lillian Kamalay, Senior Director, Housing Services, AMERESCO

Don Gilligan, President, NAESCO

*Innovating through Integrating EPCs and Incentives – 2:15pm-3:00pm*

*Moderated by Rick Sawicki, Senior Account Manager, Honeywell Building Solutions*

Rich Sissick, President, R. Sissick Consulting

Michael Levinson, Principal/Multifamily Housing Team Leader, Group14 Engineering

Holly Andreozzi, Senior Vice President Global Leasing, Bank of America

**BREAK** 3:00pm – 3:15pm



# Innovation & Integration

*Energy Performance Contracting,  
Solar Power, Rate Reduction & RAD*

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# Some New Energy

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Interest in the Public Housing Energy Performance Contracting (“EPC”) Program has waned in recent years, but the desire to conserve water and energy is stronger than ever. Renewing interest in the EPC program calls for innovation, to capitalize on developments in renewable technologies and enhanced integration with the Rental Assistance Demonstration (“RAD”) program.

- Development techniques for capitalizing on solar opportunities in Public Housing Communities with resident-paid utilities,
- Educate PHAs on how to develop EPC programs that will facilitate future conversion to Project-Based Vouchers, and
- Explore new ways to convert to RAD that focus on water and energy conservation and employ the financing approach normally used for EPCs.



**Resident Paid utilities are currently the biggest obstacle to implementation of renewable technologies in Public Housing *and* the clearest example of potential synergy between the RAD and EPC programs.**

*PIH Notice 2019-23 – Rental Assistance Demonstration – Final Implementation, Revision 4 (page 57)*

## **1.6 Special Provisions Affecting Conversions to PBVs, B. PBV Contract Terms, 5. Initial Contract Rent Setting**

- 1. e. Tenant-Paid Utility Savings.** Where a Covered Project will use a site-specific utility allowance as described in sub-paragraph iv. and the conversion will result in the reduction of one or more utility components (e.g., gas, water & sewer, electric) used to establish the Utility Allowance relative to the utility allowance of the Converting Project (i.e., the public Section I: Public Housing Projects H-2019-09 PIH-2019-23 (HA), Rental Assistance Demonstration REV-4 – Final Implementation 58 housing project), **HUD will permit the RAD contract rent to be increased by a portion of the utility savings.**

# Not so RADical an Idea

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Energy Performance Contracting and RAD Conversion are not so different. Unless redevelopment is involved, both programs focus on freezing revenues, reducing expenses, and taking on debt. Repayment of this debt is made possible by the reduction in operating expenses. By applying some of the techniques developed for the Public Housing EPC program, it may be possible to streamline RAD conversions.

An EPC-based approach to RAD conversion would work best for:

- PHAs with existing EPC programs - Particularly older programs that include an incentive for resident paid utilities,
- PHAs pursuing portfolio-wide conversions, and
- Well-performing PHAs with moderate capital needs.

Portfolio-wide RAD conversions could be accelerated by financing them with an equipment lease instead of a mortgage. This is how the majority of EPC programs are financed and this approach can be used in a project-based voucher environment.



# Solar, EPCs, Resident Paid Utilities, and RAD

## **Michael Levinson, CEM, LEED-AP**

Principal, Multifamily Team Leader

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# Firm Overview

**26** years in business

**50** Staff Members

**15** Professional Engineers

**20,000** Units of Public Housing Served  
(EPCs, M&V, CNAs, UA Studies)

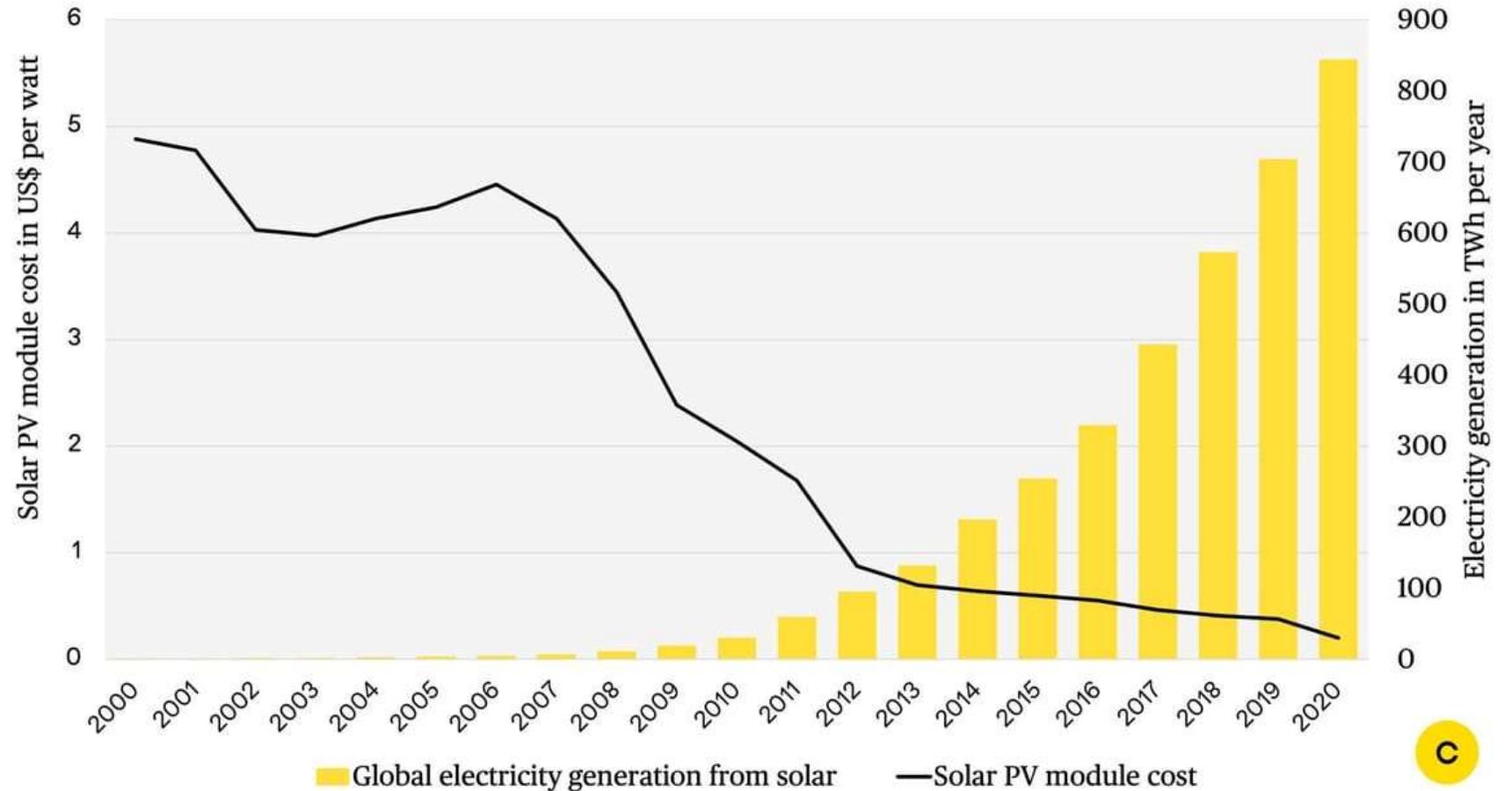


# The Miracle of Solar Economics



- Sub \$2/Watt Installed
- 250 KW – 2 MW
- Residential Rate Structure
- Less than a 15-year payback before incentives
- **EPC Cash Flow Positive**

Solar power soars as panel prices plunge



Source: Our World In Data (.org)

# Ingredients for Success

- Lots of Roof Space – Resident Paid Meters
- Solar connected to single owner paid meter
- Resident Paid Utility Allowances – Engineered Approach!
- Owned by PHA, not a PPA



*Trenton Housing Authority EPC*

# RPU to RAD



- Engineered Resident Paid Utility Allowance
- Post Solar Allowances Adjusted for Production
- Adjustment to Contract Rent under RAD, for as long as solar production is maintained

## RPU EPC Savings

			Utility Meter Type				Proposed Monthly Allowance - Pre EPC				Proposed Monthly Allowance - Post EPC			
			M = Master/PHA Paid R = Retail/Resident Pd. X = No Service				Total Dollar Value	Water Sewer Gallons	Consumption		Total Dollar Value	Water Sewer Gallons	Consumption	
			Trash	W&S	Elec	Gas			Electricity kWh	Natural Gas ccf			Electricity kWh	Natural Gas ccf
<b>Alazan</b>	0 Br	40	M	M	R	R	\$ 66.21	PHA Paid	397.30	30.16	\$ 56.79	PHA Paid	321.64	29.41
TX006000001	1 Br	16	M	M	R	R	76.45	PHA Paid	457.92	34.97	65.54	PHA Paid	373.69	33.49
TX06-6001.0	2 Br	412	M	M	R	R	90.17	PHA Paid	524.82	44.09	77.21	PHA Paid	427.26	41.86
Row/Townhouse (RW)	3 Br	33	M	M	R	R	118.34	PHA Paid	710.95	53.73	103.44	PHA Paid	604.99	50.02
Phase 1 Units	4 Br	-	-	-	-	-	-	-	-	-	-	-	-	-
Included in EPC	5 Br	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Unit Weighted Totals</b>		501	M	M	R	R	\$ 44,928	\$ -	\$ 262,904	\$ 21,704	\$ 38,545	\$ -	\$ 214,838	\$ 20,611
<b>Unit Weighted Average</b>			-	-	501	501	\$ 89.68	-	524.76	43.32	\$ 76.94	-	428.82	41.14
<b>Alazan</b>	0 Br	-	-	-	-	-	\$ -	-	-	-	\$ -	-	-	-
TX006000001	1 Br	-	-	-	-	-	-	-	-	-	-	-	-	-
TX06-6001.1	2 Br	70	M	M	R	R	86.74	PHA Paid	524.82	44.09	74.24	PHA Paid	427.26	41.86
Row/Townhouse (RW)	3 Br	110	M	M	R	R	113.86	PHA Paid	710.95	53.73	99.50	PHA Paid	604.99	50.02
Phase 1 Units	4 Br	4	M	M	R	R	141.21	PHA Paid	851.06	72.41	124.99	PHA Paid	736.71	67.22
Included in EPC	5 Br	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Unit Weighted Totals</b>		184	M	M	R	R	\$ 19,161.66	-	118,345.59	9,286.44	\$ 16,641.95	-	99,403.94	8,702.00
<b>Unit Weighted Average</b>			-	-	184	184	\$ 104.14	-	643.18	50.47	\$ 90.45	-	540.24	47.29
<b>Alazan-Guadalupe</b>	0 Br	-	-	-	-	-	\$ -	-	-	-	\$ -	-	-	-
TX006000001	1 Br	-	-	-	-	-	-	-	-	-	-	-	-	-
TX06-6127.0	2 Br	13	M	M	R	R	84.49	PHA Paid	524.82	44.75	72.17	PHA Paid	427.26	42.52
Semi-Detached (SD/duplex)	3 Br	38	R	R	R	R	259.14	11,718.02	710.95	70.96	213.35	8,571.42	604.99	67.25
Phase 1 Units	4 Br	5	R	R	R	R	334.65	16,405.23	851.06	93.25	274.41	11,999.98	736.71	88.06
Included in EPC	5 Br	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Unit Weighted Totals</b>		56	R	R	R	R	\$ 12,619	\$ 527,311	\$ 38,094	\$ 3,744	\$ 10,418	\$ 385,714	\$ 32,228	\$ 3,548
<b>Unit Weighted Average</b>			43	43	56	56	\$ 225.34	12,263.05	680.25	66.86	\$ 186.03	8,970.09	575.49	63.37

San Antonio Housing Authority EPC Resident Paid Utility Allowance – Sample Schedule