



The State University
of New York

Office for Capital Facilities Newsletter

Editors: Jessica R. Miller & Ashley Brainard

Issue 19 - September 2017



TOOLS
TRAINING
COMMUNICATION

Upcoming Events

NAEP Conference
Oct. 3-5

ERAPPA
Oct. 30-Nov. 1

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Note from the Associate Vice Chancellor - Karren Bee-Donohoe

NY Alert: NYS has executed a contract with Everbridge to replace the current NY Alert mass notification program. Initially, campuses should see very little change, but once the new system is operational we hope to implement changes that will improve the overall functionality of the program. More details to follow.

New Chancellor: Capital Facilities is very excited to welcome Chancellor Kristina Johnson on board. Dr. Johnson's background includes deputy secretary of energy under the Obama administration. The office has already been in communication with Dr. Johnson about all of the great energy management initiatives currently in place, and anticipates great support for campus efforts as well as additional pressure to make sure that SUNY is leading by example, not only in NYS but in higher education across the country.

REV Challenge Grants: An additional opportunity has opened for REV challenge grants. As a reminder there is no cost to commit to the REV campus challenge. Campuses may join at any time. Each campus self selects a participation level and goals. Campuses must be en-

rolled in the REV Challenge to apply for the new grant funds. [Rev Campus Challenge Energy to Lead Competition 2017](#)

Retrofit NY: Selection of pilot residence halls is underway for this project, which aims to produce net zero buildings through renovated mechanicals, envelope upgrades and renewable energy sources.

Brockport Grant: Congratulations to Brockport for a \$400,000 NYSERDA grant for development of an innovative building energy management, operations and maintenance (O&M) development and training program.

AiM Parking Lots and Athletic Fields: Parking lots and athletic fields will soon be added to AiM, providing data reporting capabilities. Campuses will have an opportunity to validate the data before it goes into the system.

FEMA: The logjam with FEMA has finally been cleared, allowing FEMA funding to be released in the near future. Reconciliations are underway for Irene/Lee and Sandy. Campuses will receive instructions in the near future, along with a final accounting. Other storms will follow.

Hurricanes - Barbara Boyle (continued on Page 4)

The [National Hurricane Center](#) has a wealth of information about hurricane preparedness. This article draws heavily from info on that website.

Hurricanes are among nature's most powerful and destructive phenomena. On average, twelve tropical storms, six of which become hurricanes form over the Atlantic Ocean, Caribbean Sea, or Gulf of Mexico during the hurricane season, which runs from June 1 to November 30 each year.

While hurricanes pose the greatest threat to life and property, tropical storms and depressions can also be devastating. The primary hazards from these storms include storm surge flooding, inland flooding from heavy rains, destructive winds, tornadoes, and high surf and rip currents.

A storm surge is an abnormal rise of water caused by the storm's wind. Historically, they have been the leading cause of hurricane related deaths in the United



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New York Energy Manager Training – Eric Mazzone



The Office for Capital Facilities has coordinated with New York Power Authority (NYPA) for New York Energy Manager (NYEM) training for campus operations and energy management staff.

To date, 31 SUNY energy managers and facilities operators have been trained on how NYEM's web-based platform provides insight into their facilities' energy use and identifies opportunities to reduce energy use and associated costs.

NYEM is expanding to include equipment-level sub-metering and advisory services. This includes the installation of sensors and meter hardware on equipment such as HVAC, lighting and refrigeration to collect real-time

energy data and environmental conditions. It also analyzes how the equipment is operating and shows ways to optimize operations and energy efficiency.

NYPA and SUNY are piloting this service with a building at SUNY Stony Brook. Once this pilot ends, we will provide more information on the process, costs and estimated savings your campus could gain from NYEM.



Aggregate Purchases – Jessica R. Miller

State Finance Law 163 requires campuses to consider the *“reasonably expected aggregate amount of all purchases of the same commodities or services to be made within the twelve-month period*



commencing on the date of purchase.” While this section of law is specifically applicable to the pur-

chase of commodities and services, in practice it also applies to construction and construction related consultant contracts. The intent of taking aggregate purchases into account when determining discretionary limits is to disallow split ordering, and to protect the integrity of the procurement process.

Campuses should use sound business judgment when determining if a project can be ‘unbundled’, and ensure that the ‘unbundling’ does not constitute split ordering.

Unbundling is defined as the practice of determining if components of the project can be separately procured or

the project can be progressed using a phased contract approach without compromising project delivery.

For example, it would not be appropriate to split a single concrete flat work job and assign two contracts, each under the \$20,000 discretionary limit. Jobs for the same service should not be artificially divided. On the other hand, if there are two separate and distinct concrete flat work jobs it is not required that they be consolidated simply because there happen to be projects running concurrently on campus. It is important to use reasonable judgment when assigning discretionary purchase contracts.

Visit the [Office for Capital Facilities website](#) for guidance on a variety of campus let contracts topics.



AiM Update – David Ferrari

As SUNY wraps up its implementation of AiM's Property, Space, and Asset related modules (Phase I), OCF is working toward final approval, procurement and implementation of O&M modules (Phase II) for the 27 campuses that have opted in to this offering.

This shift in priorities will result in having our Phase I Project Manager, Kelly Buchalski, return to her Fiscal Analyst role at the Fund and SUNY hiring a new Project Manager for Phase II.

Additionally, it is exciting to announce



OCF has hired a Property Management Specialist, Patrick Deloughery. Patrick comes to SUNY from NYSERDA, where he served as a Project Coordinator specializing in analysis and reporting for the single



family residential market.

Patrick's role at SUNY will focus on providing direct support to all 64 campuses for the Property and Space modules within AiM. This will include managing the AiM helpdesk, further developing guidance and training documentation for end users, and eventually becoming a subject matter expert on all of SUNY's property and space management policies and procedures and how they relate to AiM.

Please join OCF in thanking Kelly for her efforts and welcoming Patrick on board!

3D Printers and Maker Spaces – Barbara Boyle

A hot new trend at schools, colleges, libraries, student unions, and similar spaces are 3D printers and sometimes fully-suited Maker Spaces.

These new technologies are exciting and everyone seems to want them. Cool new applications are regularly covered by the news and social media. Campuses need to understand that these technologies present new and poorly characterized potential hazards. Campuses are responsible for addressing potential health and safety issues presented by campus installations.

One of the big concerns is the appropriate ventilation for printer installations. It is difficult to discern what comes off during the printing process and how harmful those emissions might be. The composition of emissions will depend on the type of materials being deposited, even down to the color. The fine engineering details of the specific printer, its enclosure, and the temperatures that are being used, also come into play. In addition to standard off-gassing

type emissions from hot plastics, some of the emissions include nanoparticles that may react very differently from more traditional materials. 3D printer manufacturers do not readily provide answers to these questions. It is reasonable, from the information that is slowly being gathered, to have some level of concern.

Campuses would be well advised to consider current NIOSH recommendations to reduce emissions from 3D printers:

- Always use the manufacturer's supplied controls (full enclosure appears more effective at controlling emissions than a cover).
- Use the printer in a well-ventilated place, and directly ventilate the printer.
- Maintain a distance from the printer to minimize breathing in emitted particles, and choose a low-emitting printer and filament when possible.

- Turn off the printer if the printer nozzle jams, and allow it to ventilate before removing the cover.
- Use engineering measures first, such as manufacturer-supplied equipment and proper ventilation, then use materials with lower emissions. Finally, wear protective equipment, such as respirators.

NIOSH is currently conducting some studies and is carefully watching several research groups that are working to better quantify concerns.

Additionally, campuses should review operations associated with the 3D printers in Maker Spaces. Often the 3D printed materials are finished through mechanical means or by treatment in strong caustic baths. These spaces may also have potentially dangerous operations such as laser cutters, cnc machines, and soldering operations that need to be assessed.

Hurricanes (continued from page 1) – Barbara Boyle



States, and can cause massive coastal destruction. The storm surge can travel inland along bays, rivers, and estuaries. Surges are coupled with very heavy rain and high winds that can cause inland flooding which can persist for days after a storm has dissipated.

Forecast language that is important to consider - **Watch** and **Warning**

Watches are designed to give you preparation time. A watch is typically issued 48 hours before tropical-force winds or a storm surge is anticipated to arrive. When one is issued you should listen closely to instructions and monitor for updates. You should evacuate if directed to do so.

Warnings are issued as the storm approaches the specified area and signal that you should be completing your preparations and/or evacuating. They are generally issued 36 hours before the anticipated storm arrival. In New York State, you would typical-

ly expect information, warning, and watches to be forwarded via NY-Alert and broadcast through the media.

Each campus should develop a checklist of steps necessary to prepare for large storm events. These may include:

- ✓ Confirm the accuracy of your emergency call lists.
- ✓ Consider availability of potential campus responders.
- ✓ Consider who is remaining on campus and how to account for their safety.
- ✓ Confirm that potential responders have the appropriate equipment they need, including personal protective equipment (PPE).
- ✓ Make sure that your communication devices are functional.
- ✓ Keep in contact with your local National Weather Service office and community partners.
- ✓ Encourage community members to monitor the weather.
- ✓ Address the needs of populations with special concerns.

- ✓ Test backup generators.
- ✓ Test pumps.
- ✓ Consider fuel reserves.
- ✓ Clean out any drains, catch basins, swales, etc.
- ✓ Have sandbags and other special supplies available.



- ✓ Consider any traffic control devices you may need.
- ✓ Secure any loose item which could become flying debris.
- ✓ Visit construction sites to ensure operations are safe from high winds.
- ✓ Prepare your potential EOC responders.
- ✓ Encourage staff to prepare their own homes for the storm.

AiM Roll-out to Help the Residence Hall Capital Planning Process – Don Smith

This past year the State University Construction Fund (Fund), along with the Office for Capital Facilities (OCF), implemented a new integrated work management system (AiM). AiM replaces a number of antiquated systems (BCI/PSI/BCAS) that were used to track the physical space, usage, and condition of all facilities within the SUNY portfolio.

AiM offers new functionality to better manage the thousands of buildings within SUNY and provides critical data needed to help support the annual capital budget request. This past spring, program managers at the Fund worked with facilities staff on each state

operated campus to evaluate and collect a comprehensive set of data for building systems and associated assets, effectively assessing the remaining useful life for each component. This information was entered into the life cycle modeling module in AiM, which will be used to help determine the timing and value of future capital needs for the SUNY Educational and Hospital capital programs for the 2018-19 budget request and beyond.

The Fund also collected similar information for SUNY's residence hall buildings, excluding foundation owned facilities. This new data will be a significant upgrade from what has been

available to campus staff and the OCF in the past. This data will be used by the campus to develop their 10 year capital plan submitted to OCF each spring, enabling both parties to analyze the plans to ensure that all capital needs are addressed in a timely manner. Moving forward, we will be working with DASNY to develop a process to help update this critical data as major renovation projects are completed.

We are excited about this opportunity and feel that this powerful tool will be a great benefit to the program and will help campuses in their capital planning process.

Nine Things to Consider with Drinking Water Lead Testing – Barbara Boyle



New York State promulgated regulations last year that require testing drinking water for lead contamination in public K-12 schools. While the regulation does not apply to colleges and universities, it has prompted many campuses to voluntarily consider testing facility drinking water for lead. Conversations about lead testing have occurred at several SUNY professional conferences, lead has been the subject of a previous [news-letter item](#), and [information](#) has been added to the Office for Capital Facilities webpage.

There are a few decision points that may cause campuses to pause - here are nine things to consider:

1. The recent NYS regulation for K-12 **does not apply to colleges and universities.**
2. Campuses would be best served to have considered testing for lead and developed a voluntary risk-reducing program, and be able to articulate the basis. (This may mean that the campus decided to test all outlets over a period of time, test areas where complaints have been made or there is concern, test older buildings, test a sample of outlets in each building, or test some percentage of buildings over the next few years, etc.).
3. Children are more susceptible to lead's effects. Campuses should confirm the availability of dependable and recent results for areas frequently used by children (e.g., childcare areas, school-age program areas, family-type residential facilities, etc.). Similarly, areas serving other particularly vulnerable populations should be considered.
4. Before embarking on a sampling program, campuses should consider possible response actions. Corrective actions, if necessary, should be implemented with minimal delays.
5. Before embarking on a sampling program, campuses should have discussions about communicating findings and corrective action decisions to the campus community in a timely manner.
6. Campuses should not randomly collect samples; all sampling programs should be carefully considered and the protocols carefully crafted so that campus results can be compared to recommended action levels. (For example, if the campus intends to compare its results to standards under a given EPA program, the protocol for campus testing needs to match the protocols for the reference program. Protocols include the period that water has been undisturbed in the plumbing, as well as sample size, sampling condition, preservatives, etc.)
7. The EPA standard for lead testing in schools is the venerable 3T program (Training, Testing, and Telling). It is a well-considered program that has stood the test of time. While not directly applicable to colleges and universities, it has clear protocols and approaches and should be carefully considered as a model. (Note that the 3T program has a traditional action level of 20 ppb, while the NYS program, using similar protocols, has set the action level at 15 ppb.)
8. The Safe Drinking Water Act with its Lead and Copper Rule (LCR) applies to public suppliers of drinking water, not consumers of water. Most campuses are consumers, not suppliers. LCR measures for lead using a different methodology than the 3T program, and the protocols are designed to provide feedback on the water treatment at the supplier. LCR protocols are generally not appropriate when looking at water from individual building outlets.
9. The EPA has recommendations for safer water consumption, independent of the testing programs. It has long recommended that the public be told:
 - Use only cold water for drinking and cooking..
 - Let water at the outlet flow for about 30 seconds, or until cold, to flush plumbing before using it for drinking or cooking.



Renewable Energy Credit Ownership — Kathleen Slusher



After much consternation regarding ownership of Renewable Energy Credits (REC) and other environmental attributes on projects with the New York State Energy Research and Development Authority (NYSERDA) funding, the Public Service Commission (PSC) ordered NYSEDA to relinquish all ownership rights effective immediately, including those from the Customer-Sited Tier (CST) and NY-Sun programs.

This Order, filed under Case 15-E-0751 at the PSC, allows campuses to maintain the generation attributes for affected generation, and to report the renewable energy generation as part of their climate commitment reporting.

A REC is a documented validation that a qualified renewable energy source generated and delivered into the local transmission system, one megawatt hour of power. If a solar array or wind turbine delivers 100 megawatt hours (MWh) of electricity into the power grid, 100 REC credits would be created. Only electricity generated by a renewable energy source, as defined by this Order, will result in issuance of a REC.

New York has started a new system to track these credits as part of the PSC's previous Order for the Clean Energy Standard (CES). The new tracking system is called Generation Attributes Tracking System or GATS (or NY-GATS) and is managed by NYSEDA.

Registration and use of the GATS program is free. Qualifying generation resulting in a REC will be assigned a unique serial number by GATS for tracking. Each numbered REC will be identified in GATS as to its transferability between registered entities, if it will carry a monetary value, and if it will meet Tier 1 status for possible sale into the NYSEDA bid program.

NYSEDA, as the manager of the CES

requirements, will periodically, at least once each year, issue an Invitation for Bid (IFB) to purchase qualifying Tier 1 RECs on behalf of electricity suppliers in New York, in order for those suppliers to meet CES requirements. Currently the SUNY Energy Buying Group, as all other wholesale electricity suppliers, including NYPA and LIPA, must participate in this program and purchase Tier 1 RECs annually, in amounts set out in the CES.

Developers of projects throughout New York are being contacted by NYSEDA to arrange for projects to be registered in GATS. If a campus has a project that is not already registered in GATS, the campus should contact the developer and ask them to register the project on behalf of the campus. If the developer cannot be reached, contact NYSEDA for information on how to proceed. The required information to be provided to NYSEDA includes: the location of the project; size of the generation unit (s), preferably as nameplate capacity; and, type of project such as solar, wind, or other renewable source.

RECs can no longer be issued retroactively for the 2016 calendar year if the project was not registered in GATS prior to May 31, 2017. Projects registered after that date are allowed to register certificates for the calendar year 2017. After registration, monthly generation data must be input to the GATS system by the account holder.

While many campuses will register projects, the chance of having RECs classified as transferable and/or having a monetary value is currently slim. One

key requirement for RECs to have monetary value and be classified as a Tier 1, is having started generation on or after January 1, 2015. In addition to being essential to meet all other CES requirements for Tier 1 status, if the project received funds under the NY-SUN, Clean Energy Fund, Customer Sited Tier programs (CST), or any other New York governmental directed renewable incentive, issued RECs cannot be sold as this would result in collection of money twice for the same REC. The PSC Order specifically prohibits a monetary value to be assigned to those RECs. However they may have some transferability between entities. The Order states:

"All pre-existing NEM [net energy metering] projects that are eligible to bid into Tier 1 solicitations are subject to a previous RPS [renewable portfolio standard] Main Tier contract rule that prohibited simultaneous collections of both New York RPS incentive payments and production-based incentives from any other state of local source, including CST, NY-Sun, and CEF program incentives."

Non-transferable RECs will still count toward other voluntary compliance programs, and toward campus goals. Once used, the campus will retire the RECs. Excess RECs may be carried over for use in subsequent years.

All renewable generation in NY, whether it meets the status as a REC or is generated for use by your campus, can be recorded in GATS and recognized to meet the Clean Energy Standard goal for NY generating 50% of its energy from renewable resources by 2030.

The Order and the details of the REC categories is available at the PSC. Further information about the GATS system is available at the [NYSEDA web page](#).





The New Method for Electricity Generation Compensation – Kathleen Slusher



Distilling 270 plus pages of a Public Service Commission (PSC) Order is not an easy task, but below is a brief description of the new compensation method for electricity generators, which has been developed by the PSC.

This new method is the first step to develop a more accurate monetary crediting for qualifying generators under a method called the “Value Stack”. New Net Energy Metering (NEM) projects (i.e. solar, wind, fuel cells, small combined heat and power (10kW), or micro-hydro) will be required to use the new Value Stack net metering compensation method. Existing projects will have the option to opt-in to the new method.

The Value Stack monetary method incorporates several elements to create a new price for electricity generation.

The base, and largest portion of the price, is the wholesale price of electricity in the NYISO Day Ahead Market, known as the Locational Based Marginal Price (LBMP). This part of the value stack can change every hour, in each in of the 11 zones across NYS, creating a potential of 264 prices for LBMP each day.

For new projects, use of LBMP will be a big change from the previous method which used the stable monthly utility listed price.

The injection time, of the generated power into the transmission system, will determine the major portion of the project’s compensation based on the LBMP for that time and zone.

Typically, peak prices occur during hot summer work days, and lowest prices occur on weekend nights.

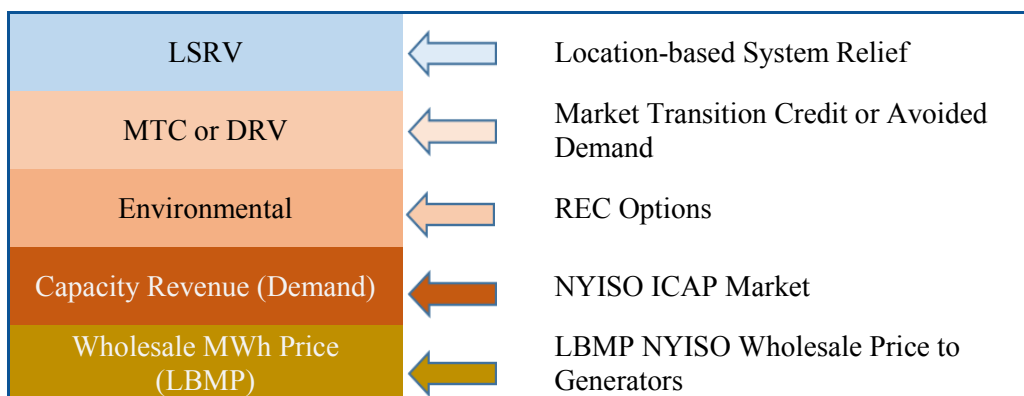
Special utility metering requirements are included in the Order to identify each hour’s activity on the transmission system. The meters involved in the above methods must be able to record net hourly consumption and injection.

Several additional items are added to the LBMP to create the Value Stack. Compensation from the NYISO Capacity Market will become a piece of the stack, listed as Demand. This portion covers

The good news is campuses won’t have to calculate these prices each month, as they will be made available by the local utility under the new tariff rules.

Existing NEM customers will have the option to change to the Value Stack method if the project will benefit more from the new pricing structure.

There are 4 tranches or cycles in the Value Stack implementation. Each cycle will have a decreasing value for NEM projects based upon each local utilities required allocations for projects. This is meant to provide incentive for the early projects.



how well the project’s power helps support peak demand in that region.

There will also be an environmental benefit added to the Value Stack, based on renewable energy credit prices and the social cost of carbon.

A market transition credit is added which also relates to demand. Lastly, the Value Stack provides additional compensation for dispatchable generation such as CHP or fuel cells that can be called upon when needed for reliability of the transmission system.

Phase 2

Projects that are too large (generally >2MW) to qualify under the current net metering or do not otherwise qualify under the Phase 1 generation will be covered by a future PSC order. The PSC may also make modifications or additions to the new Value Stack order under Phase 1.

Additional information can be found at the NYS PSC under Case 15-E-0751 or through your local utility once they have their new tariffs in place.