

Appendix E: Business Lighting

1. Introduction and Overview

Business lighting offerings are currently part of Energy Trust's Existing Buildings, Existing Multifamily, and Production Efficiency programs, and are delivered by their respective PMCs/PDC. In 2021, Energy Trust is consolidating these offerings to be delivered by a single PDC serving commercial, multifamily and industrial customers. This program will not include residential lighting or residential direct install services.

Business Lighting offers both prescriptive and custom incentives for lighting projects. The program is driven primarily by a network of trade allies, referrals from utility representatives and through direct PMC and PDC outreach. Lighting has traditionally delivered as much as 50% or more of electric savings depending on the program, and Energy Trust expects this to decline due to evolving baselines resulting from common practice and standards without new program strategies to define and penetrate new lighting markets.

Incentives are available on a prescriptive and custom basis for qualifying lighting projects that come through the programs' extensive lighting Trade Ally Network. Lighting projects are currently submitted by trade allies via the program's Excel-based lighting tool (see [Appendix K: Business Lighting Measure Build-Up](#) template for additional lighting measure and incentive information). Energy Trust currently offers incentives for all qualifying custom lighting measures, except streetlights, at \$0.25/annual kWh, not to exceed a maximum of 50% of the lighting project cost. Energy Trust provides lighting incentives for indoor grow operations with the majority of savings delivered through cannabis projects. Energy Trust currently offers custom incentives for streetlights, including all decorative streetlights, at \$0.15/annual kWh, not to exceed a maximum of 50% of the total project cost.

The lighting program also offers Performance Plus, Lighten up with LEDs, Lighting Analysis Studies and a Network Lighting Control Pilot, as outlined below:

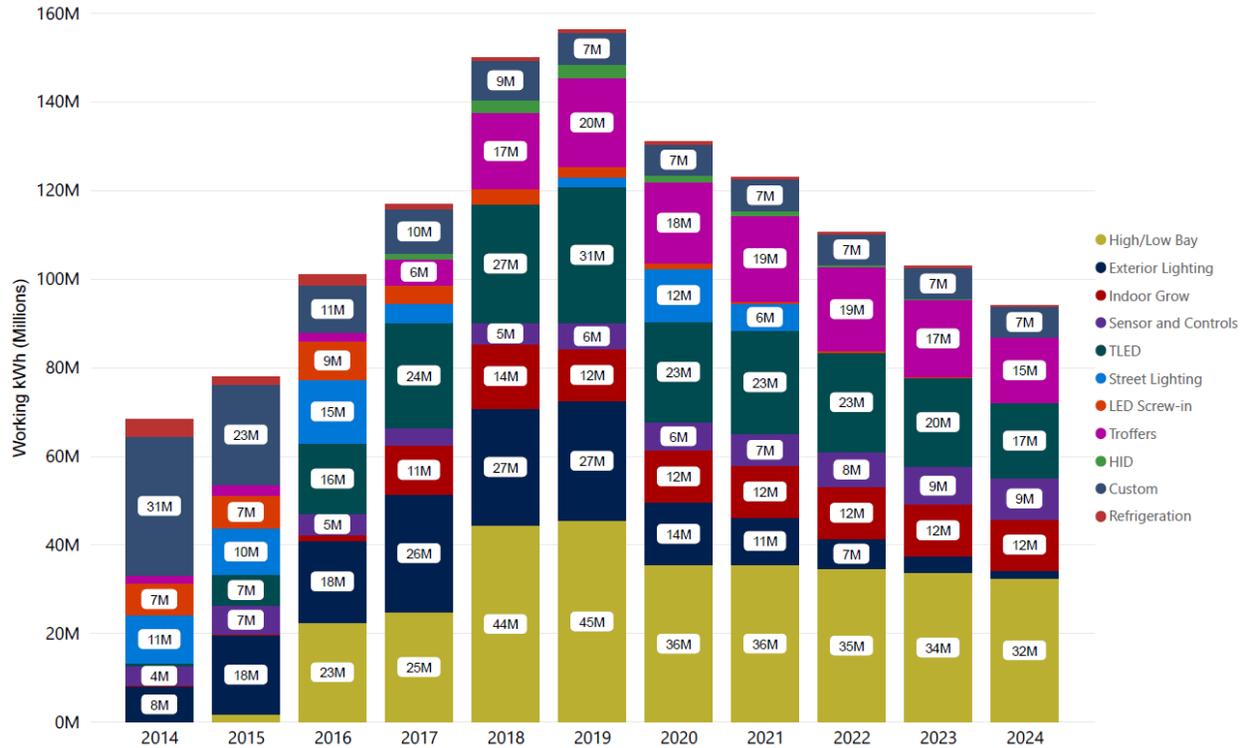
- Performance Plus encourages qualified lighting trade allies to specify and install holistic lighting projects. This offering provides higher incentives for projects that achieve at least 10% lower lighting power densities (LPDs) than specified for the respective space use type with appropriate lighting controls included in the project. See a case study at https://www.energytrust.org/wp-content/uploads/2016/11/performanceplus_cs.pdf for further information.
- Lighten Up with LEDs is a distributor LED buy-down program through which qualifying LEDs can be purchased through a distributor with an instant incentive given to the customer. Lighten Up with LEDs requires customers purchasing LEDs to submit a completed application form to the distributor.

- Lighting Analysis Studies are conducted by the PDC with the goal of encouraging customers to move forward with a lighting project. Lighting Analysis Studies are provided to customers the PDC proactively identifies as eligible. In Production Efficiency, Lighting Analysis Studies require custom PDC approvals prior to the lighting PDC engaging with the customer.
- The Networked Lighting Control (NLC) Pilot focuses on networked lighting controls with commercial and industrial lighting projects. The pilot will collect necessary cost and savings data to evaluate potential networked controls measures and to determine the actions needed to motivate the market to adopt networked lighting controls. To be eligible to apply for this pilot, a trade ally must meet specific application criteria and have completed a qualifying NLC technical training class. Among other things, in order to participate, the trade ally must:
 - o Have an approved plan for manufacturer-provided specific technical training in place;
 - o Complete a webinar on pilot requirements;
 - o Agree to assist Energy Trust's evaluation contractor with customer scheduling for the installation and removal of data logging equipment for a period of time prior to and after installation and NLC project activation; and
 - o Work closely with Energy Trust to manage a limited-incentive budget for the pilot.

2. Program Savings and the Future of Lighting Savings

Commercial and Industrial lighting savings are projected to decrease due to increasing LED baselines. Figure E1 below shows recent savings and future projections for business lighting for existing buildings, multifamily and industrial combined. While these are merely projections, they are illustrative of the trends Energy Trust expects for lighting energy savings. Future-year savings assume that certain measures (described below) move to midstream delivery in 2021.

Figure E1. Recent Savings and Future Projections for Commercial and Industrial Lighting (2014 to 2024. 2014-2018 Actuals, 2019-2024 Projections)



In responding to the Business lighting program, respondent should show in-depth understanding of this dynamic market, changes to lighting baselines and cost-effectiveness issues. Energy Trust is interested in any program design that would enhance certain lighting categories or show a better trend outlook than what is currently projected. Additional resources (Figure E3 through Figure E8, and Table E1 and Table E2) are provided at the end of this [Appendix E](#) to help inform respondent’s developed savings, incentives and delivery estimates.

3. Role of the Business Lighting Implementer

The Lighting PDC’s responsibility is to achieve annual energy savings goals by utilizing trade allies, distributors and other vendors as a sales force to support the implementation of prescriptive and custom lighting energy efficiency measures. The Lighting implementer will work with Energy Trust staff and its network of lighting trade allies through the following primary activities:

A. Program Design and Assistance

The implementer will be an experienced business lighting energy efficiency team that:

- Collaborates on marketing materials to support market outreach and provides support for trade allies to integrate collaborative marketing into their business models
- Implements ongoing recommendations for updating strategies to promote trade ally participation, midstream delivery, direct install and advanced lighting design.

Energy Trust strives to continuously improve its programs through changes in technologies, codes and standards, go-to-market strategies and market conditions.

- Stays current on new technologies, equipment performance issues and their applicability to business lighting customers and implements recommendations for incorporating these findings into the program design

Recommendations from the implementer might include:

- Adding, updating or removing prescriptive or calculated saving measures and incentives by following the guidelines of Energy Trust's measure development process
- Adjusting incentive levels for measures
- Potential methods for streamlining and improving program processes

Energy Trust is interested in new program design models or offerings; at a minimum, respondents must be able to provide the following to Energy Trust customers:

1. Direct install products and services for lighting and non-lighting measures.

Energy Trust is interested in offering a cost-effective direct install program that could include lighting and non-lighting measures to small-to-medium business customers across the region. Energy Trust's preference is to have one implementer for these projects (for both lighting and non-lighting measures) wherever possible to lessen confusion in the market and lower the numbers of installers for customers. PDC respondents should propose a direct install program for small and medium businesses (excluding unit multifamily) that could include lighting and non-lighting measures.

For situations in which lighting measures constitute the majority of a proposed direct install offering, they should be implemented by the Business Lighting PDC. If the respondent proposes a direct install offering as the PMC, it should address coordination with the Business Lighting PDC.

If respondent proposes a direct install offering, respondent must include proposed approaches, clearly indicating proposed delivery structure and incentive costs. For more information on multifamily approaches to direct install, see [Appendix C: Existing Multifamily](#).

2. Midstream lighting for select measures with lighting distributors. Energy Trust promotes the adoption of energy efficiency technology through midstream and downstream offerings. For the purpose of this RFP, downstream incentives are incentives paid to consumers; midstream incentives are incentives paid to a distributor or other midstream actor within a given supply chain. No forms for individual projects are required for midstream activity.

Starting as early as January 1, 2021, Energy Trust is considering moving tubular LEDs (TLEDs), Exterior Corn Cobs & Low Wattage Kits, high intensity discharge (HID) Corn Cobs

and CFLEDs to a midstream delivery model accessible to trade allies and customers through a lighting distributor. Energy Trust wants to continue to achieve cost-effective savings for these measures. For example, in 2017, 2018 and 2019, TLEDS generated respective 23.6M, 25.4M and 28.5M kWh savings for Existing Buildings/Multifamily and respective 4.6M, 1.2M and 5.2M kWh savings for Industrial. Respondent should provide the expected 2021 and 2022 energy savings for Existing Buildings and Production Efficiency from moving downstream to midstream. Respondent should also address potential implementation challenges such as recruiting distributors, ensuring program champions are at each branch and motivating branch staff, how to best set incentives (including whether to pass along a percentage of the incentive to the customer or trade ally), outdated point of sale systems and integrating data requests into distributor processes, and rapidly-changing products and stocks.

Under the proposed process, the implementer will enter into agreements with select lighting distributors. The agreements between the implementer and midstream distributors will determine program offer details including eligible branch locations, qualifying products and incentive levels, along with rules and guidelines such as purchase limits, amount of incentive passed to the customer and utility attribution. Figure E2 below provides more details on proposed roles and responsibilities in a distributor midstream model.

Figure E2. Proposed Roles and Responsibilities for Distributors and PDCs

Distributor Responsibilities	PDC Responsibilities
<ul style="list-style-type: none"> • Supplying eligible products to customers at reduced cost • Alerting PDC of new products, updates to product eligibility, price changes and special promotions • Collecting install or ship to zip code for all purchases where Energy Trust incentives are passed through to customers and/or trade allies • Uploading sales data through PDC-administered portal • Allowing access to the PDC’s field staff to market midstream offers and train distributor staff on the midstream program • Enforcing and monitoring program rules, such as purchase limits and cost parameters 	<ul style="list-style-type: none"> • Developing draft participation forms for Energy Trust review • Collaborating with Northwest Energy Efficiency Alliance (NEEA) on existing midstream lighting pilots and aligning with as many distributor requirements as possible to decrease regional midstream differences • Executing and maintaining distributor agreements and ongoing management and QC of distributor pool • Receiving sales data, conditioning and applying sales protocols to determine attribution • Uploading sales data and additional backup documentation and project information to Energy Trust’s incentive processing system • Distributing payment of Energy Trust incentives to distributors • Recommending program evolution and updates based on feedback from distributors

Respondent must address the 2020 transition plan for moving these measures midstream, including informing trade allies and customers of this offering change and ensuring that invoicing and systems compatibility for paying distributors will be ready for launch as early as January 1, 2021.

Respondent is also encouraged to share enhanced or different approaches along with a different lighting measure mix for midstream compared to what is described above, as well as respondent experience with these approaches.

3. Calculated and prescriptive incentives provided by a trade ally within the program's incentive calculator tool. All lighting measures not offered through the midstream program will be offered through the trade allies within the program's incentive calculator tool.

Respondent must show its capacity to maintain and grow the trade ally network as detailed below and in [Appendix G: Program Implementation](#). Respondent must also demonstrate its ability to maintain and develop the lighting calculator tool. The lighting calculator tool requires key system variables (e.g., building type, operating hours, and others) and customer characteristics as inputs, to better define the baseline and new conditions of the equipment and energy usage, to calculate estimated energy savings and incentives. Energy Trust will provide a copy of the lighting tool to Respondents after they have submitted their Intent to Respond. Respondent will provide Energy Trust staff with recommendations for tool updates or modifications and ensure that correct versions are used and that all necessary project information is regularly submitted to Energy Trust.

4. Lighting design programs/services for customers considering major lighting remodels.

Energy Trust recognizes that including technical experts and designers at the onset of a large lighting remodel can deliver impactful and longer-lasting savings. Energy Trust is looking to evolve the current Performance Plus offering to provide incentives directly to a certified lighting design team to encourage quality design and energy efficiency early in the C&I lighting project. Proposals should address at a minimum:

- Knowledge of best practices for engaging designers and energy efficiency programs
- Required qualifications for designers
- Process for matching designers to customers
- Description of what PDC would deliver to the customer and Energy Trust with the design audit and energy savings analysis
- How incentives will be paid and if financing will be included

For background on whether a project would be considered New Buildings, which is not part of this proposal, and Existing Buildings and Industrial, Energy Trust has sorting rules for projects that get assigned to new buildings and existing buildings/industrial programs. The following guidelines are used to determine which program works on projects:

- New Buildings and New Multifamily: New construction, major renovation, tenant improvement and additions for commercial, industrial and multifamily structures
- Existing Buildings: Established commercial properties that are not residential or industrial use
- Existing Multifamily: Established multifamily properties, assisted living and campus living properties with two or more dwelling units inclusive of townhomes and condominiums along with any community spaces not undergoing major renovation
- Industry and Agriculture (Production Efficiency): A site where the existing facility or business processes, treats, assembles, mines, produces, repackages, bottles for outside distribution, grows something or has a cold storage distribution center

B. Trade Ally Outreach and Trainings

The Lighting PDC is responsible for building and assisting Energy Trust's lighting trade ally network by:

- Working with Energy Trust to establish and review qualifications
- Managing ongoing quality control of lighting installs
- Fostering relationships with potential and currently-enrolled lighting trade allies through regular contact and relaying feedback to Energy Trust
- Ensuring tools and forms are up-to-date with Energy Trust's requirements at all times
- Providing lighting trade allies with the most current versions of tools and forms
- Regularly conducting meetings and training sessions throughout Energy Trust's service territory to recruit new trade allies and provide training on program requirements and processes
- Periodically visiting trade ally businesses and offering to make joint customer calls when appropriate
- Reviewing incoming trade ally applications, checking trade ally application information and working with Energy Trust's Trade Ally Coordinator to enroll trade allies. The Lighting PDC also provides Energy Trust's Trade Ally Coordinator updated information from existing program trade allies.

C. Core Program Management and Delivery Tasks

Respondents must also be able to show demonstrated ability with the core program management and delivery tasks listed below and in [Appendix G](#):

- Forecasting, reporting and invoicing
- Development and strategy
- Delivering outreach services including technical services for customers
- Performing onsite pre/post install reviews
- Supporting customers
- Developing, supporting and maintaining measure approval documents (MADs)
- Maintaining and developing lighting tools
- Developing and updating forms

- Developing, implementing and monitoring lighting pilots
- Processing incentives with technical review of offers and completion documents
- Coordinating with other Energy Trust departments such as CCS, Marketing, Planning and Evaluation

4. Additional Data

Figure E3. Five-year Lighting kWh Savings and Project Volume Summary—Existing Buildings (2014-2019)

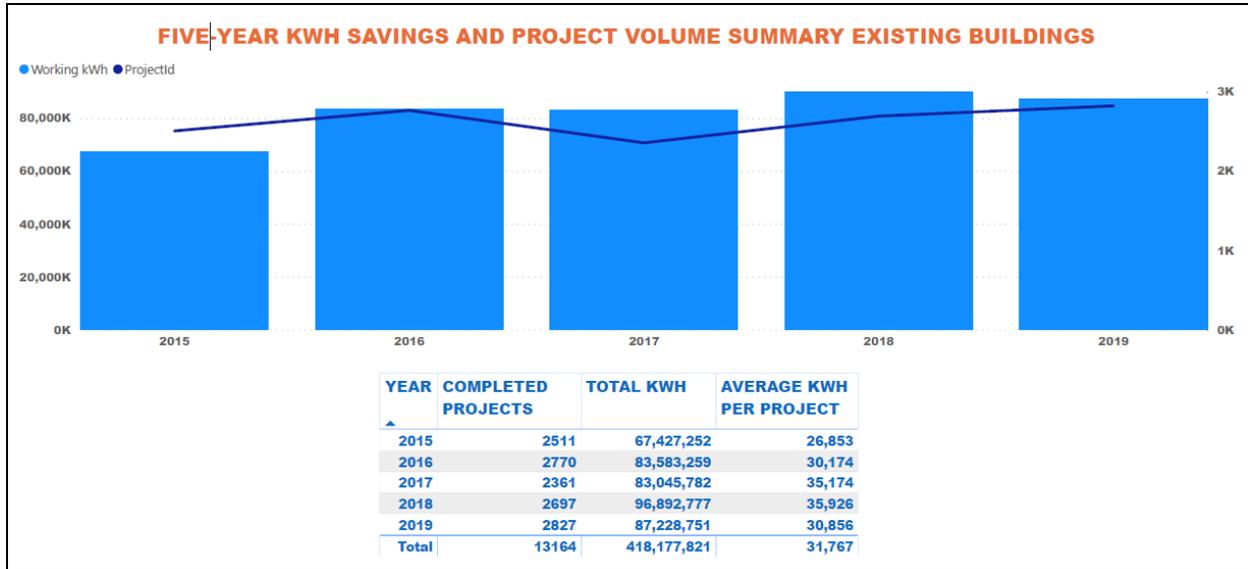


Figure E4. Five-year Lighting kWh Savings and Project Volume Summary—Production Efficiency (2014-2019)

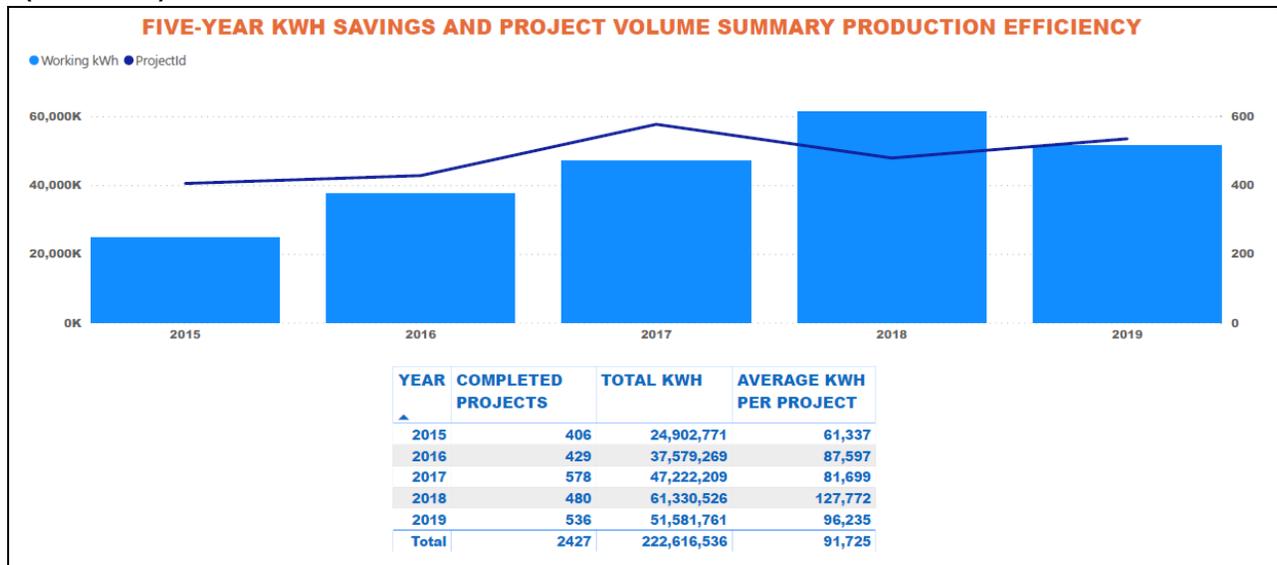


Figure E5. Five-year Lighting kWh Savings and Project Volume Summary—Multifamily (2014-2019)

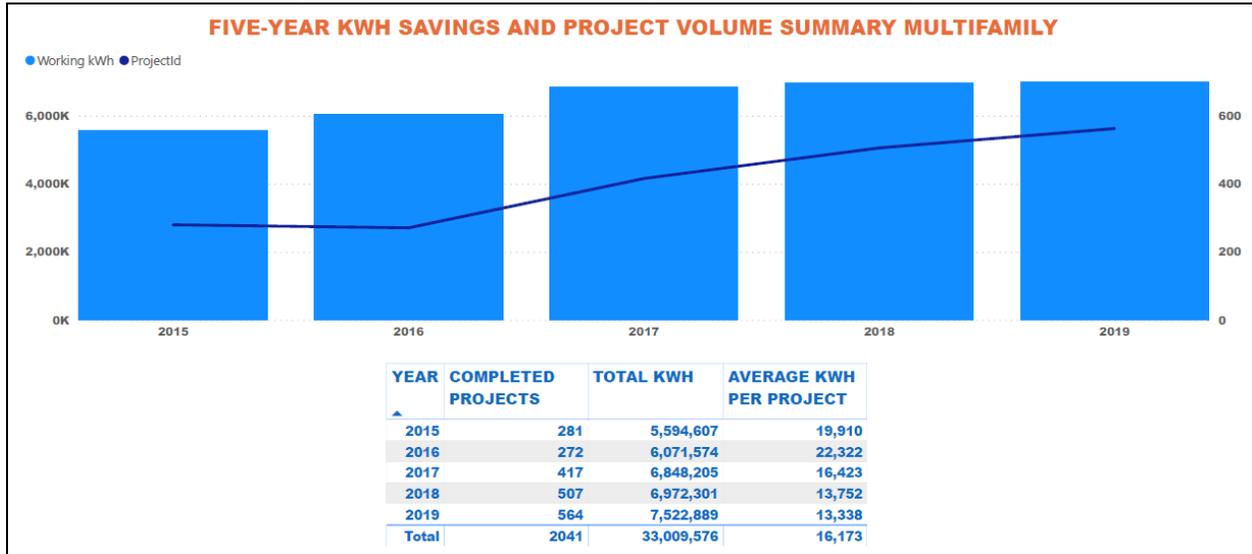


Figure E6. Recent Savings and Future Projections for Existing Buildings Lighting (2014 to 2024). 2014-2018 Actuals, 2019-2024 Projections

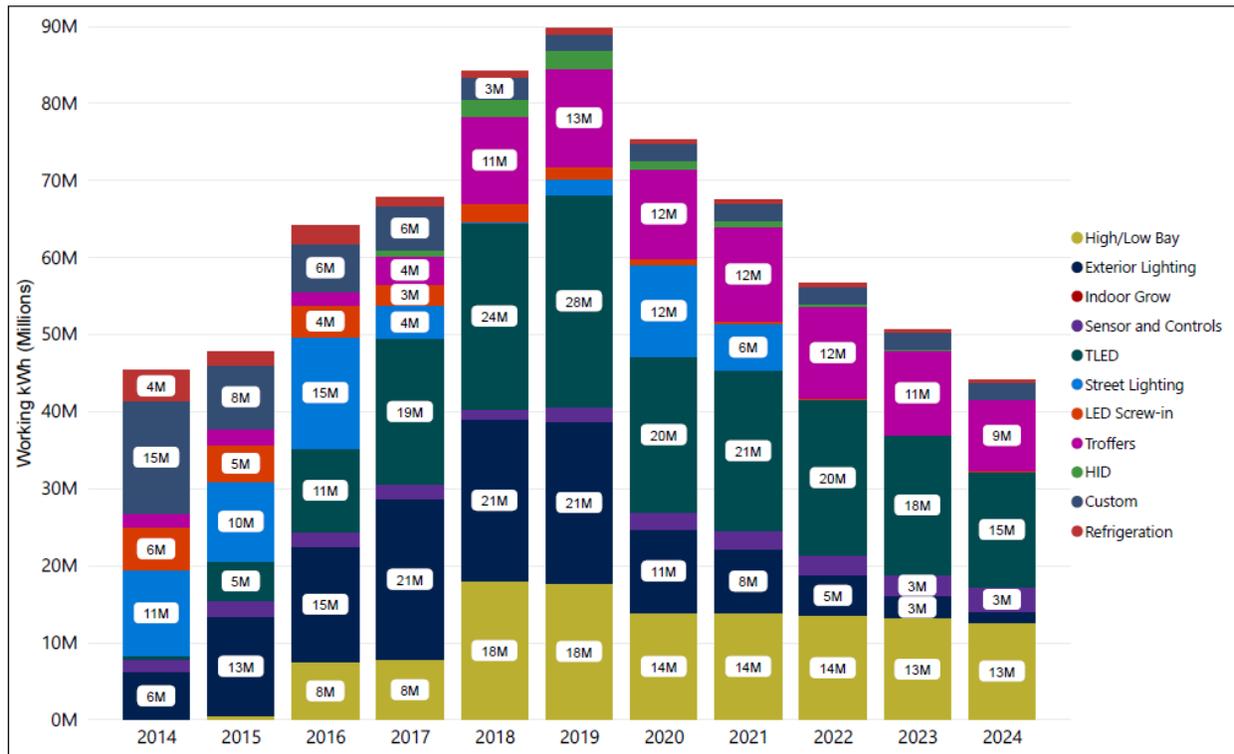
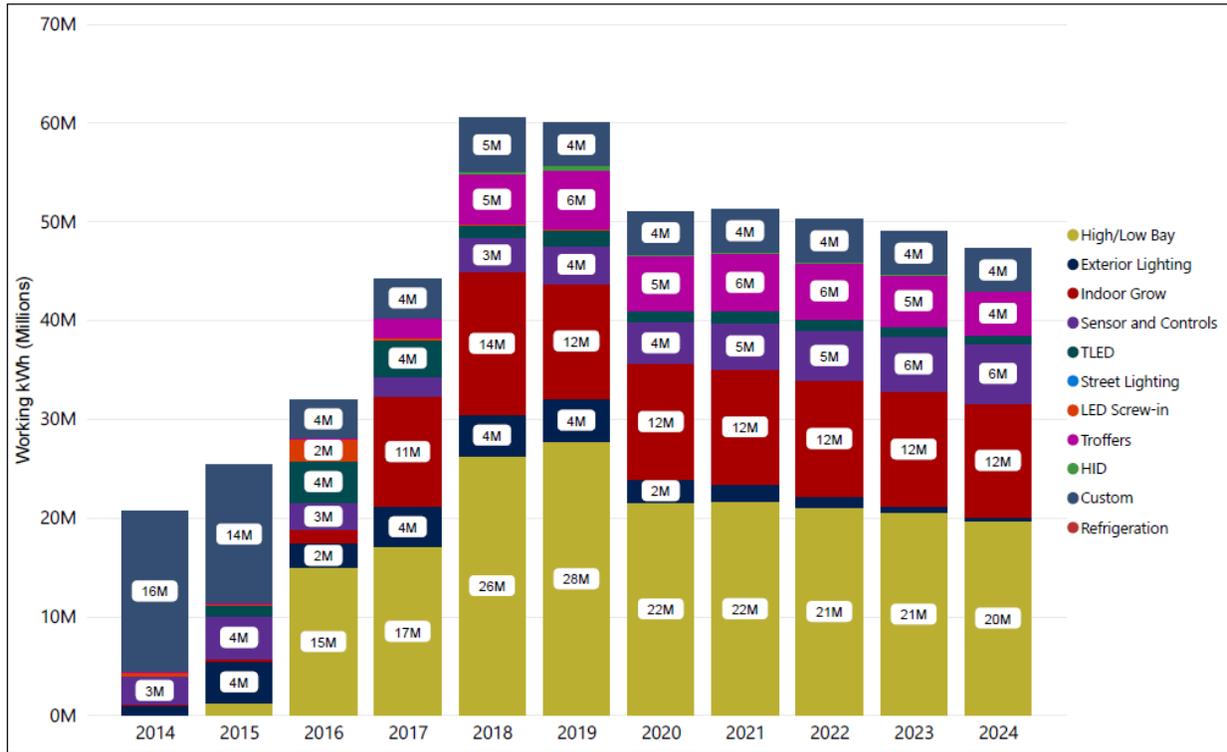


Figure E7. Recent Savings and Future Projections for Industrial Lighting (2014 to 2024). 2014-2018 Actuals, 2019-2024 Projections



**Figure E8. Recent Savings and Future Projections for Multifamily Lighting (2014 to 2024).
2014-2018 Actuals, 2019-2024 Projections**

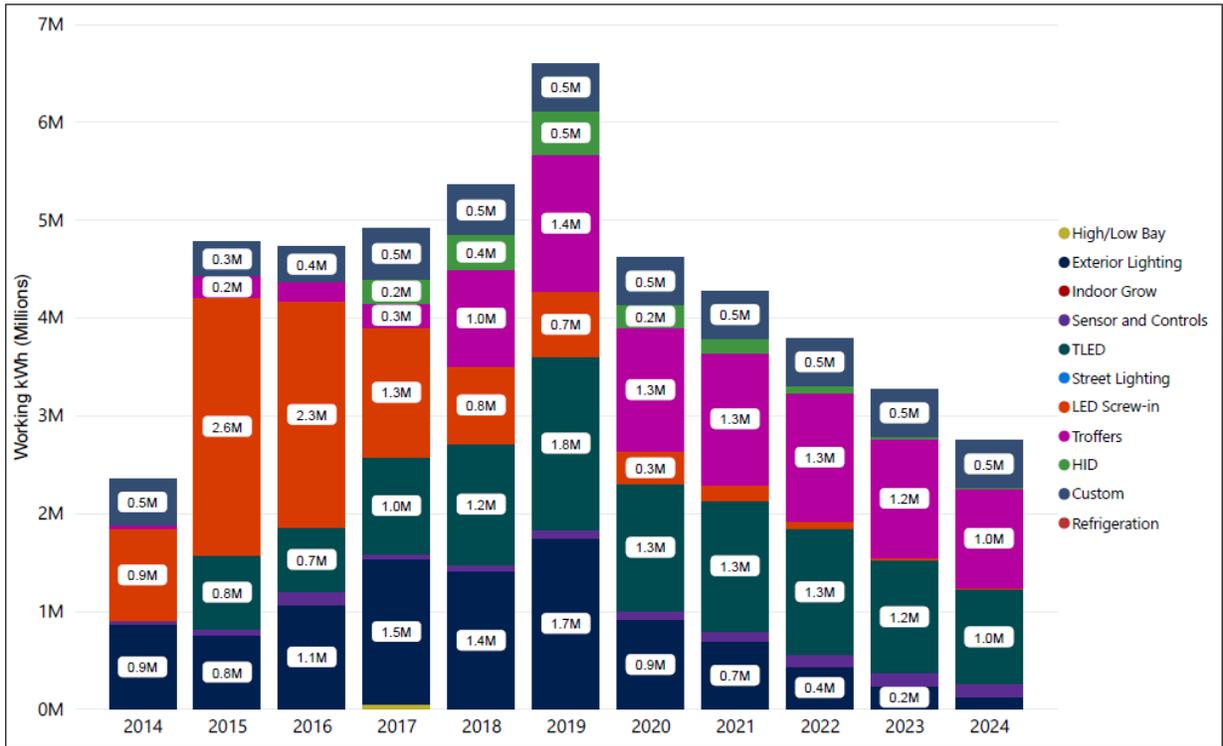


Table E1. 2019 Approximate Number of Site Visits for Lighting Projects

Existing Buildings	Production Efficiency	Multifamily
950	450	200

Table E2. Lighting Delivery Expense Allocations from 2018-2020

Program	2018	2019	2020
Commercial (Existing Buildings and Multifamily)	63.4%	61.8%	61.9%
Production Efficiency	36.6%	38.2%	38.1%