



ADVANCED RTU CAMPAIGN ROOFTOP UNIT FIELD CHECKLIST - DOE

CHALLENGE

While replacements and retrofits of existing rooftop Remote Terminal Units (RTUs) offer tremendous savings opportunities, it can be difficult to prioritize potential RTU improvements according to highest return on investment. The condition and performance of existing RTUs are critical variables in this equation, and there is a lack of standardization around RTU evaluation.

BEST PRACTICE IMPLEMENTED

To meet this challenge, the Department of Energy (DOE) Advanced RTU Campaign (ARC) has developed an RTU field checklist designed to standardize visual-based field evaluation of existing RTUs. The checklist uses clearly defined performance bins to quantitatively evaluate the condition and performance of key RTU components - condenser coil; refrigerant piping; exterior cabinet; evaporator coil; burner section; compressor; air dampers; and fan motors - and compile individual component evaluations into a whole-unit score that accounts for the relative impact of each component on overall performance. The checklist is designed to help identify damage, dysfunction, or degradation that requires more than routine maintenance. To streamline the field evaluation process, only components whose condition is deemed to impact the rating of the overall unit are included.

RESULTS OF THE BEST PRACTICE

DOE's ARC Rooftop Unit Field Checklist will enable facility personnel with limited knowledge of RTU design and performance to consistently and quantitatively evaluate the condition and performance of existing RTUs. This will enable informed prioritization of RTU replacement and retrofit investments, resulting in higher returns on RTU efficiency investments.

VERIFICATION OF EFFICIENCY AND/ OR SAVINGS CAPTURED

This field checklist is a compilation of NREL's findings from past research on RTU field evaluation, and draws heavily on feedback from industry leaders in this area. The checklist has only recently been published; accordingly, there has not yet been any verification of actual savings generated.

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