



LibertyTM

The Empire District Electric Company

MEEIA Cycle 1 Plan

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INTRODUCTION

The Empire District Electric Company d/b/a Liberty (“Liberty” or the “Company”) is part of the Liberty family. Liberty serves more than 170,000 electricity customers in Missouri, Oklahoma, Kansas, and Arkansas. This plan focuses on customers in the state of Missouri. Liberty has been offering demand-side management (DSM) programs to its customers for more than ten years.

This plan outlines of Liberty’s request to establish a DSM portfolio that is consistent with the Missouri Energy Efficiency Investment Act (MEEIA) and rules of the Missouri Public Service Commission (“MPSC”). MEEIA and the MPSC rules were established to support the state policy to value demand-side investments equal to traditional investments in supply and delivery infrastructure. It also allows recovery of all reasonable and prudent costs for delivery of cost-effective demand-side programs and provides guiding principles for filing new programs and reporting.

Liberty has developed a Cycle 1 MEEIA portfolio (“Cycle 1”) that will begin January 1, 2022 and end on December 31, 2022. Cycle 1 incorporates the existing Liberty DSM programs with the results of the 2019 Integrated Resource Planning (“IRP”) analysis to offer an expanded platform of DSM programs. The proposed DSM portfolio includes a suite of programs that offer all customers a variety of opportunities to participate in DSM.

The proposed program design delivers an effective and balanced portfolio of energy and peak demand savings opportunities across all customer segments. Each program was designed to leverage a mix of best-practice measures and technologies, delivery strategies, and target markets in order to most effectively deliver programs and measures to all Liberty customers.

The programs described in Table ESI build upon existing Liberty programs and expands the current portfolio with new offerings.

Table ESI Proposed DSM Program Descriptions, 2021-2022

Program	Description
Residential Efficient Products	<ul style="list-style-type: none"> • Customers can purchase qualifying measures at participating retailers either online or in-store and receive instant incentives at the point-of-purchase. • Customers are eligible to receive a free online energy audit.
Low Income Multifamily	<ul style="list-style-type: none"> • Free energy audits and installation of low-cost measures for multifamily customers. • Customers are eligible for prescriptive and custom rebates for qualifying measures.
Residential HVAC Rebates	<ul style="list-style-type: none"> • Customers receive rebates for the purchase and installation of qualifying energy efficient HVAC systems installed through a Trade Ally Network.
Residential Whole Home Energy: PAYS	<ul style="list-style-type: none"> • Customers receive free in-home evaluations and customized recommendations for energy efficient measure upgrades. • Customers may choose to install any recommended upgrade, receive rebates for qualifying measures and Liberty will cover the upfront full installation cost of these upgrades.
Small Business Direct Install	<ul style="list-style-type: none"> • Customers receive an energy evaluation identifying potential energy savings. • Customers are eligible to receive an incentive, direct installation of measures and a customized recommendation for energy efficient equipment upgrades.
C&I Program	<ul style="list-style-type: none"> • Customers receive prescriptive and custom rebates for purchasing energy efficient equipment for commercial and industrial facilities.



Key Aspects of the Plan

Throughout the MEEIA planning process, Liberty made several decisions concerning key aspects of the plan, in consultation with stakeholders. Table ES-2 below provides a summary of these decisions:

Table ES2 Key Aspects of the 2021-2022 MEEIA Plan

Key Aspect	Decision
Stakeholder Engagement	<ul style="list-style-type: none"> Liberty worked closely with stakeholders throughout the planning process to review portfolio topics such as program offerings, implementation contractors, avoided costs, the DSIM and other MEEIA characteristics.
Plan Duration	<ul style="list-style-type: none"> The proposed MEEIA portfolio is for a 12-month period starting on January 1, 2022 and lasting through December 31, 2022.
TRM	<ul style="list-style-type: none"> The plan primarily uses the Arkansas Technical Reference Manual (TRM) Version 8.1 to estimate the savings for the measures included in the DSM portfolio. The plan uses the Illinois TRM Version 9 and the Michigan TRM (for weatherization measures) to supplement the savings calculations in cases where the Arkansas TRM does not provide sufficient information.
Cost Effectiveness Tests	<ul style="list-style-type: none"> The MEEIA plan evaluates cost-effectiveness on a measure-level and program-level basis through four cost-effectiveness tests: Total Resource Cost test (TRC), Utility Cost Test (UCT), Participant Cost Test (PCT), and Ratepayer Impact test (RIM).
Net-to-Gross	<ul style="list-style-type: none"> The plan uses a net-to-gross factor of 82.5% across all the entire portfolio.
Avoided Costs	<ul style="list-style-type: none"> The avoided costs assumptions are sourced from the 2019 IRP. Detail on the assumptions are included in Section 1.

Non-Energy Benefits (NEBs)	<ul style="list-style-type: none"> • The analysis includes quantifiable natural gas and water savings for dual fuel participants and water savings measures - developed from associated algorithms
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Plan Organization

This plan details the 2021-2022 MEEIA DSM portfolio design. The plan layout is as follows:

- Portfolio Development
- Portfolio Summary
- Sector Programs
- Evaluation, Measurement, and Verification
- Demand-Side Investment Mechanism

Abbreviations and Acronyms

Throughout the plan we use several abbreviations and acronyms. The table below shows the abbreviation or acronym, along with an explanation.

Explanation of Abbreviations and Acronyms

Acronym	Explanation
EM&V	Evaluation, Measurement and Verification
C&I	Commercial and Industrial
DSIM	Demand-Side Investment Mechanism
DSM	Demand-Side Management
EE	Energy Efficiency
HVAC	Heating Ventilation & Air Conditioning
IOU	Investor-owned Utilities
IRP	Integrated Resource Plan
MEEIA	Missouri Energy Efficiency Act
MF	Multifamily
PAYS	Pay As You Save
PCT	Participant Cost Test



RIM	Rate Payer Impact Measure Test
SBDI	Small Business Direct Install
SF	Single Family
TRC	Total Resource Cost Test
TRM	Technical Reference Manual
UCT	Utility Cost Test



SECTION 1: PORTFOLIO DEVELOPMENT

Overview of Approach

Applied Energy Group, Inc. (“AEG”) was retained by Liberty to assist in the design of the Cycle 1 MEEIA portfolio. To develop the portfolio, Liberty and AEG worked closely using a bottom-up approach to build programs into a comprehensive portfolio that offers opportunities to all Liberty customers. Historical performance was compared with the 2019 Integrated Resource Plan (IRP), and findings from the measure-level energy efficiency (EE) potential analysis as guidance in the development.

Liberty used a multi-criteria program development approach in formulating the Cycle 1 MEEIA portfolio. In consultation with Liberty, AEG developed a comprehensive “global” measure list that is applicable to Liberty’s service territory. To develop the measure list – AEG began with the measures screened in the 2018 Potential Study, 2019 IRP filing¹, as well as measures offered by similar utilities by geography and/or size. AEG reevaluated these measures and the associated technical assumptions; cost-effectiveness; sector; end use; and delivery mechanism.

Liberty and AEG worked together to define portfolio goals and identify current portfolio gaps. This exercise was then used to refine the measure list and bundle measures together into programs based on sector, end-use, and the desired delivery mechanism of each program. Program modifications to current programs and the introduction of new programs were considered in order to provide all Liberty customers and market segments with access to cost-effective energy efficiency programs.

Cost Effectiveness

The Total Resource Cost Test (TRC) is the primary method of assessing the cost-effectiveness of energy efficient measures and programs for the Cycle 1 MEEIA filing.

¹ EO-2019-0049



MEEIA rules prescribe that “the commission shall consider the total resource cost test a preferred cost-effectiveness test.”^{2 3}

TRC measures the net costs and benefits of an energy efficiency program as a resource option based on the total costs of the program, including both the participant’s and the utility’s costs. This test represents the combination of the effects of a program on both participating and non-participating customers. Additionally, captured within the net benefits are quantifiable benefits from any reduction in natural gas and water use from dual fuel and water-saving measures.

In total, four benefit-cost tests were used to analyze program design cost-effectiveness from different perspectives:

- *Total Resource Cost Test* measures the net costs and benefits of an energy efficiency program as a resource option based on the total costs of the program, including both the participant’s and the utility’s costs
- *Participant Cost Test* quantifies the benefits and costs to the customer due to program participation.
- *Ratepayer Impact Measure Cost Test* measures what happens to a customer’s rates due to changes in utility revenues and operating costs.
- *Utility Cost Test* measures the net costs of a program as a resource option based on the costs incurred by the program administrator, excluding any net costs incurred by the participant.

The results of the four cost effectiveness tests are presented in Section 2 – Portfolio Overview and Appendix A – Program Descriptions.

The benefit-cost screening model used for the analysis, BenCost, is a proprietary AEG cost-effectiveness model that is utilized in multiple states throughout the country and is consistent with industry best practices. BenCost is a fully customizable cost-effectiveness modeling platform that enabled Liberty to evaluate the costs, benefits,

² 20 CSR 4240-20.094(I)

³ 20 CSR 4240-20.094(J) Exception to this that “programs targeted to low-income customers or general education campaigns do not need to meet a cost-effectiveness test...”



and risks of DSM programs and services using utility-specific measures and programs. The input data required for the model includes:

Table 2-2 Cost-Effectiveness Model Inputs

General Inputs	Specific-Project Inputs
Retail Rate (\$/kWh)	Utility Project Costs (Administrative & Incentives)
Commodity Cost (\$/kWh)	Direct Participant Project Costs (\$/Participant)
Demand Cost (\$/kW-Year)	Measure Life (Years)
Discount Rate (%)	kWh/Participant Saved (Net and Gross)
Inflation Rate (%)	kW/Participant Saved (Net and Gross)
Line Losses (%)	Number of Participants

Avoided Costs Assumptions

The avoided costs utilized in the Cycle 1 MEEIA analysis are sourced from Liberty’s 2019 IRP⁴. The avoided energy costs were developed using market prices from the Southwest Power Pool (SPP) and part of the SPP integrated marketplace (SPP IM). Liberty worked with ABB to create a forward view of the SPP-KSMO regional electricity market using its Fall 2018 Reference Case data set. The Cycle 1 MEEIA analysis draws on the Reference Case, which was produced using a combination of public data and proprietary forecasts to develop input assumptions for the key supply and demand drivers of power market outcomes.

The avoided capacity costs utilized in the Cycle 1 MEEIA analysis are sourced a sensitivity analysis conducted after the original 2019 IRP filing. As a commitment with stakeholders, Liberty agreed to run the analysis with a revised set of avoided capacity costs using zero avoided capacity costs until such time that Liberty needs capacity to meet SPP resource adequacy requirements, at which time the avoided capacity costs will be assumed to be equal to the ABB projected capacity cost for SPP KSMO for years in which Liberty can defer supply-side resources. These avoided capacity costs are being used as a constraint in determining the cost effectiveness of this proposed Cycle 1 MEEIA portfolio only and do not represent or replace official avoided capacity costs presented in the Company’s most recent or future IRPs.

⁴ EO-2019-0049

Budget Development

To develop the budget, Liberty identified an overall budget target that would use past program spending as the foundation for building individual programs and budgets and expand budgets to achieve portfolio goals. Program-level participation and budgets were calculated utilizing a bottom-up approach, where individual measure participation was determined, and budgets were an eventual derivative of program participation. Participation was adjusted taking into consideration cost-effectiveness, results of the Potential Study, IRP, and historic program performance.

Incentives were developed using multi-variable criteria including the measure's incremental cost, the program delivery mechanism, target market, and incentives made available by other electric utilities. Generally, for prescriptive rebate programs, incentives are calculated at approximately 30–50% of the measure's incremental cost. For audit and direct install components, there are no incentives because customers receive qualifying energy efficiency measures at no cost. These are services provided by the utility and counted as incentive costs. For business programs, incentives are calculated either on a percent of project expenses or dollar per kWh saved. This aligns with industry best practices.

Non-incentive expenses were also developed for the following categories:

Program Level

- **Program Administration** includes direct program costs to implement and deliver program incentives and services. More specifically, this represents costs incurred (primarily from third-party implementers) to coordinate with customers, set up appointments, process paperwork, process incentives, manage trade ally network, and any costs related to the develop and maintain online portals.
- **Program Marketing/Education/Training** includes direct program marketing expenses related to program specific campaigns, marketing materials, contractor training and workshops, and customer education campaigns.

Portfolio Level

- **Portfolio Administration** includes general expenses, internal utility labor, external planning consultant support, and costs to support/maintain the data tracking system.
- **Portfolio Marketing/Education/Training** category includes general portfolio marketing, education of internal staff, trade allies and external implementation partners, and internal/external training. These expenses apply to the portfolio as a whole, and not to any specific program or measure.
- **Portfolio Evaluation** expenses estimate that approximately four and a half percent of the portfolio will be spent on evaluation activities, such as process and impact evaluations.

Savings Targets

Technical assumptions were developed for each measure, including measure life, energy savings, peak demand savings, net-to-gross ratios, and measure incremental costs. Energy and peak demand savings were calculated using engineering algorithms and deemed savings from technical reference manuals, program evaluations, and assumptions from other electric utilities.

The Arkansas TRM (version 8.1) was used as the primary source to characterize measure savings and measure lifetime. The Illinois TRM (version 9) was used to supplement.

Targets for participation and savings were triangulated based on DSM Market Potential Study Realistic Achievable Potential (RAP) IRP Preferred Resource Plan, ten years of DSM program history and a diverse network of Liberty Utility programs.

Stakeholder Process and Introductory MEEIA Agreement

Liberty worked extensively with stakeholders throughout the planning process to review portfolio topics such as program offerings, implementation contractors, avoided costs, DSIM and other MEEIA characteristics. The stakeholder engagement process kicked off in August 2020, in which Liberty introduced program design methodology and key considerations around avoided costs, TRMs, energy goals and program offerings.



Next, Liberty engaged with stakeholders from October and November 2020 through a series of focused program workshops. Liberty and stakeholders continued to meet on various topics throughout the beginning of 2021 to refine the portfolio.

During this stakeholder engagement process, stakeholders proposed an alternative filing structure for Liberty in which Liberty would file for an “Introductory MEEIA Plan”, referenced throughout at Cycle 1 MEEIA, which would last for a 12-month period rather than the 3-year period of a typical, full MEEIA Plan. The intention of this recommendation was to allow Liberty sufficient time to build programs, align timing of a full MEEIA filing with the triennial IRP filing, align with MEEIA filing schedules of the other Missouri utilities, and to streamline the regulatory process.

Throughout the entire stakeholder engagement, Liberty received invaluable feedback that was utilized to refine and improve the portfolio and gain consensus on portfolio offerings, proposed delivery infrastructure, EM&V and the demand-side investment mechanism.



SECTION 2: PORTFOLIO OVERVIEW

Portfolio Summary

Liberty's proposed program portfolio begins on January 1, 2022 and extends through December 31, 2022. The 12 month portfolio is comprised of five residential programs and two business programs. Each program targets multiple end uses and offers residential, commercial and industrial customers an opportunity to achieve significant energy savings through participation.

Highlights of Liberty's portfolio include the following:

- Is cost-effective at the program and portfolio level in the 12 month period.
- Expands and/or coordinates with existing Liberty energy efficiency programs.
- Capitalizes on Liberty Utilities' implementer network and current services.
- Provides a broad range of energy efficiency opportunities to all Liberty customers.

The proposed program design delivers an effective and balanced portfolio of energy and peak demand savings opportunities across all customer segments. Each program was designed to leverage the mix of best-practice measures and technologies, delivery strategies, and target markets in order to most effectively deliver programs and measures to all Liberty customers.

Liberty's program portfolio uses a combination of education and customer incentives to advance energy efficiency in Missouri. Customer incentives are the primary focus within program delivery. Customers receive rebates to purchase energy efficient equipment and services through existing market actors, including equipment dealers and retailers. Additionally, in this Cycle 1 MEEIA, Liberty is expanding beyond traditional rebates to offer a personalized customer experience through an online audit and provision of do-it-yourself (DIY) kits to participating customers.

Historical Energy Efficiency Offerings

Liberty began offering DSM programs to its customers in 2007. Since that time, Liberty has offered a suite of residential, commercial, and industrial programs serving a variety of end-uses. Liberty's annual portfolio features have had an approximate



budget of \$1.5 million. Liberty is proud of its history of DSM programs, which have helped thousands of customers and saved millions of kilowatt-hours over the last thirteen years. Liberty is confident that its well-established history of successful DSM implementation will serve as the foundation for expansion and increased diversity through its Cycle 1 MEEIA program, and beyond to future MEEIA portfolios.



Plan Portfolio Structure

The Cycle 1 MEEIA portfolio combines Liberty’s existing DSM programs with new offerings to propose an expanded DSM portfolio. The table below presents the proposed suite of programs for the Cycle 1 MEEIA portfolio.

Table 2-1 Proposed DSM Portfolio Programs

Sector	Program
Residential	Efficient Products
Residential	Low Income Multifamily
Residential	HVAC Rebate
Residential	Whole Home Energy
Business	Small Business Direct Install
Business	C&I Program

Cumulative Portfolio Energy and Demand Savings

The table below presents the targeted cumulative net energy and demand savings for the total 12-month period of the Plan. The business portfolio represents a significant portion of the total portfolio energy and demand savings.

Table 2-3 Proposed Cycle 1 MEEIA Portfolio Savings (12-month Total)

Program	Net MWh Savings	Net kW Savings
Residential	3,239	779
Business	13,963	1,574
Total	17,202	2,353

Total Portfolio Budgets

The tables below present the targeted budgets for the total 12-month period of the portfolio broken out by the portfolio cost category and by program. Based on the information from the two tables below, a significant portion of the proposed portfolio budget is allocated to program incentives.



Table 2-4 Proposed Cycle 1 MEEIA Portfolio Costs (12-month Total)

Portfolio Cost	Total Budget
Incentives	\$2,819,300
Marketing	\$216,984
Administration	\$725,424
EM&V	\$185,606
R&D	\$45,000
Total	\$3,992,313



Table 2-5 Proposed Cycle 1 MEEIA Portfolio Cost Detail (12-month Total)

Sector	Program	Incentive	Administration	Marketing	Total Budget
Residential	Efficient Products	\$125,562	\$219,442	\$13,197	\$358,201
Residential	Low Income Multifamily	\$75,642	\$25,000	\$3,000	\$203,642
Residential	HVAC Rebate	\$352,525	\$59,577	\$2,979	\$415,081
Residential	Whole Home Energy	\$441,556	\$62,123	\$6,212	\$509,891
Business	SBDI	\$410,558	\$15,000	\$49,267	\$474,824
Business	C&I Program	\$1,413,457	\$121,555	\$30,965	\$1,465,977
Total Residential		\$995,286	\$366,141	\$25,388	\$1,486,815
Total Business		\$1,824,014	\$136,555	\$80,232	\$1,940,801
	Portfolio Administration		\$222,727		\$222,727
	Portfolio Marketing			\$111,364	\$111,364
	Portfolio EM&V				\$185,606
	Portfolio R&D				\$45,000
Total Portfolio		\$2,819,300	\$725,424	\$216,984	\$3,992,313

Portfolio Cost Effectiveness

The table below provides the ratios for four cost-effectiveness tests: the TRC, UCT, RIM, and PCT. The ratios represent the cost effectiveness of the total portfolio for the total 12-month period of the proposed plan.

Table 2-6 Proposed Cycle 1 MEEIA Portfolio Cost Effectiveness (12-month Total)

Test	Total Cost Effectiveness
TRC	1.15
UCT	1.62
RIM	0.18
PCT	4.92

SECTION 3: SECTOR PROGRAMS

This section provides an overview of the programs offered within each sector: residential and business. Each overview provides information on the pathways, eligibility requirements, cumulative energy and demand savings, costs, and cost effectiveness for each program. Additional details on each program are provided in Appendix A, Program Descriptions.

Residential Sector Programs

The Plan proposes five residential programs for the overall portfolio. The residential suite of programs is designed to serve residential customers, educate, and raise residential customer awareness about the benefits of energy efficiency products, and encourage investment in energy efficient measures such as lighting and whole house efficiency. Table 3-1 below provides a short description of each residential program. Appendix A of this report provides more detailed descriptions of each program.

Table 3-1 Proposed Residential Cycle 1 MEEIA Programs

Program	Description
Residential Efficient Products	<ul style="list-style-type: none"> • Customers can purchase qualifying measures at participating retailers either online or in-store and receive instant incentives at the point-of-purchase. • Customers are eligible to receive a free online energy audit.
Residential Low Income Multifamily	<ul style="list-style-type: none"> • Free energy audits and installation of low-cost measures for multifamily customers. • Customers are eligible for prescriptive and custom rebates for qualifying measures.
Residential HVAC Rebates	<ul style="list-style-type: none"> • Customers receive rebates for the purchase and installation of qualifying energy efficient HVAC systems installed through the Trade Ally Network.
Residential Whole Home Energy: PAYS	<ul style="list-style-type: none"> • Customers receive free in-home evaluations and customized recommendations for energy efficient measure upgrades.

- Customers may choose to install any recommended upgrade, receive rebates for qualifying measures and Liberty will cover the full installation cost of measure that meet PAYS qualifications

The sections below provide more in-depth descriptions of select programs and provide any noteworthy aspects of these programs.

Residential Efficient Products

The Residential Efficient Products program allows Liberty’s residential customers to purchase ENERGY STAR appliances and other qualifying energy efficient lighting, water, and applicable measures at participating retailers either online or in-store. Customers that participate receive instant incentives at the point-of-purchase. Incentives will vary depending upon the type of lighting/equipment, manufacturer, and the associated retail cost.

The program also offers Liberty’s residential customers energy advice through an online energy audit tool available at no cost to the customer. The evaluation identifies potential energy efficiency upgrades, educates the customer on managing energy consumption, and provides further information on Liberty’s other energy efficiency programs. Residential customers may order recommended energy efficient measures following the completion of an online audit through an online marketplace. The online marketplace will be available to all customers to purchase energy efficient products regardless of their participation in the online energy audit tool.

Residential Whole Home Energy: Pay As You Save (“PAYS ”)

The Residential Whole Home Energy: PAYS program is a Residential Whole Home Energy program that customers may choose to participate in following the completion of a home energy audit.

For the PAYS program, customers receive free in-home evaluations and customized recommendations for energy efficient measure upgrades. Customers may choose to install any recommended upgrade, and Liberty will cover the full installation cost of measure that meet PAYS qualifications. The customer does not pay any upfront cost for the upgrades. Instead, customers pay a fixed tariff on their monthly energy bills



that is attached to the metered location and is less than the estimated savings generated by the upgrades. Customers pay this tariff charge until Liberty fully recoups its original investment, then receive all the upgrade savings thereafter. All eligible rebates for the qualifying measures still apply for the customer.

For a project to be eligible for the PAYS program, the investment of the project must be able to be repaid via a monthly cost recovery charge that does not exceed 80% of expected average first-year energy savings, and that persists for a maximum of 80% of the expected useful life of the installed energy upgrades. For building efficiency upgrades, this period is typically around 12 years.

In cases where expected cost recovery payments are not sufficient to fully finance installed energy upgrades, the customer may contribute an upfront co-payment that reduces the cost of the investment to a level that may be financed according to the PAYS program’s cost effectiveness criteria.

Residential Sector Summary Table

Table 3-2 Cycle 1 MEEIA Residential Program Summary Table (12-month Total)

Program	TRC	Total MWh Savings	Total MW Savings	Total Budget
Efficient Products	1.28	1,098	0.16	\$358,201
Low Income Multifamily	1.38	209	0.04	\$203,642
HVAC Rebate	1.01	830	0.16	\$415,081
Whole Home Energy	1.28	1,102	0.42	\$509,891
Residential Total	1.21	3,239	0.78	\$1,486,815

Business Sector Programs

The Plan proposes two business programs for the overall portfolio. The business suite of programs is designed to serve commercial and industrial customers, educate and raise commercial and industrial customer awareness about the benefits of energy efficiency products, and encourage investment in energy efficient measures such as



lighting, HVAC, and motors. Table 3-2 below provides a short description of each business program. Appendix A of this report provides more detailed descriptions of each program.

Table 3-2 Proposed Cycle 1 MEEIA Business Programs

Program	Description
Small Business Direct Install	<ul style="list-style-type: none"> • Customers receive an energy evaluation identifying potential energy savings. • Customers are eligible to receive an incentive, direct installation of measures and a customized recommendation for energy efficient equipment upgrades.
C&I Program	<ul style="list-style-type: none"> • Customers receive prescriptive and custom rebates for purchasing energy efficient equipment for commercial and industrial facilities.

The sections below provide more in-depth descriptions of the business programs and provide any noteworthy aspects of these programs.

Small Business Direct Install

The Small Business Direct Install program is designed to promote the installation of energy efficient technologies in small businesses. Customers receive an energy evaluation identifying potential energy savings. Following the completion of an energy evaluation, customers are eligible to receive an incentive, direct installation of measures at no cost, and a customized recommendation for energy efficient equipment upgrades. The customized recommendation will provide information on potential energy savings, installation costs, and anticipated payback. Incentives for direct install projects will vary by project.

C&I Program

The C&I Program is designed to encourage the purchase and installation of energy efficient equipment by providing incentives to lower the cost and purchasing of energy efficient equipment for commercial and industrial facilities. The program consists of two types of rebates: prescriptive and custom rebates. Prescriptive rebates are available for both new construction and retrofit projects whereas custom



rebates are available for equipment that does not qualify for a prescriptive rebate. Custom applications must be pre-approved by Liberty before equipment is purchased and installed and must produce a Total Resource Cost Test benefit-cost ratio of at least 1.0. A \$250,000 incentive cap is imposed per facility per program year. However, if funds are still available in the last three months of the program year, the cap may be exceeded.

Business Sector Summary Table

Table 3-3 Cycle 1 MEEIA Business Program Summary Table (12-month Total)

Program	TRC	Total MWh Savings	Total MW Savings	Total Budget
SBDI	1.18	2,258	0.28	\$474,824
C&I Program	1.31	11,705	1.29	\$1,465,977
Business Total	1.29	13,963	1.57	\$1,940,801



SECTION 4: EVALUATION, MEASUREMENT, AND VERIFICATION (“EM&V”)

Liberty collaborated extensively with its regulatory stakeholders in the development of its MEEIA Cycle 1 filing, as described in Section 1. Liberty’s unique opportunities and challenges were addressed in a variety of ways, such as the 12-month portfolio length described in the Introduction of this filing. This 12-month portfolio length gives Liberty a unique opportunity to phase in a higher level of DSM engagement and offerings between Cycles 1 and 2, effectively “ramping up” to a level commensurate to its peer Investor-owned Utilities (“IOUs”), which currently have more robust offerings in their later MEEIA cycles. This shorter portfolio timeline means that Liberty and its regulatory stakeholders must make some unique considerations regarding EM&V.

In a normal three-year portfolio, the EM&V process would begin at some point in the second year of administration of the portfolio. In Year 2 of the portfolio, theoretically, the programs will be running at or near full strength, having taken some time to implement new or modified programs and/or partners. The practice of beginning EM&V in Year 2 would also likely provide enough participation in the program to provide a statistically valid sample of past participants from which to draw the necessary data to conduct EM&V and discern trends and patterns. In Liberty’s unique situation, by the latter part of year 2, it plans to be beginning implementation of its second MEEIA Cycle, which would be a standard three-year portfolio, and align with the timing of the fourth MEEIA cycles of its peer IOUs.

Because of this timing, Liberty collaborated with its regulatory stakeholder group to choose a portfolio of programs that would not only build a foundation for future MEEIA expansion but would maximize the near-term potential for cost-effective programs and meaningful energy savings during Cycle 1. In doing so, Liberty and its stakeholders believe that this portfolio coupled with program verification strategies reduces the need to conduct EM&V for Cycle 1 to determine evaluated net energy savings.

Liberty intends to implement a robust EM&V plan as part of its Cycle 2 MEEIA (“Cycle 2”). This portfolio will feature a standard three-year timeframe, which would facilitate



a better EM&V process for the reasons detailed above. For programs launched in Cycle 1 and continuing in Cycle 2, Liberty intends to align accelerate the EM&V for those programs during Cycle 2. Liberty plans to engage its stakeholders in the development of its Cycle 2 as it has in the development of its Cycle 1.

For its peer IOUs, the Demand-Side Investment Mechanism (“DSIM”) features evaluated net energy savings as a primary driver for both Throughput Disincentive and Earnings Opportunity. With input from its regulatory stakeholders, Liberty designed its Cycle 1 DSIM to include a Throughput Disincentive based on deemed savings and actual participation and an Earnings Opportunity based on a on a combination of participation and expenditures. This methodology is discussed in greater detail in Section 5 of this report.



SECTION 5: DEMAND-SIDE INVESTMENT MECHANISM

THE DSIM INCLUDED IN THE PLAN REFLECTS A SET OF REGULATORY POLICIES AND PRACTICES THAT PROVIDE TIMELY RECOVERY OF PROGRAM COSTS, REMOVE THE FINANCIAL DISINCENTIVE ASSOCIATED WITH LIBERTY HELPING ITS CUSTOMERS USE ENERGY MORE EFFICIENTLY AND IN A MANNER THAT SUSTAINS OR ENHANCES ITS CUSTOMERS' INCENTIVES TO USE ENERGY MORE EFFICIENTLY, AND PROVIDES LIBERTY WITH AN EARNINGS OPPORTUNITY BASED ON ACHIEVING CERTAIN PERFORMANCE METRICS. FOR MEEIA CYCLE 1, LIBERTY PROPOSES A DSIM THAT INCLUDES THREE COMPONENTS: 1) PROGRAM COST RECOVERY; 2) THROUGHPUT DISINCENTIVE RECOVERY; AND 3) AN EARNINGS OPPORTUNITY. THESE COMPONENTS AND OTHER TERMS OF THE DSIM ARE SUMMARIZED BELOW. IN ADDITION, THE DSIM METHODOLOGY AND ITS DEFINED TERMS, WHICH ARE EXPLAINED IN THIS REPORT, ARE INCORPORATED INTO THE ENERGY EFFICIENCY INVESTMENT CHARGE ("EEIC") TARIFF, DESCRIBED AS THE DSIM TARIFF APPENDIX D ALSO INCLUDES THE PROPOSED NOTICE TO EXPLAIN THE PROPOSED DSIM TO CUSTOMERS, WHILE APPENDIX C SHOWS A SAMPLE OF HOW THE DSIM CHARGE WILL APPEAR ON A RESIDENTIAL AND NON-RESIDENTIAL BILL

Program Costs

Presently, Liberty recovers through an energy efficiency cost recovery (“EECR”) charge the delivery costs associated with its existing energy efficiency programs. The Company plans to continue the EECR charge until program costs associated with its existing energy efficiency programs are fully recovered.

The program cost recovery component of the DSIM will be used to recover projected program expenses over the period covered by MEEIA Cycle 1. The projected program expenses will be recovered through a newly established Energy Efficiency Investment Charge (“EEIC”).

Each month, the cumulative difference between actual program expenses and actual EEIC revenues, adjusted to reflect carrying costs at the Company’s short-term borrowing rate, shall be tracked and refunded to or recovered from customers through an EEIC in the next MEEIA cycle. Program expenses to be recovered through the EEIC charge include the cost of customer incentives, administration, and marketing at the sector level. Liberty will track these expenses by budget categories for each program in the MEEIA portfolio. Program expenses associated with the portfolio delivery will be projected at the portfolio level and tracked against the following categories: portfolio administration, portfolio marketing, portfolio EM&V and portfolio R&D.

Throughput Disincentive Mechanism

Presently, there is a financial disincentive associated with the Company’s energy efficiency programs. Specifically, the energy efficiency programs result in a decline in kWh sales and revenues that hinders the Company’s ability to recover its Commission-authorized revenues.

The MEEIA rules correct for the financial disincentive through the Throughput Disincentive component of the DSIM. The Throughput Disincentive component enables the Company to recover by service classification the projected monthly



savings attributable to the energy efficiency programs for that service classification multiplied by the applicable tail block rate, adjusted by a net to gross factor, in this case 82.5%. The projected monthly savings are reconciled with actual savings following the completion of MEEIA Cycle 1. The Company's approach to calculate the Throughput Disincentive is consistent with the approach used by other Missouri electric utilities and approved by the Commission; however, the Company plans to work with the Parties in the MEEIA and rate case proceedings on improved approaches to calculate the Throughput Disincentive future MEEIA cycles.

To remove the financial disincentive associated with energy efficiency programs, the revenues generated from the Throughput Disincentive component of the EEIC charge must meet specific accounting standards. Specifically, the following conditions must be satisfied to remove the financial disincentive: 1) The demand-side program must be established by an order from the utility's regulatory commission that allows for automatic adjustment of future rates (verification of the accuracy of the adjustment to future rates by the regulator would not preclude the adjustment from being considered automatic); 2) The Throughput Disincentive revenues must be objectively determinable and have a high probability of recovery; 3) The Throughput Disincentive revenues must be collected within 24 months following the end of the annual period in which they are recognized.

Earning Opportunity

The Earnings Opportunity component of the DSIM reflects a target incentive of approximately \$370,00 and stretch incentive of \$110,787 for the MEEIA Cycle 1, period of January 1, 2022 through December 31, 2022. The Earnings Opportunity amount is based on a combination of budget spending and program participation. The core Earnings Opportunity amount for MEEIA Cycle 1 requires achievement of two performance metrics: 1) a minimum threshold of 75% budget spend; 2) dedicating spending with residential projected participation; 3) commercial projected costs; and 4) commercial projected participation. Each performance metric has minimum and maximum performance targets. Liberty has developed an Earnings Opportunity calculator (included as Appendix E). The Earnings Opportunity calculator is a spreadsheet with a cover sheet summarizing the overall results and a sheet detailing the calculations for each metric that comprises the EO. After completion of MEEIA



Cycle 1, actual performance will be compared to the performance targets to determine the Earnings Opportunity award, if any, which will be recovered from customers in the next EEIC charge.

Impact on Customers

Program expenses and the Throughput Disincentive related to the Residential programs (with the exception of the low-income program which are not recovered via the MEEIA) will be recovered from residential customers. Program expenses and the Throughput Disincentive related to the Commercial and Industrial programs will be allocated to each non-residential service classification based on retail sales (kWh), adjusted for opt-out customers. The Earnings Opportunity will also be allocated to each service classification based on retail sales (kWh), adjusted for opt-out customers.

APPENDIX A: Program Descriptions

Residential Programs

Residential Efficient Products

Objective	Raise customer awareness of the benefits of high efficiency products and to educate residential customers about energy use in their homes and to offer information, products, and services to residential customers to save energy cost-effectively.
Target Market	Residential customers.
Description	<p>Customers are eligible to purchase qualifying energy efficient lighting, water, and appliance measures at participating retailers either online or in-store. Customers that participate receive instant incentives at the point-of-purchase. Incentives will vary depending upon the type of lighting/equipment, manufacturer, and the associated retail cost.</p> <p>Residential customers are also eligible to receive energy advice through an online energy audit tool available at no cost to the customer. The evaluation identifies potential energy efficiency upgrades, educates the customer on managing energy consumption, and provides further information on Liberty's other energy efficiency programs. Residential customers may order recommended energy efficient measures following the completion of an online audit through an online marketplace. The online marketplace will be available to all customers to purchase energy efficient products regardless of their participation in the online energy audit tool.</p>
Implementation	<p>In-store: Liberty will work with a third-party implementation contractor to:</p> <ul style="list-style-type: none"> • Establish and maintain relationships with national and local retailers and engage retailers to participate in the program. • Provide in-store promotional materials and retail sales staff training. • Assist with program marketing and outreach. • Provide customer service support. • Establish systems to address customer attribution. • Track and process program performance, sales data, and payments to retailers and periodically report program activities, progress towards goals, and opportunities for improvement. <p>Online Liberty will work with a third-party implementation contractor to:</p> <ul style="list-style-type: none"> • Design and develop a comprehensive online customer portal where customers will be able to participate in the online audit tool, browse the marketplace through the offered energy efficient equipment and appliances, and purchase qualifying measures through an online marketplace that will offer instant rebates. • Implementation vendor will fulfill direct mail kit orders, provide customer service and advisory support. • Assist with program marketing and outreach. • Track and process program performance, sales data, and payments to retailers and periodically report program activities, progress towards goals, and opportunities for improvement. <p>Activities will include in the launch of an online marketplace with utility-specific interfaces, efforts to raise awareness of the program, on-going refinements to the list of eligible measures, validating customer eligibility and processing incentives and conducting outreach to and securing partnerships with retailers, wholesalers, distributors, manufacturers and trade allies to assure all customers are able to easily purchase energy efficient products and equipment through the program.</p>

APPENDIX A: Program Descriptions

Eligible Measures and Incentives	Measure	Unit	Incentive per Unit 2021-2022
	Online Audit Tool	Per Project	-
	Direct Mail Kit	Per Kit	\$30.00
	LED (In-Store)	Per Bulb	\$0.50
	LED (Online)	Per Bulb	\$0.44
	Specialty LED	Per Bulb	\$0.50
	ENERGY STAR Dehumidifier	Per Unit	\$15.00
	ENERGY STAR Air Purifier	Per Unit	\$20.00
	Smart Power Strip 5-Plug	Per Unit	\$10.00
	Advanced Thermostat	Per Unit	\$50.00
	Advanced Thermostat (Gas)	Per Unit	\$50.00
	Advanced Thermostat (Unknown)	Per Unit	\$50.00
	ENERGY STAR Bathroom Exhaust Fan	Per Unit	\$13.05
	ENERGY STAR Ceiling Fan	Per Unit	\$13.80
	Faucet Aerator (Kitchen)	Per Unit	\$0.90
	Faucet Aerator (Bath)	Per Unit	\$0.90
	Low Flow Showerhead	Per Unit	\$2.10
	Faucet Aerator (Kitchen) (Gas)	Per Unit	\$0.90
	Faucet Aerator (Bath) (Gas)	Per Unit	\$0.90
	Low Flow Showerhead (Gas)	Per Unit	\$2.10
Estimated Participation	Measure	Total	
	Online Audit Tool	1,133	
	Direct Mail Kit	1,133	
	LED	13,733	
	Specialty LED	8,133	
	ENERGY STAR Dehumidifier	66	
	ENERGY STAR Air Purifier	66	
	Smart Power Strip 5-Plug	94	
	Advanced Thermostat (Electric)	378	
	Advanced Thermostat (Gas)	133	
	Advanced Thermostat (Unknown)	245	
	ENERGY STAR Bathroom Exhaust Fan	26	
	ENERGY STAR Ceiling Fan	66	
	Faucet Aerator (Kitchen)	155	
	Faucet Aerator (Bath)	147	
	Low Flow Showerhead	188	
	Faucet Aerator (Kitchen) (Gas)	183	
	Faucet Aerator (Bath) (Gas)	266	
Low Flow Showerhead (Gas)	266		
Estimated Savings	Net MWh Savings		
	Total	Total	
	1,098	0.165	

APPENDIX A: Program Descriptions

Estimated Budget	<table border="1"> <thead> <tr> <th style="background-color: #2c4e64; color: white;">Budget Category</th> <th style="background-color: #2c4e64; color: white;">Total</th> </tr> </thead> <tbody> <tr> <td>Incentives</td> <td style="text-align: right;">\$125,562</td> </tr> <tr> <td>Marketing</td> <td style="text-align: right;">\$13,197</td> </tr> <tr> <td>Administration</td> <td style="text-align: right;">\$219,442</td> </tr> <tr> <td>EM&V</td> <td style="text-align: right;">\$0</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">\$358,201</td> </tr> </tbody> </table>		Budget Category	Total	Incentives	\$125,562	Marketing	\$13,197	Administration	\$219,442	EM&V	\$0	Total	\$358,201
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Low-Income Multi-Family

Objective	Deliver long-term energy savings and bill reductions to income-eligible customers in multi-family housing and multi-family common area energy savings.
Target Market	Electric retail customer in rate schedule RG, who live in Low-Income multi-family dwellings of three or more units, as well as common areas for qualified buildings
Description	<p>Low-Income Multi-family customers will receive an energy audit and installation of low-cost measures at no cost. The energy audit will identify potential efficiency improvements. Direct Install measures may include but are not limited to LED Light bulbs, faucet aerators, low-flow showerheads, advanced thermostats, and smart power strips. Additional in-unit measures may include refrigerator replacement, room A/Cs, other energy saving small appliances and associated recycling.</p> <p>Incentives are also available for Custom measures. Custom measures are defined as non-prescriptive energy efficiency measures, or the integration of several measures, which may include prescriptive measures, to achieve significant energy savings. All custom measures must receive a pre-approval commitment from the Company whether for tenant units, common areas, building shell, or whole building systems. Empire encourages tenants to address energy efficiency needs in common areas either as Custom measures in this program, or through the HVAC, Small Business Direct Install program or the Commercial and Industrial rebate program, depending on availability of funds and eligibility for programs.</p> <p>The Multi-Family Program will seek to work with each customer to determine and package the best energy savings opportunities based on the Company's current program offerings (e.g. direct installation of standard energy savings measures, prescriptive equipment replacement, custom solutions). Common area and whole building measures may include but are not limited to lighting, weatherization, water heating, HVAC systems and other custom measures.</p>
Implementation	<p>Liberty will engage a third-party contractor to implement the program. An implementation contractor will:</p> <ul style="list-style-type: none"> • Hire staff/engage local contractors to conduct audits and direct measure installation. • Engage customers, schedule energy audit appointments, and provide customer service support. • Establish relationships with local contractors to work with the program installing energy efficient measures. • Process rebate applications, including review and verification of applications and

APPENDIX A: Program Descriptions

payment of customer rebates.

- Track program performance, including customer and contractor participation as well as quality assurance/quality control (QA/QC).
- Periodically report program progress.

For these purposes, Low-Income can be defined with any of the following criteria:

- Participation in an affordable housing program: Documented participation in a federal, state or local affordable housing program, including LIHTC, HUD, USDA, State HFA and local tax abatement for low-income properties.
- Location in a low-income census tract: Location in a census tract identified as low-income, using HUD’s annually published “Qualified Census Tracts” as a starting point.
- Rent roll documentation: Where at least 50% of the units have rents affordable to households at or below 80% of the area median income, as published annually by HUD.
- Tenant income information: Documented tenant income information demonstrating at least 50% of units are rented to households meeting one of these criteria: at or below 200% of the Federal poverty level or at or below 80% of the Area Median Income (AMI).
- Documented information demonstrating the property is on the waiting list for, currently participating in, or has in the last 5 years participated in the Weatherization Assistance Program.

Liberty will work with the implementation contractor to market the program to residential customers and contractors. will focus on informing property owners, managers, associations, tenant groups, municipalities, and community organizations about the availability and benefits of the program and how to participate. Marketing activities will also target lower and moderate-income multi-family sector.

It is important that the measures are properly installed and customer satisfaction is high. Liberty and/or the implementation contractor should conduct QA/QC of a random group of completed projects by project type and contractor. The QA/QC process should include verification of the equipment installed and customer satisfaction with the contractor and the program.

Eligible Measures and Incentives

Measure	Unit	Incentive per Unit 2021-2022
Audit	Per Unit	-
LED	Per Bulb	-
Faucet Aerator (Kitchen)	Per Unit	-
Faucet Aerator (Bath)	Per Unit	-
Low Flow Showerhead	Per Unit	-
Faucet Aerator (Kitchen) (Gas)	Per Unit	-
Faucet Aerator (Bath) (Gas)	Per Unit	-
Low Flow Showerhead (Gas)	Per Unit	-
Hot Water Pipe Insulation	Per Unit	\$15.00
Water Heater Wrap	Per Unit	\$35.00
Air Sealing	Per Sq. Ft.	\$0.29
Air Sealing (Gas)	Per Sq. Ft.	\$4.00
Advanced Thermostat	Per Unit	\$50.00
Advanced Thermostat (Gas)	Per Unit	\$50.00
Smart Power Strip 5-Plug (Tier 2)	Per Unit	\$7.00
Water Heater – Temperature Set Back	Per Unit	\$5.00

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Estimated Participation	<table border="1"> <thead> <tr> <th>Measure</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Audit</td> <td>500</td> </tr> <tr> <td>LED</td> <td>3,000</td> </tr> <tr> <td>Faucet Aerator (Kitchen)</td> <td>200</td> </tr> <tr> <td>Faucet Aerator (Bath)</td> <td>200</td> </tr> <tr> <td>Low Flow Showerhead</td> <td>200</td> </tr> <tr> <td>Faucet Aerator (Kitchen) (Gas)</td> <td>300</td> </tr> <tr> <td>Faucet Aerator (Bath) (Gas)</td> <td>300</td> </tr> <tr> <td>Low Flow Showerhead (Gas)</td> <td>300</td> </tr> <tr> <td>Hot Water Pipe Insulation</td> <td>-</td> </tr> <tr> <td>Water Heater Wrap</td> <td>-</td> </tr> <tr> <td>Air Sealing</td> <td>-</td> </tr> <tr> <td>Air Sealing (Gas)</td> <td>-</td> </tr> <tr> <td>Advanced Thermostat</td> <td>100</td> </tr> <tr> <td>Advanced Thermostat (Gas)</td> <td>-</td> </tr> <tr> <td>Smart Power Strip 5-Plug (Tier 2)</td> <td>375</td> </tr> <tr> <td>Water Heater – Temperature Set Back</td> <td>-</td> </tr> </tbody> </table>		Measure	Total	Audit	500	LED	3,000	Faucet Aerator (Kitchen)	200	Faucet Aerator (Bath)	200	Low Flow Showerhead	200	Faucet Aerator (Kitchen) (Gas)	300	Faucet Aerator (Bath) (Gas)	300	Low Flow Showerhead (Gas)	300	Hot Water Pipe Insulation	-	Water Heater Wrap	-	Air Sealing	-	Air Sealing (Gas)	-	Advanced Thermostat	100	Advanced Thermostat (Gas)	-	Smart Power Strip 5-Plug (Tier 2)	375	Water Heater – Temperature Set Back	-
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Residential HVAC Rebates

Objective	Encourage the purchase and installation of energy efficient HVAC systems by providing rebates to lower the cost of purchasing qualifying efficient equipment.
Target Market	Residential customers with central AC units or heat pumps.
Description	Customers receive rebates for the purchase and installation of qualifying energy efficient HVAC systems. Customers must complete and submit an application form, a load calculation verification form, an invoice for the installation of the equipment, and an AHRI certificate of

APPENDIX A: Program Descriptions

	the installed equipment to be eligible for a rebate. Incentives will vary depending upon the type of HVAC system installed.																																																												
Implementation	<p>Liberty will work with a third-party implementation contractor to:</p> <ul style="list-style-type: none"> • Encourage qualified contractors to install efficient HVAC equipment. • Process customer applications, verify customer and project eligibility, and process customer rebates. • Conduct QA/QC to verify equipment installation. • Provide customer service support related to application processing. • Track program performance and report progress towards program goals and opportunities for improvement. <p>Liberty will work with the implementation contractor to market the program to residential customers and contractors. The implementation contractor will develop partnerships with contractors through education and training seminars, presentations at Chamber of Commerce meetings, and other informational events. Customer marketing activities may include, but not be limited to bill inserts, newspaper advertisements, email blasts, bill messaging and community events.</p>																																																												
Eligible Measures and Incentives	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Measure</th> <th style="text-align: left;">Unit</th> <th style="text-align: left;">Incentive per Unit 2021-2022</th> </tr> </thead> <tbody> <tr><td>Central Air Conditioner (SEER 15)</td><td>Per Unit</td><td>\$250</td></tr> <tr><td>Central Air Conditioner (SEER 16)</td><td>Per Unit</td><td>\$350</td></tr> <tr><td>Central Air Conditioner (SEER 17)</td><td>Per Unit</td><td>\$450</td></tr> <tr><td>Central Air Conditioner (SEER 18)</td><td>Per Unit</td><td>\$450</td></tr> <tr><td>Central Air Conditioner (SEER 19)</td><td>Per Unit</td><td>\$450</td></tr> <tr><td>Central Air Conditioner (SEER 20+)</td><td>Per Unit</td><td>\$450</td></tr> <tr><td>Air Source Heat Pump (SEER 15)</td><td>Per Unit</td><td>\$350</td></tr> <tr><td>Air Source Heat Pump (SEER 16)</td><td>Per Unit</td><td>\$450</td></tr> <tr><td>Air Source Heat Pump (SEER 17)</td><td>Per Unit</td><td>\$550</td></tr> <tr><td>Air Source Heat Pump (SEER 18)</td><td>Per Unit</td><td>\$550</td></tr> <tr><td>Air Source Heat Pump (SEER 19)</td><td>Per Unit</td><td>\$550</td></tr> <tr><td>Air Source Heat Pump (SEER 20+)</td><td>Per Unit</td><td>\$550</td></tr> <tr><td>Mini-Split Heat Pump (SEER 15)</td><td>Per Unit</td><td>\$100</td></tr> <tr><td>Mini-Split Heat Pump (SEER 16)</td><td>Per Unit</td><td>\$150</td></tr> <tr><td>Mini-Split Heat Pump (SEER 17)</td><td>Per Unit</td><td>\$225</td></tr> <tr><td>Mini-Split Heat Pump (SEER 18)</td><td>Per Unit</td><td>\$350</td></tr> <tr><td>Mini-Split Heat Pump (SEER 19)</td><td>Per Unit</td><td>\$350</td></tr> <tr><td>Mini-Split Heat Pump (SEER 20+)</td><td>Per Unit</td><td>\$350</td></tr> <tr><td>Geothermal (SEER 20+)</td><td>Per Unit</td><td>\$550</td></tr> </tbody> </table>	Measure	Unit	Incentive per Unit 2021-2022	Central Air Conditioner (SEER 15)	Per Unit	\$250	Central Air Conditioner (SEER 16)	Per Unit	\$350	Central Air Conditioner (SEER 17)	Per Unit	\$450	Central Air Conditioner (SEER 18)	Per Unit	\$450	Central Air Conditioner (SEER 19)	Per Unit	\$450	Central Air Conditioner (SEER 20+)	Per Unit	\$450	Air Source Heat Pump (SEER 15)	Per Unit	\$350	Air Source Heat Pump (SEER 16)	Per Unit	\$450	Air Source Heat Pump (SEER 17)	Per Unit	\$550	Air Source Heat Pump (SEER 18)	Per Unit	\$550	Air Source Heat Pump (SEER 19)	Per Unit	\$550	Air Source Heat Pump (SEER 20+)	Per Unit	\$550	Mini-Split Heat Pump (SEER 15)	Per Unit	\$100	Mini-Split Heat Pump (SEER 16)	Per Unit	\$150	Mini-Split Heat Pump (SEER 17)	Per Unit	\$225	Mini-Split Heat Pump (SEER 18)	Per Unit	\$350	Mini-Split Heat Pump (SEER 19)	Per Unit	\$350	Mini-Split Heat Pump (SEER 20+)	Per Unit	\$350	Geothermal (SEER 20+)	Per Unit	\$550
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Estimated Participation	<table border="1"> <thead> <tr> <th>Measure</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Central Air Conditioner (SEER 15)</td> <td>84</td> </tr> <tr> <td>Central Air Conditioner (SEER 16)</td> <td>109</td> </tr> <tr> <td>Central Air Conditioner (SEER 17)</td> <td>-</td> </tr> <tr> <td>Central Air Conditioner (SEER 18)</td> <td>-</td> </tr> <tr> <td>Central Air Conditioner (SEER 19)</td> <td>-</td> </tr> <tr> <td>Central Air Conditioner (SEER 20+)</td> <td>-</td> </tr> <tr> <td>Air Source Heat Pump (SEER 15)</td> <td>-</td> </tr> <tr> <td>Air Source Heat Pump (SEER 16)</td> <td>481</td> </tr> <tr> <td>Air Source Heat Pump (SEER 17)</td> <td>-</td> </tr> <tr> <td>Air Source Heat Pump (SEER 18)</td> <td>71</td> </tr> <tr> <td>Air Source Heat Pump (SEER 19)</td> <td>12</td> </tr> <tr> <td>Air Source Heat Pump (SEER 20+)</td> <td>13</td> </tr> <tr> <td>Mini-Split Heat Pump (SEER 15)</td> <td>1</td> </tr> <tr> <td>Mini-Split Heat Pump (SEER 16)</td> <td>4</td> </tr> <tr> <td>Mini-Split Heat Pump (SEER 17)</td> <td>36</td> </tr> <tr> <td>Mini-Split Heat Pump (SEER 18)</td> <td>5</td> </tr> <tr> <td>Mini-Split Heat Pump (SEER 19)</td> <td>4</td> </tr> <tr> <td>Mini-Split Heat Pump (SEER 20+)</td> <td>-</td> </tr> <tr> <td>Geothermal (SEER 20+)</td> <td>-</td> </tr> </tbody> </table>		Measure	Total	Central Air Conditioner (SEER 15)	84	Central Air Conditioner (SEER 16)	109	Central Air Conditioner (SEER 17)	-	Central Air Conditioner (SEER 18)	-	Central Air Conditioner (SEER 19)	-	Central Air Conditioner (SEER 20+)	-	Air Source Heat Pump (SEER 15)	-	Air Source Heat Pump (SEER 16)	481	Air Source Heat Pump (SEER 17)	-	Air Source Heat Pump (SEER 18)	71	Air Source Heat Pump (SEER 19)	12	Air Source Heat Pump (SEER 20+)	13	Mini-Split Heat Pump (SEER 15)	1	Mini-Split Heat Pump (SEER 16)	4	Mini-Split Heat Pump (SEER 17)	36	Mini-Split Heat Pump (SEER 18)	5	Mini-Split Heat Pump (SEER 19)	4	Mini-Split Heat Pump (SEER 20+)	-	Geothermal (SEER 20+)	-
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Whole Home Energy: PAYS

Objective	Encourage whole-house improvements to existing homes by conducting home energy audits and encouraging the installation of energy efficient measures.
Target Market	Residential customers that own or rent a residence, including owners of rental properties and new construction.
Description	Customers receive free in-home evaluations and customized recommendations for energy efficient measure upgrades. Customers may choose to install any recommended upgrade,

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	<p>and Liberty will cover the full installation cost of these upgrades. The customer does not pay any upfront cost for the upgrades. Customers instead pay a fixed tariff on their monthly energy bills that is attached to the metered location and is less than the estimated savings generated by the upgrades. Customers pay this tariff charge until Liberty fully recoups its original investment, then receive all of the upgrade savings thereafter. All eligible rebates for the qualifying measures still apply for the customer.</p> <p>For a project to be eligible for the PAYS program, the investment of the project must be able to be repaid via a monthly cost recovery charge that does not exceed 80% of expected average first-year energy savings, and that persists for a maximum of 80% of the expected useful life of the installed energy upgrades. For building efficiency upgrades, this period is typically around 12 years.</p> <p>In cases where expected cost recovery payments are not sufficient to fully finance installed energy upgrades, the customer may contribute an upfront co-payment that reduces the cost of the investment to a level that may be financed according to the PAYS' cost effectiveness criteria.</p>																																																									
Implementation	<p>Liberty will engage a third-party contractor to implement the program. An implementation contractor will:</p> <ul style="list-style-type: none"> • Hire/subcontract local, qualified individuals to complete the home energy audits, provide customized energy efficiency upgrade recommendations, and install these upgrades. • Engage customers, schedule home energy audit appointments, and provide any customer service support. • Process the on-bill financing for any PAYS projects and any rebate applications, including review and verification of applications and payment of customer rebates. • Track on-bill financing and program performance, including customer and contractor participation as well as quality assurance/quality control (QA/QC). • Periodically report program progress. <p>Liberty will work with the implementation contractor to market the program to residential customers and contractors. The implementation contractor will develop partnerships with contractors through education and training seminars, presentations at Chamber of Commerce meetings, and other informational events. Customer marketing activities may include, but not be limited to bill inserts, newspaper advertisements, email blasts, bill messaging and community events.</p>																																																									
Eligible Measures and Incentives	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Measure</th> <th style="text-align: left;">Unit</th> <th style="text-align: left;">Incentive per Unit 2021-2022</th> </tr> </thead> <tbody> <tr><td>Audit</td><td>Per unit</td><td style="text-align: center;">-</td></tr> <tr><td>LED (DI)</td><td>Per bulb</td><td style="text-align: right;">\$1.45</td></tr> <tr><td>Faucet Aerator (Kitchen) (DI)</td><td>Per unit</td><td style="text-align: right;">\$8.00</td></tr> <tr><td>Faucet Aerator (Bath) (DI)</td><td>Per unit</td><td style="text-align: right;">\$8.00</td></tr> <tr><td>Low Flow Showerhead (DI)</td><td>Per unit</td><td style="text-align: right;">\$12.00</td></tr> <tr><td>Faucet Aerator (Kitchen) (Gas) (DI)</td><td>Per unit</td><td style="text-align: right;">\$8.00</td></tr> <tr><td>Faucet Aerator (Bath) (Gas) (DI)</td><td>Per unit</td><td style="text-align: right;">\$8.00</td></tr> <tr><td>Low Flow Showerhead (Gas) (DI)</td><td>Per unit</td><td style="text-align: right;">\$12.00</td></tr> <tr><td>Hot Water Pipe Insulation (DI)</td><td>Per unit</td><td style="text-align: right;">\$15.00</td></tr> <tr><td>Water Heater Wrap (DI)</td><td>Per unit</td><td style="text-align: right;">\$35.00</td></tr> <tr><td>Air Sealing</td><td>Per sq. ft.</td><td style="text-align: right;">\$0.29</td></tr> <tr><td>Attic Insulation R-38</td><td>Per sq. ft.</td><td style="text-align: right;">\$0.45</td></tr> <tr><td>Wall Insulation R-13</td><td>Per sq. ft.</td><td style="text-align: right;">\$0.75</td></tr> <tr><td>Floor Insulation-19</td><td>Per sq. ft.</td><td style="text-align: right;">\$0.25</td></tr> <tr><td>Duct Installation & Sealing</td><td>Per home</td><td style="text-align: right;">\$150</td></tr> <tr><td>ENERGY STAR Windows</td><td>Per sq. ft.</td><td style="text-align: right;">\$4.00</td></tr> <tr><td>Air Sealing (Gas)</td><td>Per sq. ft.</td><td style="text-align: right;">\$4.00</td></tr> <tr><td>Attic Insulation R-38 (Gas)</td><td>Per sq. ft.</td><td style="text-align: right;">\$4.00</td></tr> </tbody> </table>	Measure	Unit	Incentive per Unit 2021-2022	Audit	Per unit	-	LED (DI)	Per bulb	\$1.45	Faucet Aerator (Kitchen) (DI)	Per unit	\$8.00	Faucet Aerator (Bath) (DI)	Per unit	\$8.00	Low Flow Showerhead (DI)	Per unit	\$12.00	Faucet Aerator (Kitchen) (Gas) (DI)	Per unit	\$8.00	Faucet Aerator (Bath) (Gas) (DI)	Per unit	\$8.00	Low Flow Showerhead (Gas) (DI)	Per unit	\$12.00	Hot Water Pipe Insulation (DI)	Per unit	\$15.00	Water Heater Wrap (DI)	Per unit	\$35.00	Air Sealing	Per sq. ft.	\$0.29	Attic Insulation R-38	Per sq. ft.	\$0.45	Wall Insulation R-13	Per sq. ft.	\$0.75	Floor Insulation-19	Per sq. ft.	\$0.25	Duct Installation & Sealing	Per home	\$150	ENERGY STAR Windows	Per sq. ft.	\$4.00	Air Sealing (Gas)	Per sq. ft.	\$4.00	Attic Insulation R-38 (Gas)	Per sq. ft.	\$4.00
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	Wall Insulation R-13 (Gas)	Per sq. ft.	\$4.00
	Floor Insulation-19 (Gas)	Per sq. ft.	\$4.00
	Duct Installation & Sealing (Gas)	Per home	\$4.00
	ENERGY STAR Windows (Gas)	Per sq. ft.	\$4.00
	Central Air Conditioner (SEER 15)	Per unit	\$250
	Central Air Conditioner (SEER 16)	Per unit	\$350
	Central Air Conditioner (SEER 17)	Per unit	\$450
	Central Air Conditioner (SEER 18)	Per unit	\$450
	Central Air Conditioner (SEER 19)	Per unit	\$450
	Central Air Conditioner (SEER 20+)	Per unit	\$450
	Air Source Heat Pump (SEER 15)	Per unit	\$350
	Air Source Heat Pump (SEER 16)	Per unit	\$450
	Air Source Heat Pump (SEER 17)	Per unit	\$550
	Air Source Heat Pump (SEER 18)	Per unit	\$550
	Air Source Heat Pump (SEER 19)	Per unit	\$550
	Air Source Heat Pump (SEER 20+)	Per unit	\$550
	Mini-Split Heat Pump (SEER 15)	Per unit	\$250
	Mini-Split Heat Pump (SEER 16)	Per unit	\$325
	Mini-Split Heat Pump (SEER 17)	Per unit	\$400
	Mini-Split Heat Pump (SEER 18)	Per unit	\$550
	Mini-Split Heat Pump (SEER 19)	Per unit	\$550
	Mini-Split Heat Pump (SEER 20+)	Per unit	\$550
	Geothermal (SEER 20+)	Per unit	\$550
	Advanced Thermostat	Per unit	\$50
	Advanced Thermostat (Gas)	Per unit	\$50
	Furnace Blower Motor	Per unit	\$45
	Heat Pump Water Heater ≤55 gallons	Per unit	\$300
	Heat Pump Water Heater >55 gallons	Per unit	\$400
	ENERGY STAR Dehumidifier	Per unit	\$15
	ENERGY STAR Air Purifier	Per unit	\$20
	ENERGY STAR Refrigerator	Per unit	\$30
	Smart Power Strip 5-Plug	Per unit	\$10
Water Heater – Temperature Set Back	Per unit	\$10	
Estimated Participation			
	Measure		Total
	PAYS Audit		585
	LED		3,510
	Faucet Aerator (Kitchen)		234
	Faucet Aerator (Bath)		234
	Low Flow Showerhead		234
	Faucet Aerator (Kitchen) (Gas)		351
	Faucet Aerator (Bath) (Gas)		351
	Low Flow Showerhead (Gas)		351
	Hot Water Pipe Insulation		585
	Water Heater Wrap		293
	Air Sealing		176
	Attic Insulation R-38		88
	Wall Insulation R-13		59
	Floor Insulation-19		29
	Duct Installation & Sealing		117
	ENERGY STAR Windows		88
	Air Sealing (Gas)		410
	Attic Insulation R-38 (Gas)		293

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	Wall Insulation R-13 (Gas)	176												
	Floor Insulation-19 (Gas)	29												
	Duct Installation & Sealing (Gas)	117												
	ENERGY STAR Windows (Gas)	88												
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Smart Power Strip 5-Plug	439													
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APPENDIX A: Program Descriptions

Business Programs

Liberty's commercial and industrial DSM program serves non-residential customers, encouraging investment in efficient measures such as lighting, HVAC and motors.

Small Business Direct Install

Objective	Promote the installation of energy efficient technologies in small businesses.													
Target Market	Small nonresidential customers.													
Description	Customers receive an energy evaluation identifying potential energy savings. Customers are eligible to receive an incentive, direct installation of measures at no cost, and a customized recommendation for energy efficient equipment upgrades following the energy evaluation. The customized recommendation will provide information on potential energy savings, installation costs, and anticipated payback. Incentives for direct install projects will vary by project.													
Implementation	<p>Liberty will work with a third-party implementation contractor to assist in implementation and delivery of the program. The implementation contractor will:</p> <ul style="list-style-type: none"> Hire and/or provide any training needed for qualified, local individuals to conduct energy evaluations and install efficient measures. Schedule customer evaluations and commercial equipment upgrades. Assist with program marketing and outreach. Provide customer service support. Track program performance and periodically report progress towards program goals and opportunities for improvement. <p>The program will be marketed through partnerships with Liberty trade allies as well as newspaper advertisements, email blasts or targeted mailings to customers and contractors, bill inserts, and advertising in HVAC trade publications. One key barrier to participation is ensuring that enough vendors are properly educated to allow them to actively engage customers. Therefore, Liberty will work closely with trade allies to ensure they understand and promote the program.</p>													
Eligible Measures and Incentives	\$1.70 per kWh saved.													
Estimated Participation	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #2c3e50; color: white;">Measure</th> <th style="background-color: #2c3e50; color: white;">Total</th> </tr> </thead> <tbody> <tr> <td>SBDI Project</td> <td style="text-align: center;">60</td> </tr> </tbody> </table>		Measure	Total	SBDI Project	60								
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	Total													
Incentives	\$410,558													
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APPENDIX A: Program Descriptions

Cost-Effectiveness	Total
	TRC 1.18

C&I Program

Objective	Encourage purchase and installation of energy efficient equipment by providing incentives to lower the cost of purchasing efficient equipment for commercial and industrial facilities.																								
Target Market	Commercial and industrial customers.																								
Description	<p>The program provides incentives to lower the cost of purchasing energy efficient equipment for commercial and industrial facilities. The program consists of prescriptive and custom rebates.</p> <p>Prescriptive. Pre-qualified prescriptive rebates are available for new construction and retrofit projects.</p> <p>Custom. Equipment that does not qualify for a prescriptive rebate will be eligible for a custom rebate. Applications must be pre-approved by Empire before equipment is purchased and installed and must produce a Total Resource Cost Test benefit-cost ratio of at least 1.0.</p> <p>A \$250,000 incentive cap is imposed per facility per program year. However, if funds are still available in the last three months of the program year, the cap may be exceeded.</p>																								
Implementation	<p>Liberty will engage a third-party implementation contractor. The contractor will be responsible for:</p> <ul style="list-style-type: none"> Processing customer applications for both prescriptive and custom projects, verifying customer and project eligibility (including pre-approval of custom projects), and processing customer rebates. Conducting QA/QC to verify equipment installation. Providing customer service support. Tracking program performance and periodically reporting progress towards program goals and opportunities for improvement. <p>The program will be marketed through partnerships with Liberty trade allies as well as newspaper advertisements, email blasts or targeted mailings to customers and contractors, bill inserts, and advertising in HVAC trade publications. One key barrier to participation is ensuring that enough vendors are properly educated to allow them to actively engage customers. Therefore, Liberty will work closely with trade allies to ensure they understand and promote the program.</p> <p>The measure list and incentive levels may be updated annually to reflect changes to the market. Incentives will be modified as needed to respond to market prices, with a goal of the incentive being no higher than 50% of the incremental cost. Proper incentives can reduce free ridership while still encouraging customers to participate in the program.</p>																								
Eligible Measures and Incentives	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #2c3e50; color: white;">Measure</th> <th style="background-color: #2c3e50; color: white;">Unit</th> <th style="background-color: #2c3e50; color: white;">Incentive per Unit 2021-2022</th> </tr> </thead> <tbody> <tr> <td>Wall Switch Occupancy Sensor</td> <td>Per Unit</td> <td style="text-align: right;">\$16.50</td> </tr> <tr> <td>Air Cooled Chiller</td> <td>Per Unit</td> <td style="text-align: right;">\$3,390.00</td> </tr> <tr> <td>Water Cooled Chiller</td> <td>Per Unit</td> <td style="text-align: right;">\$1,560.00</td> </tr> <tr> <td>Room Air Conditioner (12 EER)</td> <td>Per Unit</td> <td style="text-align: right;">\$20.00</td> </tr> <tr> <td>CAC <65 kBtu</td> <td>Per Unit</td> <td style="text-align: right;">\$146.00</td> </tr> <tr> <td>CAC 65<135 kBtu</td> <td>Per Unit</td> <td style="text-align: right;">\$350.00</td> </tr> <tr> <td>CAC 135<240 kBtu</td> <td>Per Unit</td> <td style="text-align: right;">\$700.00</td> </tr> </tbody> </table>	Measure	Unit	Incentive per Unit 2021-2022	Wall Switch Occupancy Sensor	Per Unit	\$16.50	Air Cooled Chiller	Per Unit	\$3,390.00	Water Cooled Chiller	Per Unit	\$1,560.00	Room Air Conditioner (12 EER)	Per Unit	\$20.00	CAC <65 kBtu	Per Unit	\$146.00	CAC 65<135 kBtu	Per Unit	\$350.00	CAC 135<240 kBtu	Per Unit	\$700.00
Measure	Unit	Incentive per Unit 2021-2022																							
Wall Switch Occupancy Sensor	Per Unit	\$16.50																							
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CAC <65 kBtu	Per Unit	\$146.00																							
CAC 65<135 kBtu	Per Unit	\$350.00																							
CAC 135<240 kBtu	Per Unit	\$700.00																							

APPENDIX A: Program Descriptions

CAC 240<760 kBtu	Per Unit	\$875.00
CAC ≥760 kBtu	Per Unit	\$2,275.00
Heat Pump <65 kBtu	Per Unit	\$350.00
Heat Pump 65<135 kBtu	Per Unit	\$700.00
Heat Pump 135<240 kBtu	Per Unit	\$875.00
Heat Pump ≥240 kBtu	Per Unit	\$2,275.00
Packaged Terminal Air Conditioner	Per Unit	\$30.00
Packaged Terminal Heat Pump	Per Unit	\$30.00
Guest Room Energy Management	Per Unit	\$125.00
Variable Speed Drive - Chilled Water Pump	Per Unit	\$500.00
Variable Speed Drive - Hot Water Pump	Per Unit	\$500.00
Demand Controlled Ventilation	Per Unit	\$600.00
ENERGY STAR Steamer	Per Unit	\$750.00
ENERGY STAR Dishwasher	Per Unit	\$30.00
ENERGY STAR Hot Food Holding Cabinets	Per Unit	\$500.00
ENERGY STAR Ice Maker (2018)	Per Unit	\$30.00
ENERGY STAR Electric Convection Oven	Per Unit	\$400.00
ENERGY STAR Electric Fryer	Per Unit	\$200.00
Vending Machine	Per Unit	\$150.00
Evaporator Fan Control	Per Unit	\$87.30
Strip Curtain for Walk-In Cooler/Freezer	Per Unit	\$64.39
Night Covers for Open Refrigerated Display Cases	Per Unit	\$175.00
Door Heater Controls	Per Unit	\$125.00
Refrigeration Economizer	Per Unit	\$800.00
Directional LED Bulb (<15W)	Per Bulb	\$0.50
Directional LED Bulb (≥15W)	Per Bulb	\$0.50
High Bay Fluorescent Fixture (HP T8 >4 lamps)	Per Unit	\$22.50
High Bay Fluorescent Fixture (HP T8 ≤4 lamps)	Per Unit	\$22.50
High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4 lamps)	Per Unit	\$30.00
High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 ≤4 lamps)	Per Unit	\$30.00
LED High & Low-Bay Fixture	Per Unit	\$41.10
Low Wattage T8 Lamp	Per Unit	\$4.50
LED Direct Linear Ambient fixtures ≤35W	Per Unit	\$15.60
LED Direct Linear Ambient fixtures 36W-60W	Per Unit	\$39.30
LED Direct Linear Ambient fixtures 61W-100W	Per Unit	\$51.90
LED linear replacement lamps (Type A or AB) 2 foot	Per Unit	\$3.90
LED linear replacement lamps (Type A or AB) 4 foot	Per Unit	\$4.50

APPENDIX A: Program Descriptions

LED Direct Linear Ambient fixtures <=35W (Exterior)	Per Unit	\$15.60
LED Direct Linear Ambient fixtures 36W-60W (Exterior)	Per Unit	\$39.30
LED Direct Linear Ambient fixtures 61W-100W (Exterior)	Per Unit	\$51.90
LED linear replacement lamps (Type A or AB) 2 foot (Exterior)	Per Unit	\$3.90
LED linear replacement lamps (Type A or AB) 4 foot (Exterior)	Per Unit	\$4.50
LED Exit Sign	Per Unit	\$9.75
LED Flood Light (≥15W)	Per Unit	\$24.00
LED Recessed Fixture (1x4)	Per Unit	\$22.50
LED Recessed Fixture (2x2)	Per Unit	\$15.90
LED Recessed Fixture (2x4)	Per Unit	\$22.80
Lighting Optimization - Remove 4ft Lamp from T8 System	Per Unit	\$3.60
Lighting Optimization - Remove 8ft Lamp from T8 System	Per Unit	\$4.80
Omnidirectional LED Bulb (<10W)	Per Bulb	\$0.44
Omnidirectional LED Bulb (≥10W)	Per Bulb	\$0.44
LED Parking Garage/Canopy (<45W)	Per Unit	\$24.00
LED Parking Garage/Canopy (45-75W)	Per Unit	\$74.40
LED Parking Garage/Canopy (≥75W)	Per Unit	\$169.80
LED Wall Mounted Area Lights (<30W)	Per Unit	\$24.00
LED Wall Mounted Area Lights (30-75W)	Per Unit	\$74.40
LED Wall Mounted Area Lights (≥75W)	Per Unit	\$169.80
LED Refrigerator Case Light	Per Unit	\$3.30
Photocell Occupancy Sensor	Per Unit	\$16.50
VFD Fans and Blowers	Per Unit	\$814.80
Zero-Loss Condensate Drain	Per Unit	\$73.20
Compressed Air Nozzle	Per Unit	\$12.60
Custom Project	Avg Per Project	\$0.10 per kWh saved
Large Custom Project	Avg Per Project	\$0.10 per kWh saved

Please note that for planning purposes, average unit sizes were assumed in the development of incremental costs and savings for measures. Actual implementation may vary.

Please note that for the food service equipment, Liberty Empire will offer the standard size equipment, but this is subject to change as the program is implemented and evaluated.

APPENDIX A: Program Descriptions

Estimated Participation	Measure	Total
	Wall Switch Occupancy Sensor	40
	Air Cooled Chiller	1
	Water Cooled Chiller	3
	Room Air Conditioner (12 EER)	3
	CAC <65 kBtu	4
	CAC 65<135 kBtu	8
	CAC 135<240 kBtu	5
	CAC 240<760 kBtu	1
	CAC ≥760 kBtu	1
	Heat Pump <65 kBtu	7
	Heat Pump 65<135 kBtu	13
	Heat Pump 135<240 kBtu	1
	Heat Pump ≥240 kBtu	1
	Packaged Terminal Air Conditioner	1
	Packaged Terminal Heat Pump	7
	Guest Room Energy Management	3
	Variable Speed Drive - Chilled Water Pump	11
	Variable Speed Drive - Hot Water Pump	11
	Demand Controlled Ventilation	3
	ENERGY STAR Steamer	1
	ENERGY STAR Dishwasher	1
	ENERGY STAR Hot Food Holding Cabinets	1
	ENERGY STAR Ice Maker (2018)	1
	ENERGY STAR Electric Convection Oven	1
	ENERGY STAR Electric Fryer	1
	Vending Machine	1
	Evaporator Fan Control	11
	Strip Curtain for Walk-In Cooler/Freezer	3
	Night Covers for Open Refrigerated Display Cases	1
	Door Heater Controls	3
	Refrigeration Economizer	13
	Directional LED Bulb (<15W)	440
	Directional LED Bulb (≥15W)	257
	High Bay Fluorescent Fixture (HP T8 >4 lamps)	7
	High Bay Fluorescent Fixture (HP T8 ≤4 lamps)	9
	High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4 lamps)	44
	High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 ≤4 lamps)	12
	LED High & Low-Bay Fixture	3
	Low Wattage T8 Lamp	15
	LED Direct Linear Ambient fixtures ≤35W	3
	LED Direct Linear Ambient fixtures 36W-60W	3
	LED Direct Linear Ambient fixtures 61W-100W	3
	LED linear replacement lamps (Type A or AB) 2 foot	8
	LED linear replacement lamps (Type A or AB) 4 foot	4
	LED Direct Linear Ambient fixtures ≤35W (Exterior)	3
	LED Direct Linear Ambient fixtures 36W-60W (Exterior)	3
	LED Direct Linear Ambient fixtures 61W-100W (Exterior)	3
	LED linear replacement lamps (Type A or AB) 2 foot (Exterior)	8
	LED linear replacement lamps (Type A or AB) 4 foot (Exterior)	4

APPENDIX A: Program Descriptions

	LED Exit Sign	37												
	LED Flood Light ($\geq 15W$)	4												
	LED Recessed Fixture (1x4)	27												
	LED Recessed Fixture (2x2)	111												
	LED Recessed Fixture (2x4)	165												
	Lighting Optimization - Remove 4ft Lamp from T8 System	1												
	Lighting Optimization - Remove 8ft Lamp from T8 System	1												
	Omnidirectional LED Bulb ($< 10W$)	440												
	Omnidirectional LED Bulb ($\geq 10W$)	257												
	LED Parking Garage/Canopy ($< 45W$)	1												
	LED Parking Garage/Canopy (45-75W)	8												
	LED Parking Garage/Canopy ($\geq 75W$)	7												
	LED Wall Mounted Area Lights ($< 30W$)	23												
	LED Wall Mounted Area Lights (30-75W)	111												
	LED Wall Mounted Area Lights ($\geq 75W$)	220												
	LED Refrigerator Case Light	8												
	Photocell Occupancy Sensor	1												
	VFD Fans and Blowers	13												
	Zero-Loss Condensate Drain	3												
	Compressed Air Nozzle	3												
Custom Project	123													
Estimated Savings	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 50%;">Net MWh Savings</th> <th style="width: 50%;">Net MW Savings</th> </tr> </thead> <tbody> <tr> <td>Total</td> <td>Total</td> </tr> <tr> <td>11,705</td> <td>1.294</td> </tr> </tbody> </table>		Net MWh Savings	Net MW Savings	Total	Total	11,705	1.294						
	Net MWh Savings	Net MW Savings												
	Total	Total												
	11,705	1.294												
Estimated Budget	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 50%;">Budget Category</th> <th style="width: 50%;">Total</th> </tr> </thead> <tbody> <tr> <td>Incentives</td> <td>\$1,413,457</td> </tr> <tr> <td>Marketing</td> <td>\$30,965</td> </tr> <tr> <td>Administration</td> <td>\$121,555</td> </tr> <tr> <td>EM&V</td> <td>\$0</td> </tr> <tr> <td>Total</td> <td>\$1,465,977</td> </tr> </tbody> </table>		Budget Category	Total	Incentives	\$1,413,457	Marketing	\$30,965	Administration	\$121,555	EM&V	\$0	Total	\$1,465,977
	Budget Category	Total												
	Incentives	\$1,413,457												
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Total	\$1,465,977													
Cost-Effectiveness	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th style="width: 50%;">Test</th> <th style="width: 50%;">Total</th> </tr> </thead> <tbody> <tr> <td>TRC</td> <td>1.31</td> </tr> </tbody> </table>		Test	Total	TRC	1.31								
	Test	Total												
TRC	1.31													

APPENDIX B: MEASURE SAVINGS TABLES

Residential Program Measure Tables

Table C-1 Efficient Products

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
In Store POS	LED	Lighting	14.92	0.00	0.00	0.00	19	\$1.45	1 bulb	ARK TRM v8.1	IL TRM v9
In Store POS	Specialty LED	Lighting	23.86	0.00	0.00	0.00	19	\$1.65	1 bulb	ARK TRM v8.1	IL TRM v9
In Store POS	ENERGY STAR Dehumidifier	Appliances	201.03	0.05	0.00	0.00	12	\$10.00	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	ENERGY STAR Air Purifier	Appliances	486.67	0.06	0.00	0.00	9	\$22.33	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	Smart Power Strip 5-Plug	Appliances	169.47	0.03	0.00	0.00	10	\$10.00	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	Advanced Thermostat (Unknown)	HVAC	343.77	0.18	69.19	0.00	10	\$125.00	1 Unit	Electric: AMMO MEEIA Gas: IL TRM v9	Electric: AMMO MEEIA Gas: IL TRM v9
In Store POS	ENERGY STAR Bathroom Exhaust Fan	HVAC	3.65	0.00	0.00	0.00	19	\$43.50	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	ENERGY STAR Ceiling Fan	HVAC	63.19	0.02	0.00	0.00	10	\$46.00	1 Unit	IL TRM v9	IL TRM v9
In Store POS	Faucet Aerator (Kitchen)	Hot Water	33.90	0.00	0.00	359.00	10	\$3.00	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	Faucet Aerator (Bath)	Hot Water	33.90	0.00	0.00	359.00	10	\$3.00	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	Low Flow Showerhead	Hot Water	140.60	0.01	0.00	3053.00	10	\$7.00	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	Faucet Aerator (Kitchen) (Gas)	Hot Water	0.00	0.00	1.43	359.00	10	\$3.00	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	Faucet Aerator (Bath) (Gas)	Hot Water	0.00	0.00	1.43	359.00	10	\$3.00	1 Unit	ARK TRM v8.1	IL TRM v9
In Store POS	Low Flow Showerhead (Gas)	Hot Water	0.00	0.00	13.36	3053.00	10	\$7.00	1 Unit	ARK TRM v8.1	IL TRM v9
Online POS	LED	Lighting	14.92	0.00	0.00	0.00	19	\$1.45	1 bulb	ARK TRM v8.1	IL TRM v9
Online POS	Specialty LED	Lighting	23.86	0.00	0.00	0.00	19	\$1.65	1 bulb	ARK TRM v8.1	IL TRM v9

Table C2 Low Income Multifamily

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
Prescriptive	Audit	0	0.00	0.00	0.00	0.00	0	\$-	1 Unit	-	
Prescriptive	LED	Lighting	14.92	0.00	0.00	0.00	19	\$1.45	1 Bulb	ARK TRM v8.1	IL TRM v9
Prescriptive	Faucet Aerator (Kitchen)	Hot Water	75.23	0.01	0.00	766.50	10	\$8.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Faucet Aerator (Bath)	Hot Water	75.23	0.01	0.00	766.50	10	\$8.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Low Flow Showerhead	Hot Water	140.60	0.01	0.00	3053.00	10	\$12.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Faucet Aerator (Kitchen) (Gas)	Hot Water	0.00	0.00	2.57	766.50	10	\$8.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Faucet Aerator (Bath) (Gas)	Hot Water	0.00	0.00	2.57	766.50	10	\$8.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Low Flow Showerhead (Gas)	Hot Water	0.00	0.00	13.36	3053.00	10	\$12.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Hot Water Pipe Insulation	Hot Water	20.28	0.00	0.00	0.00	10	\$15.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Water Heater Wrap	Hot Water	76.00	0.01	0.00	0.00	13	\$35.00	1 Unit	ARK TRM v8.1	Mid-A TRM v9
Prescriptive	Air Sealing	Shell	1.07	0.00	0.00	0.00	11	\$0.58	1500 sq ft	ARK TRM v8.1	Michigan TRM
Prescriptive	Air Sealing (Gas)	Shell	0.11	0.00	0.04	0.00	11	\$0.58	1500 sq ft	ARK TRM v8.1	Michigan TRM
Prescriptive	Advanced Thermostat	HVAC	793.43	0.18	0.00	0.00	10	\$125.00	1 Unit	AMMO MEEIA	AMMO MEEIA
Prescriptive	Advanced Thermostat (Gas)	HVAC	212.09	0.18	53.38	0.00	10	\$125.00	1 Unit	Electric: AMMO MEEIA Gas: IL TRM v9	Electric: AMMO MEEIA Gas: IL TRM v9
Prescriptive	Smart Power Strip 5-Plug	Appliances	169.47	0.03	0.00	0.00	10	\$10.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Water Heater - Temperature Set Back	Hot Water	81.56	0.01	0.00	0.00	2	\$5.00	1 Unit	IL TRM v9	IL TRM v9

Table C-3 HVAC Rebate

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
Rebates	Central Air Conditioner (SEER 15)	HVAC	223.71	0.15	0.00	0.00	19	\$108.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Central Air Conditioner (SEER 16)	HVAC	419.46	0.25	0.00	0.00	19	\$221.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Central Air Conditioner (SEER 17)	HVAC	592.18	0.25	0.00	0.00	19	\$620.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Central Air Conditioner (SEER 18)	HVAC	745.71	0.25	0.00	0.00	19	\$620.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Central Air Conditioner (SEER 19)	HVAC	883.08	0.25	0.00	0.00	19	\$620.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Central Air Conditioner (SEER 20+)	HVAC	1006.71	0.25	0.00	0.00	19	\$620.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Air Source Heat Pump (SEER 15)	HVAC	718.18	0.15	0.00	0.00	16	\$303.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Air Source Heat Pump (SEER 16)	HVAC	1353.46	0.25	0.00	0.00	16	\$438.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Air Source Heat Pump (SEER 17)	HVAC	1919.45	0.25	0.00	0.00	16	\$724.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Air Source Heat Pump (SEER 18)	HVAC	2426.91	0.25	0.00	0.00	16	\$724.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Air Source Heat Pump (SEER 19)	HVAC	2564.28	0.25	0.00	0.00	16	\$724.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Air Source Heat Pump (SEER 20+)	HVAC	2687.91	0.25	0.00	0.00	16	\$724.00	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Mini-Split Heat Pump (SEER 15)	HVAC	582.20	0.21	0.00	0.00	16	\$113.67	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Mini-Split Heat Pump (SEER 16)	HVAC	701.82	0.27	0.00	0.00	16	\$113.67	1 Unit	ARK TRM v8.1	IL TRM v9

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
Rebates	Mini-Split Heat Pump (SEER 17)	HVAC	1047.70	0.27	0.00	0.00	16	\$113.67	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Mini-Split Heat Pump (SEER 18)	HVAC	1357.82	0.27	0.00	0.00	16	\$410.67	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Mini-Split Heat Pump (SEER 19)	HVAC	1441.77	0.27	0.00	0.00	16	\$410.67	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Mini-Split Heat Pump (SEER 20+)	HVAC	1517.32	0.27	0.00	0.00	16	\$410.67	1 Unit	ARK TRM v8.1	IL TRM v9
Rebates	Geothermal (SEER 20+)	HVAC	3828.64	0.95	0.00	0.00	25	\$7,728.00	1 Unit	ENERGY STAR	ENERGY STAR

Table C-4 Whole Home Energy

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
PAYS	LED	Lighting	14.92	0.00	0.00	0.00	19	\$1.45	1 Bulb	ARK TRM v8.1	IL TRM v9
PAYS	Faucet Aerator (Kitchen)	Hot Water	33.90	0.00	0.00	359.00	10	\$3.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Faucet Aerator (Bath)	Hot Water	33.90	0.00	0.00	359.00	10	\$3.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Low Flow Showerhead	Hot Water	140.60	0.01	0.00	3053.00	10	\$7.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Faucet Aerator (Kitchen) (Gas)	Hot Water	0.00	0.00	1.43	359.00	10	\$3.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Faucet Aerator (Bath) (Gas)	Hot Water	0.00	0.00	1.43	359.00	10	\$3.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Low Flow Showerhead (Gas)	Hot Water	0.00	0.00	13.36	3053.00	10	\$7.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Hot Water Pipe Insulation	Hot Water	20.28	0.00	0.00	0.00	10	\$15.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Water Heater Wrap	Hot Water	76.00	0.01	0.00	0.00	13	\$34.00	1 Unit	ARK TRM v8.1	Mid-A TRM v9
PAYS	Air Sealing	Shell	17.13	0.00	0.00	0.00	11	\$0.58	1500 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Attic Insulation R-38	Shell	3.14	0.00	0.00	0.00	20	\$0.58	900 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Wall Insulation R-13	Shell	3.42	0.00	0.00	0.00	20	\$0.15	900 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Floor Insulation R-19	Shell	1.19	0.00	0.00	0.00	20	\$0.27	375 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Duct Installation & Sealing	Shell	2504.80	1.67	0.00	0.00	18	\$448.80	1 home	ARK TRM v8.1	IRP Model
PAYS	ENERGY STAR Windows	Shell	13.05	0.00	0.00	0.00	20	\$4.28	864 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Air Sealing (Gas)	Shell	17.13	0.00	0.69	0.00	11	\$0.58	1500 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Attic Insulation R-38 (Gas)	Shell	0.59	0.00	0.11	0.00	20	\$0.58	900 sq ft	ARK TRM v8.1	Michigan TRM

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
PAYS	Wall Insulation R-13 (Gas)	Shell	0.53	0.00	0.27	0.00	20	\$0.15	900 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Floor Insulation R-19 (Gas)	Shell	-0.14	0.00	0.06	0.00	20	\$0.27	375 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Duct Installation & Sealing (Gas)	Shell	1136.10	0.76	59.87	0.00	18	\$448.80	1 home	ARK TRM v8.1	Michigan TRM
PAYS	ENERGY STAR Windows (Gas)	Shell	4.88	0.00	0.36	0.00	20	\$4.28	864 sq ft	ARK TRM v8.1	Michigan TRM
PAYS	Central Air Conditioner (SEER 15)	HVAC	223.71	0.15	0.00	0.00	19	\$108.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Central Air Conditioner (SEER 16)	HVAC	419.46	0.25	0.00	0.00	19	\$221.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Central Air Conditioner (SEER 17)	HVAC	592.18	0.25	0.00	0.00	19	\$620.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Central Air Conditioner (SEER 18)	HVAC	745.71	0.25	0.00	0.00	19	\$620.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Central Air Conditioner (SEER 19)	HVAC	883.08	0.25	0.00	0.00	19	\$620.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Central Air Conditioner (SEER 20+)	HVAC	1006.71	0.25	0.00	0.00	19	\$620.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Air Source Heat Pump (SEER 15)	HVAC	718.18	0.15	0.00	0.00	16	\$453.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Air Source Heat Pump (SEER 16)	HVAC	1353.46	0.25	0.00	0.00	16	\$588.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Air Source Heat Pump (SEER 17)	HVAC	1919.45	0.25	0.00	0.00	16	\$874.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Air Source Heat Pump (SEER 18)	HVAC	2426.91	0.25	0.00	0.00	16	\$874.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Air Source Heat Pump (SEER 19)	HVAC	2564.28	0.25	0.00	0.00	16	\$874.00	1 Unit	ARK TRM v8.1	IL TRM v9

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
PAYS	Air Source Heat Pump (SEER 20+)	HVAC	2687.91	0.25	0.00	0.00	16	\$874.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Mini-Split Heat Pump (SEER 15)	HVAC	582.20	0.21	0.00	0.00	16	\$113.67	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Mini-Split Heat Pump (SEER 16)	HVAC	701.82	0.27	0.00	0.00	16	\$113.67	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Mini-Split Heat Pump (SEER 17)	HVAC	1047.70	0.27	0.00	0.00	16	\$113.67	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Mini-Split Heat Pump (SEER 18)	HVAC	1357.82	0.27	0.00	0.00	16	\$410.67	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Mini-Split Heat Pump (SEER 19)	HVAC	1441.77	0.27	0.00	0.00	16	\$410.67	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Mini-Split Heat Pump (SEER 20+)	HVAC	1517.32	0.27	0.00	0.00	16	\$410.67	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Geothermal (SEER 20+)	HVAC	3828.64	0.95	0.00	0.00	25	\$7,728.00	1 Unit	ENERGY STAR	ENERGY STAR
PAYS	Advanced Thermostat	HVAC	1120.93	0.18	0.00	0.00	10	\$125.00	1 Unit	AMMO MEEIA	AMMO MEEIA
PAYS	Advanced Thermostat (Gas)	HVAC	226.56	0.18	79.26	0.00	10	\$125.00	1 Unit	Electric: AMMO MEEIA Gas: IL TRM v9	Electric: AMMO MEEIA Gas: IL TRM v9
PAYS	Furnace Blower Motor	HVAC	690.00	0.26	0.00	0.00	6	\$322.00	1 Unit	IL TRM v9	IL TRM v9
PAYS	Heat Pump Water Heater ≤55 gallons	Hot Water	3042.83	0.27	0.00	0.00	10	\$1,199.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Heat Pump Water Heater >55 gallons	Hot Water	595.30	0.05	0.00	0.00	10	\$1,797.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	ENERGY STAR Dehumidifier	Appliances	201.03	0.05	0.00	0.00	12	\$10.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	ENERGY STAR Air Purifier	Appliances	486.67	0.06	0.00	0.00	9	\$22.33	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	ENERGY STAR Refrigerator	Appliances	117.58	0.02	0.00	0.00	17	\$40.00	1 Unit	ARK TRM v8.1	IL TRM v9

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
PAYS	Smart Power Strip 5-Plug	Appliances	169.47	0.03	0.00	0.00	10	\$10.00	1 Unit	ARK TRM v8.1	IL TRM v9
PAYS	Water Heater - Temperature Set Back	Hot Water	81.56	0.01	0.00	0.00	2	\$5.00	1 Unit	IL TRM v9	IL TRM v9

Commercial Program Measure Tables

Table C-5 SBDI

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
SBDI	SBDI Project	-	45,617.50	5.65	0.00	0.00	15	\$11,632.46	1 Project	-	-

Table C-6 Commercial Program

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
Prescriptive	Wall Switch Occupancy Sensor	Prescriptive	73.57	0.06	0.00	0.00	8	\$51.24	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Air Cooled Chiller	Prescriptive	19809.81	21.70	0.00	0.00	20	\$11,300.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Water Cooled Chiller	Prescriptive	6851.50	5.54	0.00	0.00	20	\$5,200.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Room Air Conditioner (12 EER)	Prescriptive	18.09	0.07	0.00	0.00	9	\$40.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	CAC <65 kBtu	Prescriptive	539.80	0.57	0.00	0.00	15	\$262.50	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	CAC 65<135 kBtu	Prescriptive	596.62	0.73	0.00	0.00	15	\$525.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	CAC 135<240 kBtu	Prescriptive	981.30	1.40	0.00	0.00	15	\$787.50	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	CAC 240<760 kBtu	Prescriptive	3413.27	4.53	0.00	0.00	15	\$791.67	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	CAC ≥760 kBtu	Prescriptive	3630.09	6.41	0.00	0.00	15	\$1,266.67	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Heat Pump <65 kBtu	Prescriptive	506.73	0.21	0.00	0.00	15	\$416.67	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Heat Pump 65<135 kBtu	Prescriptive	2123.53	0.56	0.00	0.00	15	\$833.33	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Heat Pump 135<240 kBtu	Prescriptive	3475.97	0.47	0.00	0.00	15	\$1,666.67	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Heat Pump ≥240 kBtu	Prescriptive	9497.23	2.25	0.00	0.00	15	\$2,500.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Packaged Terminal Air Conditioner	Prescriptive	223.07	0.20	0.00	0.00	10	\$70.00	1 Unit	ARK TRM v8.1	IL TRM v9

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
Prescriptive	Packaged Terminal Heat Pump	Prescriptive	443.13	0.07	0.00	0.00	10	\$70.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Guest Room Energy Management	Prescriptive	744.00	0.08	0.00	0.00	15	\$260.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Variable Speed Drive - Chilled Water Pump	Prescriptive	845.51	0.00	0.00	0.00	15	\$1,330.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Variable Speed Drive - Hot Water Pump	Prescriptive	4383.87	0.00	0.00	0.00	15	\$1,330.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Demand Controlled Ventilation	Prescriptive	4283.64	0.59	0.00	0.00	15	\$1,500.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	ENERGY STAR Steamer	Prescriptive	7796.30	1.50	0.00	0.00	12	\$2,490.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	ENERGY STAR Dishwasher	Prescriptive	2159.82	0.28	0.00	0.00	10	\$50.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	ENERGY STAR Hot Food Holding Cabinets	Prescriptive	3942.00	0.29	0.00	0.00	12	\$1,800.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	ENERGY STAR Ice Maker (2018)	Prescriptive	629.63	0.07	0.00	0.00	10	\$60.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	ENERGY STAR Electric Convection Oven	Prescriptive	2083.14	0.40	0.00	0.00	10	\$1,000.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	ENERGY STAR Electric Fryer	Prescriptive	1934.16	0.37	0.00	0.00	12	\$1,200.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Vending Machine	Prescriptive	95.30	0.00	0.00	0.00	14	\$500.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Evaporator Fan Control	Prescriptive	1901.80	0.22	0.00	0.00	16	\$291.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Strip Curtain for Walk-In Cooler/Freezer	Prescriptive	666.22	1.60	0.00	0.00	4	\$214.62	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Night Covers for Open Refrigerated Display Cases	Prescriptive	182.00	0.00	0.00	0.00	5	\$42.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	Door Heater Controls	Prescriptive	219.00	0.00	0.00	0.00	12	\$200.00	1 Unit	ARK TRM v8.1	IL TRM v9

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
Prescriptive	Refrigeration Economizer	Prescriptive	1128.29	0.13	0.00	0.00	15	\$88.00	1 Unit	ARK TRM v8.1	PSCo 2019-2020 Plan
Prescriptive	Directional LED Bulb (<15W)	Prescriptive	77.52	0.03	0.00	0.00	10	\$1.65	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Directional LED Bulb (≥15W)	Prescriptive	90.52	0.03	0.00	0.00	10	\$1.65	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	High Bay Fluorescent Fixture (HP T8 >4 lamps)	Prescriptive	854.67	0.20	0.00	0.00	12	\$75.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	High Bay Fluorescent Fixture (HP T8 ≤4 lamps)	Prescriptive	539.37	0.13	0.00	0.00	12	\$75.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4 lamps)	Prescriptive	353.98	0.08	0.00	0.00	12	\$100.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 ≤4 lamps)	Prescriptive	189.76	0.05	0.00	0.00	12	\$100.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED High & Low-Bay Fixture	Prescriptive	352.16	0.08	0.00	0.00	15	\$137.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Low Wattage T8 Lamp	Prescriptive	24.09	0.01	0.00	0.00	12	\$15.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Direct Linear Ambient fixtures ≤35W	Prescriptive	90.87	0.02	0.00	0.00	15	\$52.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Direct Linear Ambient fixtures 36W-60W	Prescriptive	232.46	0.06	0.00	0.00	15	\$131.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Direct Linear Ambient fixtures 61W-100W	Prescriptive	354.71	0.08	0.00	0.00	15	\$173.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED linear replacement lamps (Type A or AB) 2 foot	Prescriptive	22.26	0.01	0.00	0.00	10	\$13.00	1 Unit	IL TRM v9	IL TRM v9

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
Prescriptive	LED linear replacement lamps (Type A or AB) 4 foot	Prescriptive	45.25	0.01	0.00	0.00	10	\$15.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Direct Linear Ambient fixtures <=35W (Exterior)	Prescriptive	107.17	0.00	0.00	0.00	15	\$52.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Direct Linear Ambient fixtures 36W-60W (Exterior)	Prescriptive	274.16	0.00	0.00	0.00	15	\$131.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Direct Linear Ambient fixtures 61W-100W (Exterior)	Prescriptive	418.35	0.00	0.00	0.00	15	\$173.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED linear replacement lamps (Type A or AB) 2 foot (Exterior)	Prescriptive	26.25	0.00	0.00	0.00	10	\$13.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED linear replacement lamps (Type A or AB) 4 foot (Exterior)	Prescriptive	53.37	0.00	0.00	0.00	10	\$15.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Exit Sign	Prescriptive	47.34	0.01	0.00	0.00	5	\$32.50	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Flood Light (≥15W)	Prescriptive	342.09	0.00	0.00	0.00	15	\$80.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Recessed Fixture (1x4)	Prescriptive	85.03	0.02	0.00	0.00	15	\$75.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Recessed Fixture (2x2)	Prescriptive	115.32	0.03	0.00	0.00	15	\$53.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Recessed Fixture (2x4)	Prescriptive	144.88	0.03	0.00	0.00	15	\$76.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Lighting Optimization - Remove 4ft Lamp from T8 System	Prescriptive	70.80	0.02	0.00	0.00	11	\$12.00	1 Unit	IL TRM v9	IL TRM v9

Subprogram	Measure	End Use	Gross Annual Electric Savings (kWh)	Gross Demand Savings (kW)	Gross Gas Savings (Therm)	Gross Water Savings (Gal)	EUL	Incremental Cost	Unit	Savings Source	Incremental Cost Source
Prescriptive	Lighting Optimization - Remove 8ft Lamp from T8 System	Prescriptive	140.86	0.03	0.00	0.00	11	\$16.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Omnidirectional LED Bulb (<10W)	Prescriptive	54.71	0.02	0.00	0.00	15	\$1.45	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Omnidirectional LED Bulb (≥10W)	Prescriptive	77.52	0.03	0.00	0.00	15	\$1.45	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Parking Garage/Canopy (<45W)	Prescriptive	696.90	0.08	0.00	0.00	15	\$80.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Parking Garage/Canopy (45-75W)	Prescriptive	1154.48	0.13	0.00	0.00	15	\$248.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Parking Garage/Canopy (≥75W)	Prescriptive	1536.68	0.18	0.00	0.00	15	\$566.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Wall Mounted Area Lights (<30W)	Prescriptive	342.09	0.05	0.00	0.00	15	\$80.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Wall Mounted Area Lights (30-75W)	Prescriptive	566.71	0.00	0.00	0.00	15	\$248.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Wall Mounted Area Lights (≥75W)	Prescriptive	754.32	0.00	0.00	0.00	15	\$566.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	LED Refrigerator Case Light	Prescriptive	27.73	0.01	0.00	0.00	15	\$11.00	12 ft	IL TRM v9	IL TRM v9
Prescriptive	Photocell Occupancy Sensor	Prescriptive	94.87	0.03	0.00	0.00	15	\$55.00	1 Unit	ARK TRM v8.1	IL TRM v9
Prescriptive	VFD Fans and Blowers	Prescriptive	9493.83	1.48	0.00	0.00	13	\$2,716.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Zero-Loss Condensate Drain	Prescriptive	1969.66	0.30	0.00	0.00	10	\$244.00	1 Unit	IL TRM v9	IL TRM v9
Prescriptive	Compressed Air Nozzle	Prescriptive	449.03	0.07	0.00	0.00	15	\$42.00	1 Unit	IL TRM v9	IL TRM v9
Custom	C&I Custom Rebate	Custom	91235.00	11.30	0.00	0.00	15	\$18,247.00	1 Unit	Estimate	Estimate
Custom	Large C&I Custom Rebate	Custom	1003585.00	0.00	0.00	0.00	15	\$200,717.00	1 Unit	Estimate	Estimate

APPENDIX C: Customer Bill Example



Date Mailed: 03/03/2021
 1 Account Number: 000011-11-0



TOTAL AMOUNT DUE	\$135.24
Due 3/24/21, add late fee of	\$0.68
After 3/24/21, Pay	\$135.92
TOTAL AMOUNT ENCLOSED	\$ _____

2 
 JOHN A. CUSTOMER
 101 MAIN STREET
 ANYWHERE, MO 11111

3 Remit to:
 LIBERTY
 PO BOX 650689
 DALLAS, TX 75265-0689

1294820394000000880000000088441

To speak to a Liberty Customer Service Representative or to pay your bill by phone, please dial 1-800-206-2300

Liberty (www.libertyutilities.com)
 602 S. Joplin Avenue
 Joplin, MO 64801-2337

4 Account Number: 000011-11-0

Summary as of 03/02/21:

5	Previous Bill	02/11/21		\$162.77	
	Payment Received	03/01/21	Check	(\$162.77)	Thank you
	Balance Forward			\$0.00	
	Electric		000011-11-001	\$135.24	***
6	TOTAL AMOUNT DUE			\$135.24	

7 If you have a question or problem with billing or service or need help managing your charges with a delayed payment agreement, we welcome your call.

To use Liberty automated account information by phone, use the 11-digit location number on the back of your statement.

Pay your bill with a credit or debit card by phone by simply calling 800-206-2300. Pay your bill online at www.libertyutilities.com. Choose the Pay Your Bill option and select Make Payment.

When making a payment, use the nine-digit account number on the front of your statement.

To report an electric outage, use the 11-digit location number on the back of your statement.

Project Help - - - Neighbors Helping Neighbors

You may qualify for financial assistance with your Liberty bill. Visit www.libertyutilities.com and select Financial Help for options that may be right for you.

*** see Account Detail following message(s).

- 1) Nine-digit account number needed to make a payment.
- 2) Customer and billing location information.
- 3) Liberty mailing address to remit payment. Information on additional payment methods can be found on the company's website, www.libertyutilities.com.
- 4) Customer account number.
- 5) Previous balance, recent payments, and remaining balance.
- 6) Total amount due for current month – detailed explanation on customer charges can be found on the back of the bill.
- 7) This area has important messages from the company.

Account Detail

8	Electric 000011-11-001	9 For Service at 101 Main Street, Anywhere, MO 11111	Rate: RG-Residential
10	Read for: 00118237 From 01/30/21 to 03/01/21 (30 Days), Curr Read - 5690 Prev Read - 4690. Totaling 1,000 Kwh		
11	03/01/21	Customer Charge	1 x 13.00 \$13.00
12	03/01/21	Usage Charge	600kwh x .13006 \$75.21
13	03/01/21	Usage Charge	400kwh x .10574 \$40.37
14	03/01/21	Energy Efficiency Program Cost	1000kwh x .00039 \$0.45
15	03/01/21	Energy Efficiency Investment Cost	1000kwh x X \$X
16	03/01/21	Franchise Fee	\$127.13 x .06383 \$8.11
17	03/01/21	Fuel Charge	1000kwh x .0019 CR \$1.90
	03/01/21	Anywhere County Tax	111.18 x .00875 \$0.97
		18 Current Months Charges:	\$140.01
	03/01/21	19 APP Installment	\$140.01
		20 Billed Charges:	\$140.01
Contract Update			
	APP	21 Status before payment is \$140.01, after payment in full \$6.40. This account will be reevaluated in October.	

- 8) 11-digit location number to report outages or to use automated account information by phone.
- 9) Service address - this is important for customers who have multiple accounts with the company.
- 10) Meter number, previous meter read, current meter read, and usage information.
- 11) The company service includes a fixed monthly customer charge, no matter how much electricity is used.
- 12) The usage charge is for the kilowatt hours (kwh) used by a customer. The charge for each kwh used by a customer from June 16 through September 16 is \$0.13006 per kwh. The charge for electricity for the other eight months of each year is \$0.13006 per kwh for the first 600kwh and \$0.10574 for each kwh thereafter.
- 13) The cost to provide programs for customers to improve the energy efficiency of their homes and businesses.
- 14) The Energy Efficiency Investment Cost is for the recovery of costs associated with delivering and administering the MEEIA energy efficiency programs, which help customers lower their energy consumption and improve the quality of their homes.
- 15) A contractual fee required for the company to use the city public right-of-ways.
- 16) The charge for the difference between fuel and purchased power costs established in the current rate structure and the actual fuel and purchased power costs incurred by the company. This rate changes twice a year. If fuel costs are less than what is established by the current rates, customers will see a credit in the Fuel Charge line. The cost includes no mark-up or profit for the company.
- 17) Taxes, fees, and other assessments.
- 18) Total charges for the billing period.
- 19) APP, average payment plan, is a payment contract that calculates a customer's expected annual usage and divides it into 12 equal payments. Each month one payment installment is due from the customer. At the end of 12 months the actual usage is reviewed and a customer's contract and installments are adjusted for the next 12 months.
- 20) The amount due from the customer by the due date.
- 21) Important information about a customer's payment contract.

NOTICE OF FILING REGARDING LIBERTY-EMPIRE'S NEW ENERGY EFFICIENCY PROGRAMS

On September 15, 2021, The Empire District Electric Company (doing business as Liberty) filed a portfolio of energy efficiency customer programs under the legislative and regulatory framework known as the Missouri Energy Efficiency Investment Act ("MEEIA"). This new portfolio represents an increased investment in offering energy efficiency programs, which help lower the energy consumption and improve the quality of the homes and lives of its residential, commercial, and industrial retail customers.

Liberty's MEEIA Portfolio will replace its existing energy efficiency programs. It will continue the popular Residential HVAC Rebate Program and Custom Commercial and Industrial Rebate Program, as well as introducing new programs:

- Whole Home Energy
 - Allows customers to finance energy efficiency measures in their home on their electric bill, designed to pay for the monthly installments with savings created from the energy efficiency measures.
- Low Income Multi-family
 - Offers free energy audits, installation of low-cost energy efficiency and custom incentives for qualifying measures to select multi-family dwellings.
- Residential Efficiency Products
 - Allows customers to purchase energy efficient products at a discounted rate in retail outlets or an online marketplace hosted by Liberty.
- Small Business Direct Install
 - Allows small business customers to receive a free energy evaluation, as well as free energy efficient upgrades to their establishment.

These programs will be funded by a new line item on the electric bills of all eligible retail customers called the Energy Efficiency Investment Charge ("EEIC"). The EEIC is comprised of three items:

- Program Costs – The combined costs for administration, delivery, and customer incentives of the programs.
- Throughput Disincentive – Reimbursement to the Company for the reduced energy sales created by the energy efficiency programs.
- Earnings Opportunity – An incentive paid to the utility for successful implementation and achievement of energy savings and customer participation goals set by the Missouri Public Service under the provision of the MEEIA Rule.

These three factors will be combined and allocated between residential and non-residential classes, and divided by the retail sales projected for their respective customer sectors. This creates the per-kWh factor charged on customer bills as the EEIC.

APPENDIX E: EO CALCULATION

		Earnings Opportunity Payout	
Metric	Core Performance Metric	Metric Weighting	Target 100%
1	Spend 75% of approved budget	80%	\$ 295,431
2	Spend 75% of the final budget on measures	20%	\$ 73,858
	Total Core EO		\$ 369,289
		Stretch Performance Metric	
3	Residential: Achieve the PAYS program participation goal of 300 participants	7.5%	\$ 27,697
4	Residential: Achieve the Low Income Multifamily participation goal of 500 participants	7.5%	\$ 27,697
5	Commercial : Achieve a custom project participation rate of at least 50% of all participants	7.5%	\$ 27,697
6	Commercial : Have a minimum of 20 SBDI participants install a measure beyond standard direct install measures	7.5%	\$ 27,697
	Total Stretch EO		\$ 110,787
	Total Earnings Opportunity		\$ 480,076

Program	TRC	Total MWh Savings	Total MW Savings	Total Budget
SBDI	1.18	2,258	0.28	\$474,824
C&I Program	1.31	11,705	1.29	\$1,465,977
Business Total	1.29	13,963	1.57	\$1,940,801

Percentage of Total Budget (admin+ Incentives)		57%
Percentage of Savings	77%	
Budget weighting of 40%		40%
Commercial Metric Budget Weighting		0.226489899

Program	TRC	Total MWh Savings	Total MW Savings	Total Budget
Efficient Products	1.28	1,098	0.16	\$358,201
Low Income MF	1.38	209	0.04	\$203,642
HVAC Rebate	1.01	830	0.16	\$415,081
Whole Home Energy	1.28	1,102	0.42	\$509,891
Residential Total	1.21	3,239	0.78	\$1,486,815

Percentage of Budget (admin+ Incentives) 43%

Percentage of Savings 23%

Budget weighting of 40% 40%

Residential Metric Budget Weighting 0.173510101

Residential Efficient Products			Low Income MF		Residential HVAC Rebates		Whole Home Energy Pays		Participation Goal	Participation Weighting for Residential	Participation weighting	Residential Metric Participation Weighting
Proposed Participation Goal	1,133		Proposed Participation Goal	500	Proposed Participation Goal	840	Proposed Participation Goal	292.5	2,766	0.915880113	60%	0.549528068
Online Audit Tool	1,133		Audit	500	Total of all measures		50% of Pays Audit Number					

Measure	Total
Online Audit Tool	1,133
Direct Mail Kit	1,133
LED	13,733
Specialty LED	8,133
ENERGY STAR Dehumidifier	66
ENERGY STAR Air Purifier	66
Smart Power Strip 5-Plug	94
Advanced Thermostat (Electric)	378
Advanced Thermostat (Gas)	133
Advanced Thermostat (Unknown)	245
ENERGY STAR Bathroom Exhaust Fan	26
ENERGY STAR Ceiling Fan	66
Faucet Aerator (Kitchen)	155
Faucet Aerator (Bath)	147
Low Flow Showerhead	188
Faucet Aerator (Kitchen) (Gas)	183
Faucet Aerator (Bath) (Gas)	266
Low Flow Showerhead (Gas)	266
	26,411
	4,545

Measure	Total
Audit	500
LED	3,000
Faucet Aerator (Kitchen)	200
Faucet Aerator (Bath)	200
Low Flow Showerhead	200
Faucet Aerator (Kitchen) (Gas)	300
Faucet Aerator (Bath) (Gas)	300
Low Flow Showerhead (Gas)	300
Hot Water Pipe Insulation	-
Water Heater Wrap	-
Air Sealing	-
Air Sealing (Gas)	-
Advanced Thermostat	100
Advanced Thermostat (Gas)	-
Smart Power Strip 5-Plug (Tier 2)	375
Water Heater – Temperature Set Back	-

Measure	Total
Central Air Conditioner (SEER 15)	84
Central Air Conditioner (SEER 16)	99
Central Air Conditioner (SEER 17)	8
Central Air Conditioner (SEER 18)	4
Central Air Conditioner (SEER 19)	9
Central Air Conditioner (SEER 20+)	5
Air Source Heat Pump (SEER 15)	349
Air Source Heat Pump (SEER 16)	133
Air Source Heat Pump (SEER 17)	39
Air Source Heat Pump (SEER 18)	32
Air Source Heat Pump (SEER 19)	12
Air Source Heat Pump (SEER 20+)	13
Mini-Split Heat Pump (SEER 15)	1
Mini-Split Heat Pump (SEER 16)	4
Mini-Split Heat Pump (SEER 17)	8
Mini-Split Heat Pump (SEER 18)	5
Mini-Split Heat Pump (SEER 19)	4
Mini-Split Heat Pump (SEER 20+)	27
Geothermal (SEER 20+)	4

Measure	Total
PAYS Audit	585
LED	3,510
Faucet Aerator (Kitchen)	234
Faucet Aerator (Bath)	234
Low Flow Showerhead	234
Faucet Aerator (Kitchen) (Gas)	351
Faucet Aerator (Bath) (Gas)	351
Low Flow Showerhead (Gas)	351
Hot Water Pipe Insulation	585
Water Heater Wrap	293
Air Sealing	176
Attic Insulation R-38	88
Wall Insulation R-13	59
Floor Insulation-19	29
Duct Installation & Sealing	117
ENERGY STAR Windows	88
Air Sealing (Gas)	410
Attic Insulation R-38 (Gas)	293
Wall Insulation R-13 (Gas)	176
Floor Insulation-19 (Gas)	29
Duct Installation & Sealing (Gas)	117
ENERGY STAR Windows (Gas)	88
Central Air Conditioner (SEER 15)	29
Central Air Conditioner (SEER 16)	18
Central Air Conditioner (SEER 17)	6
Central Air Conditioner (SEER 18)	6
Central Air Conditioner (SEER 19)	-
Central Air Conditioner (SEER 20+)	-
Air Source Heat Pump (SEER 15)	29
Air Source Heat Pump (SEER 16)	18
Air Source Heat Pump (SEER 17)	29
Air Source Heat Pump (SEER 18)	-
Air Source Heat Pump (SEER 19)	-
Air Source Heat Pump (SEER 20+)	-
Mini-Split Heat Pump (SEER 15)	88
Mini-Split Heat Pump (SEER 16)	117
Mini-Split Heat Pump (SEER 17)	59
Mini-Split Heat Pump (SEER 18)	29
Mini-Split Heat Pump (SEER 19)	12
Mini-Split Heat Pump (SEER 20+)	-
Geothermal (SEER 20+)	-
Advanced Thermostat	176
Advanced Thermostat (Gas)	293
Furnace Blower Motor	-
Heat Pump Water Heater ≤55 gallons	6
Heat Pump Water Heater >55 gallons	-
ENERGY STAR Dehumidifier	12
ENERGY STAR Air Purifier	12
ENERGY STAR Refrigerator	12
Smart Power Strip 5-Plug	439
Water Heater – Temperature Set Back	293

Commercial Participation		SBDI		Participation Goal	Participation Weighting for Commercial	Participation weighting	Commercial Metric Participation Weighting
Participation	194	Participation	60	254	0.084119887	60%	0.050471932
Custom Project	123						
Prescriptive Participants (based on 2020)	71						

Measure	Total
Wall Switch Occupancy Sensor	40
Air Cooled Chiller	1
Water Cooled Chiller	3
Room Air Conditioner (12 EER)	3
CAC <65 kBtu	4
CAC 65<135 kBtu	8
CAC 135<240 kBtu	5
CAC 240<760 kBtu	1
CAC ≥760 kBtu	1
Heat Pump <65 kBtu	7
Heat Pump 65<135 kBtu	13
Heat Pump 135<240 kBtu	1
Heat Pump ≥240 kBtu	1
Packaged Terminal Air Conditioner	1
Packaged Terminal Heat Pump	7
Guest Room Energy Management	3
Variable Speed Drive - Chilled Water Pump	11
Variable Speed Drive - Hot Water Pump	11
Demand Controlled Ventilation	3
ENERGY STAR Steamer	1
ENERGY STAR Dishwasher	1
ENERGY STAR Hot Food Holding Cabinets	1
ENERGY STAR Ice Maker (2018)	1
ENERGY STAR Electric Convection Oven	1
ENERGY STAR Electric Fryer	1
Vending Machine	1
Evaporator Fan Control	11
Strip Curtain for Walk-In Cooler/Freezer	3
Night Covers for Open Refrigerated Display Cases	1
Door Heater Controls	3
Refrigeration Economizer	13
Directional LED Bulb (<15W)	440
Directional LED Bulb (≥15W)	257
High Bay Fluorescent Fixture (HP T8 >4 lamps)	7
High Bay Fluorescent Fixture (HP T8 ≤4 lamps)	9
High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4 lamps)	44
High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 ≤4 lamps)	12
LED High & Low-Bay Fixture	3
Low Wattage T8 Lamp	15
LED Direct Linear Ambient fixtures ≤35W	3
LED Direct Linear Ambient fixtures 36W-60W	3
LED Direct Linear Ambient fixtures 61W-100W	3
LED linear replacement lamps (Type A or AB) 2 foot	8
LED linear replacement lamps (Type A or AB) 4 foot	4
LED Direct Linear Ambient fixtures ≤35W (Exterior)	3
LED Direct Linear Ambient fixtures 36W-60W (Exterior)	3
LED Direct Linear Ambient fixtures 61W-100W (Exterior)	3
LED linear replacement lamps (Type A or AB) 2 foot (Exterior)	8
LED linear replacement lamps (Type A or AB) 4 foot (Exterior)	4
LED Exit Sign	37
LED Flood Light (≥15W)	4
LED Recessed Fixture (1x4)	27
LED Recessed Fixture (2x2)	111
LED Recessed Fixture (2x4)	165
Lighting Optimization - Remove 4ft Lamp from T8 System	1
Lighting Optimization - Remove 8ft Lamp from T8 System	1
Omnidirectional LED Bulb (<10W)	440
Omnidirectional LED Bulb (≥10W)	257
LED Parking Garage/Canopy (<45W)	1
LED Parking Garage/Canopy (45-75W)	8
LED Parking Garage/Canopy (≥75W)	7
LED Wall Mounted Area Lights (<30W)	23
LED Wall Mounted Area Lights (30-75W)	111
LED Wall Mounted Area Lights (≥75W)	220
LED Refrigerator Case Light	8
Photocell Occupancy Sensor	1
VFD Fans and Blowers	13
Zero-Loss Condensate Drain	3
Compressed Air Nozzle	3
Custom Project	123

Measure	Total
SBDI Project	60

Sector	Program	Incentive	Administrati	Marketing	Other	Total Budget
Residential	Pilot Program	\$0	\$0	\$0		\$0
Residential	Efficient Products	\$125,562	\$219,442	\$13,197		\$358,201
Residential	Multifamily	\$75,642	\$25,000	\$3,000		\$103,642
Residential	HVAC Rebate	\$352,525	\$59,577	\$2,979		\$415,081
Residential	Whole Home Energy	\$441,556	\$62,123	\$6,212		\$509,891
Business	SBDI	\$410,558	\$15,000	\$49,267		\$474,824
Business	C&I Program	\$1,413,457	\$121,555	\$30,965		\$1,565,977
Total Residential		\$995,286	\$366,141	\$25,388		\$1,386,815
Total Business		\$1,824,014	\$136,555	\$80,232		\$2,040,801
Portfolio Level	Portfolio Administration		\$222,727			\$222,727
Portfolio Level	Portfolio Marketing			\$111,364		\$111,364
Portfolio Level	Portfolio EM&V				\$185,606	\$185,606
Portfolio Level	Portfolio R&D				\$45,000	\$45,000
Portfolio Level Subtotal			\$222,727	\$111,364	\$230,606	\$564,697
Total Portfolio		\$2,819,300	\$725,424	\$216,984	\$230,606	\$3,992,313

0.706182

\$0.75

\$212,313