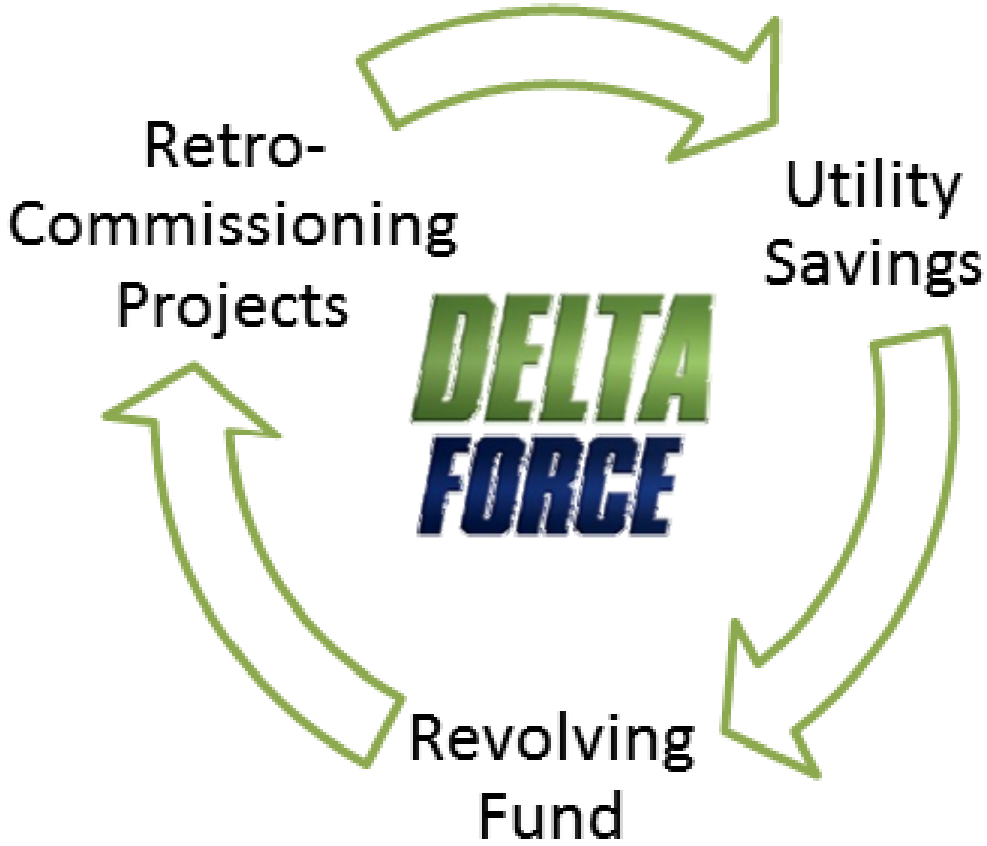

Delta Force at UVA: Beyond Retrocommissioning

Jesse Warren, Energy Engineer, Office for Sustainability

2014 DEQ Environmental Excellence Conference

March 12, 2014

SUSTAINABILITY · UVA

TITLE HEADER

SUB-HEADER

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If you need an OFS logo, here's one:

OFFICE FOR SUSTAINABILITY
UNIVERSITY of VIRGINIA

SUSTAINABILITY · UVA

U.Va. Office for Sustainability

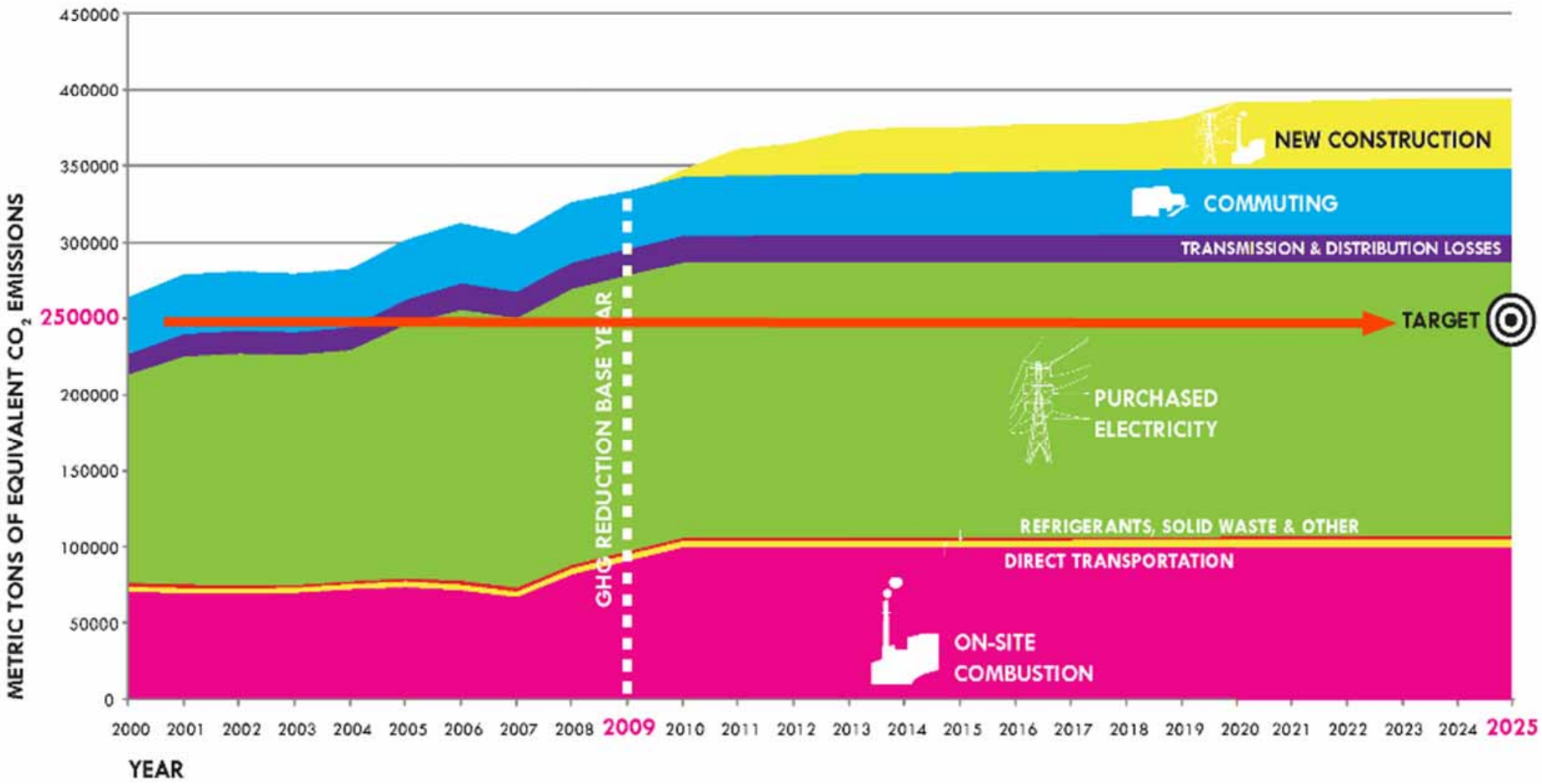
SUSTAINABILITY · UVA

U.Va. Energy & Utilities

SUSTAINABILITY · UVA

Reducing U.Va.'s Footprint

25% Carbon Reduction by 2025



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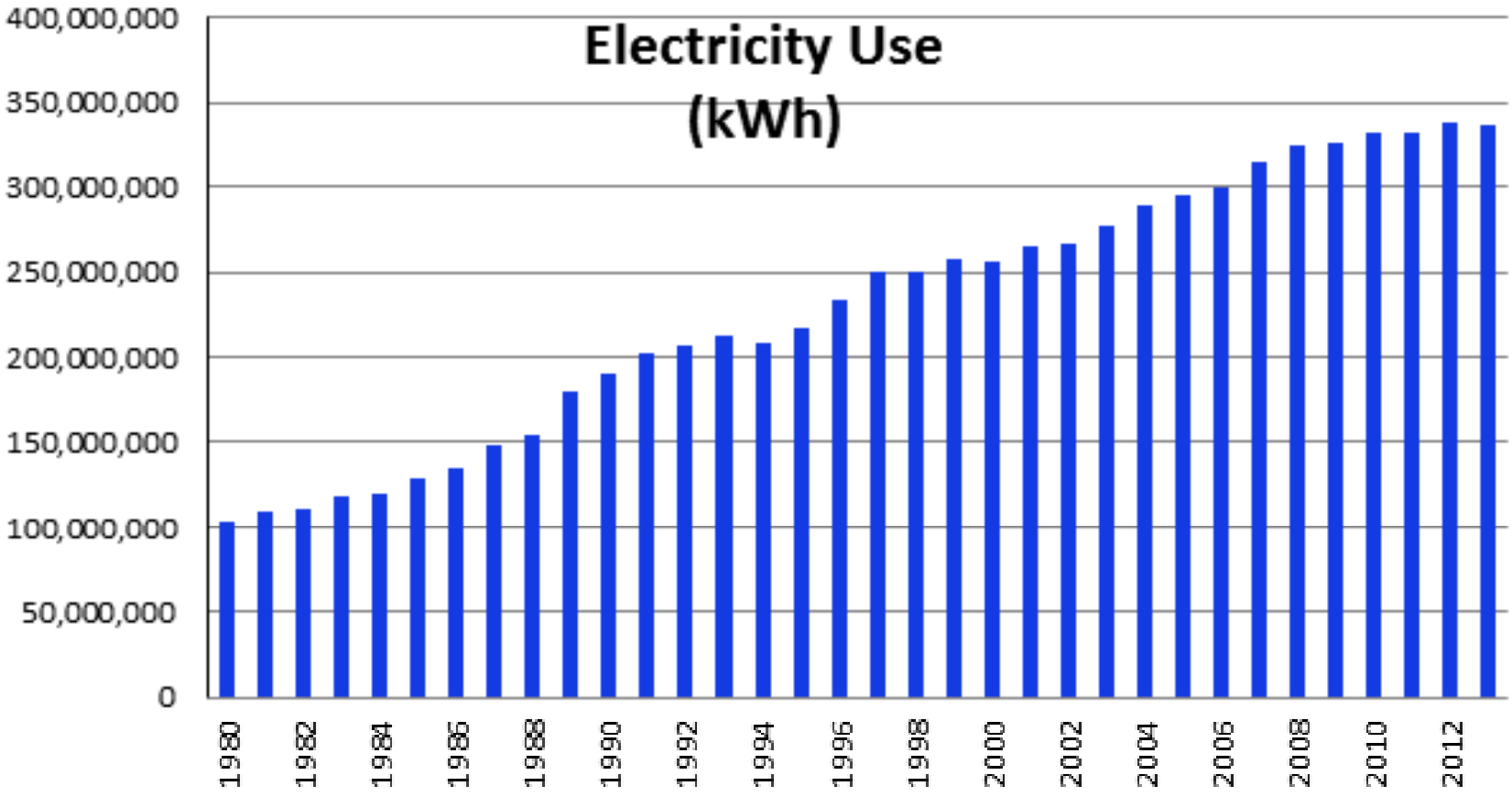
Reducing U.Va.'s Footprint



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Reducing U.Va.'s Footprint

SUSTAINABILITY · UVA

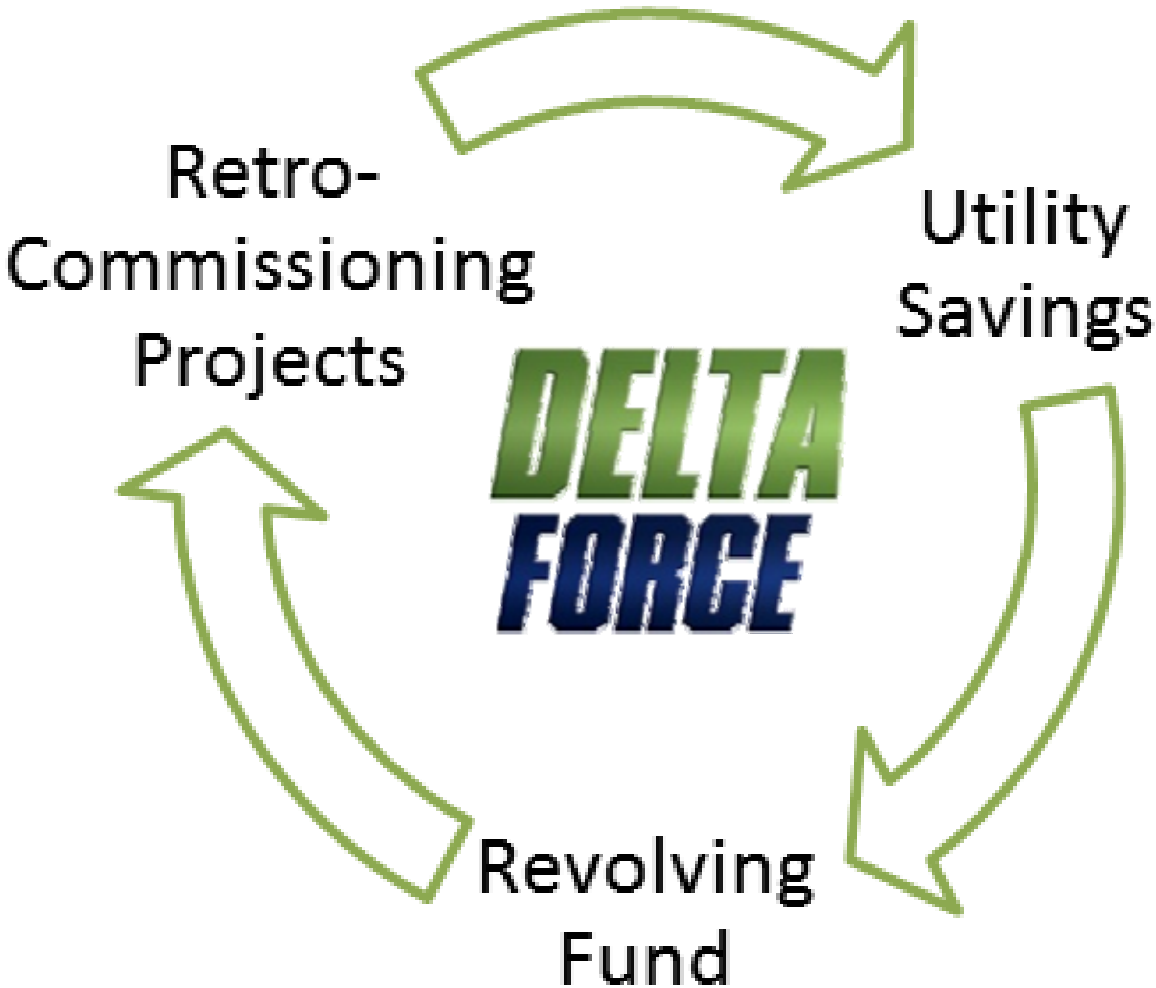
Reducing U.Va.'s Footprint

Health System

SUSTAINABILITY · UVA

Reducing U.Va.'s Footprint

Delta Force Retrocommissioning



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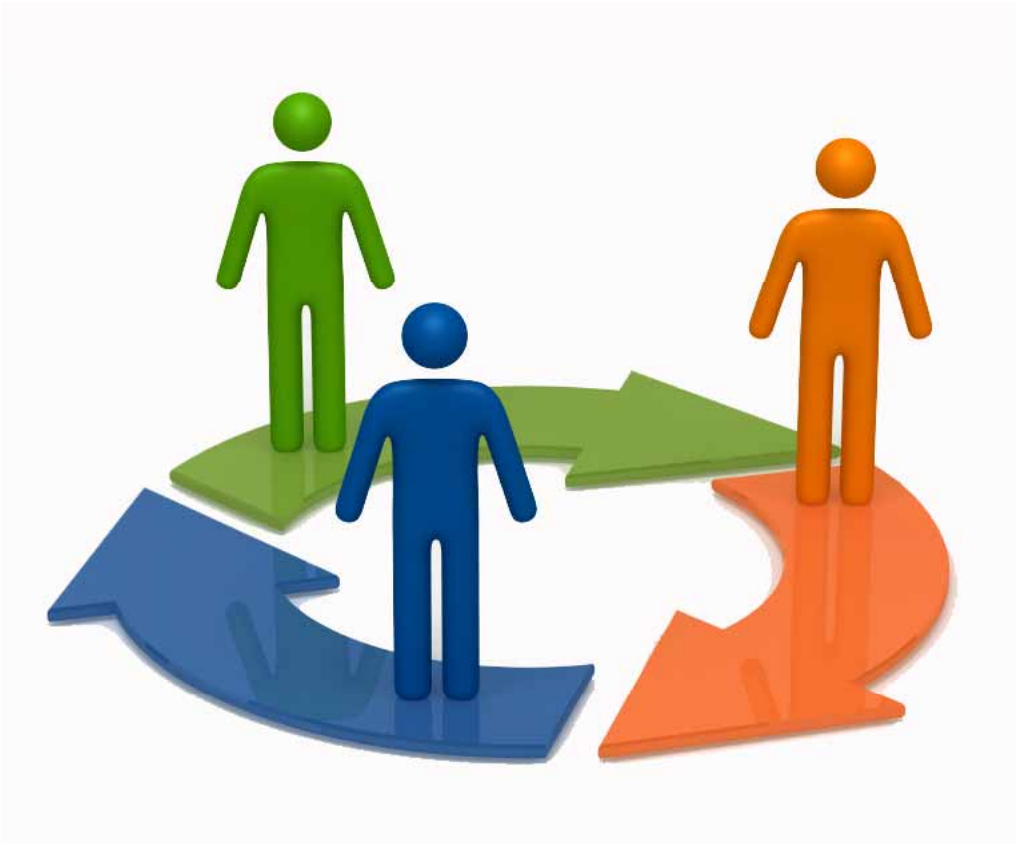
Delta Force: Retrocommissioning

A Team Effort

- Energy Engineers
- Facility Managers
- Facilities Staff and Trades
- External Consultants
- Building Occupants



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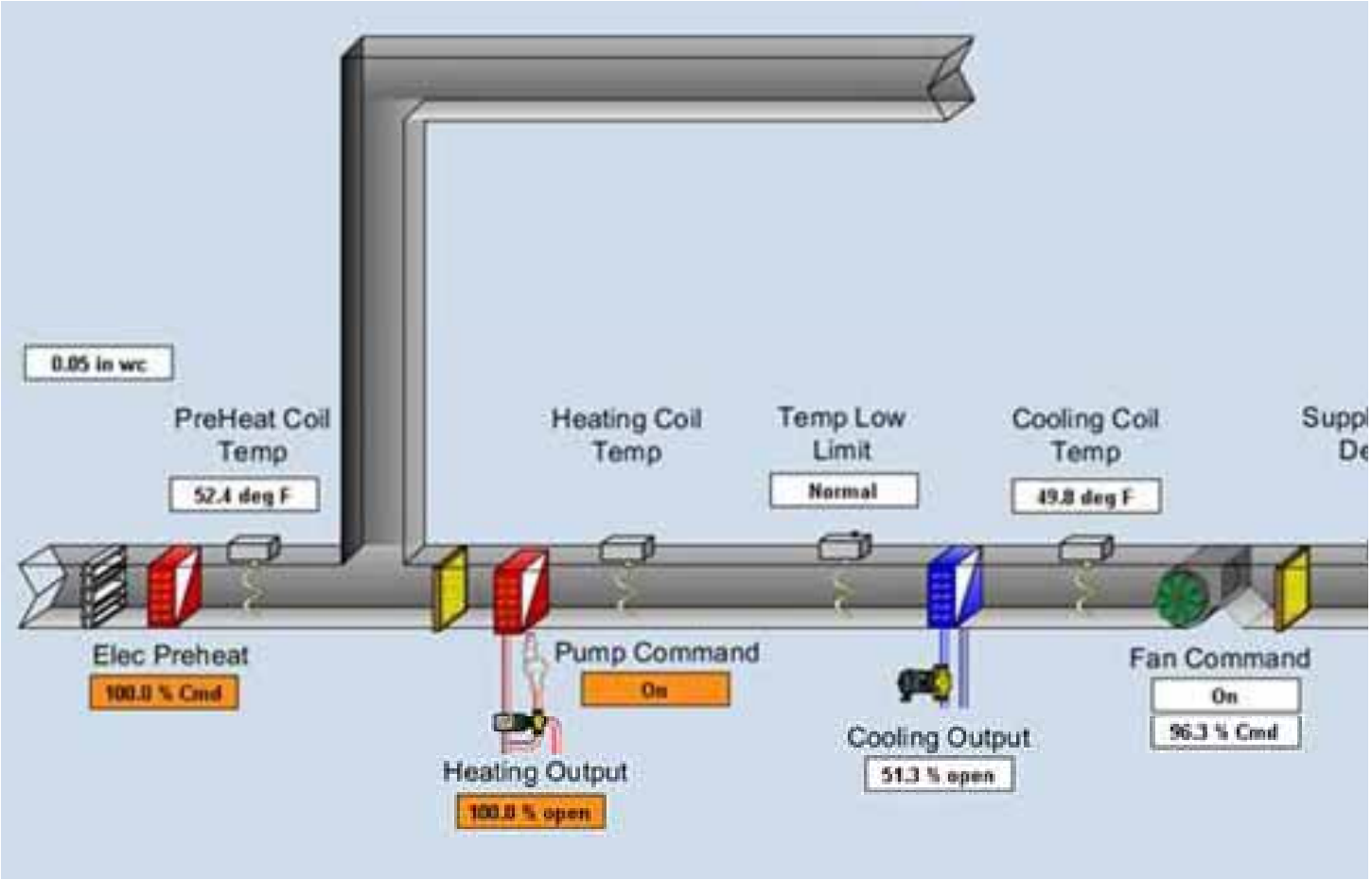
Review HVAC Controls



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Assess/Repair HVAC Systems

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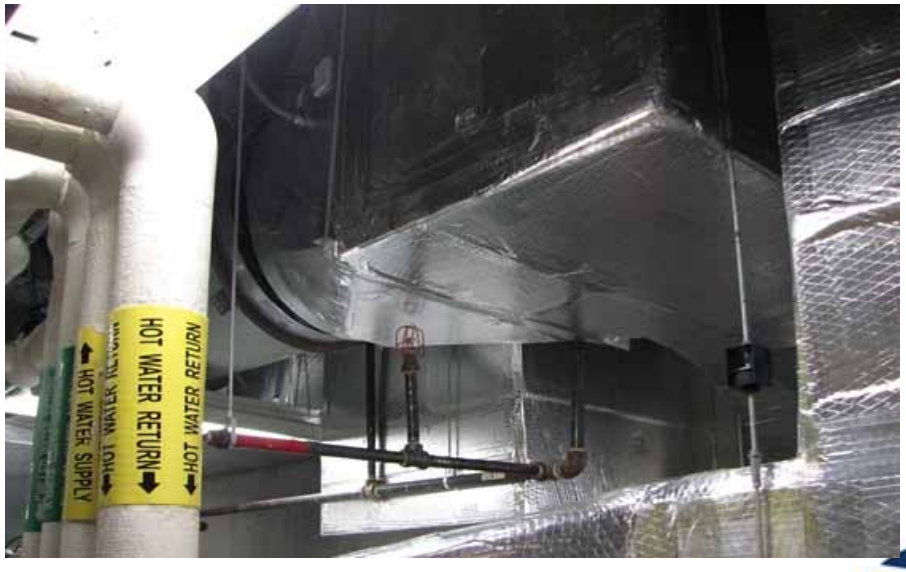
Sample & Test HVAC Equipment & TAB



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Relamping

Energy Advantage Extra Long Life T8

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Relamping

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Relamping - Campbell Hall

- Replaced 3000 lamps
- Reduced wattage by 48 kW
- Saves almost $20,000 annually

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Envelope Improvements

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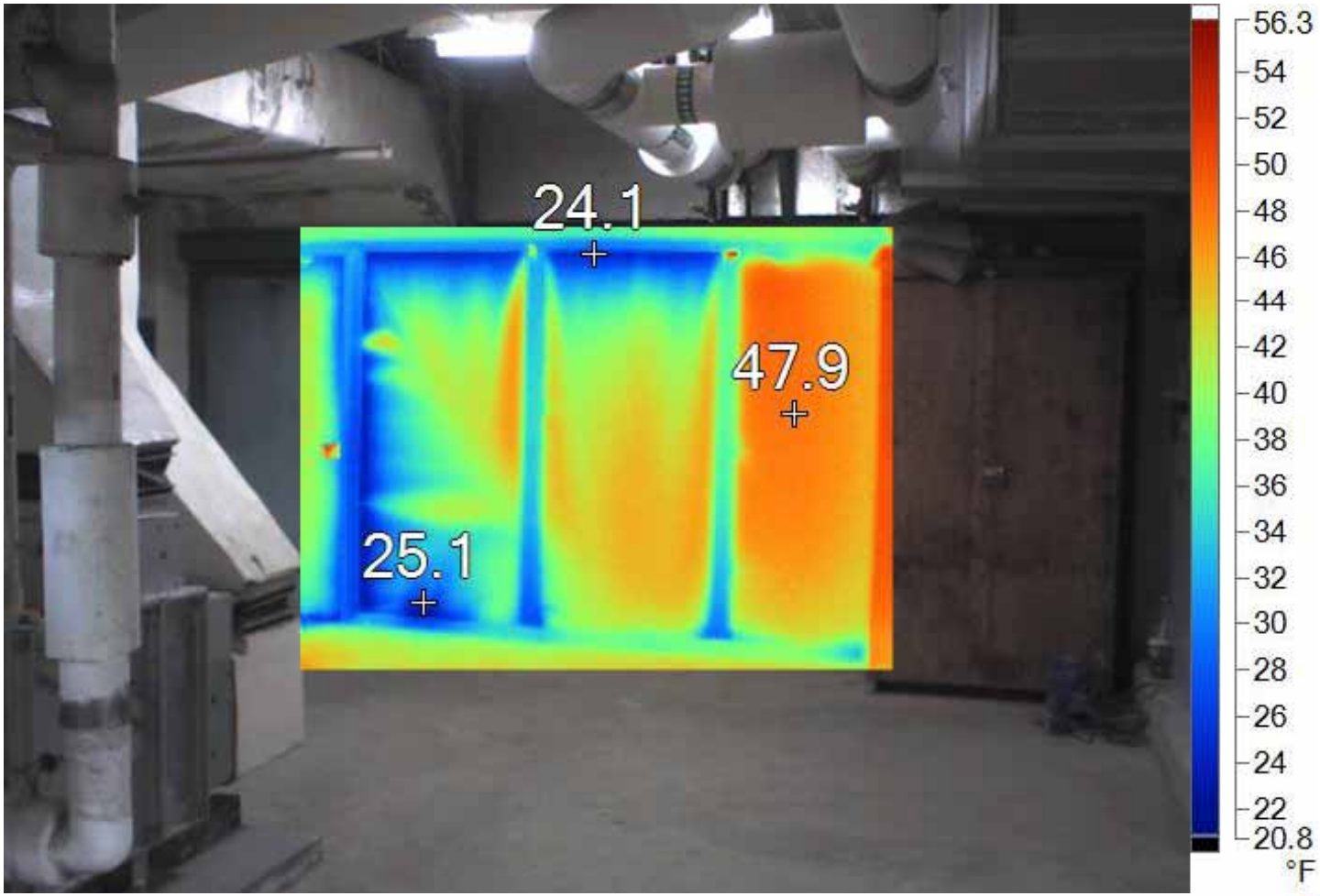
Envelope Improvements



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Additional Energy Conservation Measures

- Reduce air flows
- Install VFDs
- Plant vs. building pumps
- Install PICV's

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Water Conservation

- Capture condensate for tower make up
- Process chilled water loops
- Reduced flow aerators

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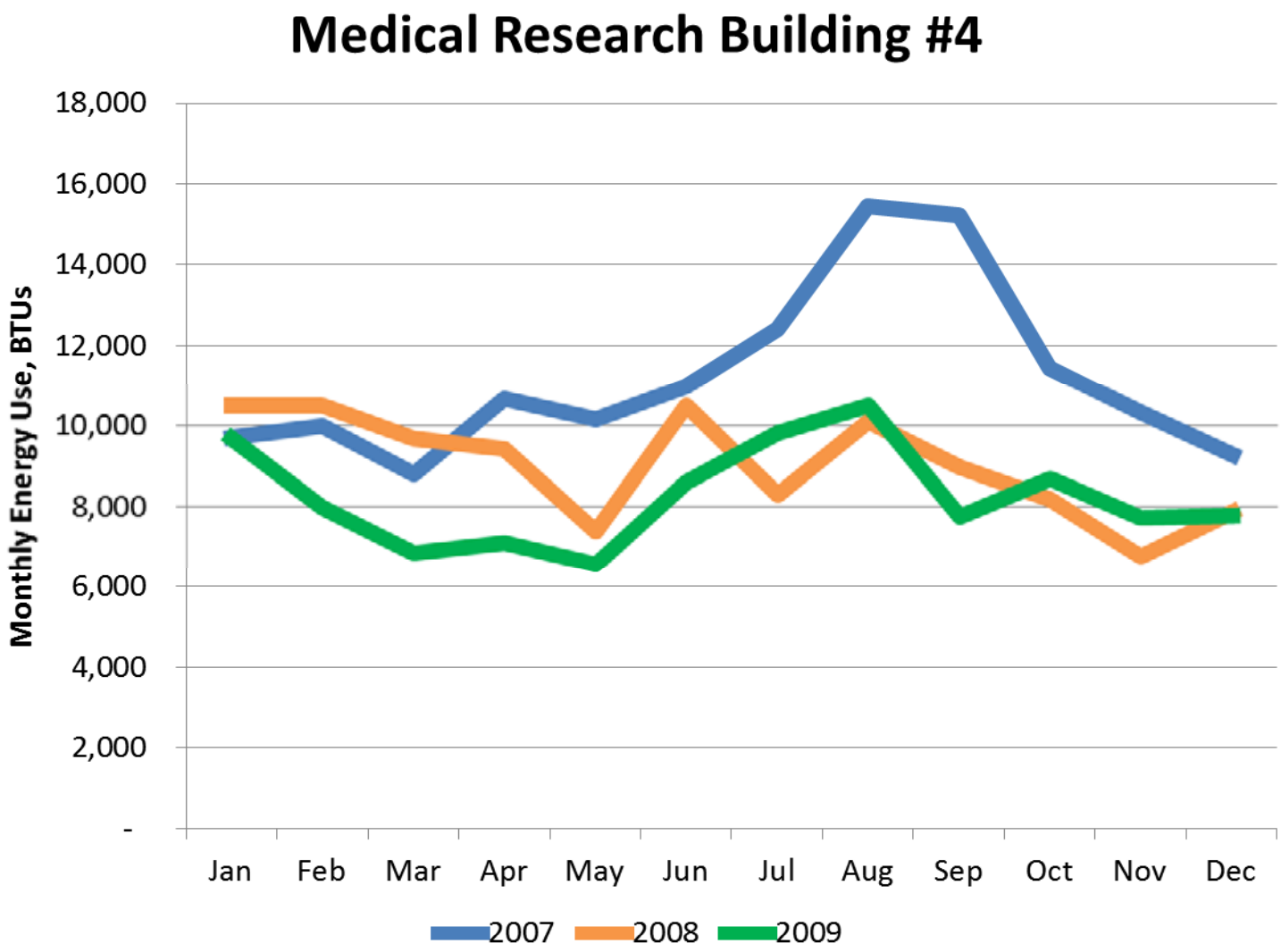
Delta Force: Results



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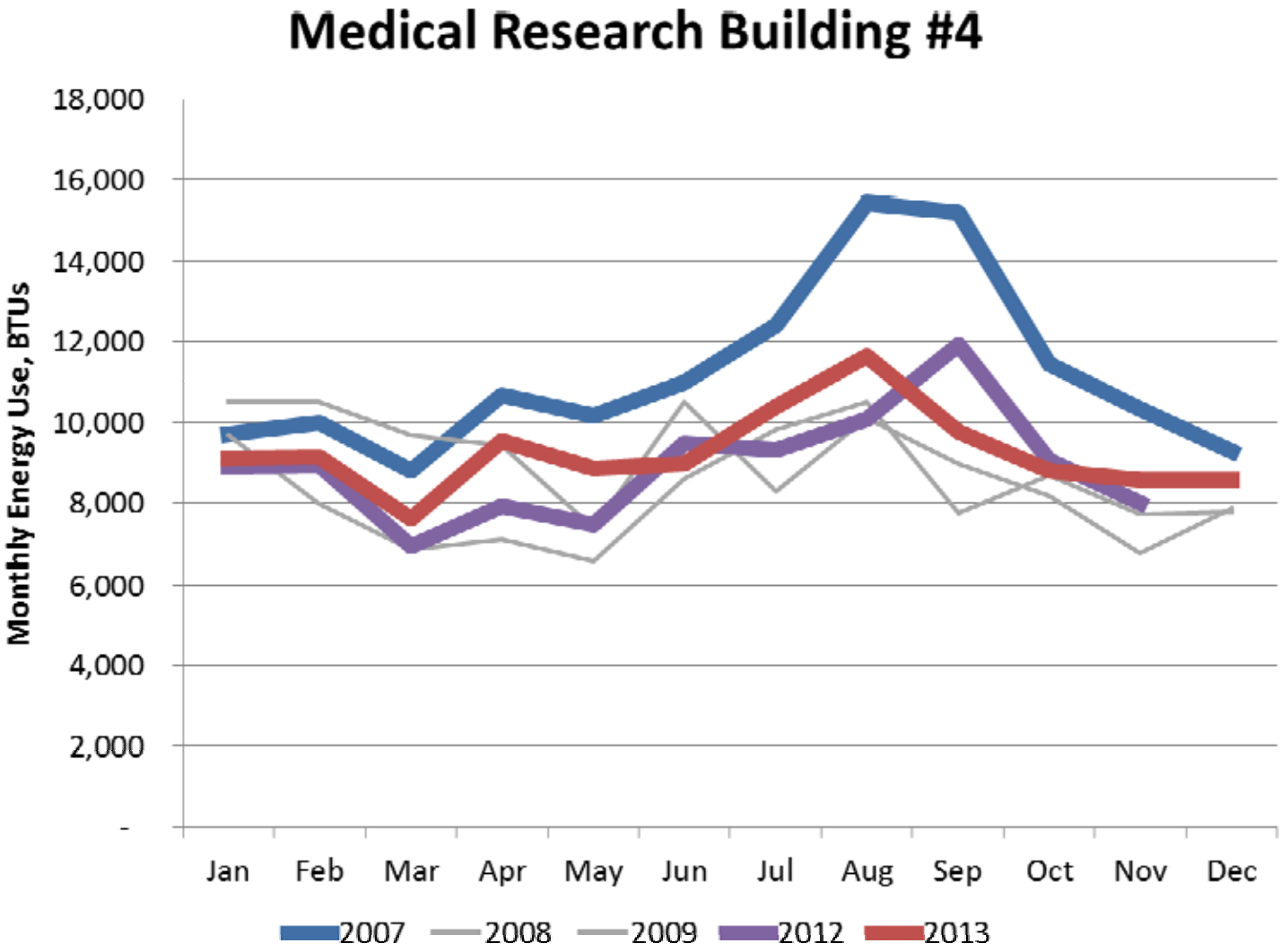
Delta Force: Results



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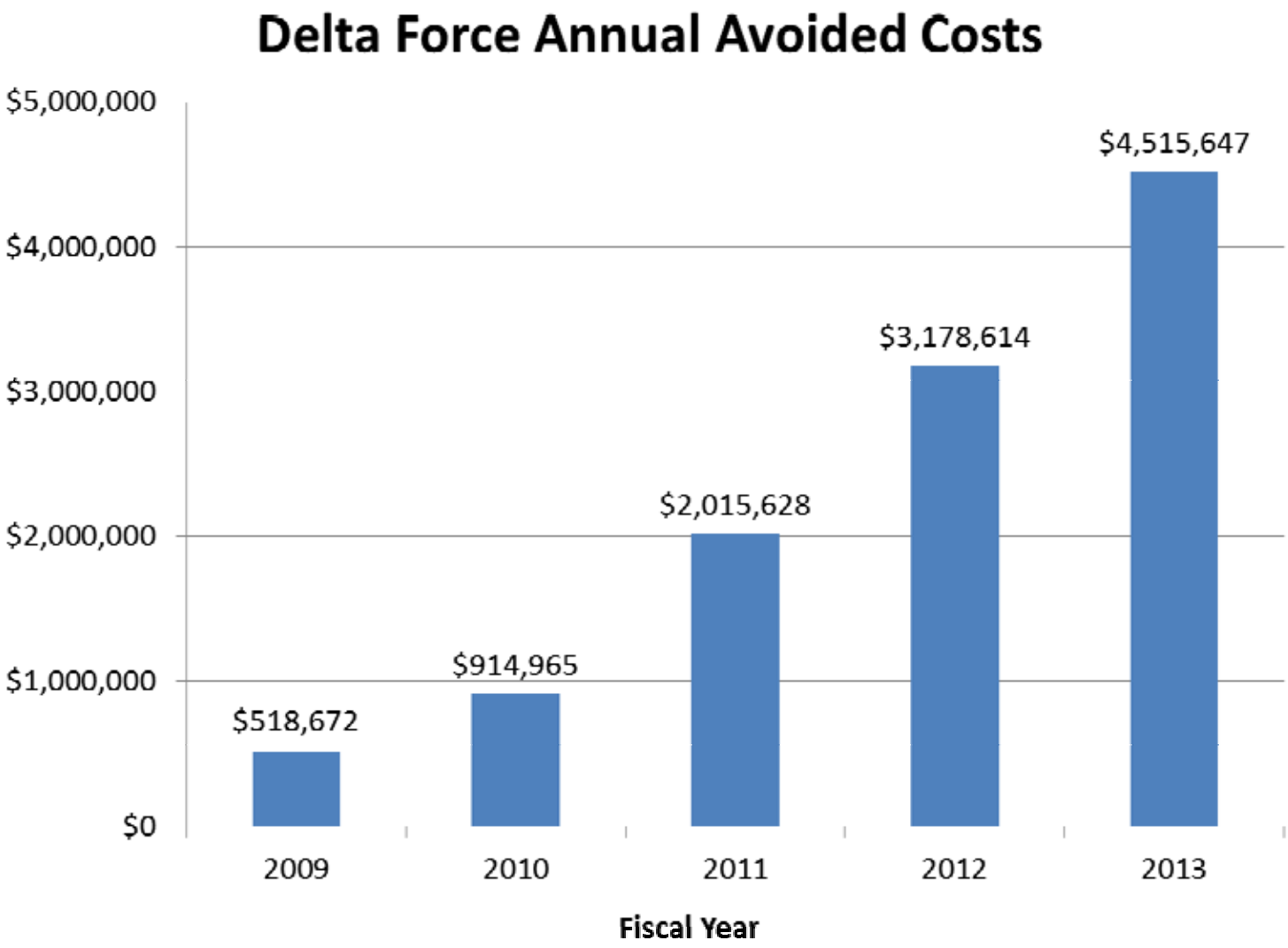
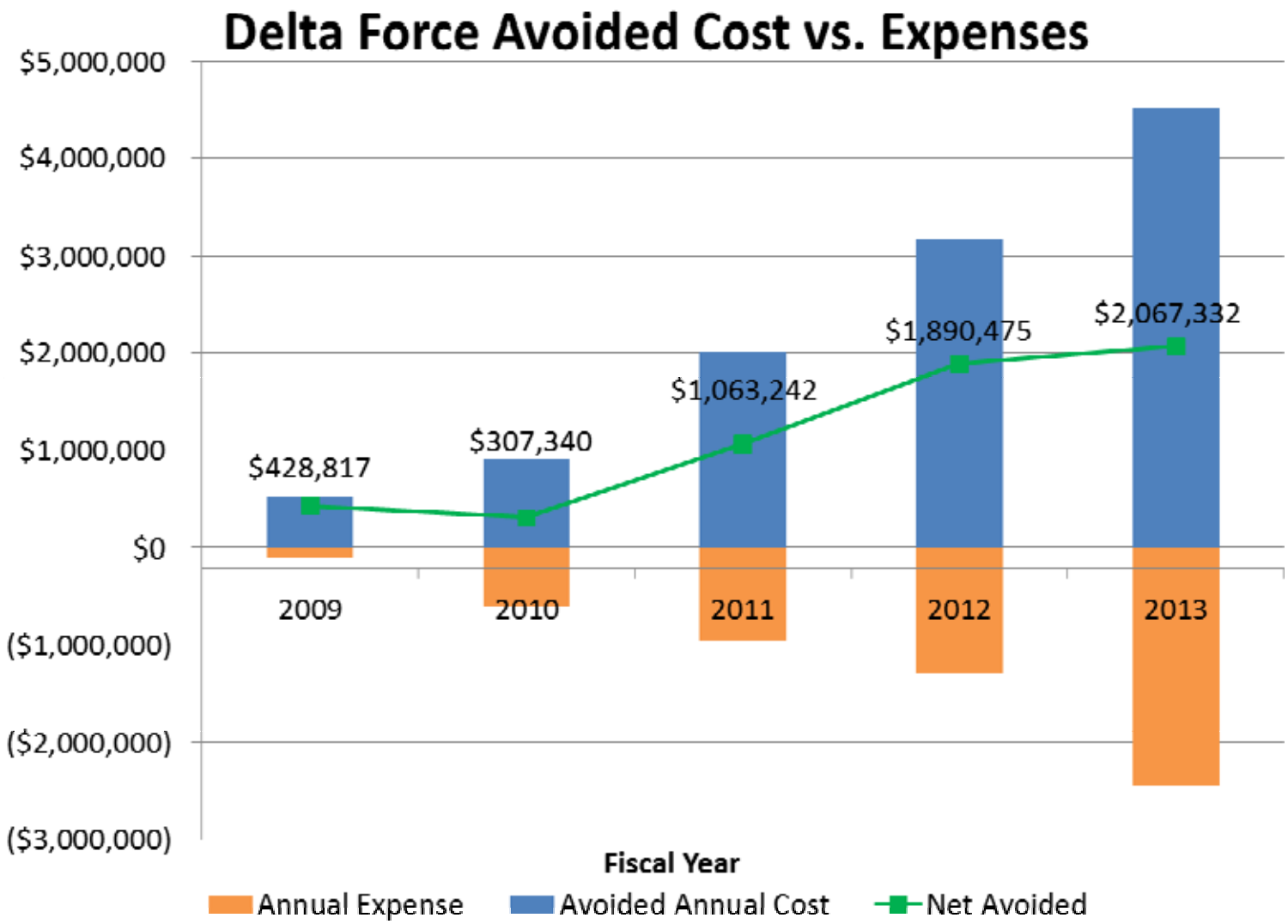
Delta Force: Results



SUSTAINABILITY · UVA

Delta Force: Results



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Delta Force: Looking Ahead

SUSTAINABILITY · UVA

Delta Force: Looking Ahead

SUSTAINABILITY · UVA

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SUSTAINABILITY · UVA

Delta Force: Looking Ahead

SUSTAINABILITY · UVA

Delta Force: Results

SUB-HEADER

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SUSTAINABILITY · UVA

Delta Force: Beyond Retrocommissioning

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