

CEBC Webinars Series (Webinar #7)

“The Impact of COVID-19 on ESCO M&V Activities”

4 June 2020, 4:00 PM GST

CEBC organized this webinar to talk about the impact of COVID-19 on the measurement and verification (M&V) activities at the energy service companies (ESCOs)

Webinar speakers include:

- [Lia Webster](#), Sr. Engineer / Principal at Facility Energy Solutions & Chair of the IPMVP Sub-Committee on Advanced M&V at Efficiency Valuation Organization (EVO)
- [Amin El Najjar](#), Director of Operations Enova Dubai & Northern Emirates, Oman, Lebanon & Egypt
- [Gaurav Soni](#), Project Assurance Manager – O&M and M&V at ENGIE Smart4Power
- Moderated by [Iwan Walters](#), Partner at Eversheds Sutherland and Board Member at Clean Energy Business Council (CEBC)

The key takeaways from the webinar discussions are summarized below.

- International Performance Measurement and Verification Protocol (IPMVP): is the key measurement and verification protocol that's being used worldwide published by EVO.
- MM&V is the process of planning, measuring and verifying energy savings within an individual facility. It aims to calculate and report the energy savings of a specific project.
- Routine Adjustments account for the expected changes in energy consumption due to changes in the independent variables.
- Non-Routine Events & Adjustments cause unexpected changes in energy use within measurement boundary due to changes of Static Factors.
- Static Factors are characteristics of a facility which affect energy consumption within the measurement boundary.
- How to deal with Non-Routine Events (NREs):
 - Baseline Period
 - Extend baseline period until operations stabilize.
 - Exclude period if impacts are temporary
 - Baseline established on 'new normal' , spans both old and new
 - Track key 'static factors' and include as variables in baseline model
 - Determine impacts and make non-routine adjustment to baseline energy
 - Implementation Period
 - Extend period until stable operations
 - Consider another M&V option (e.g., sub-meter ECMs)

- Reporting Period
 - Omit data from period
 - Determine impacts and make non-routine adjustment
 - Pause contract and extend the performance period when the contract was "performing" in "normal" situations
- In case of NREs with lower-value impacts, engineering calculations may be accepted but it's recommended to consider the life-cycle value of the non-routine adjustment.
- In case of NREs, you have one of three choices:
 - Omit the data: in that case you will have to claim no savings and extend the contract period
 - Quantify the impacts: in that case the baseline model is still valid, but you will need to quantify the impacts and make the non-routine adjustments accordingly.
 - Re-define the baseline model: in this case the baseline model becomes invalid due to some permanent changes and additional independent variables could be required. On effective way to deal with this change is to add the static factors into the baseline model as independent variables.
- Other Considerations for Covid-19:
 - Resolutions based on content of contract / M&V Plan
 - Non-routine adjustment
 - Force majeure
 - If unanticipated, use a reasonable agreed-upon solution
 - Risk sharing should extend to unforeseen circumstances
 - Consider adjusting investment duration or lease terms
 - Value is a mix of 'savings' and installation of new equipment that has the potential to perform

Questions and Answers:

1. Is there any metric other than EUI which could be used to measure and monitor the Energy Efficiency of a District which could have multiple type of facilities?

Answer: EUI is certainly a strong indicator across, however each facility is unique in itself. The best way would be to make a mathematical model for each facility for its energy use.

2. In a nutshell, what will Advanced M&V (M&V 2.0) add to the current IPMVP concepts?

Answer: We expected the advanced M&V to have more impact to option C. Option is C well-constructed for advanced modeling methods. Primarily, the application guide is going to include more details on the different kinds of models, how to make models, the considerations to take when you make models, etc.

3. It is observed that some facilities are not maintaining IAQ (T&RH) that may impact ECM performance apart from equipment/facility conditions? How to account for this?

Answer: Most (99%) of the contracts include KPIs that directly tackle comfort. So, you will have three sets of KPIs:

- The health of the equipment
- The energy savings
- And the comfort inside the facility

4. Why don't you just isolate the ECM and use option A or B and not the total building option C to avoid the sudden changes like COVID-19?

Answer: If you have chosen Option C (whole building metering), then you already gone down this pathway with your M&V option. However, it's strongly recommended to have a backup M&V plan. For example, if you are going with Option C then you should know enough information about your baseline conditions that would enable you to go back again and do Option A.

5. What happens if the original projections of the energy savings will not be achieved in the near future, does this mean adjustment on the contract period?

Answer: IPMVP doesn't mention what exactly you guarantee as savings. You can choose any absolute number based on any baseline. The contracts are usually 5-6 years, which makes it clear with the customer/facility.

6. What are the major static factors need to be considered for a multiple residential based building?

Answer: Each building is different. Determining the key static factors is the job of the energy engineer. You need to look at your energy balance when you do your energy audit to see what your big players are, big pieces of equipment, anything that would help you identify those static factors such as number of tenants, etc.

For more information about the Clean Energy Business Council (CEBC) and the Energy Efficiency Working Group and how to join, please email us at: ahmed@cebcmena.com