



Ohio State Sustainability Fund

FY 15 Report



SUSTAINABILITY



THE OHIO STATE UNIVERSITY

Overview

The Ohio State Sustainability Fund was established to support improvement of the sustainability profile of the university – through projects that improve the efficiency of campus operations, and projects that lead to increased understanding or more sustainable behaviors in the university community.

The Office of Energy and Environment (OEE) manages the Ohio State Sustainability Fund (OSSF). The OSSF has been renewed at \$1 million annually since 2010. For Fiscal Year 2015, the OSSF provided approximately \$682,000 in project support. Already in the first two months of Fiscal Year 2016, the OSSF has committed \$1,145,260 in support of four projects including the compressed natural gas filling station and a vehicle to improve the campus organics waste hauling program.

Many of the OSSF investments result in quantifiable operations cost savings. OEE is pleased to report that to date, OSSF investments are generating a cumulative annual cost savings in excess of \$1.2 million, effectively netting out the annual renewal of the OSSF and returning a financial net positive result to Ohio State.

In Fiscal Year 2015, the OSSF supported eight distinct projects; three of the projects are highlighted below. Of special note is the Bicycle Sharing program and significant energy efficiency improvements to Mendenhall Laboratory. All the OSSF supported projects are listed in tables at the end of this report.

Project Funding Guidelines

Guidelines for the eligibility and selection of projects that the OSSF supports are summarized below. Proposals are reviewed and considered individually and in light of all other funded projects and pending proposals. Proposed projects must address the eligibility criteria below. The individual projects that best meet the eligibility criteria are then evaluated for funding support in consideration and comparison to all previously funded projects and pending proposals.

Eligibility guidelines: Individually, does the project proposed meet the following criteria:

- *Contribute to sustainability:* Will the project improve the sustainability of campus operations and/or improve the sustainability awareness of campus populations?
- *Campus impact:* Will the project impact Ohio State campuses and be led by a staff or faculty member?
- *Existing university operating budget:* Is the project (or should the project be) supported by an existing university operating budget? OSSF support is not intended to be an alternate path to the normal budgeting processes. The OSSF may be used to support the launch of a program but not for regular year-over-year programmatic funding.
- *Partial funding support:* Will the project be supported by other funding sources in addition to the OSSF? The OSSF is best used to seed, catalyze, or gap-fill funding on projects.



Selection Evaluation Guidelines: Relative to previous projects and all other pending project proposals:

- **Feasibility:** Is the project more or less likely to succeed? Has the project accounted for contingencies and major obstacles?
- **Sustainability Impact:** Will the project measurably improve or accelerate the sustainability of Ohio State's campuses (e.g. reduce energy use, reduce waste, improve Ohio State's functional efficiency, etc.) more so or less so than other proposed or funded projects?
- **University Population Impact:** Will the project lead to a greater increased understanding, engagement, or sustainable behavior change in the university community?
- **Economic Impact:** Will this project produce greater financial benefits - cost-savings, return on investment, or payback over time?
- **Innovation:** Will the project better exhibit innovative technology, processes, or application of knowledge?
- **Institutionalization/Scalability:** Can the project become more easily embedded in the University's routine operation? Is this project more likely to achieve programmatic funding over time? Is this project more likely to lead to expansions/scaling to other campus locations/operations if successful?

Project Selection

OEE receives and seeks project proposals from across the university including colleges, student groups, regional campuses, research centers, Student Life, Facilities Operations and Development, Wexner Medical Center, and Athletics. OEE continually reviews projects throughout each fiscal year.

Following a review by OEE, recommended projects are presented to the President and Provost's Council on Sustainability (PPCS) for further review and advice. Projects receiving a concurrence from the PPCS are then awarded funding.

Examples of Projects funded July 2014–June 2015

A brief description of selected projects funded during Fiscal Year 2015 follows. A full list of the projects funded in the previous three fiscal years is attached.

- *Bicycle Sharing Program*

A broad working group with representation from USG, PARE, WMC, TTM, FOD, SL and OAA worked to develop a sustainable bicycle sharing system to Ohio State. The program officially launched in summer 2015. The OSSF provided \$200,000 in funding support for this project. OSSF support was only one of several funding support contributors. While difficult to definitively quantify, it is conservatively estimated that at full operation the Bicycle Sharing Program will save the university \$28,000 in annual road maintenance and health care costs. However, the far greater impact may be reduced vehicle emissions and reduced vehicle noise on campus.



- *Mendenhall Lab Efficiency Improvements*

Mendenhall Lab is a very typical of Ohio State’s older mixed-used buildings on campus. Mendenhall Lab was originally constructed in 1905, with additions in 1914 and 1922, and various renovations over the years. The recently installed energy conservation measures (ECM) include reduction in lighting levels, installation of occupancy sensors, and high-efficiency upgrades to the air-handling system. For a total investment of just under \$200,000, a savings payback of less than two years is expected. One remarkable ECM example for Mendenhall Lab is the implementation of automatic temperature setback systems on the air handlers. The cost for this portion of the total project was \$4,600 and the expected annual savings is \$34,000.

- *Improved Recycling Bin Signage and Labeling*

After studying the effectiveness of recycling behaviors on campus and gathering feedback from faculty, staff, students, and visitors, it was determined that the existing messaging and signage for our recycling program was not ideal. This project is intended to improve the messaging, increase signage, and standardize labeling across campus. The OSSF provided \$26,000 of support for this project. The balance of support came from FOD and student volunteers to deploy the new signage.

Sustainability Fund – Funded Projects Fiscal Years 2013–2015

Table 1

Fiscal Year 2013	Funding	Cost Savings/Year
Chadwick Arboretum – Student worker	\$ 10,800	NA
Helium processing/recycling lab	\$ 75,000	NA
Campus-wide Energy Efficiency Project – A&E consultant	\$ 50,000	NA
Smith Lab – lighting retrofit	\$ 150,000	\$ 54,000
Blue Creek Wind Farm – Inaugural event	\$ 5,000	NA
OSU Earth Day event sponsorship	\$ 5,000	NA
Earth Week banner hanging/removal & poster printing	\$ 2,500	NA
ASHE STARS – Audits for regional campuses	\$ 27,100	NA
Howlett Hall Green Roof – funding match	\$ 59,360	\$ 10,000
Bevis Hall – Digital controls and VFD retrofits	\$ 143,600	\$ 65,340
Mount Hall – Digital controls and VFD retrofits	\$ 151,300	\$ 68,480
Scott Hall – Digital controls and VFD retrofits	\$ 138,100	\$ 46,230
Pressey Hall – Digital controls and VFD retrofits	\$ 163,600	\$ 63,390
Prior, Park-Stradley, Goss, Woody Hayes – meters (3 projects)	\$ 15,000	\$ 16,500
Mirror Lake Improvement Study	\$ 50,000	NA
Stone Lab – windows & lighting retrofit	\$ 60,000	\$ 10,909
Stone Lab – solar array	\$ 100,000	\$ 3,500
Chadwick/Howlett Hall Green Roof – supplement	\$ 60,000	NA
Ohio State University Marching Band – iPad projects	\$ 25,000	\$ 8,500
FY 2013 Totals	\$ 1,291,360	\$ 346,849



Table 2

Fiscal Year 2014	Funding	Cost Savings/Year
Olentangy River Restoration Project	\$ 50,000	\$ 7,600
Townshend Hall – Digital control upgrade	\$ 68,000	\$ 30,320
Drinko Hall – Digital control upgrade	\$ 130,000	\$ 78,630
Agricultural Engineering Bldg – Digital control upgrade	\$ 168,000	\$ 50,220
Bolz Hall – Energy conservation measures	\$ 39,615	\$ 8,246
Mirror Lake – Well drilling and testing	\$ 15,000	\$ 33,182
FY 2014 Totals	\$ 470,615	\$ 208,198

Table 3

Fiscal Year 2015 + July – August FY 2016	Funding	Cost Savings/Year
Clean Fuels Ohio – Consultant for CNG study	\$ 4,317	NA
Ohio State Bicycle Sharing System	\$ 200,000	\$ 28,125
New Panels for Recycling Bins	\$ 26,000	NA
Mendenhall Lab – Energy Conservation Measures (ECMs)	\$ 191,108	\$ 118,754
Hagerty Hall - ECMs	\$ 20,184	\$ 62,915
Hitchcock Hall - ECMs	\$ 26,600	\$ 22,810
Caldwell Lab - ECMs	\$ 63,147	\$ 40,529
Drinko Hall - ECMs	\$ 150,877	\$ 7,1670
FY 2015 Totals	\$ 682, 233	\$ 344,803
July – August FY 2016		
Recycling Infrastructure	\$ 50,000	TBD
CNG Filling Station – Construction budget support	\$ 500,000	TBD
Concourse Lighting Retro Fit – Small stadiums	\$ 150,000	TBD
University Organics Hauling Equipment	\$ 345,260	TBD
FY 2015 + July August FY 2016 Totals	\$1,727,493	\$ 344,803

Fiscal Years 2011 – 2015 Summary	Total Investment	Annual Cost Savings
68 projects in all, 36 projects with cost savings benefits	\$ 4,131,195	\$ 1,297,140

