Time to Move On

An Examination of Metering Periods for Small Business Direct Install Participants

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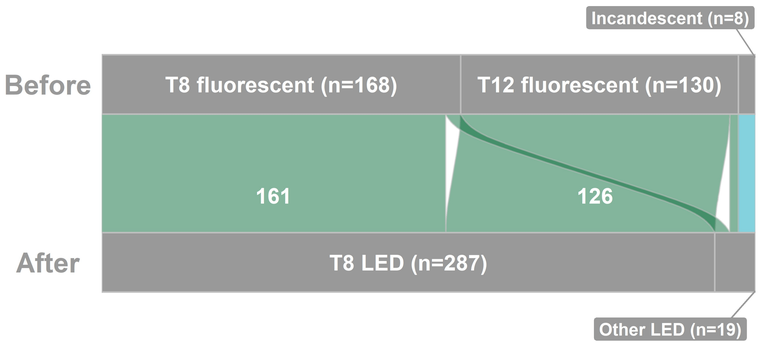
How long is too long when it comes to selecting a logging period? Standards for the evaluation of commercial and industrial lighting with data loggers call for different periods depending on the operating schedules of monitored sites, with the general requirement that logged data represent at least one typical schedule cycle. Here, we compare savings estimates from lighting retrofits over a range of metering periods to assess the **potential for reduced variability in the estimates** and **more cost-effective data collection** using **existing measurement and verification (M&V) technologies**. The findings reflect up to six months of lighting usage captured with **309 data loggers** deployed across **32 sites**.

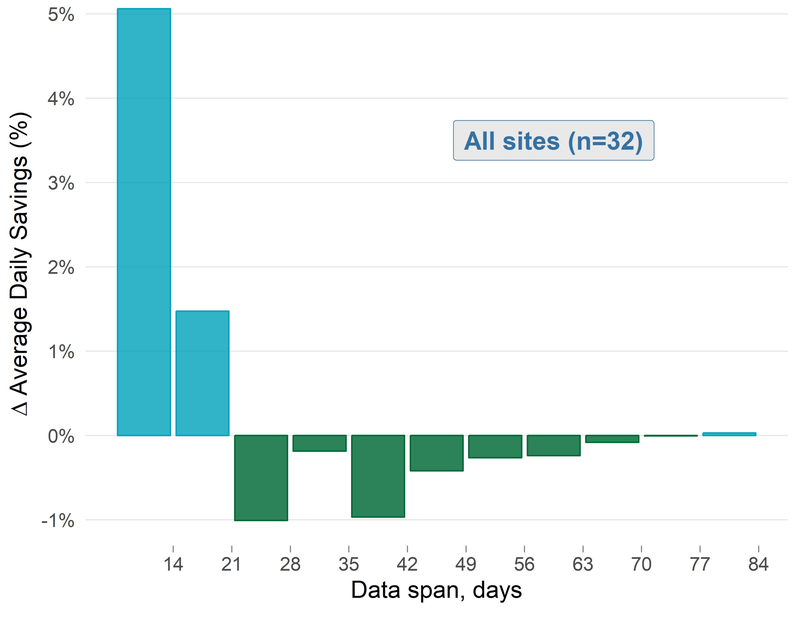
Background

We investigate the **effects of varying metering periods** from an impact evaluator's perspective, based on lighting energy data from a utility program that facilitates **lighting retrofits in small businesses**. The study focuses on the extent to which selecting more-appropriate metering periods might improve the **robustness of M&V savings estimates** derived from data loggers, reduce soft costs in device installation and retrieval, and **improve resource allocation** in future evaluations.

Lighting: before and after

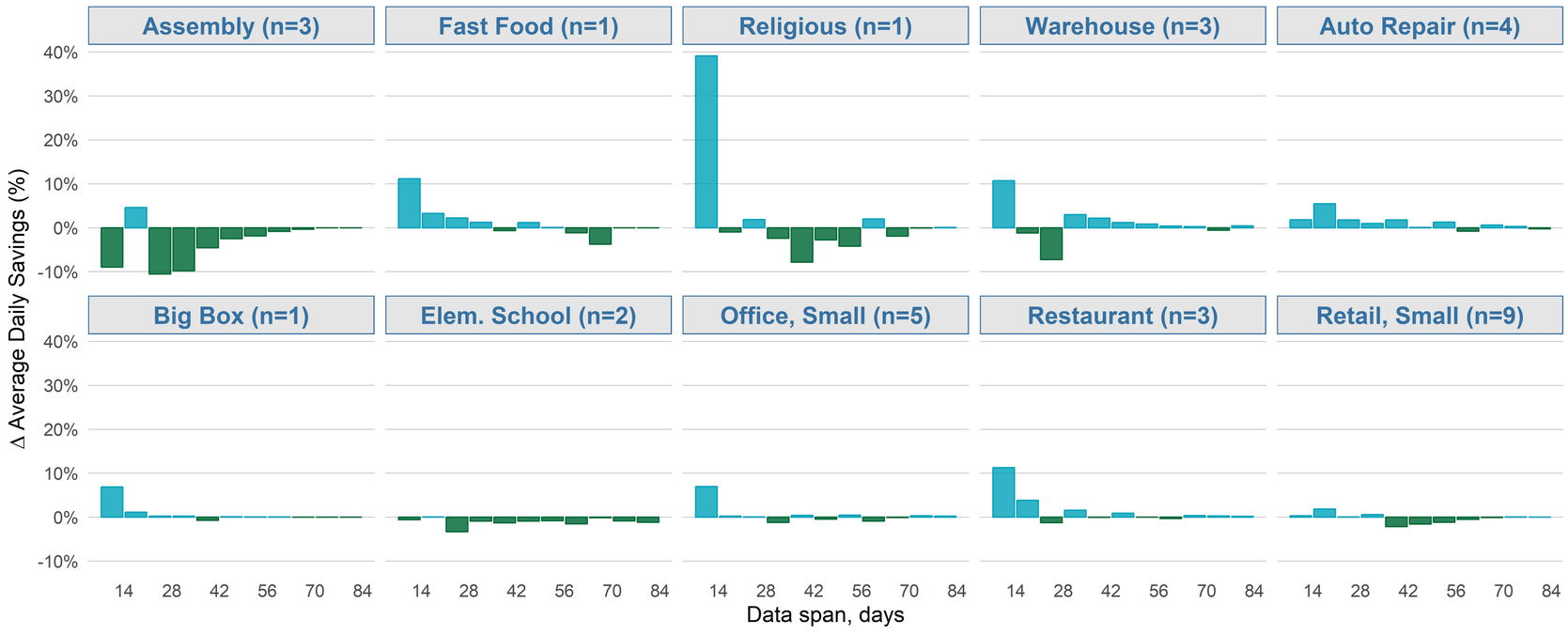


Savings at a glance



Percentage change in week-to-week mean daily savings estimates, based on the full sample of 32 sites.

A deeper dive: savings by building use



Percentage change in week-to-week mean daily savings estimates, grouped by building end-use. The most common response observed among the groups is savings converging over time, though some business types show greater volatility and less convergence, if any.

Conclusions

We suggest a 14-day default logging period, in line with NY Technical Resource Manual recommendations, with the need for longer periods determined by building use and conversations with customers about occupancy and production patterns

75% (24 of 32) sites showed **<2%** average week-to-week change in savings within **14** days

25% (8 of 32) sites showed **>2%** average week-to-week change in savings beyond **28** days