STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

IN THE MATTER OF THE VERIFIED PETITION OF INDIANAPOLIS POWER & LIGHT FOR APPROVAL OF DEMAND SIDE MANAGEMENT (DSM) PLAN, INCLUDING ENERGY EFFICIENCY (EE) PROGRAMS, AND ASSOCIATED ACCOUNTING AND RATEMAKING TREATMENT, INCLUDING TIMELY RECOVERY THROUGH IPL'S EXISTING STANDARD CONTRACT RIDER NO. 22 OF ASSOCIATED COSTS INCLUDING PROGRAM OPERATING COSTS, NET LOST REVENUE, AND FINANCIAL INCENTIVES.	)	**CAUSE NO. _____**

PETITIONER'S SUBMISSION OF DIRECT TESTIMONY OF ZAC ELLIOT

Indianapolis Power & Light Company ("IPL" or "Petitioner"), by counsel, hereby submits the direct testimony and attachment of Zac Elliot.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the forgoing was served by electronic transmission on the following:

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Dated this 17th day of May, 2017

Jeffrey M. Peabody

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Petitioner's Exhibit 2

PRE-FILED VERIFIED DIRECT TESTIMONY

OF

ZAC ELLIOT

ON BEHALF OF

INDIANAPOLIS POWER & LIGHT COMPANY

SPONSORING PETITIONER'S ATTACHMENT ZE-1

PRE-FILED VERIFIED DIRECT TESTIMONY OF ZAC ELLIOT

I. Introduction

Q1. Please state your name, employer and business address.

A1. My name is Zac Elliot. I am employed by Indianapolis Power & Light Company ("IPL" or "Company"), One Monument Circle, Indianapolis, Indiana 46204.

Q2. What is your position with IPL?

A2. My title is Manager, Energy Efficiency Programs.

Q3. What are your duties and responsibilities regarding Demand Side Management ("DSM")?

A3. My primary responsibility is to oversee the successful and cost effective implementation of IPL's DSM programs. This responsibility includes program administration, program marketing, oversight of third party program delivery vendors, budget and expenditure tracking, program impact tracking, quality assurance and quality control, and program process improvement.

Q4. Please summarize your education and professional qualifications.

A4. I hold a Bachelor's Degree from Indiana University's College of Arts and Science. I have attended workshops, seminars, and conferences pertaining to planning, implementation, and evaluation of DSM programs, and was an active participant of the Demand Side Management Coordination Committee during Energizing Indiana.

Q5. Have you previously testified before this Commission?

A5. Yes. I have testified in a similar capacity as IPL's DSM Plan witness in Cause Nos. 44328, 44497, and 44792.

Q6. What is the purpose of your testimony in this proceeding?

A6. The purpose of my testimony is to (1) summarize the planning approach which led to the development of the 2018-2020 DSM Implementation Plan (attached hereto as Petitioner's Attachment ZE-1) as proposed in this proceeding; (2) describe the competitive Request for Proposals ("RFP") process used to select 2018-2020 program implementation vendors; and (3) discuss the proposed 2018-2020 DSM Plan programs and associated operating costs.

Q7. What Attachments are you sponsoring in this proceeding?

A7. I am sponsoring the following Attachment which was prepared or assembled by me or under my supervision:

Petitioner's Attachment ZE-1 IPL's 2018-2020 DSM Implementation Plan

Q8. Were these attachments prepared or assembled by you or under your direction and supervision?

A8. Yes.

Q9. Did you submit any workpapers?

A9. Yes. I am providing an electronic version of the DSM Implementation Plan summary as well as the listing of measures included in the programs.

II. DSM Plan Development

Q10. Please summarize the process which led to this filing.

A10. As summarized below, the planning process which led to the development of the 2018-2020 DSM Plan took place over the course of nearly 18 months, and was coordinated by IPL for the purpose of filing and delivering a reasonably achievable plan that meets all the requirements of Section 10 as enacted by SEA 412[1].

- **Market Potential Study ("MPS")** – IPL engaged the consulting firm Applied Energy Group ("AEG") in early 2016 to develop a DSM MPS for the years 2018-2020 with an extended market potential projection for the years 2021-2037.

- **Development of DSM Measure Bundles** – IPL, in conjunction with AEG and Morgan Marketing Partners, developed a bundled measure strategy that paired measures based on two measure attributes: (1) load shape, and (2) levelized cost of conserved energy. This approach provided sufficient granularity such that DSM could be evaluated on a consistent footing with supply side resources in the Integrated Resource Planning ("IRP") model, while also providing sufficiently broad bundles that allowed program design flexibility. These matters are addressed by IPL Witness Erik Miller.

- **IRP modeling** – As discussed by IPL Witness Miller, IPL's resource planning team, in partnership with the consulting firm ABB, input the DSM Measure Bundles into the IRP capacity expansion model on a comparable basis to supply side resources. Bundles of DSM were chosen by the model in an effort to select the optimal mix of supply and demand side resources.

- **RFP development and issuance** – IPL next developed an RFP seeking bids to design and deliver programs consistent with the IRP results for the period 2018-2020.

- **RFP Evaluation** - IPL received and evaluated the RFP responses to select successful bidders to deliver programs for the period 2018-2020.

- **2018-2020 DSM Plan Development –** IPL developed the 2018-2020 DSM Implementation Plan (Petitioner's Attachment ZE-1) after selecting vendors through the competitive bidding process.

Q11. Was there stakeholder involvement in the development of the 2018-2020 DSM Plan?

[1] Senate Enrolled Act 412 was enacted by the Indiana General Assembly and signed by the Governor in 2015, and defines energy efficiency planning rules for electricity suppliers in the Indiana.

A11. Yes. IPL sought stakeholder input to the extent allowed by the timeframe to develop and submit a plan. IPL provided a summary of the 2018-2020 DSM Plan to the OUCC and CAC, and solicited feedback prior to submission of this filing.

III. DSM Program Implementation Vendor RFP.

Q12. Please describe the RFP approach, and how it relates to the IRP results.

A12. IPL co-developed the RFP in consultation with AEG and Morgan Marketing Partners. The overall RFP approach was to present broad program categories, without prescribing specific end use participation, savings, or budget projections that could limit bidders' ability to present innovative program design options. This approach afforded bidders the flexibility to differentiate their respective responses and bid to their organizational strengths, while targeting a portfolio that was overall consistent with the IRP. Bidders were asked to design programs consistent with the IRP net and gross savings projections at the portfolio level. Each program category provided high and low energy savings ranges, which allowed bidders to design programs that met the overall savings projections.

Stakeholders, including the Office of the Utility Consumer Counselor ("OUCC") and Citizens Action Coalition ("CAC") were provided the RFP and invited to provide feedback on the draft in advance of its issuance.

Q13. Describe the timing and process for the RFP issuance and bid evaluation efforts.

A13. The process and timing included:

- **RFP Issuance –** After developing the RFP, IPL issued the solicitation in November of 2016. The RFP was an open bid, meaning that it was

publicly posted and open to any potential vendor whose response met the criteria of the RFP.

- **Response Development –** Bidders had six weeks to submit a response to the RFP.

- **Response Receipt and Evaluation –** IPL received more than 40 distinct responses for individual programs from 15 different program implementation vendors. Given the significant interest and number of responses, the bid evaluation comprised most of the first quarter of 2017. IPL compiled a comprehensive bid summary, which included program level impacts and budgets, and provided the summary to the OUCC and CAC.

- **Follow-Up/Clarifying Questions –** Where necessary, IPL sent follow up questions to bidders (and received responses) in February 2017.

- **Vendor Selection –** Successful bidders were selected, and corresponding communications were sent in March 2017.

Q14. What program categories were presented in the RFP?

A14. As described above, the RFP presented high level program categories without pre-determining the participation, savings, or budgets for each respective program. The program categories, and the high level descriptions from the RFP are in Table ZE-1 below. In an effort to garner innovative program delivery approaches beyond the named program categories, IPL also included a program category called "Vendor Picks."

Table ZE-1

Program Category	High Level Objective
Residential	
Demand Response	Provide installation and maintenance services, data tracking and fulfillment, customer service.
Appliance Recycling	Create energy savings by offering an incentive payment to customers to remove their old, inefficient appliances and recycle them.
Whole Home	Provide holistic energy savings to single family households; this may include, but is not limited to, direct installation services, rebate fulfillment, trade ally engagement and services, direct mail kits, customer information portals, and online stores.

Income Qualified Weatherization	Provide holistic energy savings to income qualified households; this may include, but is not limited to, direct installation services, rebate fulfillment, trade ally engagement and services, direct mail kits, customer information portals, and online stores.
Lighting & Appliances	Increase the market deployment of energy efficient lighting & appliance measures.
Multifamily	Provide holistic energy savings to multifamily households; this may include, but is not limited to, direct installation services, rebate fulfillment, trade ally engagement and services, direct mail kits, customer information portals, and online stores.
School Education	Provide educational curriculum materials and low cost energy efficiency measures to teachers and students.
Res Vendor Picks	Please provide your best, innovative program ideas
Business	
Bus Demand Response	Provide installation and maintenance services, data tracking and fulfillment, customer service
Custom	Program for business customers to drive energy savings through customizable projects that are too complex to fit in the standard prescriptive rebate offering.
Prescriptive	Program for business customers to drive energy savings in their facilities through a wide-ranging list of specific energy efficiency options that address all major end uses and processes.
Small Business	Program for small business customers to drive holistic energy savings.
Bus Vendor Picks	Please provide your best, innovative program ideas

Q15. What were the requirements of the RFP?

A15. Consistent with IPL's intention of receiving innovative and competitive bids, the eligibility requirements were as broad as practical. Nonetheless, certain requirements were included to facilitate the bid evaluation efforts, and to ensure that defensible program characteristics (e.g. energy and demand savings levels) were presented in the bids. The high level RFP requirements included:

- All programs needed to be shown as cost-effective such that the TRC benefit to cost ratio is greater than 1.0.[2] Avoided costs, as well as other relevant economic assumptions, were included in the RFP to facilitate bid comparability and were consistent with those used in the IRP modeling.

[2] An exception was made for the Income Qualified Weatherization program

- Bidders were required to use the Indiana Technical Resource Manual version 2.2 ("IN TRM") as the basis for the savings projections. For those measures that were not considered in the IN TRM, the vendor was encouraged to develop and document alternative values.

- Bidders were encouraged to bid to their respective program categories within the projected savings ranges, but were afforded the opportunity to propose alternative savings projections depending on their independent assessment of the market.

- All program proposals were to be accompanied by a corresponding list of proposed Service Level Agreements ("SLAs") and/or Key Performance Indicators ("KPIs").

- All responses needed to at a minimum include the following:
  - Cover Letter
  - Executive Summary
  - Bidder Background and Relevant Experience
  - Program Descriptions
    - Program Description
    - Program Objectives
    - Target Market
    - Implementation Strategy
    - Outreach & Education Strategy
    - Barriers/risks and strategies
    - Detailed measure list
    - Proposed Service Levels/KPIs
    - Detailed matrix containing the following by program by year:
      - Estimated MWh and MW savings achievable by program, by year
      - Estimated participation by measure
      - Deemed kWh and kW savings by measure utilized
      - Estimated incentive for each proposed measure
      - Program Budget by year
      - Benefit cost results at the program level by year

Q16. Are the DSM Plan savings goals supported by the RFP responses?

A16. Yes. The savings goals for the 2018-2020 DSM Plan are presented in Petitioner's Attachment ZE-1, and are consistent with the successful bids that resulted from the competitive RFP process described above. Where available, the selected vendors projected deemed energy and demand savings using the IN TRM. For those measures

not contemplated in the IN TRM, the vendors utilized savings values from alternative sources representative of the characteristics of IPL's service territory. IPL will continue to update measure level assumptions on a prospective basis as programs are evaluated in the future.

Q17. Do the DSM Plan goals reflect large business customer opt out in the 2018-2020 DSM Plan?

A17. Yes. The achievable potential ranges in the MPS were adjusted to reflect the realized opt out rate. This means the DSM selected by the IRP modeling and the portfolio level savings amounts in the RFP reflect large customer opt out. Additionally, the savings ranges in the 2018-2020 program delivery RFP provided bidders the flexibility to make judgments based on their experience or knowledge of IPL's service territory. For those vendors who did not have experience delivering programs in IPL's service territory, IPL included market potential information, the current opt out rates, and historical program performance in the RFP to provide additional context for those programs affected by opt out (Business Custom and Business Prescriptive).

IV. DSM Plan Programs And Costs

Q18. Please summarize IPL's 2018-2020 DSM Plan.

A18. The 2018-2020 DSM Plan is comprised of thirteen (13) programs, including nine (9) residential programs and four (4) programs targeting business customers. IPL projects that successful delivery of the 2018-2020 DSM Plan will require spending authority of

$78,235,485[3] in Direct Costs and Indirect Costs, and expects gross energy savings of 375,703 MWh over the three year period. The annual average Direct and Indirect Costs are projected at $26,078,495, and the forecasted average annual gross energy impacts are 125,234 MWh. For additional detail, please refer to the summary tables prepared below for each calendar year in the 2018-2020 DSM Plan.

Q19. What programs are included in the 2018-2020 DSM Plan?

A19. The 2018-2020 DSM Plan includes the following named programs:

Table ZE-2

Program
Residential
Appliance Recycling
Community Based Lighting
Residential Demand Response
Income Qualified Weatherization
Lighting & Appliances
Multifamily
Peer Comparison
School Education
Whole Home
Business
Custom
Business Demand Response
Prescriptive
Small Business Direct Install

I further discuss the DSM Plan programs below.

V. DSM Plan Costs

Q20. Please describe the Direct Costs projected for the 2018-2020 DSM Plan programs.

[3] This amount excludes proposed costs for Lost Revenues, Shared Savings, Spending Flexibility, and Emerging Technologies.

A20. Consistent with the development of the savings projections and overall program delivery strategies, the Direct Costs presented (Petitioner's Attachment ZE-1) are largely reflective of the costs presented in the successful bids. The bid costs – or program implementation costs – are comprised of vendor administrative costs, equipment costs, and customer incentives necessary to successfully deliver the stated goals. In addition to the direct implementation costs, IPL forecast Evaluation, Measurement & Verification ("EM&V") costs, and direct IPL administrative costs based on historical expenditures.

Q21. Is IPL seeking to recover Indirect Costs in addition to the Direct Costs as outlined above?

A21. Yes. In addition to the Direct Costs of the programs described above, successful administration of the 2018-2020 DSM Plan will require Indirect Costs including: 1.) Outreach & Education; 2.) Consulting; 3.) Memberships; 4.) Staff Development; and 5.) Indirect IPL Labor.

Q22. Please list the Indirect Costs necessary for the 2018-2020 DSM Plan.

A22. Estimated Indirect Costs by year are listed in the table below.

Table ZE-3

Indirect Costs	2018	2019	2020
Outreach & Education	$ 750,000	$ 750,000	$ 750,000
Consulting	$ 320,000	$ 320,000	$ 320,000
Memberships	$ 50,000	$ 50,000	$ 50,000
Staff Development	$ 25,000	$ 25,000	$ 25,000
Indirect IPL Labor	$ 510,000	$ 510,000	$ 510,000
Total	$ 1,655,000	$ 1,655,000	$ 1,655,000

Q23. Please describe Outreach & Education.

A23. Outreach and Education is comprised of general messaging activities not tied to specific program offerings, but nonetheless required to successfully promote energy and demand saving actions. Ultimately, IPL must be able to make its customers aware of the information and programs available to assist them in taking advantage of these opportunities. In order to implement successful programs, IPL must understand what messages will cause customers to consider their energy consumption and then motivate them to change their energy related purchasing decisions or consumption behavior. Outreach efforts will incorporate key messages into a general awareness campaign that will be delivered through a variety of channels.

Q24. Please describe Consulting expenses IPL expects to incur.

A24. In the 2018-2020 program years, IPL expects to incur Consulting expenses for ongoing DSM modeling and planning efforts in addition to licensing and maintenance fees associated with Vision DSM, IPL's internal DSM tracking system. IPL also included a projection for EM&V activities in the Indirect consulting budget that cannot be attributed to (and thus expensed to) specific programs.

Q25. Please describe the value of Memberships.

A25. Membership organizations act as an extension of IPL DSM program staff, and provide vast resources that emphasize industry best practices. Membership organizations also present the opportunity for DSM staff members to attend ongoing education, training, and development events such as seminars, conferences, and workshops.

Q26. Please describe Staff Development.

A26. Staff Development is comprised of expenses associated with attendance at DSM related seminars, conferences, and workshops that provide opportunities for ongoing professional development and continuous learning of DSM industry best practices.

Q27. Please describe why Indirect IPL Labor is necessary.

A27. IPL has threshold obligations to successfully administer its proposed 2018-2020 DSM Plan that are not tied to specific programs. These obligations include but are not limited to:

- Attendance at, or participation in IPL Oversight Board meetings;
- Participation in external seminars, conferences, and/or workshops;
- Preparation of memoranda and/or reporting materials to be presented to the IPL Oversight Board;
- Attendance to, preparation for, or participation in industry association events and/or community events to promote IPL's DSM portfolio;
- General program oversight.

Q28. Please discuss the Emerging Technology initiatives.

A28. IPL believes that it is important to consider promising, emerging technologies that have the potential to contribute toward IPL's future energy and demand savings achievement. These funds will be used under the direction of the IPL Oversight Board to assess innovative energy and demand saving technologies. This in turn will provide flexibility as the DSM market changes in the future.

Q29. Has IPL successfully worked with its Oversight Board to use Emerging Technology funding in prior years?

A29. Yes. In 2016, IPL worked with its Oversight Board to identify the savings potential and costs to launch a smart thermostat demand response and energy efficiency pilot program. Through the pilot, IPL installed smart thermostats in customers' homes with the ability to modify thermostat set points during times of peak demand or economically advantageous periods. Overall, the pilot objectives were to:

- Verify energy and demand savings;
- Provide diversity to IPL's demand response offering;
- Measure customer technology preference and satisfaction;
- Measure opt out and deferral rates for smart thermostats; and
- Identify participation barriers and best practices for potential future programs.

Q30. Please describe Spending Flexibility proposed by IPL.

A30. IPL has successfully worked with its Oversight Board to modify budgets as necessary throughout the course of previous program years. Spending Flexibility provides IPL, through the Oversight Board, the ability to pursue cost-effective energy and demand savings opportunities if interest in the market exceeds projected expectations. Increasing the level of participation or inclusion of additional measures may increase Direct Costs. Consistent with the Commission's Orders in Cause Nos. 44328[4], 44497[5], and 44792[6], IPL requests Spending Flexibility of up to 10% of the portfolio Direct Costs for each year presented in the 2018-2020 DSM Plan. In the event that utilization of Spending Flexibility is necessary, program expenditures in excess of those contemplated in the 2018-2020 DSM Plan would be allocated per the direction of the IPL Oversight Board.

[4] The Commission issued its Order in Cause No. 44328 on November 25, 2013.
[5] The Commission issued its Order in Cause No. 44497 on December 17, 2014.
[6] The Commission issued its Order in Cause No. 44792 on December 28, 2016

Q31. What is the total cost projection for the 2018-2020 DSM Plan?

A31. IPL projects the annual costs shown below will be necessary to successfully administer and implement programs as outlined in the 2018-2020 DSM Plan.

Table ZE-4

	2018	2019	2020	Total
Direct Costs	$24,630,168	$24,623,644	$24,016,672	$73,270,485
Indirect Costs	$1,655,000	$1,655,000	$1,655,000	$4,965,000
Sub total	**$26,285,168**	**$26,278,644**	**$25,671,672**	**$78,235,485**
Emerging Technology	$250,000	$250,000	$250,000	$750,000
Shared Savings	$6,720,413	$6,604,225	$4,426,217	$17,750,854
Lost Revenues	$2,867,642	$5,970,691	$8,625,044	$17,463,377
Sub total	**$9,838,054**	**$12,824,916**	**$13,301,261**	**$35,964,230**
Total	**$36,123,222**	**$39,103,560**	**$38,972,933**	**$114,199,715**

Lost Revenues (Legacy)	$10,410,169	$1,777,030	$1,777,030	$13,964,229
Total (w/ Legacy)	**$46,533,392**	**$40,880,590**	**$40,749,963**	**$128,163,944**

Q32. How do the annual savings and program operating costs in the 2018-2020 DSM Plan compare to the savings and costs in the 2017 DSM Plan?

A32. Overall, the savings and program operating costs are comparable. IPL's gross energy savings projection for program year 2017 is approximately 129,000 MWh, compared to the three year average gross energy savings of approximately 125,000 MWh in the 2018-2020 DSM Plan. IPL currently forecasts Direct and Indirect Costs of $22.6 million dollars in program year 2017 compared to the average annual projected expenditure of approximately $26 million in the 2018-2020 DSM Plan.

VI. Program Implementation And Descriptions

Q33. What is the overall administrative strategy of the 2018-2020 DSM Plan?

A33. IPL intends to maintain its administrative responsibility over the 2018-2020 DSM Plan. Program implementation (including but not limited to participant acquisition, rebate fulfillment, equipment and measure installations, onsite quality control and quality assurance, and primary data collection and tracking) will largely be delivered by the third party implementation vendors selected in the competitive bid process. IPL's role as administrator will continue to consist of program planning, program coordination, internal and external reporting, data aggregation and tracking, and overall program quality assurance and oversight. Lastly, IPL, in partnership with its OSB, will continue to maintain responsibility for coordination and oversight of EM&V that is completed annually by the independent third party evaluator.

Q34. What programs in the 2018-2020 DSM Plan are materially the same as current program offerings?

A34. Of the thirteen (13) DSM programs proposed in the 2018-2020 DSM Plan, eight (8) largely represent an extension of existing IPL DSM program offerings. Those programs are:

- Appliance Recycling
- Multifamily
- Peer Comparison
- School Education
- Custom
- Prescriptive
- Business Demand Response; and
- Small Business Direct Install

Q35. Please describe the residential programs that are new or materially changing compared to the current program offerings.

A35. As proposed, five (5) residential programs are new or materially different, and are as follows:

- Community Based Lighting
- Income Qualified Weatherization
- Whole Home
- Lighting & Appliances; and
- Residential Demand Response

Q36. Please describe the Community Based Lighting program.

A36. The Community Based Lighting program will be new to IPL's portfolio, and is designed to distribute qualifying Light Emitting Diodes ("LEDs") to customers by leveraging the supply chain of food banks affiliated with Feeding America. IPL's program implementation vendor will deliver LEDs to participating food banks, which will act as a central distribution centers. Allotments of LEDs will be delivered to community food pantries, which will provide LEDs and educational materials to customers on assistance days. IPL also foresees the added benefit that customers that receive LEDs will also receive additional material on IPL's other program offerings. In particular, the program is designed as a gateway into deeper energy efficiency savings through the Whole Home and/or Income Qualified Weatherization programs. IPL implemented a similar, albeit smaller, program in prior years through the Income Qualified Weatherization program. As proposed, the Community Based Lighting program would expand on the success of that initiative.

Q37. Please describe the Income Qualified Weatherization program.

A37. IPL has offered an Income Qualified Weatherization program in some form since 1993. The Income Qualified Weatherization program, as proposed, aims to improve over the current offering in three key ways: (1) increase the number of measure offerings for

participating customers, (2) better leverage trade ally partnerships, and (3) provide additional on-ramps for customers to enroll and participate in the program.

Regarding increased measure offerings, IPL proposes to add additional air sealing and insulation measures, including Heating Ventilation and Air Conditioning ("HVAC") duct sealing and wall insulation. Currently, the program offers blower door directed air sealing, and attic insulation, but the additional offerings will provide for deeper savings and home improvement than currently administered. Similar to current practice, insulation measures will continue to be provided to participating households that have electric space heating as appropriate.

The program, as proposed, includes an online portal dedicated to participating insulation trade allies. Insulation contractors will undergo a qualification process prior to earning trade ally status in the Income Qualified Weatherization program. After meeting all of the qualification criteria, the portal will enable trade allies to upload company information (*e.g.* licenses, certifications, insurance information), and will contain all relevant program implementation documentation (*e.g.* insulation applications, project status information, program metrics, and customer feedback). This process aims to streamline and simplify trade allies' experience with the program, which IPL believes will be important in driving valuable partnerships with local contractors.

Lastly, the program will increase the numbers of on-ramps for customers to participate in the program, which will ultimately increase customer enrollment and improve overall customer experience. The Income Qualified Weatherization program will leverage the eScore program model, which includes an outreach approach aimed at enrolling customers via the channel of their choice. In other words, customers will have the

flexibility to enroll and participate in the program by any of the following channels: (1) a self-administered online assessment through a web-based portal; (2) scheduling an in-home assessment online or by phone; (3) enrolling via a participating community based organization; or (4) enrolling through the Community Based Lighting program. Ultimately, the program is designed to increase the enrollment yield in the program, and to make it as simple as possible for customers to enroll and participate in the program.

Q38. Please describe the Whole Home program.

A38. The Whole Home program, based on the eScore model, expands on the current Home Energy Assessment ("HEA") model by increasing the number of measure offerings available to participants via prescriptive rebates, incorporating trade allies as program partners, and expanding the number of on-ramps for customers to enroll and participate in the program.

The eScore model was developed for the Tennessee Valley Authority, and was designed and improved over a three year period. The objectives of the eScore program model are to increase customer engagement and satisfaction, increase trade ally participation, streamline participation via one customer portal for multiple programs, and to improve the overall operational efficiency and customer experience of the programs.

Unlike the current HEA program, the Whole Home approach will offer prescriptive rebates for various measures installed by qualified trade allies. Qualified trade allies will have access to all relevant program materials via an online portal, and will be able to easily submit rebate applications on participants' behalf. For quality control and assurance, IPL's trained technicians will provide onsite verifications after the

applications have been submitted, and will also provide an assessment and additional direct installation measures during the site visit.

In terms of additional measure offerings, IPL is proposing to add rebates for HVAC measures (e.g. air conditioning units, heat pumps), smart thermostats, and various building shell improvements (e.g. air sealing, insulation, duct sealing). Customers who receive rebates for smart thermostats through the Whole Home program will also be eligible for additional incentives if they elect to participate in the residential Demand Response program.

Q39. Please describe the Lighting & Appliances program.

A39. The Lighting & Appliances program expands on the current Residential Lighting program in two key ways: (1) the program expands measure offerings to include non-lighting end use appliances, and (2) aims to improve coordination and cross promotion of other programs under IPL's administration.

In addition to LED lighting rebates for both general service and specialty applications, the program as proposed incorporates rebates for ENERGY STAR® qualifying air purifiers and dehumidifiers. The program will also include rebates for qualifying smart thermostats, which will provide customers a do-it-yourself ("DIY") option to self-install and register their device online. Additionally, customers who elect to purchase a smart thermostat through the Lighting & Appliances program will be offered additional incentives to register their device in IPL's Residential Demand Response programs.

Q40. Please describe the changes to the Residential Demand Response program.

A40. The Residential Demand Response program as proposed expands upon the current Air Conditioning Load Management ("ACLM") program by adding smart thermostats as an eligible load control measure, and by leveraging IPL's other residential programs, namely Whole Home and Lighting & Appliances, to offer customers additional on-ramps into the program.

IPL's recent experience with smart thermostats indicates that they can sufficiently act as a replacement technology for traditional load control switches. Early evaluation results demonstrate load reductions comparable to that of load control switches, and customers who participated in IPL's 2016 smart thermostat pilot were highly satisfied with the technology and program offering. In addition to offering customers smart thermostats to replace aging load control switches through the Residential Demand Response program, customers will also be able to receive smart thermostats through the Whole Home and Lighting & Appliances programs. Smart thermostats implemented through these residential programs will also be eligible to enroll in the Residential Demand Response program.

Q41. Were there any material changes to the business programs as compared to the current program offerings?

A41. As proposed, there are no significant changes to the Business programs in the 2018-2020 DSM Plan. IPL expects to continue its partnership with the current business program implementation vendor, and generally maintain continuity of the current program designs. IPL will continue to assess program enhancements as necessary, and will continue to manage incentive levels and program terms and conditions based on market conditions.

Q42. Will approval of the DSM Plan give an unfair competitive advantage to IPL vis-à-vis small businesses (170 IAC 4-8-8)?

A42. No. IPL and its program implementation vendors will work with trade allies and other small businesses to support outreach and delivery of the programs as proposed in the 2018-2020 DSM Plan.

Q43. Does this conclude your verified pre-filed direct testimony?

A43. Yes, it does.

VERIFICATION

I, Zac Elliot, of Indianapolis Power & Light Company, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

Zac Elliot

Dated: May 17, 2017

Petitioner's Attachment ZE-1
2018-2020 DSM Implementation Plan

DSM PROGRAMS

2018 Summary

Program	Budget	Energy Savings		Demand Savings	
		Gross kWh	Net kWh	Gross kW	Net kW
Appliance Recycling	$741,032	3,094,111	2,134,755	435	303
Community Based Lighting	$886,206	6,810,512	6,810,512	0	0
Residential Demand Response	$3,449,024	271,500	271,500	45,013	45,013
Income Qualified Weatherization	$1,796,283	2,075,379	2,050,612	349	333
Lighting & Appliances	$1,451,536	10,101,420	8,081,136	1,662	1,329
Multifamily	$2,162,507	5,712,946	5,668,546	732	702
Peer Comparison	$1,466,814	32,000,000	32,000,000	7,008	7,008
School Education	$765,616	3,645,329	3,645,329	459	459
Whole Home	$3,654,230	7,217,828	6,351,689	1,968	1,732
Business Custom	$2,530,059	16,376,275	13,101,020	3,405	2,724
Business Demand Response	$155,600	10,500	10,500	1,400	1,400
Business Prescriptive	$4,628,766	42,697,237	28,607,149	6,496	4,353
Small Business Direct Install	$942,496	3,785,800	3,592,041	434	412
Residential	$16,373,247	70,929,025	67,014,078	57,626	56,879
Business	$8,256,921	62,869,812	45,310,710	11,735	8,888
Direct Subtotal	$24,630,168	133,798,837	112,324,787	69,361	65,767
Indirect Subtotal	$1,655,000				
Portfolio Total	$26,285,168	133,798,837	112,324,787	69,361	65,767

Program budgets are inclusive of the direct and indirect cost of DSM programs, including costs related to EM&V

2019 Summary

Program	Budget	Energy Savings		Demand Savings	
		Gross kWh	Net kWh	Gross kW	Net kW
Appliance Recycling	$742,623	3,094,111	2,134,755	435	303
Community Based Lighting	$842,613	6,810,512	6,810,512	0	0
Residential Demand Response	$3,591,243	240,900	240,900	47,637	47,637
Income Qualified Weatherization	$1,730,803	2,075,379	2,050,612	349	333
Lighting & Appliances	$1,373,588	10,202,204	8,161,763	1,672	1,337
Multifamily	$2,108,419	5,712,946	5,668,546	732	702
Peer Comparison	$1,466,814	32,000,000	32,000,000	7,008	7,008
School Education	$783,518	3,749,481	3,749,481	472	472
Whole Home	$3,598,047	7,217,828	6,351,689	1,968	1,732
Business Custom	$2,587,709	16,599,309	13,279,447	3,448	2,759
Business Demand Response	$155,600	10,500	10,500	1,400	1,400
Business Prescriptive	$4,678,482	42,758,696	28,648,327	6,503	4,357
Small Business Direct Install	$964,185	3,785,800	3,592,041	434	412
Residential	$16,237,668	71,103,361	67,168,257	60,273	59,524
Business	$8,385,976	63,154,306	45,530,315	11,785	8,927
Direct Subtotal	$24,623,644	134,257,666	112,698,572	72,058	68,451
Indirect Subtotal	$1,655,000				
Portfolio Total	$26,278,644	134,257,666	112,698,572	72,058	68,451

2020 Summary

Program	Budget	Energy Savings		Demand Savings	
		Gross kWh	Net kWh	Gross kW	Net kW
Appliance Recycling	$757,096	3,016,303	2,092,738	430	300
Community Based Lighting	$445,249	2,043,824	2,043,824	0	0
Residential Demand Response	$3,722,554	210,312	210,312	50,286	50,286
Income Qualified Weatherization	$1,741,330	1,918,623	1,897,215	349	333
Lighting & Appliances	$1,015,222	4,201,863	3,361,490	630	504
Multifamily	$2,128,545	4,855,313	4,817,008	622	593
Peer Comparison	$1,466,814	32,000,000	32,000,000	7,008	7,008
School Education	$852,761	3,160,849	3,160,849	363	363
Whole Home	$3,627,003	6,618,468	5,824,252	1,890	1,664
Business Custom	$2,644,612	16,982,663	13,586,130	2,606	2,085
Business Demand Response	$155,600	10,500	10,500	1,400	1,400
Business Prescriptive	$4,525,891	30,042,899	20,128,743	4,289	2,874
Small Business Direct Install	$933,996	2,584,957	2,452,112	234	222
Residential	$15,756,573	58,025,556	55,407,690	61,579	61,051
Business	$8,260,099	49,621,019	36,177,485	8,529	6,580
Direct Subtotal	$24,016,672	107,646,575	91,585,175	70,108	67,631
Indirect Subtotal	$1,655,000				
Portfolio Total	$25,671,672	107,646,575	91,585,175	70,108	67,631

LIGHTING & APPLIANCES

Program Description	The Residential Lighting & Appliance program is an expanded and enhanced version of the existing Residential Lighting Program. The Lighting & Appliances program will increase awareness and sales of energy efficient lighting and appliance products in the IPL service territory. IPL's residential customers can purchase products at participating retail locations across its service territory. The program will reduce the cost barrier of products through markdowns on lighting products at the point of sale. Additionally, IPL will leverage a customer facing portal to allow participants to submit online incentive applications for qualifying appliance purchases. By applying for an online appliance incentive, the customer is also automatically enrolled in eScore, the proposed program model for IPL's Whole Home, Multifamily and Income Qualified Weatherization programs. Connecting a customer who has already chosen to make an energy efficient purchase through the Lighting & Appliances program is an excellent warm lead for the other energy efficiency offerings. Enrolling the customer into the eScore platform helps them determine the next steps for continuing on their journey to energy efficiency. IPL has also added smart thermostats as a measure for this program. Adding this measure connects the Lighting & Appliances program to the Demand Response (DR) program model, which incorporates a smart thermostat component. The implementer will perform focused reach-back outreach on those customers who purchased an incentivized smart thermostat to draw more participants into the DR program avoiding many of the usual customer acquisition usual costs of a bring-your-own-thermostat (BYOT) direct install (DI) program.
Objectives	The objectives for the Lighting & Appliances program include: • Increasing consumer awareness of the benefits of energy efficient products in the residential market; • Amplifying the availability of energy efficient products in local retail stores; • Improving retailers' understanding of the benefits of energy efficient lighting products through training; • Enhancing the local market penetration of energy efficient lighting products through off-shelf merchandising tactics leading to higher sales; • Pursuing industry leadership initiatives to increase knowledge and develop strategic partnerships to strengthen local program effectiveness; • Educating customers on available incentives for ENERGY STAR products; • Providing an entry point into more comprehensive residential programs through the dsmPower customer portal to achieve larger overall portfolio results; • Strengthening the customer's awareness of IPL as a trusted partner in energy efficiency; • Deliver cost-effective energy savings.

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Lighting & Appliances	10,101,420	10,202,204	4,201,863

Gross Demand (kW) Savings

Program	2018	2019	2020
Lighting & Appliances	1,662	1,672	630

Net Energy (kWh) Savings

Program	2018	2019	2020
Lighting & Appliances	8,081,136	8,161,763	3,361,490

Net Demand (kW) Savings

Program	2018	2019	2020
Lighting & Appliances	1,329	1,337	504

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Lighting & Appliances	$1,451,536	$1,373,588	$1,015,222

Cost-Effectiveness

The cost-effectiveness metrics of the Lighting & Appliances program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Lighting & Appliances[1]	4.43	3.85	0.71	9.69

[1] Benefit/Costs results for each program reflect scores for the entire 2018-2020 program delivery period.

COMMUNITY BASED LIGHTING

Program Description

The Residential Community Based Lighting program will provide ENERGY STAR®-certified LED bulbs to food banks affiliated with Feeding America[2]. The food banks then use their network of local food pantries to distribute the bulbs to IPL customers. The food banks primarily serve as a distribution center by receiving the LEDs from the manufacturer, providing temporary storage, and distributing the allocated LED quantities to the participating food pantries.

The Community Based Lighting program provides a distinctive cost-effective energy efficiency solution that targets a hard-to-reach customer segment in IPL's residential market by allowing IPL to proactively reach its economically disadvantaged customers. The program enables underserved community members to save energy, offers energy efficiency education, increases energy awareness, and produces long-lasting savings in energy usage and cost for the residents of the community most in need of assistance.

This program is not intended to replace or compete with the residential Lighting & Appliances program. The targeted customer demographic represents a sector of IPL's service area that, in absence of the Community Based Lighting program, would not have the resources to participate in the Lighting & Appliances program.

Objectives

The objectives for the Community Based Lighting program include:

- Educating economically disadvantaged customers on energy efficiency and behavior change opportunities so they can begin saving money on utility bills immediately;
- Encouraging participation in IPL's Income Qualified Weatherization program and other applicable programs to further their energy efficiency journey;
- Strengthening the customer's awareness of IPL as a trusted partner in energy efficiency;
- Delivering cost-effective energy savings;

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Community Based Lighting	6,810,512	6,810,512	2,043,824

Gross Demand (kW) Savings

Program	2018	2019	2020
Community Based Lighting	0	0	0

Net Energy (kWh) Savings

Program	2018	2019	2020

[2] Feeding America is a nonprofit organization that is a nationwide network of more than 200 food banks that feed more than 46 million people through food pantries, soup kitchens, shelters, and other community-based agencies.

Community Based Lighting	6,810,512	6,810,512	2,043,824

Net Demand (kW) Savings

Program	2018	2019	2020
Community Based Lighting	0	0	0

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Community Based Lighting	$886,206	$842,613	$445,249

Cost-Effectiveness

The cost-effectiveness metrics of the Community Based Lighting program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Community Based Lighting	2.38	2.38	0.43	N/A

INCOME QUALIFIED WEATHERIZATION

Program Description	The Residential Income Qualified Weatherization program is an expanded and enhanced version of the existing IQW program, utilizing the eScore delivery model. IPL's proposed eScore model goes above and beyond a traditional income qualified program. eScore was developed for the Tennessee Valley Authority (TVA) and piloted over an intensive three year period using behavior change best practices and consumer product market research methodology. From the beginning, this program has focused on meeting the customer where they are, identifying the simplest path to change and providing a reward for every action completed. This innovative, end-to-end program leads each IPL customer through their long-term journey to achieving greater energy efficiency, engaging the customer over time and at their own pace in a way that reduces the cost of energy saved and improves the customer experience. The program offers holistic weatherization measures, including air and duct sealing completed by trained Energy Advisors as well as attic and wall insulation performed by local weatherization contractors for electrically heated homes. There are multiple points-of-entry into the program, including a web-based, self-administered home assessment through the dsmPower online customer portal, or by scheduling an in-home Income Qualified Weatherization eScore audit with a trained Energy Advisor. eScore combines upstream, midstream and downstream approaches to deliver a highly effective one-stream residential program. The program offers a win-win-win scenario for IPL, participating customers and trade allies: • IPL achieves increased participation through a one-stream program design and end-to-end platform allowing for a more customer-centric approach that delivers a positive customer experience and improves customer satisfaction scores. Furthermore, the program offers enhanced transparency with real-time, reporting and graphic dashboards. • Customers receive expert advice that focuses on low cost and no-cost ways (including behavioral changes) to improve the efficiency and safety of their home, as well as immediate savings through comprehensive direct install measures, lowering the cost of their utility bills which is particularly critical for income qualified customers. They also have access to their online eScore account and program incentives that lower the cost burden of completing energy efficiency upgrades beyond the no-cost weatherization measures included in the program. Customers receive long-term support from the program through a customized path to making their home more safe, comfortable and affordable at their own pace. eScore also provides customers with the opportunity to participate at whatever level they are comfortable through tiered audit offerings – a self-audit through the online dsmPower customer portal or a detailed in-home evaluation to determine where they can save on energy from a trained Energy Advisor. • Participating weatherization contractors receive additional leads through the program which allows them to generate higher sales (generating economic

development in the service territory) and, using the successful model, achieve greater customer satisfaction. They receive the added benefit of paperless application submission and easy access to program information and their participation statistics through an online portal.

Objectives

The objectives for the Income Qualified Weatherization program include:

- Helping eligible customers understand how they are using energy, identify opportunities for energy savings specific to their home, and offer access to a wider range of energy conservation measures;
- Educating qualifying customers on the benefits of energy efficiency measures installed and behavior change opportunities so they can begin saving energy and money immediately;
- Providing education support services and funding for qualified customers to promote the implementation of energy efficiency measures;
- Engaging IPL's residential customers over the long term, delivering more holistic energy savings
- Creating jobs and developing the local market through participating weatherization contractors;
- Strengthening the customer's awareness of IPL as a trusted partner in energy efficiency

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Income Qualified Weatherization	2,075,379	2,075,379	1,918,623

Gross Demand (kW) Savings

Program	2018	2019	2020
Income Qualified Weatherization	349	349	349

Net Energy (kWh) Savings

Program	2018	2019	2020
Income Qualified Weatherization	2,050,612	2,050,612	1,897,215

Net Demand (kW) Savings

Program	2018	2019	2020
Income Qualified Weatherization	333	333	333

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Income Qualified Weatherization	$1,796,283	$1,730,803	$1,741,330

Cost-

The cost-effectiveness metrics of the Income Qualified Weatherization program are as

Effectiveness

follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Income Qualified Weatherization	0.96	0.96	0.46	N/A

RESIDENTIAL DEMAND RESPONSE

Program Description

The Residential Demand Response (DR) program is a two-pronged approach:

- **DLC Switch Maintenance.** IPL's current ACLM program consists of ~45,000 single-family (SF) and ~5,000 multifamily (MF) one-way Air Conditioning switches. The Residential Demand Response program proposes a highly cost effective approach that delivers switch replacements while enhancing IPL's relationship with the local HVAC service community. The implementation vendor will provide in-depth training and in-field support to a network of local HVAC trade allies who will perform all switch replacements. This approach transforms the local HVAC community by educating local trade allies on the benefits of DR and alleviates the common issue of service technicians disconnecting DLC switches when they service customer's AC units.
- **Smart Thermostats.** The proposed approach offers a simplified avenue for recruiting IPL's residential customers into the DR program using in-home visits and touch points within other residential offerings. It also allows customers the option of purchasing smart thermostat through several channels across multiple manufacturers. Customers who purchase a smart thermostat through the Whole Home or Lighting & Appliances programs will receive two upfront incentive payments in addition to the current annual $20.00 Standard Contract Rider No. 13 bill credit.

Objectives

The objectives for the Residential DR program include:

- Updating IPL's existing infrastructure of one-way DLC switches;
- Growing IPL's relationship with the local HVAC community;
- Maintaining the existing one-way DR fleet until two-way conversion of the switches is complete;
- Driving the adoption of smart thermostats in the IPL service territory;
- Creating a foundation for the next generation DR program;
- Leveraging synergies between complementary IPL energy efficiency and DR programs.

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Res Demand Response	271,500	240,900	210,312

Gross Demand (kW) Savings

Program	2018	2019	2020
Res Demand Response	45,013	47,637	50,286

Net Energy (kWh) Savings

Program	2018	2019	2020

	Res Demand Response	271,500	240,900	210,312

Net Demand (kW) Savings

Program	2018	2019	2020
Res Demand Response	45,013	47,637	50,286

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Res Demand Response	$3,449,024	$3,591,243	$3,722,554

Cost-Effectiveness

The cost-effectiveness metrics of the Residential Demand Response program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Res Demand Response	2.66	4.34	2.66	N/A

MULTIFAMILY

Program Description	IPL will offer two separate components to drive participation and savings in the Multifamily program: • Through the traditional multifamily properties component, trained Energy Advisors will perform direct installation of low-cost measures to deliver immediate energy and cost savings. The program will provide walk-through in-unit assessments with property managers to determine the scope of the measures that will be installed in each unit. • For the innovative manufactured homes component, trained Energy Advisors will perform a more detailed two-hour home audit, including the direct install measures to deliver immediate energy savings. Should the audit reveal the homeowner would benefit from air or duct sealing, qualified vendors will return to the home to complete the installation of those measures in a separate visit to limit the time spent in the home. Adding air and duct sealing offers these customers access to more holistic energy and cost savings. While on-site at the manufactured homes, crews will also make note of energy savings opportunities and incentives available to customers via IPL's other residential programs (e.g., Whole Home, Lighting & Appliances) using the eScore program design and dsmPower technical platform. Through dsmPower, manufactured home owners have the opportunity to participate at whatever level they are comfortable through tiered audit offerings – a self-audit through the online dsmPower customer portal that sends the customer a no cost energy efficiency kit upon completion or a detailed in-home evaluation to receive immediate savings through DI measures from a trained Energy Advisor. This program will provide no-cost, turnkey service delivery to property managers and homeowners to help overcome first-cost and disruption barriers typically associated with this type of an investment. Trained Energy Advisors will install low-cost energy saving measures (e.g., showerheads, programmable thermostats, bath and faucet aerators various LED bulbs, and pipe wrap) within residences at no cost. As noted above, manufactured homes may also include air and duct sealing measures if appropriate.
Objectives	The objectives for the Multifamily program include: • Providing education and support services for property owners/managers, tenants and manufactured home owners to promote the implementation of energy efficiency measures; • Creating jobs and developing the local market; • Enhancing the local market penetration of energy efficient products and services – helping customers save energy and money; • Providing manufactured home owners with access to an in-home audit program; • Strengthening the customers awareness of IPL as a trusted partner in energy efficiency; • Delivering cost-effective energy savings.

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Multifamily	5,712,946	5,712,946	4,855,313

Gross Demand (kW) Savings

Program	2018	2019	2020
Multifamily	732	732	622

Net Energy (kWh) Savings

Program	2018	2019	2020
Multifamily	5,668,546	5,668,546	4,817,008

Net Demand (kW) Savings

Program	2018	2019	2020
Multifamily	702	702	593

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Multifamily	$2,162,507	$2,108,419	$2,128,545

Cost-Effectiveness

The cost-effectiveness metrics of the Multifamily program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Multifamily	1.71	1.76	0.54	N/A

WHOLE HOME

Program Description	The Whole Home program is an enhanced approach to the delivery of an in-home energy assessment. The Whole Home program will also include the eScore tool. The eScore model goes above and beyond a traditional home retrofit program. eScore was developed for the TVA and piloted over an intensive three year period using behavior change best practices and consumer product market research methodology. From the beginning, this program has focused on meeting the customer where they are, identifying the simplest path to change and providing a reward for every action completed. This innovative, end-to-end program leads each IPL customer through their long-term journey to achieving greater energy efficiency, engaging the customer over time and at their own pace in a way that reduces the cost of energy saved and improves the customer experience. There will be multiple points-of-entry into the program, including through the trade ally network that uses eScore as an opportunity to sell their customers energy efficient products, a web-based self-administered home assessment through the dsmPower online customer portal, or by scheduling an in-home eScore audit with a trained Energy Advisor. eScore combines upstream, midstream and downstream approaches to deliver a highly effective one-stream residential program. The program offers a win-win-win scenario for IPL, participating customers and trade allies: • IPL achieves increased participation through a one-stream program design and end-to-end platform, dsmPower, allowing for a more customer-centric approach that delivers a positive customer experience and improves customer satisfaction scores. Furthermore, the program offers enhanced transparency with real-time reporting and graphic dashboards. • Customers receive expert advice on improving the efficiency of their home while lowering the cost of their utility bills. They also have access to their online eScore account and program incentives that lower the cost burden of completing energy efficiency upgrades. Customers receive long-term support from the program through a customized path to making their home more comfortable at their own pace. eScore also provides customers with the opportunity to participate at whatever level they are comfortable through tiered audit offerings – a self-audit through the online customer portal, a detailed in-home evaluation to determine where they can save on energy from a trained Energy Advisor, or engaging in the program through an existing relationship with a participating trade ally. • Participating trade allies receive additional leads through the program which allows them to generate higher sales (generating economic development in the service territory) and, using the successful model, achieve greater customer satisfaction. They receive the added benefit of paperless application submission and easy access to program information and their participation statistics through an online trade ally portal.
Objectives	The objectives for the Whole Home program include: • Growing customer awareness and understanding of the benefits of home

energy efficiency improvements;

- Engaging our residential customers over the long term, delivering more holistic energy savings;
- Increasing the local market penetration of energy efficient products and services – helping customers save energy and money;
- Creating jobs and developing the local market;
- Strengthening customer's awareness of IPL as a trusted partner in energy efficiency;
- Delivering cost-effective energy savings

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Whole Home	7,217,828	7,217,828	6,618,468

Gross Demand (kW) Savings

Program	2018	2019	2020
Whole Home	1,968	1,968	1,890

Net Energy (kWh) Savings

Program	2018	2019	2020
Whole Home	6,351,689	6,351,689	5,824,252

Net Demand (kW) Savings

Program	2018	2019	2020
Whole Home	1,732	1,732	1,664

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Whole Home	$3,654,230	$3,598,047	$3,627,003

Cost-Effectiveness

The cost-effectiveness metrics of the Whole Home program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Whole Home	1.37	1.24	0.59	4.65

SCHOOL EDUCATION

Program Description

The School Education program incorporates an educational module provided to grade school students, along with a take-home kit of energy efficiency measures. Measures include LEDs and low-flow fixtures. It targets students to help them learn about energy efficiency and how they can apply it at school and at home. Participating schools will receive education in the classroom and take-home kits filled with energy efficiency saving devices. The program is designed to educate both the students and their parents about simple energy efficiency and conservation practices, driving grassroots market transformation throughout the service territory.

Objectives

The objectives for the School Education program include:

- Achieve verifiable, cost-effective electric savings through the installation of low-cost measures;
- Help customers identify opportunities to better manage their energy use;
- Create an exceptional customer experience for participating households;
- Strengthen and support IPL's energy efficiency branding, while providing an excellent opportunity to increase energy efficiency awareness;
- Cross-promote and uplift other energy efficiency program offerings;
- Promote energy literacy among teachers and students and families.

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
School Education	3,645,329	3,749,481	3,160,849

Gross Demand (kW) Savings

Program	2018	2019	2020
School Education	459	472	363

Net Energy (kWh) Savings

Program	2018	2019	2020
School Education	3,645,329	3,749,481	3,160,849

Net Demand (kW) Savings

Program	2018	2019	2020
School Education	459	472	363

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
School Education	$765,616	$783,518	$852,761

Cost-Effectiveness

The cost-effectiveness metrics of the School Education program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
School Education	3.18	3.18	0.64	N/A

APPLIANCE RECYCLING

Program Description

The Residential Appliance Recycling program achieves energy savings by offering an incentive payment to customers to remove their old, inefficient appliances and recycle them. It includes refrigerators, freezers and room AC units. The program offers free pickup of units from residences plus customer incentives and education about the benefits of secondary unit disposal, to encourage their participation. There are no costs to participating customers. The contractor will pick-up, disable, and recycle the units. Once IPL receives verification that the units have been recycled. The customer will receive a $50 incentive per refrigerator recycled and a $20 incentive per Room AC recycled.

In addition to educating residential customers about the benefits of secondary unit disposal, the program provides services to enable disposal of the units. The two program components are:

Customer Incentives

- Pickup of units from homes will be by appointment directly with the program implementation contractor.
- The program implementation contractor mails incentive checks to customers after units have been removed.
- To qualify, refrigerator, freezer, or room air conditioning units must be in working condition, meet minimum size requirements, and be readily accessible for removal.

Environmental Disposal of Units

- Units will be removed to a collection facility and disassembled for environmentally responsible disposal of CFCs and recycling of remaining components.

Objectives

The objectives for the Appliance Recycling program are:

- To permanently remove old, energy-inefficient appliances from the electric grid.
- To recycle all appliances with strict adherence to local and federal regulations and in compliance with the Environmental Protection Agency's (EPA) Responsible Appliance Disposal (RAD) requirements.
- To provide responsive and effective program management services to IPL customers.
- To provide IPL's customers with seamless service that results in high customer satisfaction and a white-glove customer experience in every step of the program.

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Appliance Recycling	3,094,111	3,094,111	3,016,303

Gross Demand (kW) Savings

Program	2018	2019	2020

	Appliance Recycling	435	435	430

Net Energy (kWh) Savings

Program	2018	2019	2020
Appliance Recycling	2,134,755	2,134,755	2,092,738

Net Demand (kW) Savings

Program	2018	2019	2020
Appliance Recycling	303	303	300

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Appliance Recycling	$741,032	$742,623	$757,096

Cost-Effectiveness

The cost-effectiveness metrics of the Appliance Recycling program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Appliance Recycling	2.61	2.61	0.66	N/A

PEER COMPARISON

Program Description	The Residential Peer Comparison program provides individualized Home Energy Reports that analyze customer's energy usage and offer recommendations on how to save energy and money by making small changes to their energy consumption. Reports are sent monthly or quarterly to customers throughout the year. A key component is a peer comparison, where they are shown energy usage relative to similar, nearby households. Peoples' intrinsic social competitiveness thereby increases the energy reductions and effectiveness of this program.
Objectives	The purpose of the Residential Peer Comparison program is to reduce energy consumption through socially-driven and information-driven behavioral change. Another very important objective of the program is to raise general awareness regarding energy efficiency and to cross-sell and market other programs within the portfolio.
Projected Savings	**Gross Energy (kWh) Savings** Program | 2018 | 2019 | 2020 Peer Comparison | 32,000,000 | 32,000,000 | 32,000,000 **Gross Demand (kW) Savings** Program | 2018 | 2019 | 2020 Peer Comparison | 7,008 | 7,008 | 7,008 **Net Energy (kWh) Savings** Program | 2018 | 2019 | 2020 Peer Comparison | 32,000,000 | 32,000,000 | 32,000,000 **Net Demand (kW) Savings** Program | 2018 | 2019 | 2020 Peer Comparison | 7,008 | 7,008 | 7,008
Projected Expenditures	**Budget (dollars)** Program | 2018 | 2019 | 2020 Peer Comparison | $1,466,814 | $1,466,814 | $1,466,814
Cost-Effectiveness	The cost-effectiveness metrics of the Peer Comparison program are as follows: | | Cost Effectiveness Tests | | | | | **Program** | **UCT Ratio** | **TRC Ratio** | **RIM Ratio** | **PCT Ratio** |

	Peer Comparison	1.50	1.50	0.52	N/A

BUSINESS PRESCRIPTIVE

Program Description	The Prescriptive program generates energy savings for business customers by increasing customer awareness and understanding of energy efficiency opportunities in their facilities through education provided by the local program team and a qualified network of trained trade allies already in place and supporting IPL customers. The program will provide financial incentives of up to 50 percent of the project cost for installing a wide array of high efficiency defined measures within the Indiana TRM, and other regional engineering and sales data where required. The Prescriptive program is a great introduction to energy efficiency for IPL customers and can serve as an entry point to further engage customers on a journey to more energy saving options available through IPL, e.g., custom opportunities. Additionally, IPL proposes to continue a Midstream program component, which offers incentives for buy-downs to reduce the initial cost of high efficiency products and generate expanded stocking and promotion while minimizing the cost to administer the program. The approach will lead to higher project conversion rates, market transformation and further position IPL as a true partner among its business customers. The program design supports each customer's journey toward greater efficiency through an ongoing engagement that is easy for the customer. IPL will combine program delivery efforts of the Prescriptive program with those of the Custom program so commercial field specialists can work with customers and trade allies on all opportunities of IPL's business portfolio, and allow each program to feed into the others. IPL's vendor will take the extra steps to provide customers with seamless access to the services they need to easily and time-effectively implement projects. This works includes walking them through the incentive application process, to referrals to qualified trade allies and to recommendations for other energy saving opportunities through IPL. The objective is to make it easy for customers to participate to enhance their business while cost-effectively achieving IPL's energy savings goals over time.
Objectives	The objectives for the Prescriptive program include: • Achieve IPL's electric goals cost-effectively by using data-driven customer outreach, segmentation and prioritization strategies to target projects with the highest savings yield per dollar and customers with the highest propensity to invest in them; • Encourage business customers to improve the energy efficiency of their facilities by offering financial incentives that improve the economics associated with installing a broad range of energy efficiency options that address major end uses and processes; • Offer customers a streamlined participation path to earn financial incentives on their energy efficiency efforts, making it easy for them to participate; • Enhance the Indianapolis area's network of trade allies by offering program training on new measures and technologies that will continue to play a part in efficiency program planning and delivery; • Leverage cost-efficiencies derived from the current portfolio; coordinating

program delivery and customer support with existing trade ally networks while maintaining IPL's unique brand identity;

- Coordinate program delivery of all IPL's business programs where appropriate, including Custom, and SBDI
- Support customer satisfaction and the perception of IPL as the customer's energy efficiency expert and advocate to help achieve both energy and cost savings while enhancing brand equity for IPL

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Business Prescriptive	42,697,237	42,758,696	30,042,899

Gross Demand (kW) Savings

Program	2018	2019	2020
Business Prescriptive	6,496	6,503	4,289

Net Energy (kWh) Savings

Program	2018	2019	2020
Business Prescriptive	28,607,149	28,648,327	20,128,743

Net Demand (kW) Savings

Program	2018	2019	2020
Business Prescriptive	4,353	4,357	2,874

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Business Prescriptive	$4,628,766	$4,678,482	$4,525,891

Cost-Effectiveness

The cost-effectiveness metrics of the Business Prescriptive program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Business Prescriptive	4.69	3.12	0.84	5.08

BUSINESS CUSTOM

Program Description	The Custom program will continue to provide incentives for implementing energy efficiency projects in buildings that fall outside the scope of the Prescriptive program. IPL will continue to customize our best practice approach and devise new strategies to meet the unique needs of your valued business customers. Drawing on historical experience working with customers of all sizes, the Custom program will deliver a high-quality customer experience based on a trusted advisor relationship aimed at optimizing each customer's energy consumption. Optimization means balancing our assessment of each customer's business needs (e.g., energy reliability, value of efficiency, productivity) and tailoring energy efficiency solutions to meet them, not simply maximizing the amount of energy saved. This pragmatic approach reflects the belief that there must be a clear business case to justify investment in energy efficiency. This approach will lead to higher project conversion rates and economic development, and will further position IPL as a true partner among your business customers and the communities it serves. The Custom program broadens the availability of financial incentives for more complex projects and offers non-cash incentives in the form of technical support for end-use customers and trade allies. Program measures earn incentives based on $/kWh savings beyond baseline energy performance, such as state or federal codes and standards, industry-accepted performance standards, or other baseline energy performance standards. We will also continue to help all business customers participate in IPL's suite of business programs, creating additional savings for customers and lowering the cost of customer acquisition. If deemed measures can complement the deeper savings approach to energy efficiency through the Custom program, suggesting Prescriptive measures based on the customer and facility needs.
Objectives	The objectives for the Custom program include: • Achieve savings goals cost-effectively by using data-driven customer outreach, segmentation and prioritization strategies to target projects with the highest savings yield per dollar and customers with the highest propensity to invest in them • Encourage business customers to improve the energy efficiency of their facilities by offering a refined participation process to secure financial incentives for installing energy efficiency equipment or for implementing energy-saving processes that are not covered by the Prescriptive program; • Offer customers a streamlined participation path to earn financial incentives on their energy efficiency efforts, making it easy for them to participate; • Leverage our technical expertise to identify, scope and drive projects forward, working closely with customers and their contracted trade allies; • Enhance existing relationships with the network of equipment suppliers who can also identify energy efficiency opportunities for utility customers and streamline their engagement with the program; • Leverage cost-efficiencies derived from the implementation vendor having other work in Indiana; coordinating program delivery and customer support with our existing trade ally networks; • Coordinate program delivery of all IPL's business programs where appropriate,

including Prescriptive, and SBDI to improve customer experience;

- Support customer satisfaction and the perception of IPL as the customer's energy efficiency expert and trusted advisor, advocating for energy and cost savings.

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Business Custom	16,376,275	16,599,309	16,982,663

Gross Demand (kW) Savings

Program	2018	2019	2020
Business Custom	3,405	3,448	2,606

Net Energy (kWh) Savings

Program	2018	2019	2020
Business Custom	13,101,020	13,279,447	13,586,130

Net Demand (kW) Savings

Program	2018	2019	2020
Business Custom	2,724	2,759	2,085

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Business Custom	$2,530,059	$2,587,709	$2,644,612

Cost-Effectiveness

The cost-effectiveness metrics of the Business Custom program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Business Custom	3.53	1.85	0.82	2.89

SMALL BUSINESS DIRECT INSTALL

Program Description	The Small Business Direct Install program helps small business owners experience instant savings by completing energy-efficient equipment upgrades. Customers with less than a predetermined annual peak demand – currently 200 kW – are eligible for participation. Commercial Energy Auditors conduct a walkthrough assessment and provide recommendations for savings. In addition, the Auditors install faucet aerators, LED bulbs, LED exit signs, occupancy sensors, pre-rinse spray valves, programmable thermostats, low-flow showerheads and water heater pipe insulation at no cost to the customer while onsite. The SBDI program design builds on the current model to better complement IPL's Prescriptive offerings by increasing the incentive on select measures identified through the assessment for small business customers. This approach leads to higher project conversion rates, economic development and further positions IPL as a true partner among its small business customers and the communities it serves. While financial constraints are a very common barrier to implementing energy efficiency upgrades, cost barriers are often more acute for small business owners based on their smaller size and budgets. The SBDI Program aims to transform the small business market by increasing the installation of energy efficiency measures and encouraging follow-on building improvements through incentive-eligible projects offered through the Prescriptive program. To continue to reach this sector and lower participation barriers, the program will use a tablet based audit tool to document facility data (e.g., size, fixture counts), direct installation of measures, and additional energy efficiency opportunities. The program provides customers with attractive and easy-to-understand project proposals with the cost and payback data customers need to make informed decisions about which projects to implement and build a business case for investment.
Objectives	The objectives for the SBDI program include: • Encouraging small business customers to improve the energy efficiency of their facilities by installing a suite of targeted, highly cost-effective measures at no cost to demonstrate the benefits of investing in efficiency while building rapport that leads to further investment • Educating the customer about their existing energy use and how to operate their buildings in a way that saves energy and money, supporting long-term energy efficiency awareness and commitment leading to permanent improvements in the market for energy efficient products and services • Creating assessment reports that are compelling and that present additional energy efficiency opportunities and available financial incentives to make the case for further investment • Implementing a streamlined participation process that breaks down financial barriers for small business customers by offering immediate energy and cost savings through direct installation of measures and bonus incentives for multi-measure implementation • Following-up after assessments to drive participation in measures suited to the particular customer from the wider suite of IPL business programs by implementing cross-selling strategies that move customers to action • Using data-driven customer outreach, segmentation and prioritization strategies to reach the right customers with the right messages, including

sector-specific messages for IPL's most common small business customer types (e.g., small offices, restaurants, retail, grocery and warehouses)

- Supporting customer satisfaction and placing IPL at the center of the value steam as the customer's energy efficiency expert and advocate for energy and cost savings

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Small Business Direct Install	3,785,800	3,785,800	2,584,957

Gross Demand (kW) Savings

Program	2018	2019	2020
Small Business Direct Install	434	434	234

Net Energy (kWh) Savings

Program	2018	2019	2020
Small Business Direct Install	3,592,041	3,592,041	2,452,112

Net Demand (kW) Savings

Program	2018	2019	2020
Small Business Direct Install	412	412	222

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Small Business Direct Install	$942,496	$964,185	$933,996

Cost-Effectiveness

The cost-effectiveness metrics of the Small Business Direct Install program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Small Business Direct Install	2.20	1.71	0.68	7.82

BUSINESS DEMAND RESPONSE

Program Description

The Business Demand Response program employs an innovative and highly cost-effective approach that delivers switch replacements while enhancing IPL's relationship with the local HVAC service community. The implementation vendor will provide in-depth training and in-field support to a network of local HVAC trade allies, who will perform all switch replacements. This approach offers the advantage of transforming the HVAC community by educating local trade allies on the benefits of DR; alleviating the common issue of service technicians disconnecting DLC switches while they are in the field. It also serves as a way to keep HVAC workers employed during the industry's slow season when some HVAC companies have to layoff even some of their best technicians; further improving IPL's relationship with the HVAC community. The participating trade allies will also be available to provide year-round service to IPL customers that may have questions or HVAC issues they perceive to be associated with the ACLM program.

Objectives

The objectives for the Business Demand Response program include:

- Update IPL's existing infrastructure of one-way DLC switches;
- Provide a cost-effective solution that leverages local HVAC contractors;
- Grow IPL's relationship with the local HVAC community;
- Maintain the existing one-way DR fleet until two-way conversion is complete;
- Provide lead generation for the Small Business Direct Install program.

Projected Savings

Gross Energy (kWh) Savings

Program	2018	2019	2020
Business Demand Response	10,500	10,500	10,500

Gross Demand (kW) Savings

Program	2018	2019	2020
Business Demand Response	1,400	1,400	1,400

Net Energy (kWh) Savings

Program	2018	2019	2020
Business Demand Response	10,500	10,500	10,500

Net Demand (kW) Savings

Program	2018	2019	2020
Business Demand Response	1,400	1,400	1,400

Projected Expenditures

Budget (dollars)

Program	2018	2019	2020
Business Demand Response	$155,600	$155,600	$155,600

Cost-Effectiveness

The cost-effectiveness metrics of the Business Demand Response program are as follows:

	Cost Effectiveness Tests			
Program	**UCT Ratio**	**TRC Ratio**	**RIM Ratio**	**PCT Ratio**
Business Demand Response	0.40	0.40	0.40	N/A