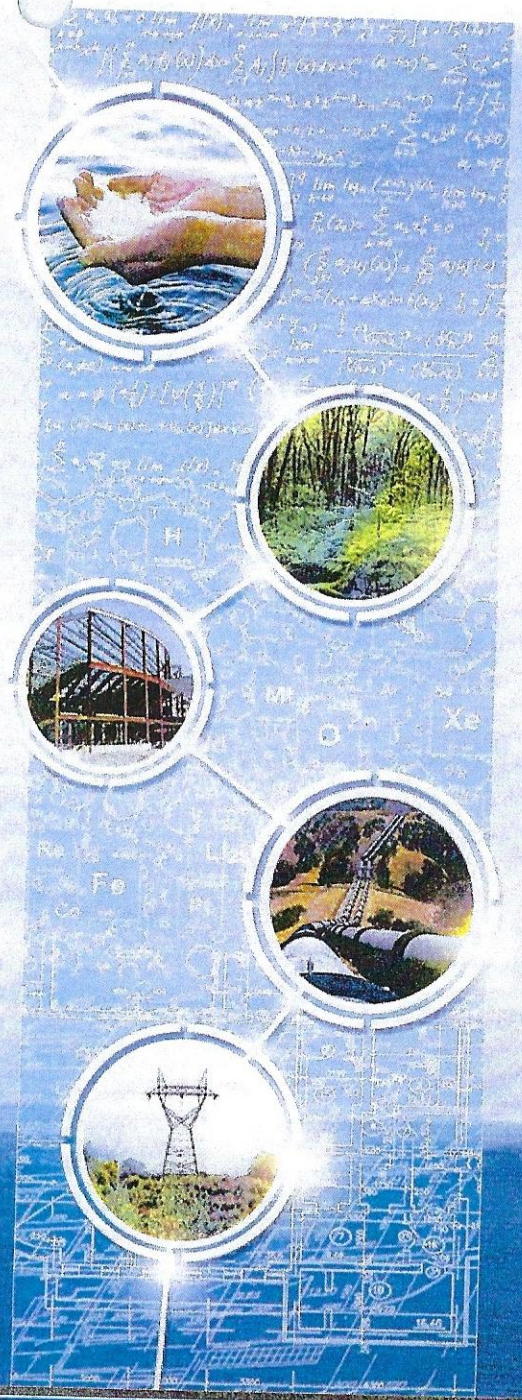

TETRA TECH

DCSEU FY2014 Evaluation Results Summary

SEU Advisory Board Meeting

June 29, 2015

Teri Lutz, Senior Utilities Manager, Tetra Tech

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FY2014 was a good year for DCSEU.

leidos

BAUMANN CONSULTING

GDS Associates, Inc.
Engineers and Consultants

Agenda

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I. Achievements

II. Performance Benchmark Verified Results

III. Portfolio Verified Results

IV. Key Findings and Recommendations

V. Questions

Achievements: Increased savings, lower acquisition costs

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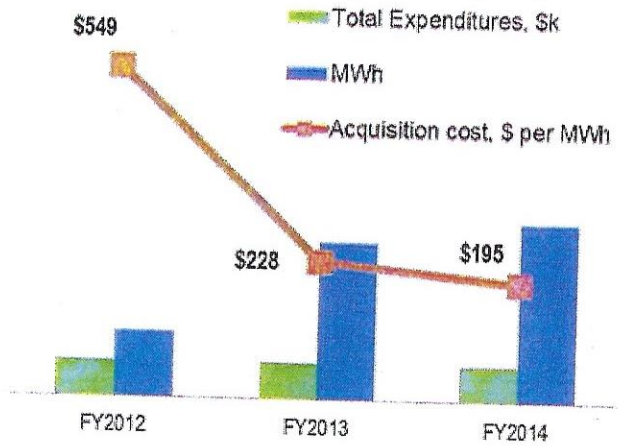

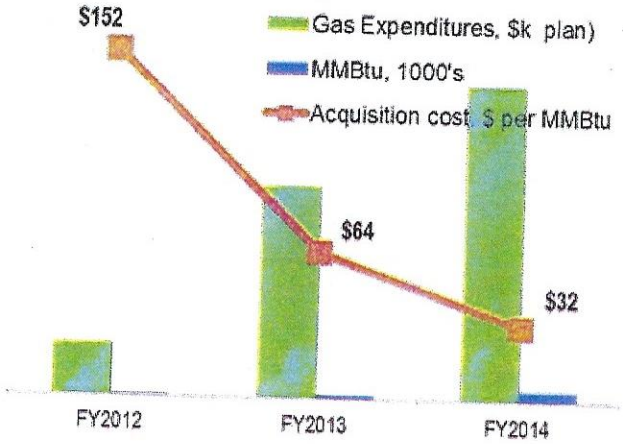

Savings continue to increase. Since FY2012...

- kWh more than doubled
- Mcf increased by more than 2700%

And acquisition costs continue to decline year-over-year...

- kWh down 65%
- Mcf down 78%

Achievements: Acquisition Cost Comparison, kWh (PA utilities)

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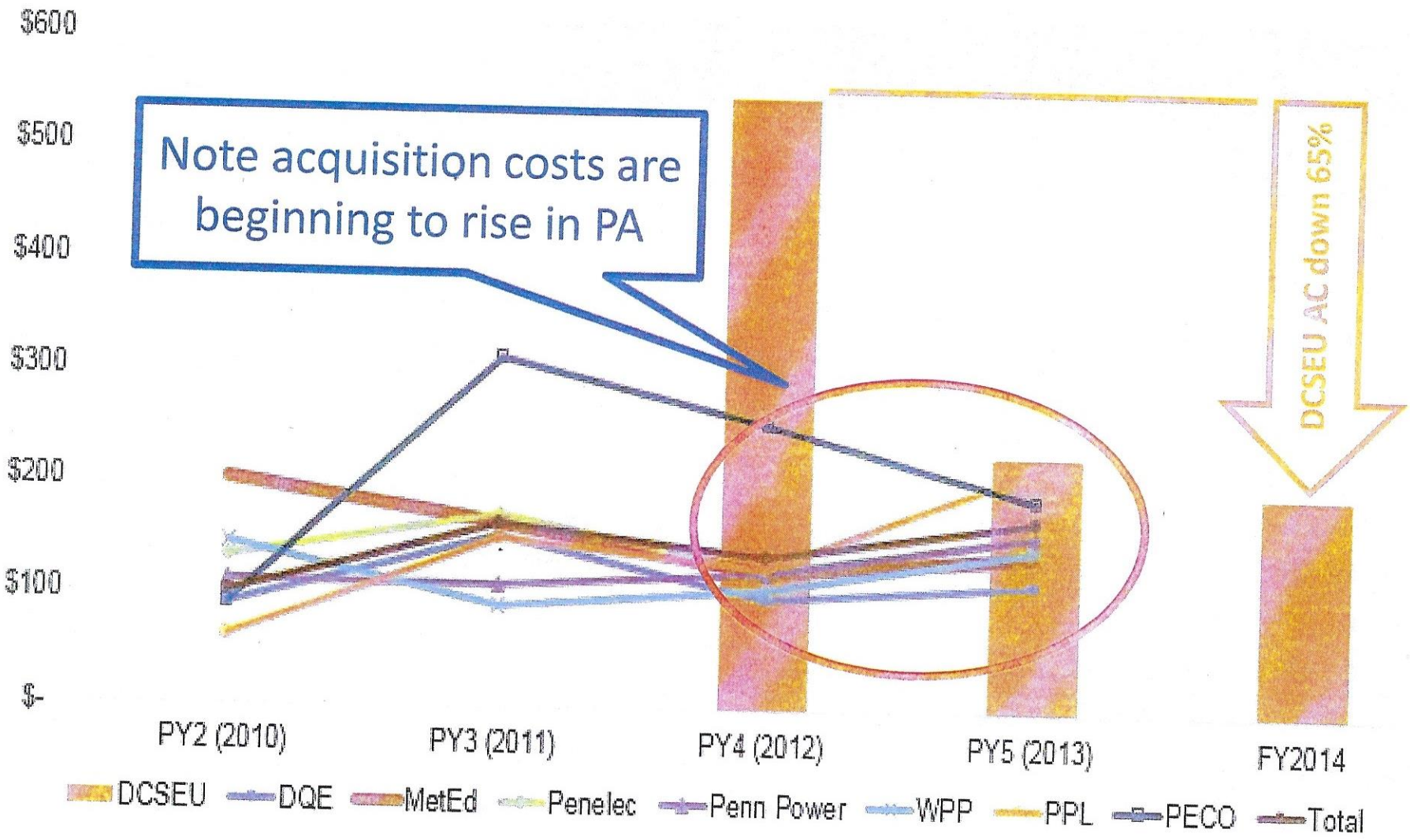

Achievements: Portfolio of programs remains cost effective

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Initiative	Evaluation Verified
7110SHOT Solar Hot Water	1.35
7107PV Solar Photo Voltaic	1.35
7401FHLB Federal Home Loan Bank	0.46
7420HPES HP with Energy Star	0.32
7511CIRX Business Energy Rebates	7.88
7510MTV T12 Lighting Replacement	4.21
7520CUST, 7520MARO, 7520NEWC Commercial Custom	5.35
7610ICDI, LI CP	2.1
7612LICP	3.68
7710APPL Appliances	2.18
7710FBNK Retail Lighting Food Bank	3.26
7710LITE Retail Efficient Products	7.54
Portfolio	**4.51**

Evaluation verified includes:

- Verified savings results
- Estimates for free-ridership and spillover
- Evaluation cost

Achievements: Participant satisfaction remains high

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- Satisfaction is high across key program components for all programs.
- Technical assistance provided by the DCSEU is rated "very satisfied". This speaks to the success of the DCSEU efforts to become a "trusted energy advisor".

Satisfaction, scale 1 (not at all) to 5 (highly)	C&I		
	Lighting	Other Prescr	Custom
Your experience overall	4.62	4.73	4.56
Technical assistance from the DCSEU	4.50	4.63	4.28
The rebate amount or financial incentive	4.18	3.61	3.72

Achievements: Performance Benchmarks

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DCSEU continues to build on past successes by achieving more - and higher - performance benchmark targets.

Benchmark	Maximum Performance Target	Minimum Performance Target	Maximum Performance Target	Minimum Performance Target	Maximum Performance Target	Minimum Performance Target
Reduce annual electricity consumption (MWh)						
Reduce annual natural gas consumption (Mcf)						
Increase renewable energy generating capacity (% decrease from FY13 costs)						
Reduce growth in peak demand (kW)						
Improve energy efficiency in low-income housing						
Reduce growth in energy demand of largest users (number of projects completed with a square footage > 200,000)			Not defined		Not defined	
Increase the number of green-collar jobs (FTE)						

Achievements: FY14 Performance Benchmarks

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Item	Benchmark	Maximum Performance Target	Minimum Performance Target	FY14 Reported	FY14 Verified	Maximum Target % Attained	Minimum Target % Attained
1a	Reduce annual electricity consumption (MWh)	103,690	51,845	60,778	59,659	58%	115%
1b	Reduce annual natural gas consumption (Mcf)	273,428	61,521	134,586	135,893	50%	221%
2	Increase renewable energy generating capacity (% decrease from FY13 costs)	20%	10%	8%	-20%	-102%	-204%
3	Reduce growth in peak demand (kW)	20,000	2,000	8,620	7,912	40%	396%
4	Improve energy efficiency in low-income housing	$5,280,000	$3,520,000	$6,168,206	$6,168,247	117%	175%
5	Reduce growth in energy demand of largest users (number of projects completed with a square footage > 200,000)	50	30	77	77	154%	257%
6	Increase the number of green-collar jobs (FTE)	88	70	82	85	97%	121%

Achievements: Portfolio Results

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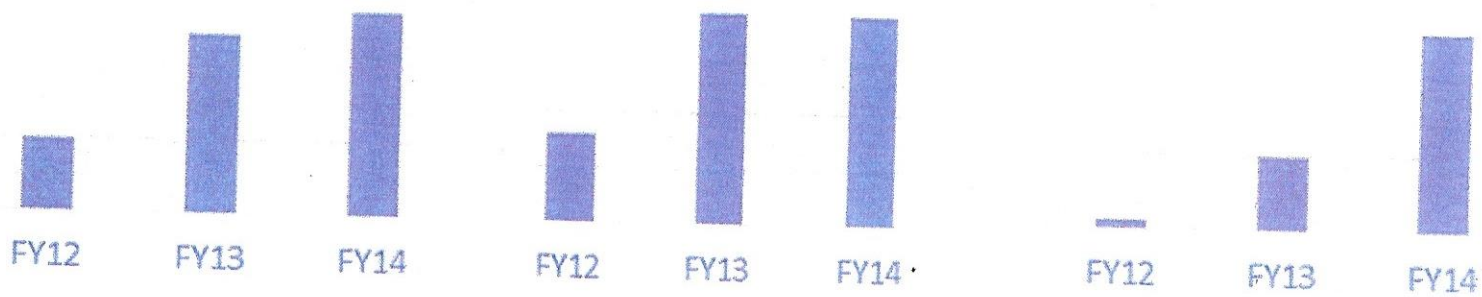
	MWh			MW			MMBtu		
	R	V	RR	R	V	RR	R	V	RR
FY14	56,209	55,157	0.98	8.0	7.5	0.92	133,189	132,579	1.00
FY13	46,625	48,399	1.04	7.0	7.6	1.07	49,827	49,616	1.00
FY12	21,515	19,875	0.92	3.4	3.2	0.95	4,808	4,760	0.99



Legend: R=Reported, V=Verified, RR=Realization Rate

Key Findings and Recommendations

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Reduce per-capita energy consumption

- Targets are more in line with funding.
- DCSEU has driven down acquisition costs for both MMBtu and MWh over the past 3 years of implementation.
- Data from other states suggests that a continued decrease in acquisition costs may become more difficult; additional funding may be warranted in future years and/or targets adjusted.
- A baseline study in conjunction with a more robust attribution assessment can gather data to assess market transformation impacts.

Key Findings and Recommendations

TETRA TECH

Increase renewable energy generating capacity

- The renewable energy initiatives expenditures are driven primarily by the measure incentive expenditures--costs largely outside of the DCSEU control.
- A different approach for establishing this benchmark to focus on DCSEU operations and aligning with District renewable objectives may be warranted.

Key Findings and Recommendations

TETRA TECH

Reduce growth in peak demand

- Reported savings result from the installation of electric savings measures and the associated reduction in demand.
- Continuing to calculate and verify the demand resources available for potential PJM Capacity Market participation is useful.
- Future demand performance benchmarks could be based on PJM Capacity Market metrics should the DCSEU begin bidding into this market.

Key Findings and Recommendations

TETRA TECH

Improve energy efficiency in low-income housing

- The DCSEU shares the VEIC commitment to low-income households. VEIC mission statement includes, "...at least 10% of the GHG and fiscal savings we create in 2027 will be from work that benefits low-income people."
- Additional MWh savings could be acquired by redirecting expenditures from low-income initiatives to non-low-income non-renewable energy initiatives.
- However, the DCSEU is tasked with achieving several (and sometimes conflicting) performance benchmarks and contractual obligations requiring close management of the portfolio throughout the year.

Key Findings and Recommendations

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Reduce growth in energy demand of largest users

- Defined for FY14, largest energy users are those with building space >200,000 sqft or "contiguous geographical area that share building systems or at least one common energy meter without separate metering, or sub-metering".
- Assess measurability and verifiability of benchmark.
- Ensure data and information required to verify project eligibility for this benchmark is included with project file for verification and audit.

Key Findings and Recommendations

TETRA TECH

Increase number of green-collar jobs

- As the DCSEU continues to move toward a market-based programmatic approach, less of the green job creation will be within the control of the DCSEU.
- This can lead to more efficient implementation and, thus, lower energy resource acquisition costs.
- The inclusion of 'estimated green job creation for cash incentives' accounts for dollars spent outside of the DCSEU control.

Recommendations Summary

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1) Continue to assess and refine Performance Benchmarks to remain relevant and encourage meaningful results within the context of District goals and objectives.
2) Assess value and feasibility of a District baseline study.
3) Assess evaluation focus to consider other value-added studies such as efforts to estimate market transformation impacts attributable to DCSEU initiatives.

Questions

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