

Guide to Energy Efficiency Incentives for

New Construction



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Program Overview

Program Objectives

The objective of Ameren Missouri's New Construction Incentive Program is to promote the adoption of cost-effective, energy efficient design choices in qualifying construction projects by providing incentives to support design that goes beyond the minimal efficiency required by building codes or other minimal design requirements. These incentives are based on estimates of the reduction in projected annual energy use by the new building.

Customer Eligibility

Eligible participants are commercial and industrial electric customers of Ameren Missouri that are classified under one of the following rates: Small General Service Rate 2(M), Large General Service Rate 3(M), Small Primary Service Rate 4(M), or Large Primary Service Rate 11(M).

- Eligible projects under the New Construction Incentive Program may include any of the following:
 - New building projects wherein no structure or site footprint presently exists
 - Addition or expansion of an existing building or site footprint
 - A gut rehab for a change of purpose of an existing building requiring replacement of all electrical systems/equipment
 - "Warm Shell" projects, where the building envelope, central mechanical system, and core lighting systems are included in the design, but future buildout work or tenant improvements are permitted separately

Incentive Offerings

There are three types of energy efficiency incentives available to New Construction customers:

- Installed Interior Lighting incentives are based upon the installed system's interior lighting power density (LPD) relative to the approved baseline LPD.
- Custom incentives are available for all other energy efficiency measures which are determined to be cost-effective and meet program terms and conditions.
- Whole Building Performance incentive provides an incentive to perform a Whole Building Energy simulation (energy model). Whole Building Performance incentives may be paired with individual Custom Incentive measures.

A New Construction project can utilize all three types of incentives, although some incentive types may not be appropriate for every project.

Guidelines



Program Rules

- New Construction Incentive Program applications will be approved based on fulfillment of eligibility requirements, technical review and approval, passed inspections, and compliance with program terms and conditions.
- Projects measures must demonstrate reliable and cost-effective energy savings potential in the proposed use and site.
- New Construction incentives must be applied for and approved prior to the purchase and installation of equipment.
- The program start date is March 1, 2019.
- All completion paperwork (completed applications, invoices, supporting documentation) must be submitted within 12 months from the date the incentive offer was signed by the customer or by November 30, 2021, whichever occurs earlier.
- Customers must install measures achieving a minimum total incentive of \$150 per application and total incentives across all programs shall be capped at \$3,000,000 per customer per program cycle.
- Incentives shall be capped according to their incentive measure type.
- Incentives are taxable and, if more than \$600, will be reported to the IRS. For tax-exempt organizations, proof of tax exemption must be provided with the final application.
- All New Construction projects are subject to inspection after submittal of the completion paperwork and completed application.



Guidelines (Continued)



The Application Process

- Participants must submit the New Construction Incentive Application to the program office (BizSavers) to initiate the project and provide preliminary project and customer information.
 - Note: The baseline for the project will be established based on local code or the equipment that the participant has committed to purchasing, whichever is higher at the time the initial application is submitted.
 - Please contact the program office as early in the process as possible.
- After receiving the application, the BizSavers Team will review the application and coordinate with the customer to schedule a Design Team Meeting (DTM) to accomplish the following:
 - Review the process for the New Construction Incentive Program.
 - Establish the project baseline for calculating energy impacts and financial incentives.
 - Identify additional energy savings and demand reduction potential.
- The BizSavers Team will provide the customer with a DTM summary and associated documentation that identifies the eligible baseline and incentive options for the project.
- Upon complete installation of all measures on the application, the customer will ensure that the final project application is updated to accurately represent installed equipment.
- The customer will submit the final project application form and all required completion documentation (outlined in the application) to the BizSavers Team at **BizSavers@ameren.com**.
 - Equipment must be installed prior to submitting completion paperwork.
 - All projects are subjected to inspection after submittal of the completion paperwork and completion application.
- All submitted documentation will undergo technical review and will need to receive approval prior to the incentive being delivered.
- Eligible Ameren Missouri customers may elect to receive incentive payments for qualifying measures through one of the following methods: by check to the Ameren Missouri customer associated with the project, as a bill credit toward the Ameren Missouri company account where qualifying measures were installed, or by authorizing a check to be made payable to an approved Ameren Missouri Trade Ally in good standing.



Baseline Determination

Since the state of Missouri does not have a statewide building code, the building design baseline will be established on a case-by-case basis. The baseline will be established by identifying the highest baseline from the following:

- IECC 2009
- Local energy code or building code
- Equipment that the participant has committed to purchase

The BizSavers Team will have the discretion to determine the building design baseline for any situation that does not fall into one of these categories.



Incentive Types

Whole Building Performance

The Whole Building Performance Incentive aims to encourage the use of whole-building computational energy-use simulations (energy models) to optimize the energy efficiency of a building design. This incentive helps offset the additional costs of running an energy model, and also identifies additional kWh savings that are not identified in custom measures or LPD reduction.

- Building electricity consumption, as evaluated by energy modeling simulation, must be at least 10% below the approved baseline to qualify for an incentive. The incentive level increases incrementally with improved performance.
- Incentives range between \$0.02/kWh – \$0.04/kWh based on the level of energy efficiency designed and installed below the established baseline.
- The Whole Building Performance Incentive cap is \$50,000 per site, per program year.

The energy model – also referred to as the Technical Analysis Study – must be submitted with the Whole Building Performance Incentive application. Each TAS must satisfy the following:

- Describe the proposed facility (typically with a sketch or blueprint showing site layout or floor plan).
- Describe the efficient equipment to be added along with key performance specifications.
- Provide estimated electricity use for the efficient condition.
- Provide the energy and demand savings calculations, together with the source of input parameter numbers, and justification for each assumption made.

The following table lists the accepted modeling software and corresponding reports that are required with the incentive application.

| DOE2, eQuest & Visual DOE | EnergyPlus | Carrier HAP | Trane TRACE |
|-------------------------------------|---|---|---|
| Building Energy Performance (BEPS) | Annual Building Utility Performance Summary (ABUPS) | Annual Cost Summary | Energy Cost Budget/PRM Summary |
| Building Utility Performance (BEPU) | System Summary showing unmet load | Unmet load reports for all plants and systems | Energy Consumption Summary Reports |
| Energy Cost Summary (ES-D) | Report that shows energy cost by fuel source | Systems Energy Budget by Energy Source | Performance Rating Method Details |
| System Design Parameters (SV-A) | Equipment Summary & System Summary | System Input Data Reports | Equipment Energy Consumption |
| Summary of Exterior Surfaces (LV-D) | Envelope Summary | Wall Constructions | Entered Values Report (all rooms and systems) |

Baseline models must follow the protocol outlined in IECC 2009, or any higher applicable standard, for the approved baseline. Should the state of Missouri adopt a statewide energy code or building standard, Ameren Missouri may adjust the approved baseline requirements for the New Construction Incentive Program accordingly.

The Whole Building Performance Incentive is offered at a tiered rate based on performance. See table to the right for Whole Building Performance incentives.

| From Baseline | Whole Building (Design) |
|------------------------------|-------------------------|
| 0-19% energy savings | \$0.02/kWh |
| 20-29% energy savings | \$0.03/kWh |
| 30% energy savings and above | \$0.04/kWh |

Lighting Power Density (Installed Interior Lighting)

Incentives are available for lighting systems where the installed interior lighting power density (watt per square foot) is lower than the approved baseline lighting power density (LPD) by at least 10%.

The applicable baseline LPD will be established during the DTM and is based on the applicable standards referenced in the Energy Efficiency Standards tables.

- The “Whole Building” or “Space-by-Space” method may be used to calculate the LPD.
- LPD incentives will be calculated at \$0.40 per watt below the baseline wattage, with baseline wattage calculated by multiplying baseline LPD (identified in the DTM) by the square footage associated with the lighted space.
- Incentives will be capped at 50% of total costs.



Energy Efficiency Standards

| Building Area Type | ASHRAE Standard 90.1-2016 | ASHRAE Standard 90.1-2013 | ASHRAE Standard 90.1-2010 | ASHRAE Standard 90.1-2004/2007 |
|-----------------------------|---------------------------|---------------------------|---------------------------|--------------------------------|
| Automotive Facility | 0.71 | 0.80 | 0.82 | 0.9 |
| Convention Center | 0.76 | 1.01 | 1.08 | 1.2 |
| Courthouse | 0.90 | 1.01 | 1.05 | 1.2 |
| Dining: Bar | 0.90 | 1.01 | 0.99 | 1.3 |
| Dining: Cafeteria/Fast Food | 0.79 | 0.90 | 0.90 | 1.4 |
| Dining: Family | 0.78 | 0.95 | 0.89 | 1.6 |
| Dormitory | 0.61 | 0.57 | 0.61 | 1.0 |
| Exercise Center | 0.65 | 0.84 | 0.88 | 1.0 |
| Fire Station | 0.53 | 0.67 | 0.71 | |
| Gymnasium | 0.68 | 0.94 | 1.00 | 1.1 |
| Healthcare/clinic | 0.82 | 0.90 | 0.87 | 1.0 |
| Hospital | 1.05 | 1.05 | 1.21 | 1.2 |
| Hotel | 0.75 | 0.87 | 1.0 | 1.0 |
| Library | 0.78 | 1.19 | 1.18 | 1.3 |
| Manufacturing Facility | 0.90 | 1.17 | 1.11 | 1.3 |
| Motel | 0.75 | 0.87 | 0.88 | 1.0 |
| Motion Picture Theater | 0.83 | 0.76 | 0.83 | 1.2 |
| Multi-Family | 0.68 | 0.51 | 0.60 | 0.7 |
| Museum | 1.06 | 1.02 | 1.06 | 1.1 |
| Office | 0.79 | 0.82 | 0.90 | 1.0 |
| Parking Garage | 0.15 | 0.21 | 0.25 | 0.3 |
| Penitentiary | 0.75 | 0.81 | 0.97 | 1.0 |
| Performing Arts Theater | 1.18 | 1.39 | 1.39 | 1.6 |
| Police | 0.80 | 0.87 | 0.96 | 1.0 |
| Post Office | 0.67 | 0.87 | 0.87 | 1.1 |
| Religious Building | 0.94 | 1.00 | 1.05 | 1.3 |
| Retail | 1.06 | 1.26 | 1.40 | 1.5 |
| School/University | 0.81 | 0.87 | 0.99 | 1.2 |
| Sports Arena | 0.87 | 0.91 | 0.78 | 1.1 |
| Town Hall | 0.80 | 0.89 | 0.92 | 1.1 |
| Transportation | 0.61 | 0.70 | 0.77 | 1.0 |
| Warehouse | 0.48 | 0.66 | 0.66 | 0.8 |
| Workshop | 0.90 | 1.19 | 1.2 | 1.4 |

| Building Area Type | IECC 2018 (Watts/Sq. Ft.) | IECC 2015 (Watts/Sq. Ft.) | IECC 2012 (Watts/Sq. Ft.) | IECC 2009 (Watts/Sq. Ft.) |
|-----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| Automotive Facility | 0.71 | 0.8 | 0.9 | 0.9 |
| Convention Center | 0.76 | 1.01 | 1.2 | 1.2 |
| Courthouse | 0.9 | 1.01 | 1.2 | 1.2 |
| Dining: Bar | 0.9 | 1.01 | 1.3 | 1.3 |
| Dining: Cafeteria/Fast Food | 0.79 | 0.9 | 1.4 | 1.4 |
| Dining: Family | 0.78 | 0.95 | 1.6 | 1.6 |
| Dormitory | 0.61 | 0.57 | 1 | 1 |
| Exercise Center | 0.65 | 0.84 | 1 | 1 |
| Fire Station | 0.53 | 0.67 | 0.8 | 1 |
| Gymnasium | 0.68 | 0.94 | 1.1 | 1.1 |
| Healthcare/clinic | 0.82 | 0.9 | 1 | 1 |
| Hospital | 1.05 | 1.05 | 1.2 | 1.2 |
| Hotel | 0.75 | 0.87 | 1 | 1 |
| Library | 0.78 | 1.19 | 1.3 | 1.3 |
| Manufacturing Facility | 0.9 | 1.17 | 1.3 | 1.3 |
| Motel | 0.75 | 0.87 | 1 | 1 |
| Motion Picture Theater | 0.83 | 0.76 | 1.2 | 1.2 |
| Multi-Family | 0.68 | 0.51 | 0.7 | 0.7 |
| Museum | 1.06 | 1.02 | 1.1 | 1.1 |
| Office | 0.79 | 0.82 | 0.9 | 1 |
| Parking Garage | 0.15 | 0.21 | 0.3 | 0.3 |
| Penitentiary | 0.75 | 0.81 | 1 | 1 |
| Performing Arts Theater | 1.18 | 1.39 | 1.6 | 1.6 |
| Police | 0.8 | 0.87 | 1.0 | 1 |
| Post Office | 0.67 | 0.87 | 1.1 | 1.1 |
| Religious Building | 0.94 | 1 | 1.3 | 1.3 |
| Retail | 1.06 | 1.26 | 1.4 | 1.5 |
| School/University | 0.81 | 0.87 | 1.2 | 1.2 |
| Sports Arena | 0.87 | 0.91 | 1.1 | 1.1 |
| Town Hall | 0.8 | 0.89 | 1.1 | 1.1 |
| Transportation | 0.61 | 0.7 | 1 | 1 |
| Warehouse | 0.48 | 0.66 | 0.6 | 0.8 |
| Workshop | 0.9 | 1.19 | 1.4 | 1.4 |

Custom Incentives

Custom Incentives cover all categories of energy efficiency improvement that are not eligible for installed interior lighting incentives.

- Custom Incentives require pre-approval, so equipment may not be purchased or installed prior to the customer receiving approval from the program.
- All proposed applications will be approved based on fulfillment of eligibility requirements, technical review and verification, and compliance with program terms and conditions. This includes:
 - The installed equipment must achieve a level of energy savings (kWh).
 - The installed equipment must pass the benefit-cost test contained within the application.
 - The simple payback of installed measures must be greater than 12 months.
- Project measures must demonstrate reliable and cost-effective energy savings potential for the proposed use and site as demonstrated by engineering calculations or whole building energy simulation.

Custom Incentives (Continued)

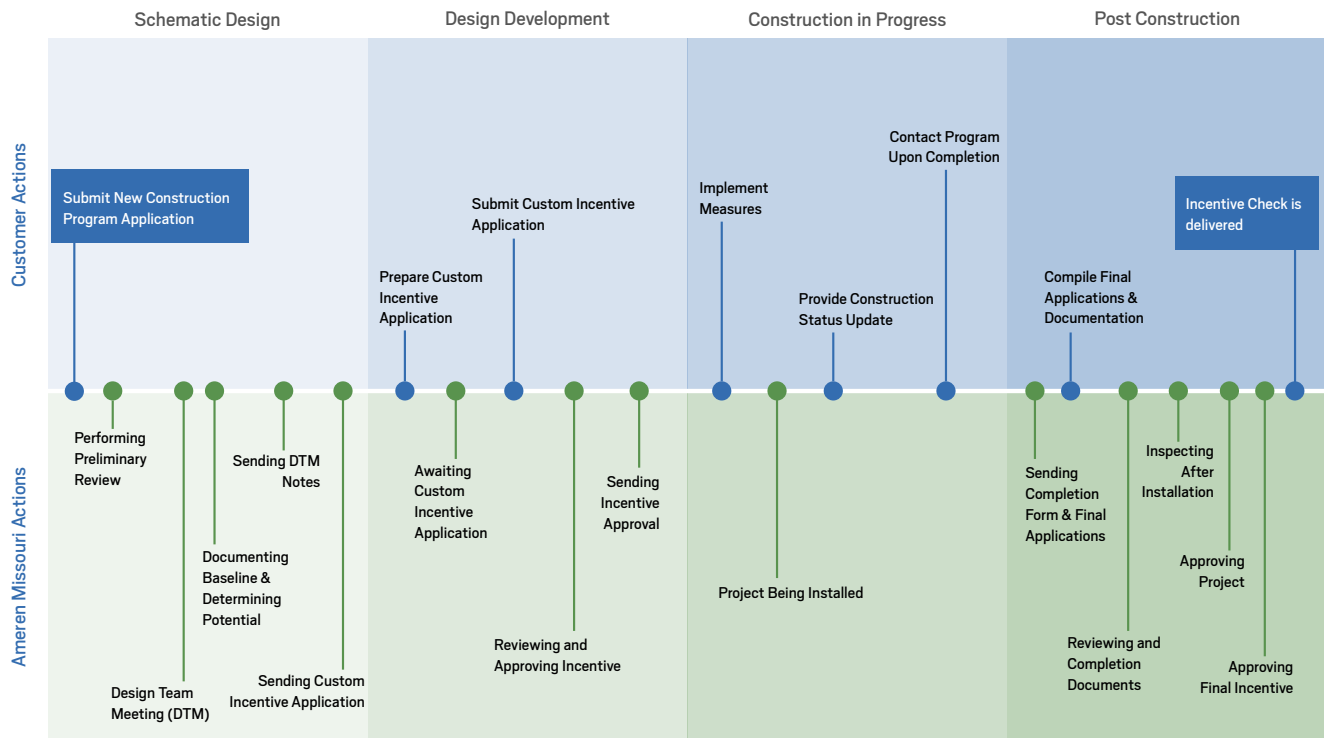
- All Custom Incentive applications will undergo technical review by the BizSavers Team in order to:
 - Validate the proposed energy savings and demand reduction potential and correct any errors identified.
 - Verify project, measure and installation cost estimates.
 - Determine the incentive amount.
- Following review, the BizSavers Team will send an approval based on the reviewed application to the project contacts.
- After receiving approval, the customer may begin purchasing and installing the project equipment.
- Any change in project scope from what was approved will require recalculation of incentive amounts. The incentive may increase or decrease based on measure eligibility and incentive budget availability.

Custom Incentives are approved at a rate based on technology end use. See table for Custom Incentive rates. Each measure is capped at the total incremental cost of the installed measure.

Custom Incentive Rates

| End Use (Savings Type) | Incentive Rate (per kWh saved) |
|------------------------|--------------------------------|
| Cooling | 18¢ |
| Building Shell | 12¢ |
| HVAC | 12¢ |
| Cooking | 9¢ |
| Water Heating | 9¢ |
| Interior Lighting | 8¢ |
| Compressed Air | 8¢ |
| Miscellaneous | 7¢ |
| Motors | 7¢ |
| Process | 7¢ |
| Refrigeration | 6¢ |

Application Process



For more information about Ameren Missouri's BizSavers Energy Efficiency Program Incentives, please contact:

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