About the Sustainability Office

- Created in November 2005
- Two full time employees
- 12 student workers:
  - Outreach, graphic design, project management and data management
  - Seven residence hall Eco-Reps
- Central support organization for sustainability efforts at OSU
What We Do

- **Infrastructure & Policy**: identify, arrange funding for (and occasionally manage) sustainability projects
- **Outreach**: networking, social norming and communications, both on and off campus
- **Student Engagement & Academic Support**: inside and outside the classroom
- **Assessment & Reporting**: STARS, greenhouse gas and annual sustainability reporting
National Recognition

- Sierra Club Cool Schools: 20th in the nation (2017), 11th (2013) and 24th (2010)
- EPA Green Power Leadership Award (2008)
What is STARS?

- A voluntary, self-reporting framework
- A guide for advancing sustainability in all sectors of higher education
- A common standard of measurement for sustainability in higher education
- A tool that promotes a comprehensive understanding of sustainability that includes its social, economic and environmental aspects.
## STARS Ratings

<table>
<thead>
<tr>
<th>Rating Level</th>
<th>Minimum Score Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>STARS Bronze</td>
<td>25</td>
</tr>
<tr>
<td>STARS Silver</td>
<td>45</td>
</tr>
<tr>
<td>STARS Gold</td>
<td>65</td>
</tr>
<tr>
<td>STARS Platinum</td>
<td>85</td>
</tr>
<tr>
<td>STARS Reporter</td>
<td>For institutions that wish to use STARS and submit data publicly but are not pursuing a rating</td>
</tr>
</tbody>
</table>

http://fa.oregonstate.edu/sustainability/planning-policy-assessment/stars
### How Well Did OSU Perform?

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Submission Date</th>
<th>STARS Version</th>
<th>STARS Score</th>
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<tbody>
<tr>
<td>2010</td>
<td>Jan. 31, 2011</td>
<td>1.0</td>
<td>69.74</td>
</tr>
<tr>
<td>2012</td>
<td>May 11, 2013</td>
<td>1.2</td>
<td>68.95</td>
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<td>2013</td>
<td>Apr. 30, 2014</td>
<td>2.0</td>
<td>70.94</td>
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<tr>
<td>2014</td>
<td>Apr. 30, 2015</td>
<td>2.0</td>
<td>72.78</td>
</tr>
<tr>
<td>2015</td>
<td>Mar. 4, 2016</td>
<td>2.0</td>
<td>73.40</td>
</tr>
<tr>
<td>2016</td>
<td>Feb. 28, 2017</td>
<td>2.1</td>
<td>72.21</td>
</tr>
<tr>
<td>2017</td>
<td>Jan. 31 2018</td>
<td>2.1</td>
<td>72.34</td>
</tr>
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</table>
STARS and Curriculum Review

- STARS recognizes institutions that offer sustainability courses and that include sustainability in courses across the curriculum.
  - **Sustainability Courses** are courses in which the primary and explicit focus is on sustainability and/or on understanding or solving one or more sustainability challenge (e.g. the course contributes toward achieving principles outlined in the [Earth Charter](#)).
  - **Courses that Include Sustainability** are primarily focused on a topic other than sustainability, but incorporate a unit or module on sustainability or a sustainability challenge, includes one or more sustainability-focused activities, or integrates sustainability issues throughout the course.
Sustainability Double Degree

BS, Sustainability
32 credits (+180)
• 5 Core courses (17-20 cr)
• Practicum (3 cr)
• Elective Courses (12-16 cr)

Sustainability Minor
27 credits (within 180)
• 5 Core courses (17-20 cr)
• Elective Courses (7-10 cr)

Open to all OSU Undergrads & Post-Baccalaureates
Offered through Corvallis, Bend, and Ecampus
Sustainability Double Degree Students' Primary College

- Public Health & Human Services: 6%
- Agricultural Sciences: 25%
- Business: 21%
- Liberal Arts: 17%
- Forestry: 16%
- Engineering: 8%
- Earth, Ocean, and Atmospheric Sciences...: 6%
Academic Engagement

- Capstone projects with MIME and computer science
- Geog 300 service projects
- Sus 304 assessment
- Sus 103 tours
### Yearly comparisons - Gas

<table>
<thead>
<tr>
<th>Year</th>
<th>BTUs Used</th>
<th>% BTU change</th>
<th>$ change (savings)</th>
<th>% Cost difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 yr. avg.</td>
<td>2,436,166,667</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FY13</td>
<td>1,089,260,000</td>
<td>-55.3%</td>
<td>$13,695</td>
<td>-60.5%</td>
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<tr>
<td>FY14</td>
<td>1,099,310,000</td>
<td>-54.9%</td>
<td>$13,726</td>
<td>-59.5%</td>
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<tr>
<td>FY15</td>
<td>1,214,390,000</td>
<td>-50.2%</td>
<td>$14,836</td>
<td>-64.7%</td>
</tr>
<tr>
<td>FY16</td>
<td>1,051,710,000</td>
<td>-56.8%</td>
<td>$16,411</td>
<td>-71.1%</td>
</tr>
<tr>
<td>FY17</td>
<td>1,281,890,000</td>
<td>-47.3%</td>
<td>$14,967</td>
<td>-64.8%</td>
</tr>
</tbody>
</table>

### Yearly comparisons - Electricity

<table>
<thead>
<tr>
<th>Year</th>
<th>KWH Used</th>
<th>% kWh change</th>
<th>$ change (savings)</th>
<th>% Cost difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 yr. avg.</td>
<td>936,133</td>
<td></td>
<td></td>
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<tr>
<td>FY13</td>
<td>561,200</td>
<td>-41.4%</td>
<td>$19,997</td>
<td>-29.4%</td>
</tr>
<tr>
<td>FY14</td>
<td>693,360</td>
<td>-27.6%</td>
<td>$8,617</td>
<td>-12.7%</td>
</tr>
<tr>
<td>FY15</td>
<td>569,432</td>
<td>-40.5%</td>
<td>$14,822</td>
<td>-21.8%</td>
</tr>
<tr>
<td>FY16</td>
<td>640,080</td>
<td>-33.1%</td>
<td>$10,406</td>
<td>-15.3%</td>
</tr>
<tr>
<td>FY17</td>
<td>612,400</td>
<td>-34.6%</td>
<td>$12,532</td>
<td>-18.5%</td>
</tr>
</tbody>
</table>
CH2MHIll Alumni Center

- Savings totals FY13-FY17: ~$140,200
  - $66,300 electricity
  - $73,900 natural gas
OSU Energy Center

- Replaced heat plant built in 1920 that houses 50-70 year old equipment
- Co-generating, or combined heat and power (CHP), technology greatly increases efficiencies by utilizing waste heat from the electrical generation process
- 5.5MW gas turbine and heat recovery steam generator
- Total plant capacity: 250,000 pounds of steam/hour
- The systems are configured for future use of renewable fuels, such as biodiesel and methane
- First LEED Platinum facility of its kind
- Supports future implementation of smart grid technologies.
http://fa.oregonstate.edu/sustainability/ground-mounted-photovoltaic-arrays
Green Office Certification

- Measures workspace sustainability and provides recognition for OSU employees (including student employees) who ‘green’ their space
- Provides resource library with new ideas for easy steps to reduce environmental footprint and carbon emissions
- Scalable to any size operation!
Improved Transportation Options

Alternatives to the single occupancy vehicle

1. Agreements with Corvallis Transit System, Linn-Benton Loop, Philomath Connection and Albany Transit System
2. An electronic carpool match system, Drive Less Connect
3. Free campus shuttle
4. Compressed work schedules and telecommuting options
5. Access to emergency rides home
6. Preferential parking for carpools and vanpools
7. A physical development plan promoting dense growth, not sprawl
8. Secure bicycle parking and showers
9. Car sharing through the Zipcar
10. Bike sharing with Zagster
Sustainability Advocates

- Represent various units across campus
- Communicate about events, funding and other resources
- Quarterly networking meetings over hosted lunch
- Advocates bring ideas for how to make their departments more sustainable
- Have fun with sustainability!
Eco-Representatives

Eco-Reps advance and institutionalize a culture of sustainability in the residence halls in which they live. They are supported by the Sustainability Office, Campus Recycling, SSI and University Housing & Dining Services and are responsible for:

- Educating residents about sustainable lifestyles and resources
- Assisting with marketing and outreach efforts for sustainability programs and creating their own programs
- Managing residence hall composting program.
- Running Kilowatt Crackdown annual energy reduction competition
Carbon Commitment

- Take interim steps by Nov. 15, 2007 to reduce GHG emissions
- Greenhouse gas inventory within one year, biennially thereafter
- Within two years, plan and timeline to become climate neutral
OSU Comprehensive Greenhouse Gas Gross Emissions

Emissions Sources:
- Cogeneration
- Other Directly Financed Travel
- Air Travel
- Commute
- Refrigerants
- Solid Waste
- Agriculture
- Fleet & Maintenance
- Stationary Sources
- Purchased Electricity

Gross Emissions (t CO2e)

<table>
<thead>
<tr>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
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<tbody>
<tr>
<td>80,000</td>
<td>80,000</td>
<td>80,000</td>
<td>80,000</td>
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<td>80,000</td>
<td>80,000</td>
<td>80,000</td>
<td>80,000</td>
<td>80,000</td>
<td>80,000</td>
</tr>
</tbody>
</table>
OSU Emissions per Student and per Square Foot

- **Gross Emissions per FTE**
- **Gross Emissions per 1000 SQ FT**

FY07: 21.5 tCO2e  
FY08: 19.5 tCO2e  
FY09: 17.5 tCO2e  
FY10: 15.5 tCO2e  
FY11: 13.5 tCO2e  
FY12: 11.5 tCO2e  
FY13: 9.5 tCO2e  
FY14: 7.5 tCO2e  
FY15: 5.5 tCO2e  
FY16: 3.5 tCO2e  
FY17: 1.5 tCO2e
Carbon Footprint Calculator

- Based on open source calculator from Santa Clara U
- Configured with region and campus-specific factors; tailored for OSU by the Sustainability Office
Carbon Planning Toolkit

- A facilitated process that uses a mix of prescriptive and adaptive tools to create carbon reduction plans customized by and for OSU colleges and divisions
  - This type of “unit-level” planning best at college/division scale
  - Facilitated by Sustainability Office (SO)
    - Toolkit adapted from Penn State and maintained by SO
    - Meetings scheduled and led by SO, templates provided, liaising, etc.
  - Allows flexibility and adaptability without being an open book or blank slate
Student Organizations

- There are 398 registered student organizations at Oregon State University.
- 33 of the organizations are categorized as environmental or sustainability.
- For more information on the groups that are available, visit: https://apps.ideal-logic.com/osusli
Undergraduate Research (URSA Engage)

• Engaging in undergraduate research or creative projects helps students build confidence, develop problem-solving skills, and establish relationships with faculty members.

• For more information, visit: http://undergraduate.oregonstate.edu/research
Student Employment

- The Student Sustainability Initiative, Campus Recycling, University Housing and Dining Services, and Sustainability Office have a wide variety of student employment positions.

- For more information, visit: https://jobs.oregonstate.edu
Center for Civic Engagement

- CCE facilitates a wide range of civic learning opportunities for student empowerment; we advance reciprocal campus-community partnerships, community capacity, and civic leadership skills in order for students to create and progress their collective visions of a better world.
- Located in SEC (Student Experience Center) 206
Volunteer Opportunities

- Get involved with civic engagement opportunities with local partner organizations.
- Over 100 ways to get involved in the local community.
- For the full list of opportunities, visit: http://sli.oregonstate.edu/cce/listings
Alternative Breaks

• Immersive team experiences working with various community partners to explore issue areas of interest to you!

• Spring Break trips:
  – Digging Deeper: Environmental Restoration & Conservation in Ashland, OR
  – Tangled Roots: Community & Cultural Engagement in Yakima, WA
  – Change not Coins: Hunger, Food & Housing Insecurity in San Francisco, CA
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facebook.com/OSUsustainable

@OSUSustainable

Monthly email newsletter    Sustainability Calendar