



IEPEC 2022

Virtual Visions: The Future of Field Work

Presented at the 2022 International Energy Program Evaluation Conference (IEPEC)

Introduction

- COVID-19 pandemic and requirements for social distancing resulted in rapid and significant changes to facility operations
- Out of necessity, evaluators transitioned to relatively safe yet potentially lower rigor Virtual Site Visit approach.
- This approach uses a variety of tools and techniques to verify energy efficiency measures for a project.



Source: https://medium.com/@theandrewjcarr/why-most-virtual-tours-for-real-estate-suckand-14-ways-to-make-yours-amazing-658684402b86

Introduction Cont'd

Overview of Paper:

- Outlines a virtual site visit approach for project verification and investigate whether the approach is viable for energy savings verification based on conducting over 1,000 virtual visits for a broad range of energy savings measures.
- Discusses challenges and opportunities.
- Provides feedback from several energy efficiency programs across the United States.



Virtual Site Visit Best Practices

Key Aspect	Contactless Strategy				
Customer-Centric	Develop a virtual approach that prioritizes customer comfort, preference, privacy concerns, and operational policies, and that is designed to minimize the customer burden throughout data collection and inspection.				
Safety-Focused	Keep safety as the top priority and aim to work with each customer to verify projects safely and securely at the facility.				
Innovative	Adapt to the rapidly changing environment by providing a variety of virtual platforms to support various customers and develop strong protocols to ensure the accuracy of resulting verification and analyses.				
Testing and Practicing	Test the virtual site visit approach internally and through pilot studies before deploying large-scale M&V activity in the field.				
Using Comprehensive Protocols to Address Challenges	Design evaluation and M&V protocols that address challenges related to modified hours of operation and changes in production, as well as other atypical activities during the COVID-19 period.				
Continuously Improving and Calibrating	Continuously calibrate the virtual site visit process to meet evaluation needs.				

Process Flow for Virtual Site Visit

Review Verification Sample and Identify Projects for Virtual Site Visit	Conduct Pre- Site Visit Call	Conduct Virt Site Visit	Collect ual Additional Follow-up Information	Perform Energy Savings and Demand Reduction Analysis
Reference Virtual Site Visit Protocols Reference Evaluation Guidance	Reference Virtual Site Visit Protocols Reference Evaluation Guidance	Reference Virtual Site Visit Protocols Reference Evaluation Guidance	Trend Data Utility Bills Pictures, etc. AMI Data	Use Virtual Site Visit Findings to Calculate Energy Savings and Demand Reduction.
	Perform Equipment Check and Training			

Virtual Site Visit Platforms

- **Customer Experience:** Provide several options to the customer while also deferring to the customers' preference of tools.
- **Data Security:** Data security is a critical consideration for both the utility clients and the site contacts.
- **Tool Capability:** Most video conferencing tools have the features required for a successful virtual visit
- **Reliability:** Platform reliability is critical to the success of a virtual call.
- Ease of Use: It is important that the virtual site visit tool is easy to use for the site contacts and for the evaluators.
- **Compatibility and Accessibility:** The selected tool should have cell phone accessibility as well as laptop/desktop accessibility.

Sector Distributions



Measure Distributions





Considerations and Best Practices

- **Safety:** The sites and measures selected must be deemed safe for verification by a site contact.
- Data Security, Privacy, and Participant Operational Policies: Participants' operational policies must be followed, and privacy concerns must be addressed.
- Site or Project Characteristics: Project selection for virtual visits is critical to success.
- Site Contact Knowledge and Burden: Site contact is critical to the success of the virtual visit.
- Data Collection Quality and Input Assumptions: A combination of data collection approaches is critical to success.
- **Technology:** Challenges with connectivity issues or platforms could derail a virtual visit.

Virtual Visit Opportunities

- Shorter Duration
- Safe for COVID-19
- Lower Cost
- Opportunity to Have More Team Members on the Call



Virtual Visit Barriers

- Less Rigor (in some cases)
- Technical Difficulties
- Customer Inconvenience
- Difficulties with Scheduling



Feedback from Program Staff

Question 1: How would you rate the success of virtual site visits in conducting M&V activities, where 1 means not successful and 10 means very successful?

Question 2: Do you plan to continue to accept the virtual site visit approach as an M&V option moving forward?

Question 3: Do you think virtual visits were convenient or inconvenient for customers?

Question 4: What concerns or barriers do you see with virtual site visits?

Question 5: What suggestions do you have, or opportunities do you see to improve the virtual site visit process?



Conclusions

- Virtual site visits are a viable option for verification across different measure types and sectors
- Site contacts and energy efficiency program staff provided encouraging feedback on the virtual site visit approach
- The key criteria for success:
 - Ensure the correct selection of projects that qualify for a virtual visit
 - Prepare a robust M&V plan
 - Be **flexible and adaptable** during calls when issues arise
 - Work with the customer to ensure customer satisfaction.





Thank You

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Principal

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