New Jersey's Clean Energy Program™
Energy Efficiency Committee Meeting
November 13, 2014

MEETING MINUTES

Presentations

- Resource Value Framework
  Robin LeBaron (RL), Senior Advisor for Policy and Research at the Home Performance Coalition ("HPC"), presented on the Resource Value Framework (RVF), a new approach to cost-effectiveness screening. The RVF provides a template for conducting the traditional California Standard Practice Manual tests according to best practices and/or creating a new test to determine whether an energy efficiency program is in the public interest.

- The HPC is:
  - A new organization based in Maine; a national stakeholder and conference organization that takes on challenges to the home performance industry.
  - They are developing national data standards to reduce "pain and suffering".
  - Making value of energy efficiency homes more visible in real estate transactions
  - Cost-effectiveness testing stemming from the ACI 2011 stakeholder meeting
    - Issue is serving as a break on many programs
    - Example – Virginia RIM test, Arizona Societal test
    - NY – measure-level TRC testing; every project had to clear a TRC (Total Resource Test)
    - Tests have posed a barrier

Question by Betsy Ackerman (BA) of NJBPU: In the programs that are being cut – are the eliminating the program or reducing the incentive?
RL Reply: It's a mix - program design led to projects being slowed down. In Oregon, programs have been cut. Threat in AZ that programs may be cut. Generally, if it doesn't clear the test, cut the program.

- Overview of the 5 tests:
  California Standard Practice Manual – most referred to document in the EE industry.
  Testing approach 5 tests.

  1. RIM test – Rate Impacts – whether an Energy Efficiency (EE) program will cause rates to go up or down.
  2. Utility Cost test – Benefit cost testing. If we offer program, does the utility come out ahead or behind.
  3. Societal Cost test – Takes a more global perspective. All the costs from everybody - utility, customers, etc. Do the total costs all in outweigh the total benefits all in?
  4. TRC – Total Resource Cost test: includes the costs/benefits experienced by all utility customers, including participants and non-participants.
  5. Participant test: includes costs/benefits experienced by the program participants.

- In practice, most states screen programs by using 1 test. NJ uses all 5 tests. TRC is by far the most widely used test and is usually the gate-keeper.

  - EE Measure Cost Participant Contribution
  - Non-Energy Benefits - Have the most slippery and complicated numbers.

- The challenge is that cost effective tests have been constraining programs or shutting them down. Issue really was that industry professionals felt that the tests weren't capturing the full value of

programs. Costs are there but benefits aren't there. Technical flaws too. The manual was written in 1982 – not a lot of guidance.

The HPC commissioned a study of best practices. Examples:

- Account for all avoided costs
- Uses appropriate measure lives – US States in same climate zones (variation)
- Appropriately accounts for spillover as well as free ridership
- Accounts for other program impacts – other fuel costs, water savings, non-energy benefits
- Ensure appropriate discount rate that accounts for the low risk associated with EE investments

- Non-Energy Benefits still not widely understood and considered
  - TRC and Societal tests deeply flawed in practice/need a more fundamental solution to the issue

- This is where the "The Resource Value Framework (RVF)" comes into play.
  - A new approach. A framework – not a test. Provides a method to "test your test" OR provides a method to create a new, theoretically coherent test

- RVF Principles
  - The ultimate goal is to determine whether a program is in the public interest
  - Energy efficiency screening should account for a state's energy policy goals
  - Tests should be symmetrical and transparent to stakeholders
  - Hard to quantify benefits should be adequately accounted for
  - Applicable to all resources, both demand and supply-side

EE screening should account for a state's energy policy goals –

How to apply the RVF:

- Decide on inputs for screening test with reference to appropriate perspective
- Identify and account for energy policy goals
- Determine most appropriate method to account for hard to quantify benefits
- Maintain transparency and symmetry
- Use the RVF worksheet

- The question that won't go away: Which test?
  - TRC is a tough test – because participant benefits are hard to quantify
  - Better one is Societal
  - Another approach is the Public Interest Utility Test
  - Start with utility system costs and benefits

Q&A:
Anne-Marie Peracchio (AMP) of NJNG: Through any of the groups/organizations is there a cheat-sheet of States that have used the RVF or are looking at it? RL Reply: A website will be going up with that soon.

Comment by BA: ACE is working on a means of understanding how states are calculating jobs from EE. Did a survey to all 50 states. They are addressing a similar issue.

Mike Ambrosio (MA) of Applied Energy Group (AEG): You made a point earlier, a pretty important one, we don't apply the same test on the supply side. If we build a powerline or plant, if you can expand on that a little bit. We don't do a rate impact payer test on the supply side.

RL reply: The bar is higher for EE on the demand side. No tests on the Supply side. Bar is high and even higher if you do the test wrong. The utility cost test is comparable to the thinking/planning that a utility would do. Most commissions aren't stopping the utility on the TRC. Pain-point is the non energy benefits. Say a utility provides a $3K incentive and the homeowner spends $7k on improvements, they are not just spending that money for energy savings but comfort and aesthetics.

Walt Sparrow-Hood/PSE&G: Utility cost test is the most important one in NJ. SBC or RGGI – what are ratepayers paying and what are they getting for the money. The participant cost should be a market based decision that the customers make. RL Reply: Stakeholders have different motivations at the table.

Question by Joe Gennello (JG) of Honeywell: Do you have examples of a TRC test for a measure with a table of different outcomes? RL Reply: Yes and I'll circulate that.

EPA 111-D: Rules currently in development to regulate carbon emissions as a pollutant under the Clean Air Act.

Audience member asked: Is anyone looking at EPA Non-attainment areas? In Newark, Mayor Booker, he said 1 in 4 children in Newark have asthma conditions. Medical costs are huge as a societal cost.

Followed by comment by AMP: Panel at ACI – Non-energy benefits start to see a lot more things. Hospital in St. Louis working with an EE group. With the ACA bill, hospitals can get fined for multiple visits to the hospital. Through ACI, we will see more stuff coming out.

Presentation ended followed by a 2nd presentation from NJIT Center for Building Knowledge Staff.

NJIT Update

Deane Evans "DE" (Executive Director) and Paul Romano of NJIT reviewed the following EE/C&I projects that the Center for Building Knowledge (CBK) has recently completed: 1) A retro-commissioning pilot project for supermarkets that we conducted for PSE&G and the "Supermarket Toolkit" that we developed based on the results of the pilot, also supported by PSE&G 2) A "Saving Energy in Leased Space" toolkit and training program that CBK created for US Department of Energy's Consortium for Building Energy Innovation in Philadelphia. 3) The national Commissioning Authority Training program. Funded by the US Department of Energy, the program was developed jointly by CBK and Portland Energy Conservation Inc., in cooperation with the Building Commissioning Authority. 4) The national Certificate of Proficiency in Benchmarking program, created by CBK in cooperation with the USEPA and the Natural Resources Defense Council and launched at Greenbuild 2014.

- Saving Energy in Leased Space Program (The "SELS" proram)
  Online training tool-kit. Issue is overlooked.
  3 modules:
  1. Existing Leases (Behavioral change)
  2. New Leases
  3. During Tenant Improvement Process

  Big areas of Focus: Lighting, HVAC, Plug Loads, Metering and Monitoring

Question by BA: This assumes that each tenant has their own meter? DE reply: Not necessarily.

- Example, US DOE 20,000 SF Tenant Improvement in Denver.
  - Estimated savings 34% over baseline
  - Upgrade downlight lamps
  - Install vacancy sensors
  - Reduce night light and plug loads
  - Balance corridor lighting
  - Upgrade thermostats
  - Add variable frequency fans on air handling units
  - Total cost of energy improvments $42,322
  - 3 year payback
  - Roughly 10% of TI Allowance

- $1.62/SF
- No additional expense to tenant or owner – more than 60% of savings due to lighting

- National Online Building Commissioning Training Program
  - Worked with PECI on the west coast – PECI did curriculum and NJIT the online courses

- Certificate of Proficiency in Benchmarking Program
  - Unique Collaboration
  - Issued by: NJIT Center for Building Knowledge
  - Developed by: Consortium for Building Energy Innovation (CBEI)
  - Supported by: US E.P.A., Dept. of Energy, The City Energy Project/NRDC

- Standardize data entry for benchmarking
  - Free online training program on US EPA's Energy Star Portfolio Manager tool and building information collection
  - 4 Interactive training modules (free to public) - students can register and pay to take an exam and earn a Certificate in Proficiency Benchmarking

- Retro-Commissioning Pilot - Market Segmentation & Customer Engagement

  - Supermarkets - $1 saved in energy would represent $59 in Sales
  - Energy and payroll – 2 largest expenses (low penetration of EE)
  - Supermarkets are 2nd largest consumer of energy in NJ but smallest footprint – very energy intensive. Third largest employer in the State.
  - Refrigeration accounts for 85% of savings potential at grocers

- CBK at NJIT developed programs
  - PSE&G Market Focused Retro-commissioning Pilot Program
  - Arguably the most cost effective ECM when applied appropriately
  - Greater than 10% of Supermarkets within PSE&G territory participating in Pilot Year.
  - 39 Participating Stores representing excess of 2.3M SF

- NSTAR Food Sales Program
  - Prescriptive Strategy – difficulty of implementation
  - Difficulty vs ROI
  - Package of measures
  - How do we ensure savings persist?
  - Build Awareness of energy costs and change business practices

Q&A:
JG – Any thoughts about going upstream and research on manufacturers on equipment and building?
DE - Example: All these walk-ins have motors and putting an ECM in would boost efficiency? When you talk to store owners, the way that display case gets cleaned is with a power washer which would destroy the ECMs. Store owner says never going there again – all potential savings is lost with ECMs.

With that type of insight we can do better – there are waterproof ECMs. The correct motor needs to get spec'ed. So, yes, the upstream is attractive because the notion is you will get large units quickly with low admin burden – but you need to understand the customer base. Requires us to know their practices.

BA – Building on what Joe asked, as part of pilot, did you do a baseline study of what equipment is being used from large markets to little bodegas, used equipment industry. Make that EE upgrade before it gets installed.

DE Reply: The DOE has done an excellent job of collecting data on the equipment. The secondary market for equipment is a great opportunity potentially.

How easy was it to get the markets onboard?
DE Reply: It is extraordinarily difficult. The utilities have relationships with them. Need to find a champion who understands the significance to then leverage it. You need to address their perception of risk – biggest barrier to address (food safety/ loss of merchandise). Be respectful of their concerns.

BA - Your study focused on supermarkets not the food service industry. DE Reply: Correct, PSE&G study focused on supermarkets and stores like Wawa/QuickChek were not included.

BA – You use refrigeration as the umbrella; do we have any sense of what that opportunity looks like in NJ? DE Reply: It's tremendous. Supermarkets are looking a lot more like a restaurant these days than a warehouse with all the prepared foods. Cross-over with food service equipment. Only becoming more energy intensive.

Program Coordinator and Regulatory Updates
Betsy Ackerman, Sherri Jones, Mike Ambrosio

Discussion of NJCEP Program Administrator RFP

The RFP has been reviewed and approved by OMB and OIT. It is currently targeted on the November Board agenda for approval and is expected to be released before the end of the year. The new RFP, which will be a three year term plus two one-year options, contains two marked differences from last RFP:

1. Marketing/website will not be included in the RFP. A separate RFP for the marketing/website component will be released in early 2015. The intent is that the new Program Administrator will coordinate with this entity.
2. The strategic plans are asked to be included in the RFP submittal.

FY15 True-Up Budget

- Budgets are set on estimated expenses. Spreadsheet was circulated this morning.
- Reconciliation between budgets and funds held in Trust Fund.
- $380M is max allowable we can have. Cannot exceed this amount.

BA Comment: Out of the $60M in headroom that we had between commitments for last year and what we budgeted for this year, where is it? MA – CHP has $30M and Renewables has $7M in Commitments

MA Said: Budgets will be going out for comment tomorrow along with a program modification on LED lamps. Comments are due in 2 weeks and targeting the December agenda meeting for Board approval.

C&I Direct Install – has a $43M budget. Last year we spent $26M and had $16 in Commitments – so almost $42M. Do you see that staying at the 70% incentive level? Not proposing any changes for this year. There is a work group that is looking at all of the programs and incentive levels for 2016.

TRC and Honeywell have taken a fresh look at all the marketing campaigns. Within the next month or so looking at fresh tactics. By December, new creative campaign, idea is to rollout a new marketing campaign by Jan 1st.

Commercial & Industrial Programs
TRC Team

- FY 2015 Program to Date update posted to NJCleanEnergy.com/SSB under **Program Updates.**
- New FY15 applications are available on NJ Clean Energy website
- New Proposal – Prescriptive program formal comment to be out for comment shortly
  - Incentive for 2' and 4' LED Linear Lamps qualified by the DLC: $5 per 2' lamp and $5 per 4."

<u>Program Updates FY 15 thru October:</u>

- Retrofit:
  - Electric Side: Installed 50% of Goal/Committed 85% of Goal
  - Gas Side: Installed 24% of Goal/Committed 90% of Goal
  - 2,699 applications Received – 1,044 in October alone; 1,040 applications Completed and Paid (37% of Goal)
  - $8.9M Available Budget remaining

- New Construction
  - Electric Side: 27% of Goal/Committed 9% of Goal
  - Gas Side: Installed 0% of Goal/Committed 24% of Goal
  - 50 applications received and 6 Applications Completed and Paid
  - 47% of budget committed/paid with $2.0M budget remaining

- Direct Install
  - Electric Side: Installed 52% of Goal/Committed 47%
  - Gas Side: Installed 67% of Goal/Committed 79% of Goal
  - 459 apps received – 153 in October alone. 443 applications Completed and Paid
  - 64% of budget committed/paid with $15.9M remaining

- CHP/FC
  - Electric side: Installed 0% of Goal/Committed 71% of Goal
  - Gas Side: Installed 0% of Goal/Committed 0%
  - 11 apps received – 2 approved – 1.6MW (13% of Goal)
  - 22% of budget committed/paid with $31.6M remaining.

- P4P – Existing Buildings
  - Electric Side: Installed 43% of Goal/Committed 81%
  - Gas Side: Installed 27% of Goal/Committed 2% of Goal
  - 28 apps received; 10 ERPs approved (20% of Goal)
  - 16 installs approved and 6 performance benchmarks approved
  - 64% of budget committed/paid with $12.9M remaining

- P4P New Construction
  - Electric Side: Installed 0% of Goal/Committed 5% of Goal
  - Gas Side: Installed 0% of Goal/Committed 26% of Goal
  - 13 apps received and 2 ERPs approved (6% of Goal)
  - 59% of budget committed/paid with $5.6M remaining

- LGEA
  - 90% of Goal; 42% of budget committed/paid with $1.4M remaining
  - 41 new projects and 51 Audit Reports approved

- Large Energy Users
  - Electric Side: Installed 23% of Goal/Committed 5% of Goal
  - Gas Side: Installed 0% of Goal/Committed 0% of Goal
  - 3 new enrollments approved; 4 installation submissions under review; 1 installation approved
  - 52% of budget committed/paid with $8.8M remaining

- SEP
  - $28,643 in Remaining Funds; 11 apps committed and 1 app paid

- C&I Sandy Relief
  - 2,872 apps received, increase of 329. $28.9 M in incentive value to date
  - 1,423 apps committed, $15M of incentive value ($13.5 last month)
  - 792 apps approved for payment worth $6.9M in incentives

- C&I Lifetime Environmental Benefits
  - Saved 1,169,536 metric tons of CO2 equivalent to 246,218 passenger vehicles or
  - CO2 emissions from 131,600,714 gallons of gasoline consumed

Residential Programs – Honeywell Team

Program Updates FY 15 thru October:

- EE Products
  - Electric Side 35% of Savings Goal realized/Gas Side 14% of Savings Goal realized
  - 6,749 Washers Paid to Date
  - 1,331 Fridges Paid to Date
  - 1,361,631 Lighting Paid to Date
  - 3,848 Fridge Recycling Paid to Date
  - $4.7M Budget spent & $15.3M remaining

- HVAC
  - Electric Side 14% of Savings goal realized/Gas side 18% of Savings Goal realized
  - 974 Cools Paid to Date
  - 3,231 Warms Paid to Date
  - 5 SEP Cools 73 SEP Warms Paid to Date
  - $2.9M Budget spent & $11.9 M remaining

- HPwES
  - Electric Side 70% of Savings goal realized/Gas Side 51% of Savings goal realized
  - 135 Tier 2 Completions and 1,847 Tier 3 Completions (Total 1,982)
  - $13.6 Spent to Date & $20.7M remaining

- RNC
  - Electric Side 10% of Savings goal realized/Gas side 8% of Savings goal realized
  - 1,591 Enrollments and 565 Completions
  - $1.6 Spent & $9M budget remaining

- Hurricane Sandy
  - 4,256 incentives $3.2M total paid out

Utility Updates

Cheryl England of Elizabethtown Gas:
ETG has been working with Staff on a method to share customer information between the BPU/Utility.

Anne-Marie Peracchio of NJNG:
Existing Save Green program expires 6/30/15. They want to align with clean energy and be approved of anticipated program changes. They have an energy related sweepstakes underway, as well as a school contest. They are coordinating chamber events.

Walt Sparrow-Hood of PSE&G:
Submitted their filing to continue their 3 existing programs, slated for the January Board meeting. This would include on-bill financing.

Sam Valora of South Jersey Gas:
The C&I financing option is open. Total budget is $2M & $500K pre-approved. They are preparing a filing to extend beyond 6/30/15.

Other Business, Next Meeting

- December Meeting – 12/9/14. No speakers scheduled at this time.

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		Please check off	
Name	**Company**	**In Person**	**By Phone**
Ackerman, Elizabeth	BPU	x	
Acampora, Robbie	Phoenix Advisors, LLC		
Adams, Ben	MaGrann Assoc.		
Ambrosio, Mike	AEG	x	
Barnes, Anthony	Energy Saavy		
Bovio, Brian	Bovio Heating		x
Boyd, Mary Jo	CSG	x	
Burke, Kevin	Honeywell	x	
Carpenter, Joseph	NJ DEP	x	
Colander, Brandi	Opower		
De Seve, Julie	CSG		
DelPino, Kristin	CSG		
DeLuca, Brian	TRC	x	
Dempsey, Peter	South Jersey Energy Service Plus		
Desimpel, Tom	CMC Energy	x	
Dolan, Brian	Intellidyne		
Donadio, Tom	JCP&L		
Donohue, John	On behalf of Fuel Merchants Assoc	x	
Ellman, Susan	NJNG	x	
Evans, Deane	NJIT	x	
Evans, Frank	Willdan Energy Solutions		
Fisk, Andrew	CSG		
Flannery, Mike	MaGrann Assoc.		
Flynn, Don	Energy Program Advisory Services, LLC		x
Foster, Rebecca	VEIC	x	
Gennello, Joe	Honeywell	x	
Georgi, Anthony	Honeywell	x	
Glickman, Joan	US DOE		
Graham, Marianne	ICF International		x
Grossman, Bruce	SJG		
Haddock, Kyle	EIC, Comfort Home		
Haider, Renne	Sustainable Jersey		
Hauber, Fred	Eastern Energy Services, Inc.		
Hayes, James	The Stone House Group		
Heise, Dani	Techniart – Energy Saving Outlet		
Hendricks, Mahogany	BPU		
Hoff, Kim	CSG		
Holland, Dave	Honeywell		
Holmes, Bill	SJG		
Hutchinson, Ed	Hutchinson Mech. Services		x
Ingelido, Richard	ConEdison	x	
Janowiak, Ed	Eastern Heating and Cooling Council		
Jones, Sherri	BPU	x	
Kaplan, Matthew	Revireo		
Kleuver, Amanda	EFS		
Lewandowski, Kurt	NJ Rate Counsel		

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Name	**Company**	**In Person**	**By Phone**
Liaukus, Christine	Center for Building Knowledge		
Lupse, Janja	CSG	x	
Magrann, Mark	Magrann Associates	x	
Markwood, Scott	O&R		
Marx, Rick	EAM Assoc.		
Miller, Ashley	TRC		
Mitchell, Allison	BPU		
Murdoch, Jay	Owens Corning		
Napoleon, Alice	Synapse Energy Economics Representing Rate Counsel		
O'Donnell, Tony	Sustainable Jersey	x	
Palmer, Bill	Kamson Corp		
Perracchio, Anne-Marie	NJNG	x	
Reichert, Tom	CSG		
Rogers, Dan	ICF International		
Rozanova, Valentina	TRC		
Ryan, Jerry	NJNG	x	
Schuster, Thomas	Sierra Club		
Sherako, Jill	Eastern Heating and Cooling Council	x	
Skok, Andy	Fuel Cell Energy		
Slaten, Marisa	BPU		
Smith, Peter	Renewable Power		
Sparrow-Hood, Walt	PSE&G	x	
Stanish, Jeff	O-Power		
Steindel, Sarah	NJ Division of Rate Counsel		
Stewart, Patrick	ACCA NJ		
Stone, Gordon	BPCA - NJ / Home Energy Matters		
Takahashi, Kenji	Synapse -Energy		
Tantillo, Cheryl	Elizabethtown Gas	x	
Teng, Elizabeth	BPU	x	
Teter, Carl	TRC	x	
Valora, Sam	SJG	x	
Walker, Tom	BPU - ERB		
Wetzel, Linda	AEG	x	
Winka, Mike	BPU		
Wong, Douglas	BC Express Inc		x
Zukas, Diane	TRC		

Add names below:	**Company**		
LeBaron, Robin	Home Performance Coalition	x	
Schmidt, Edward	Performance Solutions, LLC		x

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		Please check off	
Name	**Company**	**In Person**	**By Phone**
Klor, Jason	Green Light Energy Conservation		x
Foley, Gearoid	Integrated CHP Systems Corp.		x
Bhadra, Prasenjit	Ranial Systems		x
Gordon, Rebecca	Pepco Holdings, Inc.		x
Giordano, David	Doosan Fuel Cell America	x	
Behkhiet, Yosry	CB&I		
Philbrick, Chris	CH&!		
Missel, Fred	Willdan	x	