A Look at an Energy Efficiency Utility’s Successes Supporting Federal Agencies

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Agenda

- Definition of an “EEU”
- A Look at the DCSEU
- Sample Customer Case Studies
What is an EEU?

• EEU = Energy Efficiency Utility

• VEIC – DCSEU’s parent company
  – Founded the Nation’s first EEU in 1999
  – Operates 3 EEU's
ABOUT THE DCSEU
DCSEU Overview

- Ratepayer-funded, privately operated
- Our purpose: Assist organizations in achieving operational energy goals.
  - Provide both technical and financial assistance
- Clean Energy Omnibus Bill (2018)

Through FY18 Over 5 Million Tons of CO\textsubscript{2}e Lifetime Carbon Emissions Prevented.
Equivalent to emissions from burning 5.4 billion pounds of coal
Lifetime energy savings of $850 million.
DCSEU Goals

- Electricity Savings
- Gas Savings
- Green Jobs
- Local Economic Development
- Low-Income Spending
- Renewables
DCSEU’s Programs

- No-Cost Technical Assistance
- Financial Support
  - Prescriptive Incentives
  - Custom Rebates
Technical Assistance with Federal Customers

- Tabling at Events
- Marketing Support
- Setting Lighting Standards
- Building Operator Certification
- Project Meetings
- Scope Review
- Technology Intros
- Sourcing Lighting
- GSA representation at meetings
Building Operator Certification Training Course

• Graduates make buildings more efficient and comfortable
• Scholarship from DCSEU
• Classes held at DCSEU

Typical Course:
• Five in-person trainings, lasting all day
• Plus two online trainings
• Option to take exam at the end
DCSEU Incentives

- Project support with ESPC/UESC
- Capital Projects/Retrofits
- Resiliency Efforts
- New Construction
- Retrocommissioning, Energy Management Programs (P4P)
- Net Zero Support
- Renewables
## Incentive Program Overview

<table>
<thead>
<tr>
<th>Product Category</th>
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<tbody>
<tr>
<td><strong>Lighting</strong></td>
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<td>Interior LEDs</td>
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<td>Exterior LEDs</td>
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<td>Controls</td>
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<td><strong>Heating and Ventilation</strong></td>
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<td>Boiler Projects</td>
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<td>Hot Water Heaters</td>
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<td>Steam Systems</td>
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<td>Steam Trap Replacement</td>
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<td>Variable Frequency Drives (VFDs)</td>
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<td>Demand Control Ventilation</td>
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<td>Chillers</td>
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<td>Heat Pumps</td>
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<td><strong>Pay for Performance</strong></td>
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<td>Recommissioning and Retro-commissioning</td>
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<td>Advanced Building Controls</td>
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<td>Energy Management Information Systems</td>
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<td><strong>Refrigeration and Food Service</strong></td>
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<td>Walk-in refrigerators and freezers</td>
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<td>ECM Motors for Walk-in coolers and freezers</td>
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<td>Food Service Equipment</td>
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<td><strong>Other</strong></td>
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<td>New Construction Projects</td>
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<td>Complex, Multi-measure projects</td>
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<tr>
<td>Renewables</td>
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<td>Net Zero Building Projects</td>
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The DCSEU will pay incentives to customers for the energy savings generated.

Project types that qualify:
• Complex, multi measure projects
• Re-commissioning
• Interactive effects of multiple ECMs
• Advanced Building controls
• Energy Management Information Systems (EMIS)
UESC and ESPC Assistance

- National Deep Energy Retrofit Program
- Early Involvement
- IGA Review
- Independent Energy Calculations
- Direct Communication with ESCO, Building Team, and Project Team
- Can Phase Rebates
- M&V Strategies
Solar Projects

• Custom project
• Incentive based on production capacity
• Can be a single measure or part of a comprehensive project
• Support to project teams
CASE STUDIES
Lighting Example

Photos used with permission
Data Analysis Example

- Viper tool for analyzing data – tells us where high energy usage occurs.

- What if I cap my peak?
- What if I reduce my base load?
Preventive Maintenance Pilots

Steam Trap Program
- Organize with multiple building teams
- Coordinate an audit during heating season
- Analyze for energy savings
- Incentivize Repairs
- Average Simple Payback less than 2 years

Compressed Air Pilot
- First time program at Museum in DC
- ASHRAE level 2 audit with focus on compressed air leaks
- Measure for energy savings
DCSEU and Federal Agencies

- 105 Completed Projects since FY 2012
- 71,000 MWH in Electric Savings
- 437,000 MMBTU in Gas Savings
- 1.4 billion lbs. of CO₂ Prevented
- Lifetime Energy Cost Savings over $100 million
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