The Path to Long-term Energy Conservation
18% and Holding

The Evergreen State College is a small, public, liberal-arts college located on Puget Sound just outside Olympia, Washington.

- Enrollment — 4,400 (80% live off campus)
- Campus — 1,008 acres (300 developed, the remainder is unmanaged second-growth, north-west forest)
- Environment — Marine; temperate, cloudy, wet
- Buildings — 1.5 million gross square feet

In 2007, the college adopted a goal of carbon neutrality by 2020. Our first steps were focused on energy conservation. Evergreen has a district steam system (natural gas boiler) that provides heat and hot water to over 90% of the conditioned space on campus. The remaining space relies variously upon propane or electrical heating systems.

The college was able to leverage partnerships with McKinstry and our utility, Puget Sound Energy, to implement a broad suite of conservation measures that resulted in an enduring reduction of 18% in total energy use.

Operational Practices
- Assessed space use and conducted after-hours light surveys
- Participated in utility-sponsored (Puget Sound Electric) programs to shed load and add Resource Conservation Manager
- Reviewed heating/cooling ranges and times — contracted ranges to 68—70 deg. F (winter) and 76—78 deg. F (summer), contracted heating/cooling times to more closely align with scheduled occupancy
- Reduced steam pressure from 100 to 50 psi

Energy Saving Performance Contracting (ESPC) was available to state agencies. We worked with Energy Services Contractor (ESCO) McKinstry Esentification to perform campus-wide energy audits, select areas for detailed analysis, and plan a multi-phase Energy Services Proposal.

ESCO-based Systemic Upgrades
- LAB EXHAUST HEAT RECOVERY
- STEAM TRAPS
- 9.2 kW SOLAR PV
- POOL LIGHTING UPGRADE
- OCCUPANCY-BASED LIBRARY STACK LIGHTS
- OPTIMIZED LIBRARY AND CAB HVAC
- UPDATED BOILER CONTROLS

Financial Returns on ESCO Projects

<table>
<thead>
<tr>
<th>Total Expenses</th>
<th>Savings (2009 to date)</th>
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<tbody>
<tr>
<td>$1.9 Million</td>
<td>$2.2 Million</td>
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In the fall of 2005, Evergreen began purchasing Renewable Energy Credits for each of our purchased electricity. That purchase, supported by a student green fee, added over $50,000 (plus or minus depending on rates and consumption) to our annual bills.

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ESCO Project Funding

- $670,000
- $670,000
- $25,000

College Capital
Utility (PSE) Grant
WA State Grants
Student Green Fee Grant

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