

## **2017 Dane County Departmental SMART Fund**

### **Funding Opportunity Description**

The Sustainability Subcommittee of the Public Works and Transportation Committee is responsible for distributing grant money to county departments from a \$2 million fund in the county's capital budget. This fund helps support the county's goal of becoming more sustainable. For example, it supports initiatives that fulfill the county's desire for reducing greenhouse gas emissions by implementing systems that result in more efficient energy use and investments in renewable energy production at our various facilities. This fund is a part of the county's continued efforts to ensure that important natural resources and ecosystem services are maintained for current and future generations. The fund can be used by your department to help you implement strategies identified in the [Dane County Government Sustainable Operations Plan](#), to supplement current budget items that do not have enough funds to incorporate additional sustainable measures, or to fully fund projects that are not in the current budget, but that will improve the sustainability of county operations and reduce long-term costs. The committee will select projects to fund based on their consistency with the sustainability principles adopted by the Dane County Board (on October 18, 2012) to guide county government management, operations, and policy making, as well as based on their ability to further implement the [Dane County Government Sustainable Operations Plan](#).

### **Benefits of this fund:**

- Alignment of departments and staff toward a common understanding of sustainability
- Clarity and consistency in assessing and organizing actions and programs for sustainable government operations
- Enhanced policies and programs incorporating a sustainability perspective
- Enhanced reputation as a proactive contributor to a more sustainable community
- Reduced operating costs

### **Dane County's Sustainability Principles:**

Dane County strives to operate in a sustainable way that will:

- Reduce and eventually eliminate county government's contribution to fossil fuel dependence and to wasteful use of scarce metals and minerals;
- Reduce and eventually eliminate county government's contribution to dependence upon persistent chemicals and wasteful use of synthetic substances;
- Reduce and eventually eliminate county government's contribution to encroachment upon nature and harm to life-sustaining ecosystems (e.g., land, water, wildlife, forest, soil, ecosystems); and
- Reduce and eventually eliminate county government's contribution to conditions that undermine people's ability to meet their basic human needs.

### **Eligible Applicants:**

Dane County Departments

**Award Information:**

**Application Deadlines:** There are 3 application deadlines for 3 rounds of funding. Solicitations for applications will go out via email about 1 month before each deadline.

1. Feb 6, 2017 — At this time up to 50% of the funds will be awarded.
2. July 10, 2016 — At this time up to an additional 25% of the funds will be awarded.
3. October 9, 2016 — At this time the remainder of the funds will be awarded.

The subcommittee generally makes award decisions within a couple of weeks of the application deadline depending on complexity of the proposals and the subcommittee meeting schedule.

**Examples of types of projects that would be eligible:**

- Renewable energy or energy efficiency improvement investments for county facilities, such as solar lighting, LED lighting upgrades, energy efficient boilers, etc.
- Water conservation improvements
- Covering the cost differential between conventional and fuel-efficient vehicles to purchase more fuel-efficient fleet vehicles or convert existing vehicles to more fuel-efficient and lower-emission vehicles
- Purchase of new or upgraded equipment that will improve the overall efficiency of facilities and reduce greenhouse gas emissions, reduce the use and disposal of toxic products, reduce maintenance costs and/or staff time using the equipment, and/or facilitate better tracking, measurement, and verification of sustainable outcomes in county operations

**Application and Submission Information:**

Apply electronically to Lisa MacKinnon at [Mackinnon@countyofdane.com](mailto:Mackinnon@countyofdane.com) and Carlos Pabellon at [Pabellon@countyofdane.com](mailto:Pabellon@countyofdane.com).

Please include the following in your application:

- 1) A detailed description of your proposed project
- 2) How the project, if carried out, will meet the county's sustainability principles
- 3) How the project, if carried out, will implement specific goals, objectives, and strategies identified in the [Dane County Sustainable Operations Plan](#). Indicate which goals, etc.
- 4) How the county might build upon the sustainability outcomes of the proposed project
- 5) How your department intends to track and measure the outcomes of the project, if funded, such as cost savings, energy reductions, maintenance reductions, etc. and who will be responsible for measurement and verification.
- 6) Budget Sheet: Include all costs of achieving the objectives of the project.
- 7) Estimated cost savings to the county due to implementation of the project and the payback period. Include here information on estimated Focus on Energy incentive savings if your project is eligible for FOE incentives (see <https://focusonenergy.com/business> or contact Lisa MacKinnon for assistance in getting this information).

Questions are to be directed to Lisa MacKinnon at 267-1529 or Carlos Pabellon 266-4519.

**Project Information:**

Please provide the following information (take as much space as you need to provide details):

Department: Dane County Sheriff's Office – CCB Jail Address: 115 West Doty Street Madison, WI 53703	Total project costs: \$29,648.00 Funding amount in current budget:\$0 Funding amount requested: \$29,648.00
Project Title: CCB Jail Dishwasher Replacement	
Project Location: City-County Building Jail – 6 <sup>th</sup> floor Kitchen	
Project Description: Purchase and install an energy efficient dishwasher for the CCB jail kitchen	
<p>Describe how the proposed project moves the county toward meeting the following Sustainability Principles. (See the guiding questions in the box below.) Responses to this section will be used to determine the relative level of sustainability for each project.</p> <ul style="list-style-type: none"> <li>• Reduce and eventually eliminate county government's contribution to fossil fuel dependence and to wasteful use of scarce metals and minerals;</li> <li>• Reduce and eventually eliminate county government's contribution to dependence upon persistent chemicals and wasteful use of synthetic substances;</li> <li>• Reduce and eventually eliminate county government's contribution to encroachment upon nature and harm to life-sustaining ecosystems (e.g., land, water, wildlife, forest, soil, ecosystems); and</li> <li>• Reduce and eventually eliminate county government's contribution to conditions that undermine people's ability to meet their basic human needs.</li> </ul> <p>Include in your description any estimated reductions of GHGs / CO2 equivalent emissions related to your proposal. Please use the following calculator to do this: <a href="http://www.epa.gov/cleanenergy/energy-resources/calculator.html">http://www.epa.gov/cleanenergy/energy-resources/calculator.html</a></p>	

**Describe how the proposal furthers implementation of the Dane County Government Sustainable Operations Plan goals, objectives, and strategies in your department and/or countywide. Please identify specific plan goal**

The Dane County Jail currently operates a commercial grade Hobart Vulcan Model C44AW dishwasher in the 6<sup>th</sup> floor kitchen of the Dane County Jail. The current dishwasher is 17 years old and has reached its life expectancy. This dishwasher does not have the safeguards necessary to be used in a correctional setting and does not provide the necessary information required by the State Jail Inspector. The Sheriff's Office has spent a considerable amount of money maintaining the dishwasher in which the benefits no longer outweigh the cost.

Based on the energy audit completed by Woolsey and Associates, the current dishwasher (Hobart C44AW) uses approximately 84 gallons of water per hour. According to the specifications of the energy efficient Hobart CL44e, the water use per hour is approximately 55 gallons. Based on an estimated eight hours of use each day, seven days a week, over a one year period, the annual water savings would be approximately 84,448 gallons. [29 gallons saved per hour x 8 hours = 232; 232x 7 days=1624; 1624 x 52 weeks/ yr =84,448].

The estimated CO2 equivalent emissions reduction from saving 84,448 gallons of water annually is approximately 0.35 metric tons of CO2e annually. According to <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>, this emissions reduction is equivalent to: 824 miles driven by passenger vehicle, 367 lbs. of coal burned, 39 gallons of gas. Source: Report: Carbon Footprint of Water (average: 4.1 metric tons CO2e per million gallons of water) <http://www.csu.edu/cerc/researchreports/documents/CarbonFootprintofWater-RiverNetwork-2009.pdf> <http://www.leansixsigmaenvironment.org/index.php/how-much-impact-does-one-gallon-of-water-in-your-home-or-business-have-on-the-environment/>

The Hobart CL44e also has a unique energy saving feature referred to as "Energy Recovery Technology." This technology reuses the steam emitted from the machine by condensing it and in turn uses it to heat the incoming cold water inlet in the final rinse cycle. The booster heater used to heat the water has been reduced by 50% which will show a significant saving in electricity.

Lastly, a reduction in the amount of water consumed would directly impact the amount of chemicals used per wash. A reduction in the amount of chemically saturated sewage water entering our drains would have a positive impact on Madison's beautiful lakes and streams. Lessening the amount of chemicals used would also prove to be a cost saving measure.

Below is a screenshot from the energy audit. The rinse water and sewage cost savings will mean that Dane County will be paying \$962 less (\$481+ \$481) in water costs/year. The primary water heat, booster water heat and maintenance heat savings will mean that Dane County will be paying \$3,506 less (\$450+ \$1,562+ \$1,494) in electricity costs/year.

Annual Cost	C44AW	CL44e	Savings
Rinse Water	\$734	\$481	\$253
Sewage Cost	\$734	\$481	\$253
Primary Water Heat (55-110 °F)	\$1,304	\$854	\$450
Booster Water Heat (110-185 °F)	\$4,527	\$2,965	\$1,562
Maintenance Heat	\$3,971	\$2,477	\$1,494
<b>Total Annual Cost Savings</b>			<b>\$4,012</b>

<p><b>Estimated payback: 7 years</b></p> <p>Per the quote received from Woolsey and Associates, the Hobart CL44e dishwasher including the security features is \$25,148.20. The additional \$4500 requested would be applied to the installation of the new dishwasher and removal of the current dishwasher. The Hobart Corporation will include an 18 month parts and labor warranty provided their technicians complete the installation.</p> <p>The new Hobart CL44e is an Energy Star-rated unit which qualifies for a \$250 rebate through the WI Focus on Energy program. You can visit their website at "focusonenergy.com" for more information.</p>	
<p><b>Describe how the county might build upon the outcomes of the proposed project to work toward greater sustainability.</b></p> <p>The need to properly clean and sanitize all kitchenware will always be a necessity while operating a correctional facility which meets the standards set forth by the State of Wisconsin. The current process is inefficient in water consumption and energy usage. By taking the necessary steps to reduce the carbon footprint left by the Sheriff's Office, we will be working towards the sustainability principles.</p>	
<p><b>Describe how your department will track and measure outcomes of the proposed project (i.e., annual cost savings, annual energy savings, resource use reductions, maintenance reductions, etc.). Include a timeline for measurement and reporting outcomes, and the staff member contact who is responsible for conducting the tracking and measurement.</b></p> <p>The annual costs saving will be tracked and measured by working in conjunction with Dane County Facilities Management. An immediate impact will be seen in the reduction of chemically saturated waste water produced by the jail. This reduction will have a positive impact on Dane County's ecosystems. The cost saving measure that will be shown in the reduction of chemicals can be tracked by purchase invoices of chemical ordered.</p> <p>The specific savings in water and electricity will need to be measured on an annual basis and compared with previous years. Based on the preliminary energy audit, an immediate savings should be noticeable.</p> <p>The Hobart Corporation will include an 18 month parts and labor warranty which will show an immediate savings in maintenance and repair costs.</p>	
<p>Contact person: Sgt. Nick Skrepenski</p>	<p>Phone: 266-7455 E-mail: skrepenski@danesherriff.com</p>