

Disclaimer:

The State Energy Office of North Carolina would like to thank the National Energy Services Coalition for allowing the use of this resource for USI participants. A great deal of work went into compiling this information into a single location. As you go through this program and/or have additional questions, please contact Reid Conway [reid.conway@ncdenr.gov](mailto:reid.conway@ncdenr.gov).



## GESPC-U Lesson #123:

### Closing Out and Acceptance

**FYI:** Terms and Acronyms can be found on the last page

**Summary:** When to start keeping score? Finalizing each measure leading up to the project closeout should follow a very well-defined plan and process. In this lesson we explore some of the details that must be accomplished to call a measure complete.

It's getting near the end and time to focus our discussion on the closing out and acceptance of energy conservation measures within a performance contracting project.

One distinguishing attribute of performance contracting is that the energy conservation measures (ECMs) are required to achieve their projected guaranteed savings. This means that it is critical to know when a measure's performance period begins. The performance period is that point in time when a measure has been fully completed and accepted by the Owner and its performance must begin to generate its guaranteed savings. And you can't know when to start keeping score, until you know what must be accomplished to call a measure complete.

Along with the prescribed requirements that may have been a part of the project documents like the Request for Proposals and subsequent contract documents -- finalizing each measure -- building up to the final

project implementation closeout -- should follow a very well-defined plan, process, and sequence of operational events. Probably the most obvious is implementing the work that meets or exceeds the quality standards of the agency or institution as defined in the scope of work and services. Throughout the installation and implementation process, Owners and ESCOs typically are working together to review, inspect and ensure that the Owner is satisfied with the work being performed. When the ESCO and Owner agree that the work is mostly fulfilled and the Owner has beneficial use of a measure, a statement of substantial completion for the ECM should be offered for the parties to execute. For NC this will be the signing of Exhibit 3.

But we'd be remiss if we didn't expand on a few of the additional considerations that come into play for substantial completion in real life applications. Beneficial use should mean that the space is ready for occupation or reoccupation by the Owner and an acceptable level of operator and maintenance training has been provided for the measure. This should include how and where to acquire service and/or replacement parts should they be required. Often misunderstood is how warranties are applied. Questions such as if the measure is under warranty, when does it begin? Does it start at the completion of the measure itself or at the time of final project acceptance? And how long is the warranty period? The Owner should be fully instructed on how to obtain warranty service and who to contact. And most importantly, the Owner should be provided a detailed list of maintenance and operational requirements to ensure that the warranty is not for some reason forfeited. For some measures, this may also include a number of replacement components that might be labeled "attic stock." Attic stock is generally an agreed upon quantity of replacement consumables

delivered to the Owner for onsite availability should they require replacement. One common example that many of us have lived through is a box or two of replacement LED lamps that can be used to replace any premature burned-out lamps.

And diving just a little deeper, this request to agree that a measure is substantially complete should also be accompanied by a punch list of items or issues that need additional attention, if any. For many projects, punch lists are developed during owner inspection of the work, or perhaps during the commissioning of the measure. The ESCO, Owner, or any other key stakeholders, can add to it while it's being created. Punch lists should not be taken lightly and should receive dedicated focus by the Owner and ESCO. It remains the ESCO's responsibility to fully complete all punch list items for the Owner's final acceptance of the measure. A defined effort and a defined amount of time should be outlined for the creation and completion of all items on the punch list. What you're working to avoid is a lingering, add-on forever list. The goal is to identify what must be achieved for the measure to be finally inspected, approved and therefore Finally Complete.

Punch lists however are only valid and applicable if reached by mutual agreement and documented as full and complete. A real key here is that most construction contracts include the right to withhold a specified percentage of payment until all the items of the punch list have been completed correctly. So, while progress payments may have been issued as work is completed and approved, a final or retained amount is likely to be held back until all punch list items have been satisfactorily resolved. Other considerations that must be addressed

are things like when legal title to the improvement, and therefore insurance coverage for the device or system transfers to the Owner and as implied before, when the actual warranty period clock begins. It's critical to have all these details well documented to avoid disputes and confusion should there be a concern.

Assuming the work has been completed, a punch list created and signed off on as complete with all the accompanying considerations regarding title, service resources, training and warranty, only one unattended detail remains. As they say, the job's not over until the paperwork is finished. Accepting a measure or a project as complete and final should never occur without having received all the associated paperwork as outlined in the contract. This may include as-built documents, owner and maintenance manuals and additionally should include; Certificate of Substantial Completion, Completed Punch list, Inspection Certificates, Lien Waivers and Final Pay Applications. For many programs and projects, when the Measure Final Completion has been executed is when the performance period for that measure begins. For NC this will be the signing of Exhibit 4.

While in a typical comprehensive performance contract there are several measures staged to be completed at different times, it's incumbent that these processes and attention to detail occur for each one of the measures as they are completed. Then and only then, can the Owner and ESCO collectively look forward to the final implementation project closeout. Lingering unattended details or undelivered required documentation is the stuff bad memories are made of. And the way to avoid them is with careful forethought and planning about all these measure closeout details.

During the construction period the State Energy Office still has a role to play. SEO will schedule several site visits to the job site to look over work being completed by the ESCO. SEO is not approving the work, that is the job of the governmental unit. But rest assured that if SEO sees something that is not right, we will say something. The biggest part of these visits is to make sure things are running smoothly. SEO is also available anytime to help work out any disagreements that may arise.

While we briefly mentioned the term commissioning today as one means to add items to a punch list, we'll have a deeper discussion of commissioning and introduce post construction measurement and verification in our next lesson.

Once you feel comfortable with the information above, please scroll down and complete the quiz below. Email your answers to Reid Conway at [reid.conway@ncdenr.gov](mailto:reid.conway@ncdenr.gov). If you have additional questions, feel free to include them as well.

## Lesson 23 Quiz

1. What is meant by the concept of substantial completion?
2. True or False, substantial completion of a measure also means the owner understands when the warranty period starts and how to use and maintain the device, system, or improvement.
3. What does the owner need to know about the warranty for a device or system?

4. What is a Punch List and when are they usually developed?
5. What considerations should be in place prior to the final acceptance of a measure or project?
6. What is the role of SEO when they come to visit? What are they there to do?

## Terms and Acronyms

3 <sup>rd</sup> Party	3 <sup>rd</sup> Party Engineer
COS	Council of State
DOA	NC Department of Administration
DPI	NC Department of Public Instruction
ECM	Energy Conservation Measure
ESA	Energy Services Agreement
ESC	Energy Services Coalition
ESCO	Energy Service Company could be interchangeable with QP
ESPC	Energy Saving Performance Contracting
GEPC	Guaranteed Energy Performance Contracting
GESPC	Guaranteed Energy Saving Performance Contracting
GS	General Statute
GU	Governmental Unit
IGA	Investment Grade Audit
IPMVP	International Performance Measurement and Verification Protocol
LGC	Local Government Commission (Housed in the Treasurer's Office)
LGU	Local Governmental Unit
M and V	Measurement and Verification
OR	Owner's Representative
OSBM	NC Office of State Budget and Management
PC	Performance Contracting
Pre-Bid	Meeting held prior to the bid opening
QP	Qualified Provider could be interchangeable with ESCO
QR	Qualified Reviewer
RFP	Request for Proposal
SEO	State Energy Office
UNC	Refers to the UNC System
USI	Utility Savings Initiative