

## Energy Conservation Project Update – March 2018

### PROJECT INFORMATION:

| ENERGY CONSERVATION MEASURE       | LOCATION              | CONTRACTOR   |
|-----------------------------------|-----------------------|--------------|
| Energy Management System          | Campus Wide           | Siemens      |
| Central Plant Boiler Improvements | Central Heating Plant | GT Wilkinson |

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|-----------------------|
| <b>AMERESCO PM</b>    |
| <b>Chris Guccione</b> |

### OBSEVATIONS:

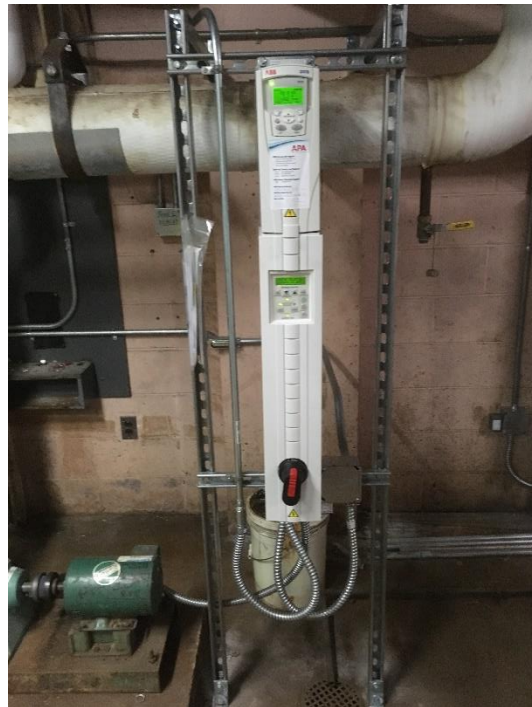
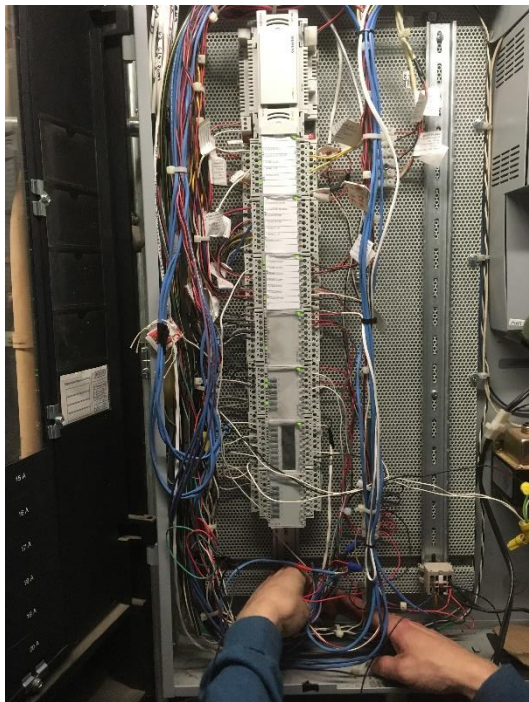
- *New environmental control systems installed campus wide.*
- *New temporary exhaust stack installed in the central heating plant on Boiler #5. This temporary exhaust stack will allow for upgrades on Boiler #4 to be installed.*

### Energy Savings Totals

| Ecm # | ECM Name                                       | Annual kW  | Total kWh      | Natural Gas (Therms) | Propane (Gallons) | #2 Fuel Oil (Gallons) | Water (kGallons) | Sewer (kGallons) | Energy Savings   | O&M Savings      | Total Project Savings |
|-------|--|------------|----------------|----------------------|-------------------|-----------------------|------------------|------------------|------------------|------------------|-----------------------|
| 4     | Energy Management System Upgrade/Expansion     | -          | 320,642        | 56,295               | -                 | 8,944                 | -                | -                | \$ 90,694        | \$ -             | \$ 90,694             |
| 5A    | Central Plant Boiler Improvements - All        | -          | 18,623         | 27,492               | -                 | 6,040                 | 21               | 21               | \$ 27,810        | \$ 7,000         | \$ 34,810             |
| 10    | Variable Frequency Drives                      | -          | 50,309         | -                    | -                 | -                     | -                | -                | \$ 4,757         | \$ -             | \$ 4,757              |
| 14A   | Water Conservation - Areators Only             | -          | -              | 922                  | -                 | 203                   | 242              | 242              | \$ 3,048         | \$ -             | \$ 3,048              |
| 14B   | Water Conservation                             | -          | 1,030          | 1,425                | 363               | 313                   | 2,263            | 2,263            | \$ 20,839        | \$ -             | \$ 20,839             |
| 15    | Building Weatherization                        | -          | 4,343          | 14,016               | 959               | 2,703                 | -                | -                | \$ 17,227        | \$ -             | \$ 17,227             |
| 18    | Vending Machine Controls                       | -          | 40,024         | (740)                | (17)              | (160)                 | -                | -                | \$ 2,923         | \$ -             | \$ 2,923              |
| 24    | Energy Efficient Motors                        | 18.8       | 5,653          | -                    | -                 | -                     | -                | -                | \$ 691           | \$ -             | \$ 691                |
| 25    | Demand Control Ventilation                     | -          | 27,127         | 6,829                | -                 | 1,322                 | -                | -                | \$ 10,192        | \$ -             | \$ 10,192             |
| 26    | Transformer Replacement                        | 179.5      | 130,912        | -                    | -                 | -                     | -                | -                | \$ 13,872        | \$ -             | \$ 13,872             |
| 27    | WAC Timers                                     | -          | 29,971         | -                    | -                 | -                     | -                | -                | \$ 2,834         | \$ -             | \$ 2,834              |
| 29    | AHU/Rooftop Unit Replacement                   | -          | 3,972          | 222                  | -                 | -                     | -                | -                | \$ 592           | \$ -             | \$ 592                |
| 40    | Kitchen Hood Controls                          | -          | 60,731         | 14,688               | -                 | 3,227                 | -                | -                | \$ 22,524        | \$ -             | \$ 22,524             |
| 41    | Repair Heat Recovery Units                     | -          | 23,808         | 18,147               | -                 | 3,987                 | -                | -                | \$ 22,985        | \$ -             | \$ 22,985             |
| 42    | Underground Steam and Condensate Piping - WO#1 | -          | -              | 10,238               | -                 | 2,249                 | 536              | 536              | \$ 16,118        | \$ 1,500         | \$ 17,618             |
| 42    | Underground Steam and Condensate Piping - WO#3 | -          | -              | 27,552               | -                 | 6,053                 | 184              | 184              | \$ 32,998        | \$ 86,000        | \$ 118,998            |
| 42    | Underground Steam and Condensate Piping - WO#4 | -          | -              | 12,689               | -                 | 2,788                 | 54               | 54               | \$ 14,939        | \$ 11,500        | \$ 26,439             |
|       |  | <b>198</b> | <b>717,144</b> | <b>189,775</b>       | <b>1,306</b>      | <b>37,669</b>         | <b>3,301</b>     | <b>3,301</b>     | <b>\$305,043</b> | <b>\$106,000</b> | <b>\$ 411,043</b>     |

**Photos:**

*New Control wiring for VFDs in Adams Library*



*New Temporary Stack for Boiler #5.*



