



20 N. Wacker Drive
Suite 1642
Chicago, IL 60606

Participant Agreement

Integrated Controls pilot with DOE funding

Seventhwave and the City of St. Paul (the Participant) agree to this memorandum of understanding to complete a controls retrofit of Streets Maintenance Building, 899 Dale St, St. Paul, 55103 in conjunction with the US Department of Energy-funded Integrated Controls pilot.

The Participant will receive a complete lighting retrofit along with the associated control system. The core lighting retrofit technology to be installed is the [Cree SmartCast lighting system](#), to be installed as a direct replacement for fluorescent troffers and other office-type lighting. The SmartCast system integrates occupancy and daylight controls with LED luminaires, wireless control, and automated commissioning. We will build on this technology by connecting those controls to [Wattstopper outlet controls](#) for reducing plug load energy usage in appropriate outlets. In addition, the system will control the local HVAC terminal units in the retrofitted space to reduce heating, cooling, and fan energy.

Cost for this work will be shared between the building owner, Xcel Energy (via incentives), and the US DOE grant-funding. See the costs and payments section below for details.

Seventhwave team responsibilities

Seventhwave and their project partners will coordinate the overall project. They will also provide the following services:

- Full design services for the retrofit
- Administration of the grant funds from the US Department of Energy
- Aid in filling out the inputs for Xcel Energy's energy efficiency incentive program
- Assisting with contract negotiation for needed subcontractors
- Commissioning of the system
- Training facility staff on operation of the system
- Conducting measurement and verification of their building systems' performance and reporting back to the participant (this includes energy performance as well as comfort and occupant satisfaction)
- Providing significant publicity through case studies and other media that the US Department of Energy publishes on all of its technology demonstrations

Participant responsibilities

The pilot participant will retrofit approximately 16,000 ft² at 899 Dale St, St. Paul, 55103 with the integrated controls package discussed above. They will hold contracts with any installing electrical or controls subcontractors. In addition, they will:

- Allow access to the site by the full project team
- Coordinate work and allow completion of the project prior to December 31, 2018.
Provide a single point-of-contact to coordinate and schedule activities
- Allow for representatives and subcontractors from Pacific Northwest National Lab access to the building and systems to conduct measurement and verification of the retrofit. This includes installing submetering, installing some indoor environmental sensors, and

surveying some fraction of building occupants. All of this measurement is temporary, and will be fully removed within six months of the retrofit being completed.

- Track time spent on the project for use in reporting to US DOE
- Fill out a brief occupant satisfaction survey

Costs and payments

The pilot participant is initially responsible for all project costs, but participation in the pilot will yield a number of reimbursements.

- The participant will receive a discount of ~10% on all Cree products, and 100% on all Wattstopper products. This participant agreement will enable these discounts which will be applied automatically; no further action is needed.
- The participant will receive \$34,500 from Seventhwave (DOE grant funds) to offset a portion of the cost of the retrofit. This will be paid upon verification that the retrofit is complete. This participant agreement suffices as preapproval for participant recipient of these grant funds.

The participant will also receive an incentive from Xcel Energy for participating, but that requires a separate agreement with Xcel, and their terms and conditions apply. This agreement does not affect the agreement with Xcel, and vice versa.

The two parties duly execute this Memorandum effective as of the date first set forth above.

SEVENTHWAVE

By: _____

Name: Frank Greb

Title: President

Date: _____

PARTICIPANT

Organization: _____

By: _____

Name: _____

Title: _____

Date: _____