

CT X1931-4 Advanced Lighting Controls - PSD New Measures

Phase 2 Kickoff
12/13/21

Kathleen Sturtevant, Senior Engineer

Phase 2 Objectives

- **Provide additional detail to the Phase 1 residential and commercial Advanced Lighting Controls measures that were incorporated into the PSD; adjust measure parameters if needed.**
- Confirm or update Phase 1 controls' savings factors through empirical data and interviews
- Investigate topics identified through Phase 1 that may impact savings factors, such as:
 - Savings factor differentiation between NLC and LLLC
 - Application of savings factors for combinations of controls beyond dual occupancy and daylight sensors
- Explore appropriate coincidence factors and measure lifetimes per control technology through expert and market actor interviews

Not Expected in Phase 2

- Scope of Phase 2 does not include all components of the developed Phase 1 measures.
- These components of the measure are not expected to be updated through Phase 2:
 - Types of control technologies researched in Phase 1
 - Savings calculation methodology
 - Calculation inputs pulled from existing CT PSD standard lighting measure, such as lighting hours and HVAC interactivity savings factors

Phase 2 Methods

- Expert Interviews (6)
 - Interviews with experts (designers, installers, manufacturers, suppliers, or other industry contacts) sourced from the implementation staff and/or tracking data.
- Market Actor Interviews (4)
 - Interviews with market actors to identify available data and provide context for the current market.
- Empirical Data Review / Analysis
 - Re-processing / collecting existing data (based on available data from relevant prior studies in Northeast).

Identified Interview Candidates

Expert Interviews

- Erik Page (*Erik Page & Associates, Inc.*)
- Gabe Arnold (*PNW National Laboratory*)
- DLC 2020 study authors (*Energy Solutions*):
 - Yao-Jung Wen, Emily Kehmeier, Teddy Kisch, Andrew Springfield, Brittany Luntz, Mark Frey
- *Others*

Market Actor Interviews

- Jason Vasilakos, Illuminate / Yusen
- Jordano Santos, Regional Energy Solutions Manager, U.S. Electrical Services Inc.
- Ron Galati LC, Energy Projects Manager, Lighting Affiliates Ltd.
- David J. Dow, Energy Division Account Manager, Apex Lighting Solutions
- Clark McCain, Rexel
- *Other Suggestions*
 - Representative from Lutron
 - Representative from Leviton
 - Representative from Daintree
 - Representative from Integrated / networked controls provider TBD

Identified Primary Research Data Sources

Empirical Data Studies

- C1635 Impact Evaluation of PY 2016 & 2017 Energy Opportunities (EO) Program (August 2020)
- *Part of C1635*: CT Upstream Lighting Study investigating PY2018
- Impact Evaluation of PY2019 MA C&I Upstream Lighting Initiative (March 2021)
- Massachusetts Impact Evaluation of PY2018-2019 Custom Electric Installations (June 2021)
- *Pursue data for 2020 DLC Study* (DLC and Northwest Energy Efficiency Alliance (NEEA), "Energy Savings from Networked Lighting Control (NLC) Systems with and without LLLC", Energy Solutions, Sept 24, 2020)
- *Others*

Utility Data

- Tracked qualitative or quantitative data regarding how customers are intending to operate their installed NLC or LLLC systems and which controls technologies will be implemented.

Schedule

January 2022: Data Request & Interview Guides

- Draft data request and send to utilities
- Review and finalize expert and market actor interview guides

January – February 2022: Primary Research

- Recruit and conduct expert and market actor interviews
- Collect and analyze data from various sources*

March 2022: Synthesis and Draft Deliverables

- Synthesis and analysis
 - Collect findings from interviews and data analysis and synthesis results
- Draft PSD write-ups and report

April 2022 Final PSD Write-ups, Report, and Presentation

- Updated residential and commercial ALC measures based on expert interviews, market actor interviews, and primary data sources
- Report and presentation detailing findings and conclusions from Phase 1 and Phase 2 of this study

DNV ©

*Pending data availability



Budget

- *Remaining from Advanced Lighting Controls after Phase 1:* \$15,500
- Initial budget for Phase 2:

Task / Study	Phase 2
Primary Research	\$25,700
Expert and Market Actor Interviews	\$11,200
Data Analysis	\$14,500*
Reporting and Presentation	\$3,000
Total	\$28,700

- Scope detailed in presentation is based on initial budget for Phase 2

8 DNV ©

*Pending data availability

