CEDI Martin-Schramm Rebuttal Testimony (EEP-2022-0150) Exhibits

Exhibit Number	Exhibit Title
CEDI Martin-Schramm Rebuttal Exhibit 1	IPL Response to CEDI Data Request No. 19
CEDI Martin-Schramm Rebuttal Exhibit 2	DOE LEAD, 0-200 FPL Households IA + USA
CEDI Martin-Schramm Rebuttal Exhibit 3	IPL Response to CEDI Data Request No. 20
CEDI Martin-Schramm Rebuttal Exhibit 4	IPL Response to CEDI Data Request No. 11
CEDI Martin-Schramm Rebuttal Exhibit 5	IPL Response to IBEC Data Request No. 7
CEDI Martin-Schramm Rebuttal Exhibit 6	IPL AMI Uses Matrix (03-15-23)

CEDI Martin-Schramm Rebuttal Exhibit No. 1

Response of Interstate Power and Light Company to CLEAN ENERGY DISTRICTS OF IOWA Data Request No. 19

Docket Number: EEP-2022-0150
Date of Request: April 3, 2023
Response Due: April 10, 2023
Information Requested By: Andrew Johnson
Date Responded: April 10, 2023
Author: Kurt Sempf

Author's Title: Sr. Portfolio Manager

Author's Telephone No.: 319.786.4118

Subject: Heat Pump Rebates

Data Request No. 19

A. How many rebates for heat pumps has IPL provided to customers under the current five-year energy efficiency plan (EEP-2018-0003)? Please break down the information in the following way:

- a. Total number of rebates for heat pumps to residential and non-residential customers.
- b. How many of these rebates were for air source heat pumps vs. mini-split heat pumps?
- c. Number of rebates by heat pump type (air source, ground source, hybrid hot water heater), and associated energy efficiency criteria.
- d. Number of heat pump rebates provided to low-income households (0-200% FPL)
- e. Number of heat pump rebates provided to low-to-moderate-income households (200-300% FPL)
- f. Number of heat pump rebates provided to all other households.

Response:

- a) In the current Plan, IPL has issued 1,170 heat pump rebates to residential customers and 129 heat pump rebates to non-residential customers.
- b) Of the 1,170 heat pump rebates, IPL issued 456 ASHP rebates and 253 Mini Split rebates to residential customers. IPL issued 17 ASHP rebates and 87 Mini Split rebates to non-residential customers.
- c) Table1 below indicates the number of heat pump rebates issued by type and year:

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Table 1 Heat Pump Rebates by Year and Type

Heat Pump Type	2019	2020	2021	2022	2023	TOTAL
Res Mini Splits	19	110	85	39	TBD	253
Res ASHP	34	155	82	185	TBD	456
Res Geothermal Heat	24	71	86	63	TBD	244
Res Electric Heat Pump						
Water Heaters	24	59	73	61	TBD	217
					TOTAL	1170
Non Res mini splits	18	21	39	9	TBD	87
Non res ASHP	4	8	2	3	TBD	17
Non res Geothermal						
Heat Pumps	5	3	10	3	TBD	21
Non Res Electric Heat						
Pump Water Heaters	0	2	1	1	TBD	4
					TOTAL	129

IPL uses the technical reference manual (TRM) to determine qualifications for all equipment rebated in our programs. The qualifications from the current TRM are listed below.

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Residential Quali	fications	
ASHP	Tier 2 SEER/EER 16/13 and HSPF 9.0 (split system); SEER2 15.2 and HSPF 7.7 Tier 3 SEER/EER 18/13 and HSPF 10.0 (split system); SEER2 17.1 and HSPF2 8.5	AHRI certified, Units must be less than 65,000 BTUH, Condenser and coil must both be replaced; Eligible for new construction (newer than 5 years old) and existing construction (minimum of 5 years old); Must be IPL electric customer
Geothermal Heat Pumps	Tier 1 ENERGY STAR Tier 2 ENERGY STAR (variable speed)	AHRI certified; Must new geothermal system (including equipment and ground loop); Eligible for new construction (newer than 5 years old) and existing construction (minimum of 5 years old); Must be IPL electric customer
Heat Pump Water Heater	ENERGY STARUEF >= 3.3 for Integrated HPWH; UEF >= 2.2 for Integrated HPWH, 120V/15A Circuit; UEF >= 2.2 for Split-System HPWH	AHRI Certified, ENERGY STAR Qualified; Eligible for new construction (newer than 5 years old) and existing construction (minimum of 5 years old); Must be IPL electric customer
Mini-Split Heat Pump	Whole-house primary heating	Whole-house units must heat and cool for the use of heating and cooling the whole home; AHRI certified; Minimum efficiency: SEER/EER 16/13 and HSPF 9.0; SEER2 15.2 and HSPF2 7.7; Minimum of 12,000 BTUH (outdoor unit); Must heat and cool for the use of heating the whole home; Must be inverter-based units; Cooling only systems are not eligible; Rebate is based on per outdoor unit; Home must be a minimum of 5 years old (existing construction; Must be IPL electric heating space customer
	Supplemental heating system	Supplemental units are applicable for add-on supplemental heating and cooling for individual room(s); AHRI certified; Minimum efficiency for existing spaces: SEER/EER 16/13 and HSPF 9.0; SEER2 15.2 and HSPF2 7.7; Minimum efficiency for new spaces: SEER/EER 19.5/12.5 and HSPF 11.0; SEER2 18.5 and HSPF2 9.4; No minimum capacity to qualify; Applicable for add-on or supplement heating and cooling for individual room(s); Must be inverter-based units; Cooling only systems are not eligible; Rebate is based on per outdoor unit; Home must be a minimum of 5 years old (existing construction); Must be IPL electric heating space customer for existing spaces; Must be IPL electric customer for new conditioned spaces (e.g. new additions)

Non Residential	Qualifications	
ASHP	Tier 2 SEER/EER 16/13 and HSPF 9.0; SEER2 15.2 and HSPF 7.7 Tier 3 SEER/EER 18/13 and HSPF 10.0; SEER2 17.1 and HSPF2 8.5	< 65 MBTUH; AHRI Certified; Split-system or single-package eligible; Must be IPL electric customer; New construction eligible for buildings less than 5,000 square feet and not participating in the Commercial New Construction program (new construction = buildings less than 5 years old)
GEO	Tier 1 ENERGY STAR Tier 2 ENERGY STAR variable	< 240 MBTUH Must new geothermal system (including equipment and ground loop); AHRI Certified; Must be IPL electric customer; New construction eligible for buildings less than 5,000 square feet and not participating in the Commercial New Construction program (new construction = buildings less than 5 years old)
Heat Pump	ENERGY STAR UEF >= 3.3 for	AHRI Certified, ENERGY STAR Qualified; Must be IPL electric
Water Heaters	Integrated HPWH; UEF >= 2.2 for	customer; New construction not eligible
	Integrated HPWH, 120V/15A Circuit;	
	UEF >= 2.2 for Split-System HPWH	
Ductless Heat	≥ 1 to < 5.4 tons ductless heat	Must heat and cool, Cooling-only units are ineligible; AHRI Certified;
Pumps	pumps (SEER/EER 15/12 and HSPF	I I
	8.5) SEER/EER 16/13 and HSPF 9.0	
	(split system); SEER2 15.2 and	
	HSPF 7.7	

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d) IPL does not request customer income in rebate applications. IPL does track the number of heat pumps installed through the state low-income weatherization program in Table 2 below.

Table 2 – Heat Pumps Installed through Iowa Low-income Weatherization program

I I I I I I I I I I I I I I I I I I I			
LI Heat Pump replacement 2 9 21	24	TBD	56

- e) IPL does not track requesting customer income in rebate applications and cannot filter for moderate income customers.
- f) IPL does not request customer income in rebate applications and cannot provide this information. Please see Table 1 in response c).

CEDI Martin-Schramm Rebuttal Exhibit No. 2

Low-Income Energy Affordability Data Tool Chart Export (https://lead.openei.org/)

Exported On: 4/10/23

FPL: 0% - 100%; 100% - 150%; 150% - 200%; 200% - 400%; 400%+ Building Age Before 1940; 1940 - 59; 1960 - 79; 1980 - 99; 2000 - 09; 2010+

Heating Fuel Utility Gas; Bottled Gas; Electricity; Fuel Oil; Coal; Wood; Solar; Other; None

Building Typ: 1 unit detached; 1 unit attached; 2 units; 3 - 4 units; 5 - 9 units; 10 - 19 units; 20 - 49 units; 50+ units; Boat/RV/Van; Mobile/Trailer

Rent/Own: Renter-occupied; Owner-occupied

	Federal		Avg. Energy						
	Poverty		Burden						
Name	Level	Housing Counts	(% Income)						
lowa	0% - 100%	125,894	18	125,894	125,894				
lowa	100% - 150%	103,345	9	103,345	103,345				
lowa	150% - 200%	111,085	7	<u>_</u> 111,085	111,085				
Iowa	200% - 400%	406,909	4	340,324 0-200 FPL IA Households	406,909				
Iowa	400%+	509,622	2		509,622			_	
the United	S 0% - 100%	14,783,171	18		1,256,855	Total Iowa F	louseholds		
the United	S 100% - 150%	10,417,199	8			=	27.08%	0-200 FPL Iowa	1
the United	S: 150% - 200%	10,355,634	6						_
the United	S 200% - 400%	34,686,906	4	14,783,171	14,783,171				
the United	S: 400%+	50,680,351	2	10,417,199	10,417,199				
				10,355,634	10,355,634				
				35,556,004 0-200 FPL US Households	34,686,906				
				 	50,680,351				
					120,923,261	Total US Ho	useholds		
				•			29.40%	0-200 FPL USA	7

CEDI Martin-Schramm Rebuttal Exhibit No. 3

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Response of Interstate Power and Light Company to CLEAN ENERGY DISTRICTS OF IOWA Data Request No. 20

Docket Number: EEP-2022-0150 Date of Request: April 3, 2023 Response Due: April 10, 2023 Information Requested By: Andrew Johnson Date Responded: April 10, 2023 Author: Aquila Velonis Author's Title: Senior Associate Author's Telephone No.: 503.467.7156

Subject: Table 4-18, Comprehensive Income Qualified Program

Data Request No. 20

Table 4-18 in IPL's application provides the overall budget for the Comprehensive Income Qualified Program Budget but it does not explain how and where these budget items are allocated to the three components in the program. These components are:

- Single-Family Low-Income
- Single-Family Limited-Income
- Multifamily and Institutional Low-Income

(IPL Application, Exhibit 1, pg. 64)

A. Please provide a year-by-year and total budget for each component of the Comprehensive Income Qualified program utilizing the budget items in Table 4-18 in IPL's application, Exhibit 1.

Response:

The following tables (1-3) provide year-by-year and total budgets by each component.

Table 1. Single-Family Low-Income

	2024	2025	2026	2027	2028	Total
Electric Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$43,172	\$43,511	\$43,860	\$44,219	\$44,589	\$219,351
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$17,500
Education	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0
Overhead Subtotal	\$46,672	\$47,011	\$47,360	\$47,719	\$48,089	\$236,851
Customer Incentive	\$542,419	\$542,665	\$542,665	\$542,665	\$542,665	\$2,713,081
Equipment	\$14,381	\$14,381	\$14,381	\$14,381	\$14,381	\$71,903
Installation	\$0	\$0	\$0	\$0	\$0	\$0
Incentives Subtotal	\$556,800	\$557,046	\$557,046	\$557,046	\$557,046	\$2,784,985
Electric Total	\$603,472	\$604,057	\$604,406	\$604,765	\$605,135	\$3,021,836

NOTE: In the event the response to this data request contains confidential information, do not simply mark the entire response or attached document(s) confidential. Please highlight, or otherwise identify, the specific information that is claimed to be confidential.

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Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$219,967	\$219,985	\$220,003	\$220,022	\$220,042	\$1,100,020
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$10,500	\$10,500	\$10,500	\$10,500	\$10,500	\$52,500
Education	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0
Overhead Subtotal	\$230,467	\$230,485	\$230,503	\$230,522	\$230,542	\$1,152,520
Customer Incentive	\$1,936,057	\$1,937,450	\$1,937,450	\$1,937,450	\$1,937,450	\$9,685,858
Equipment Cost	\$19,612	\$19,612	\$19,612	\$19,612	\$19,612	\$98,058
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Incentives Subtotal	\$1,955,668	\$1,957,062	\$1,957,062	\$1,957,062	\$1,957,062	\$9,783,915
Natural Gas Total	\$2,186,135	\$2,187,547	\$2,187,565	\$2,187,584	\$2,187,604	\$10,936,436
Component Total	\$2,789,608	\$2,791,604	\$2,791,971	\$2,792,349	\$2,792,739	\$13,958,271

Table 2. Single-Family Limited-Income

	2024	2025	2026	2027	2028	Total
Electric Budget	•					
Planning and Design	\$30,000	\$5,000	\$5,000	\$5,000	\$5,000	\$50,000
Administration	\$33,492	\$34,258	\$35,046	\$35,858	\$36,695	\$175,349
Advertising and Promotion	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
Monitoring and Evaluation	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$10,000
Education	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
Overhead Subtotal	\$110,492	\$86,258	\$87,046	\$87,858	\$88,695	\$460,349
Customer Incentive	\$41,580	\$41,580	\$41,580	\$41,580	\$41,580	\$207,898
Equipment	\$1,506	\$1,506	\$1,506	\$1,506	\$1,506	\$7,529
Installation	\$0	\$0	\$0	\$0	\$0	\$0
Incentives Subtotal	\$43,085	\$43,085	\$43,085	\$43,085	\$43,085	\$215,427
Electric Total	\$153,577	\$129,343	\$130,132	\$130,944	\$131,780	\$675,776

Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$56,186	\$56,227	\$56,268	\$56,311	\$56,355	\$281,348
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000
Education	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000
Overhead Subtotal	\$62,186	\$62,227	\$62,268	\$62,311	\$62,355	\$311,348
Customer Incentive	\$160,459	\$160,459	\$160,459	\$160,459	\$160,459	\$802,295
Equipment Cost	\$2,102	\$2,102	\$2,102	\$2,102	\$2,102	\$10,509
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Incentives Subtotal	\$162,561	\$162,561	\$162,561	\$162,561	\$162,561	\$812,804
Natural Gas Total	\$224,747	\$224,788	\$224,829	\$224,872	\$224,916	\$1,124,151
Component Total	\$378,325	\$354,130	\$354,961	\$355,816	\$356,696	\$1,799,928

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Table 3. Multifamily and Institutional Low-Income

	2024	2025	2026	2027	2028	Total
Electric Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$77,498	\$78,283	\$79,092	\$79,926	\$80,784	\$395,583
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$3,592	\$3,592	\$3,592	\$3,592	\$3,592	\$17,961
Education	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0
Overhead Subtotal	\$81,090	\$81,875	\$82,684	\$83,518	\$84,376	\$413,544
Customer Incentive	\$1,097	\$1,097	\$1,097	\$1,097	\$1,097	\$5,483
Equipment	\$28,619	\$28,619	\$28,619	\$28,619	\$28,619	\$143,094
Installation	\$0	\$0	\$0	\$0	\$0	\$0
Incentives Subtotal	\$29,715	\$29,715	\$29,715	\$29,715	\$29,715	\$148,577
Electric Total	\$110,805	\$111,591	\$112,400	\$113,233	\$114,091	\$562,121

Natural Gas Budget						
Planning and Design	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$6,510	\$6,551	\$6,594	\$6,637	\$6,683	\$32,974
Advertising and Promotion	\$0	\$0	\$0	\$0	\$0	\$0
Monitoring and Evaluation	\$10,776	\$10,776	\$10,776	\$10,776	\$10,776	\$53,882
Education	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0
Overhead Subtotal	\$17,286	\$17,327	\$17,370	\$17,414	\$17,459	\$86,855
Customer Incentive	\$1,340	\$1,340	\$1,340	\$1,340	\$1,340	\$6,702
Equipment Cost	\$14,093	\$14,093	\$14,093	\$14,093	\$14,093	\$70,463
Installation Cost	\$0	\$0	\$0	\$0	\$0	\$0
Incentives Subtotal	\$15,433	\$15,433	\$15,433	\$15,433	\$15,433	\$77,165
Natural Gas Total	\$32,719	\$32,760	\$32,803	\$32,847	\$32,892	\$164,020
Component Total	\$143,524	\$144,351	\$145,203	\$146,080	\$146,983	\$726,141

CEDI Martin-Schramm Rebuttal Exhibit No. 4

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Response of Interstate Power and Light Company to CLEAN ENERGY DISTRICTS OF IOWA Data Request No. 11

Docket Number: EEP-2022-0150
Date of Request: March 17, 2023
Response Due: March 24, 2023
Information Requested By: Andrew Johnson
Date Responded: March 24, 2023
Author: Kari Gehrke

Author's Title: Manager Demand Side Management

Author's Telephone No.: 319.786.4326

Subject: PowerHouse Program

Data Request No. 11

"PowerHouse is an educational television program focused on home energy efficiency projects and information. Produced by a third-party vendor, PowerHouse will air once each weekend across four lowa television markets in IPL's service territory. PowerHouse episodes will also be available to customers online (through YouTube and the PowerHouse website). IPL will often include contractors and homeowners on the show for testimonies about and demonstrations of energy efficiency improvements, do-it-yourself projects, and new technologies." (IPL Application, Exhibit 1, pg. 68)

A. What is the budgeted annual cost of producing the Power House program? (It is not included as a line item in Table 4-22 or Table 4-23.)

Response:

Powerhouse is primarily designed to focus on the residential sector. The following table shows the annual budget by fuel for the PowerHouse program component.

Component	2024	2025	2026	2027	2028
PowerHouse (Electric)	\$451,943	\$453,502	\$455,107	\$456,760	\$458,463
PowerHouse (Natural Gas)	\$12,734	\$12,816	\$12,900	\$12,987	\$13,077
PowerHouse (Total)	\$464,677	\$466,318	\$468,007	\$469,747	\$471,540

	Filed with the	lowa Utilities Board Rebuttal Exhib	d on April 12, 2023	FFP-2022-0150
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Response of Interstate Power and Light Company to IOWA BUSINESS ENERGY COALITION Data Request No. 7

Docket Number: EEP-2022-0150
Date of Request: March 13, 2023
Response Due: March 20, 2023
Information Requested By: Lynn Herndon
Date Responded: March 20, 2023
Author: Jeff Adams

Author's Title: Portfolio Manager Author's Telephone No.: 608.458.8419

Data Request No. 7

Detail the rationale supporting Interstate Power and Light's proposed Nonresidential Interruptible credit levels, including what other levels of credits IPL considered and why IPL determined not to adopt another level of credit?

Response:

As noted on page 8 of Gehrke Direct Testimony, "IPL acknowledges additional modifications may be necessary to the Large Commercial and Industrial Interruptible component of the Demand Response program as the result of ongoing changes to values for capacity additions and the implementation of Midcontinent Independent System Operator's (MISO) seasonal construct. IPL commits to working with Plan intervenors to address these changes during the regulatory process and as needed during Plan implementation."

Due to the timing of the Plan filing and approval of MISO's seasonal construct, IPL did not have adequate time to make any corresponding modifications (if needed) to the Nonresidential Interruptible program. IPL remains committed to collaborating with Plan intervenors in advance of the settlement deadline to discuss any needed modifications including but not limited to the interruptible credit levels.

	CA identified AMI nctions/projects	Corresponding IPL AMI data projects	Customer Benefits	Status	<u>Description</u>	April 2022 OCA Comments	June 2022 IPL Update	July 2022 OCA Comments	September 2022 Update	December 2022 Update	March 2023 Update		
			More accurate description of energy used in the household by product type such as lighting, cooking, cooling, etc. This will be fronted in home energy reports.		PL's configuration of AMI data transfer has completed and we are now sending slight flee to Uplight for use in multiple products. Uplight is analyzing the data and will begin using it in daily updates to the Home Energy portal and use it to feed other products like the home energy reports. Configuration on the voice side is taking a little longer than expected. We are having trouble with the daily fless being small enough for ingest by the vendor.	appreciate receiving ongoing updates on the status of customer historical usage information being populated in the Home Energy Portal now that the file size limitation issue has been resolved, the	portal for up to the previous 16-18 months. Customers are able to see their usage per day and per hour to see their kWh use and \$		No update OCA Question: What is IPL's plan and timeline for populating more usage data? How far back will IPL eventually make available? IPL Response: Historical AMI usage data is available for all lows customers depending on the date the AMI mater was configured and provisioned. This historical data can start may be as of Fall of billing data as far back as fall of 2016 or spring of 2017 when program was first implemented. As IPL moves forward, all AMI data is being shared to build on current historical data.	No Updates. Data is confining to be shared with customers and Uplight is using it to power their program platforms.	No Updates. Data is continuing to be shared with customers and Uplight is using it to power their program platforms.	OCA General Comment - What is IPL's overall plan for AMI meter testing? What have been the results so fair 1 How a demonstration of each of the projects, either during stages of development or once completed and deployed, to be able to experience what customers will be offered, especially the on-going changes and developments to the MyAccount portal.	own measurable savings to IPL, and/or to the cust stomers reduced their usage and saved on their bi
tions	Data disaggregation Two-way mmunications between	Disaggregation			believes this use case would provide to customers. The AMI meters accompanied by the MyAccount potal already allow the Company to receive interval data from the AMI meters and the customer's to access the corresponding usage information through the MyAccount portal.	availability of this - Green Button Connect My Data is the energy-industry standard for enabling easy access to, and secure sharing of, utility-customer energy-usage data. Utilities providing standards-based Green Button customer- consumption and billing data can provide customers sew data-driven services, programs, and platforms; digitally emprovering			No update <u>QCA Note:</u> QCA awaits feedback on its earlier comments. Also, please see QCA Question regarding item 14 below. <u>IPL Response</u> : See IPL's response to Item 14 below. IPL has not received requests to make this AMI data available to outside parties.	See IPL's response to Item 14 below. IPL has not received requests to make this AMI data available to outside parties.	See IPL's response to litem 14 below. IPL has not received requests t make this AMI data available to outside parties.	IPL Response - IPL continues to follow the In-Service test plan submitted to the IUIS in accordance with lowa Administrative Code 199-206 - Meeting: This withen plan outlines our inservice testing for all meter groups. All meter test lost passed for the year 2021. Results of testing and quantities tested can be found in the required report for 199 NCC 202(6) through the IE-Torm. Results will be submitted prior to the April 1st deadline. As a result of testing, a total of 58 meters have been replaced due to overlunder registration outside tolerances, creep, or no register. OCA Question: Does IPL have updated test numbers for 2022? IPL Response: IPL does not track mid-year or quarterly meter testing results. Due to requirements for potential additional testing based on meter test results, data is completed the end	
tomer	atomer and company Control of smart devices	Demand Response Smart Thermostat	More confortable way to participate in Demand Response. Customers have the ability to opt out if it gets to owarm. And lailows Alliant Energy to confirm the savings manufacturers unlike previous one-way switch programs. We data from our Summer 2021 to share the confirmed results by end of January.		Enroliments continue with the Smart thermostal program. As of 1/1/2022 we have the ability to control 5.900 devices with approximately 200 other devices necessary to the second of the devices with approximately 200 other devices controlled, but yet to be attached to WIFI. This means we have ~ 5.000 even dedicustomers, but are still waiting on some to be hooked up to WIFI. Customers we 60 days from purchase of a smart thermostal on our marketiplace to hook their thermostal up to WIFI. The Smart Hours cooling season ended on September 30th. Our average kW per household was 1.0. We are doing internal confirmation of this savings information using AMI data and the customers we know participated in the treatment and the control group.	consumer interest in and usage of smart thermostats, is there any reason not to seek to further promote and expand the demand response smart thermostat for Summer and Winter? OCA would appreciate ongoing updates on the demand response smart thermostat for both summer and winter? OCA would appreciate ongoing updates on the demand response smart thermostats pilot for both Summer and Winter programs either in the AMI	add 5,000 customer per year to the pilot, we are not limiting oustomers to join the program and hope to exceed that number each year.	considering in establishing goals for this program?	IPL is seeing the growth in the number of customers in the smart thermostal program slowing down in 2022. IPL is increasing its marketing to a broader customer base. IPL is also working with in 2022. IPL is increasing its marketing to a broader customer base. IPL is also working with the solver price. This would be in addition to IPL's enrollment boruses and EE rebates. Our current active enrollment is ~6,500 customers enrolled in Smart Hours. OCA Note: What information and programs is IPL considering in establishing goals for this program. IPL Response: IPL is using the smart hours modification filed in the fall of 2020 for the goals in this program. ~15,000 customers enrolled by the end of 2023. IPL is also trying to bisinore the program. ~15,000 customers enrolled by the end of 2023. IPL is also trying to bisinore the case of the control of the	7,100 customers enrolled in the program. IPL has used AMI data to tauged = 50,000 lby usage customers for enrollment in the Smart Hours program. October saw a 124% increase in enrollments and November showed higher enrollments are well. More enrollments are oxpected due to holding shopping specials on Smart Thermostats.	the Smart Hours program. This will provide an additional 14,000 potential opportunities for IPL's Smart Hours program.	CEDI Martin-Schramm Rebuttal Exhibit No. 6	
4. ·	Tools to help customers pactively manage usage sal-time and historical)		Platform for customers to view usage data online.	Operational	Customer AMI data fully integrated into tool.	- The demonstration of MyAccount was very helpful as it was the first time that many of the stakeholders could actually see what customers can access. OCA would appreciate receiving annual	No Update		No update	No update. Our My Home portal is available for all lows customers through My Account.	No update. My Home portal is available for all lowa customers through My Account.		
,,,	on area and motoroon)	EEP My Home Portal	Customer will be able to see their average weekday hourly usage, their recent usage charts will change from monthly to daily usage and the disaggregation will become more accurate once AMI is enabled.		Work is all underway between our My Account partner and Uplight to get this moved to a front page tile inside My Account and available with AMI data. The HAMI files are being shared, but have been unable to be ingested due to size constraints. Alliant Energy IT is working to solve the problem with Uplight.		No update, file size issue has been addressed by IPL.		No update	Demostration of My Hone Potal will be provided in December collaboration meeting. My Home Portal is available for all lowa customers through My Account.	My Home portal in available for all lows oustomers through My Accour EV My Home Portal customer information was provided in January 2023.		
pro-	Tools to help customers oactively manage usage real-time and historical)	EEP Home Energy	Better disaggregation on the printed reports with the email reports mirroring the portal abilities listed above.		Formatting for physical home energy reports will take a little bit longer to begin- populating with AMI information. Uplight is currently analyzing the data ingest and determining a formal for the physical reports. The online portal will update rist followed by the physical report. We are expecting this to take place in Q1- 2022.		The AMI data now also populates the eHer reports and paper reports with an average weekday hourly use that compares usage to previous bill and highlights		No update	No Updates. Home Energy Reports are currently using AMI data.	No Updates, Home Energy Reports are currently using AMI data.		
			Commercial customers are able to get their daily usage, daily demand, and demand intensity.	Operational	Customer AMI data fully integrated into tool.		where it has IPL is adding outbound communications from the Energy Edge product. Our goal is to have this operational by Q4 of 2022. The outbound communications		PL continues to add outbound communications to the Energy Edge product. The Scope of Work for the vendor has been updated and work between IPL's internal product learn and the vendors team is commencing. IPL's goal is to have this added capability operational in Q4 2022. The outbound customer communications will include enaited information about their energy usage, how they can update their company profiles and take advantage of energy savings options. This program will be similar to the eHERS option provided to residential customers.	customers in early January 2023. Businesses will receive energy information via emails to encourage them to use the tool.	IPL launched outbound communications to business customers in January 2023. These customers rocke emails providing energy information and encouraging them to utilize IPL's Energy Edge tool.		
4. pro (re	Tools to help customers pactively manage usage lal-time and historical)		AMI data will be used to create a better profile and offer better recommendations to customers who take the online assessment.		Linkage problems are still causing problems with the My Account vendor. We are confinning to pursue the issues, but also exploring an updated version of home assessment which should not require the single sign on through My Account. This new updated version would confirm identity through data already being sent to Uplight via the new feeds. This version is expected to be online by and of January 2022.	participation trends for IPL's online Home Energy Assessments after the updated version went live in February and how this compares to prior participation	Home Assessment portal has logged 1,433 customers starting an online assessment with 1,292 customers completing the tool for a 90%		Since February, the Home Assessment portal has logged 2,136 customers starting an online assessment with 1,936 customers completing the tool for a 91% completion rate. Of the customers who completed he assessment, 1,937 are electric-only customers, 90 were dual fuel customers and 191 are gas-only customers. In 2021, IPL had 1,119 assessments completed for the entire year	No update. Our My Home Portal is available for all lowa customers through My Account.	8,961 customers visited the My Home Portal application between January 2022 and December 31, 2022. Of those, 4,749 customers started an assessment 4,328 congleted an assessment and 1,312 clicked an action. The assessment completion rate is -911%.		
omer tions					2021 activity - lowa State University and Slipstream partnered with Alliant Energy, and three 3 other utilities to submit a proposal to the Department of Energy as part of a Building technologies research and field evaluation to mine		No update		No update	No update	No Update	-	

I Martin-Schramm uttal Exhibit No. 6

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Categories f	OCA identified AMI functions/projects	Corresponding IPL AMI data projects	Customer Benefits	<u>Status</u>	<u>Description</u>	April 2022 OCA Comments	June 2022 IPL Update	July 2022 OCA Comments	September 2022 Update	December 2022 Update	March 2023 Update
Customer Solutions					available to other potential stakeholders. SLIPSTREAM did not get chosen for this DOE evaluation.		No Update		No update	No update	No update
G F	Aggregated data for commercial or multi-family properties (used for benchmarking)	None	Non-wires alternative to	Diet in process	Geo-targeting grid pilot in process for analysis in 2022 with results by 2023.		Targeted marketing		Pilot is in process, actual savings from the pilot will be calculated in Q1 2023.	Pilot is still in process, actual savings from the pilot will be calculated in	Sproots from the silet have been unbuilted for makers to determine
Customer Support Services	7. TOU rates	Pilot	reduce costs by using pilot target certain customers to reduce usage or demand to lower load impacts on specified circuits allowing upgrades to substations and systems to be delayed or minimized.		Analyzing customer's usage and prior program participation to determine propressity modeling and customer mapping features such as customers with sensitivity to hot or cold weather, customers which might benefit from Time of Use, and customers which might be possible to the programs. The programs with might be good carnicidates for Demand response programs. These analytics are also being used to create "next Best actions" for customers in communities identified for a circuit analysis.		is in flight for Peosta and Tiffin. The full scope of actual energy diverted or saved won't be available until Q1 2023. Uplight has shared the technical potential for savings. The technical potential (TP) is the amount of energy that could be saved if			Q1 2023.	potential savings. Analysis should be available in Q2 2023.
			Automatically determine best rate for customers using AMI data to analyze usage pattems. Internally the tool may also be used for targeted marketing so customers are only presented programs which match their needs.	In development	We are currently in discussion with Uplight to investigate how our newly established Aft feed could benefit customers with a ret calculation to show customers which rate might be best for them and also offer them the option to sign up to the new /existing rate.		100% of NRA IPL's IT internal development team is creating a rate calculator. The process is currently in the design phase. More information on this process will		The rate calculator project is still in development. IPL hopes to have a testing model available by mid-January of 2023.	The rate calculator project is still in development. IPL hopes to have a testing model available by mid-January of 2023.	expects to have the residential time of use calculator available for customers in 2023.
	7. TOU rates	TOU Customer outreach	Offer low income customers and those on payment arrangements an opportunity to enroll in the TOU rate; providing analysis showing the rate would be cost beneficial for the customer.	Operational	2021 Project - Called almost 5,000 low income or customers on a payment arrangement who would save money by proving to TOU rate 8,5% (429) of customers switched to TOU rate. Ongoing outbound calling continues as staffin and call volume allows.	analyze the effectiveness of th current TOU offering? Are there other TOU program/designs (or better marketin strategies for the current program)	calculator is being designed so customers may be able to "find their		IPL is working on creation of a rate calculator for customers. See above. This calculator is being designed so customers may be able to 'find their beat rate' using their annual usage to compare current IPL rates. IPL's plat of cutbound calls to sign up on the TOU rate is currently on hold due to recent call volume. IPL will resume this plot when call volumes decrease to allow for resources to make outbound calls.	above. This calculator is being designed so customers may be able to "find their best rate" using their annual usage to compare current IPL	IPL is working on creation of a rate calculation for customers, see above. The calculator will allow customers to determine if time of us rates are more cost-effective and sign up to change their rate. In 20 Elt- spoke with 3.256 low-income uncoteners or customers or as payment arrangement to discuss changing to TOU rates. Approximately 300 customers elected to change to TOU rates. Calls have not started in 2023.
8	Automated outage and restoration notifications	Real-time restoration model	Ease of use for customers and increased transparency and awareness. Reduced costs for performing those functions.	1	Automated outage and restoration notifications are part of our operational process.		Since go live of our new My Account portal (March 2020), Alliant Energy has sent 2.3 million outage notification emails to IPI customers		Since go live of our new My Account portal (March 2020), Alliant Energy has sent ~2.7 million outage notification emails to IPL customers.	Since go live of our new My Account portal (March 2020), Alliant Energy has sent ~2.8 million outage notification emails to IPL customers.	Since go live of the updated My Account in March 2020 through, Jan 31, 2023, Allant Energy has sent ~2.9 million outage notification em to IPL customers.
Customer Support Services	in .	Remote Reconnects/Disconne cts	Ease of use for customers and increased transparency and awareness. Reduced costs for performing those functions.		Remote Reconnects/Disconnects are part of our operational process.		The number of disconnections has decreased since 2019. 2019: 34,063 disconnects, e 25,736 reconnects n 2020: 7,328		Since Jan 1 of 2022 there have been 15,600 disconnects and 11,441 reconnects. There are many factors that can impact the number of disconnections such as extended moratoriums and arrears levels.	Since Jan 1 of 2022 there have been 16,800 disconnects and 15,500 disconnects and 15,500 disconnections. There are many factors that can impact the number of disconnections such as extended moratoriums and arrears levels.	In 2022, IPL completed a batal of 20,075 disconnects & 15,402 reconnects. From Jan. 1, through Feb. 14, 2023, there have been 2 disconnects & 199 reconnects.
		Meter data management upgrade	No customer facing benefits, but more automation in the processes will increase efficiency and decrease manual work and potential for mistakes. Ease of use for customers and	Operational Operational	Leverage AMI alarts and alarms to detect billing issues during the billing cycle in addition to automating more tasks. Providing a "white glove" service to customers with high bill inquiries; on track to		Not started IPL currently has	What is the status of this project and if it has not started, why not?	This project was completed in early April 2022. The new MDM is working well and has been stable since implementation. The project was kicked off in C221, integration and core MDM development and integration development were completed in Q421 and the project went live in April 2022. IPL currently has 9,823 customers enrolled in High Usage Alerts (as of 8/31/2022). Alliant Energy	This project is operational. PL currently has 10,365 customers enrolled in High Usage Alerts (as	This project is operational. If As of 1/31/2023, there were 10.721 customers enrolled in high usage.
c r	10. Tools to help customers proactively manage usage (real-time and historical	High usage alerts	increased transparency and awareness.		enroll over 6.500 IPL customers by the end of 2021.		7,752 customers enrolled in High Usage Alerts (as of 5/31/2022). Alliant Energy continues to promote and enroll customers into High Usage alerts and has a goal to have a total of 11,000 IPL customers enrolled in high usage alerts		continues to promote and enroll customers into High Usage alerts and has a goal to have a total of 11,000 IPL customers enrolled in High Usage alerts by EVCY 2022. Alliant Energy recognizes that providing the cost versus energy used may be more meaningful to consumens. Shill information in usage alerts would be ideal, and Alliant Energy will continue to investigate solutions to provide this in the future.	1031/2022). Alliant Energy continues to promote and ernol customer into High Usage alerts and has a good to have a total of 1,000 IPE outsomers enrolled in High Usage alerts by EOV 2022. Alliant Energy recognizes that providing the cost versus energy used may be more meaningful to consumers. Shall information in usage along the beautiful and Alliant Energy will continue to investigate solutions to provide this in the future.	notifications. Aliant Energy continues to promote and enroil custom into High Usage alerts and expects to reach 11,000 customers within the next few months.
	,	Voltage Analytics	Proactive investigation of these issues and next steps to resolution.	Operational	The voltage analytics tool takes the daily voltage readings that are collected from the AMI meters (Voltage Min, Ax, and Average) and compares them against the +/- 5% allowable deviation.		INC. ECM 2022 Information provided in AMI Deep Dive Topic in June. 144 cases have been identified and investigated though May 2022.		(PL Distribution Engineers (DEs) continue to use the tool to investigate high and low voltage notifications based on AMI meter information.	IPL Distribution Engineers (DEs) continue to use the tool to investigate high and low voltage notifications based on AMI meter information.	IPL Distribution Engineers (DEs) continue to use the tool to investign high and low voltage notifications based on AMI meter information.
Grid Services		Outage Analytics	Proactive investigation of these issues and next steps to resolution.	Prototype	Modeled off the Voltage Analytics Tool we are investigating the use of AMI dat in investigating customer outages to determine if there are data trends that can provide insights into outage causes. A prototype tool has been developed.		No update, this pilot has been placed on hold unti such time as a business case can be made for integration of more data into the tool.		No update, this pilot has been placed on hold until such time as a business case can be made for integration of more data into the tool.	No update, this pilot has been placed on hold until such time as a business case can be made for integration of more data into the tool.	No update, this pilot has been placed on hold until such time as a business case can be made for integration of more data into the tool
	Conservation voltage reduction (CVR) or Volt- Var optimization (VVO) Measure power quality	Real-time Voltage Monitoring	Proactive investigation of these issues and next steps to resolution.	Piloting 2 meters	Plicting a new Sensus Stratus IQ meter that can support requirements for low- latency voltage (15 minutes or less) measurement data to be supplied to our SCADA system to support our ADMS project Volt-Var Optimization functions at 'believethers' at key grid locations.	S	No update, pilot in IPL is currently on hold.		No update, pilot in IPL is currently on hold.	No update, pilot in IPL is currently on hold.	No update, plot in IPL is currently on hold.
	and voltage	Gas Metering - Sonix IQ Meter	Ease of use for customers and increased transparency and awareness.	Piloting 2 meters	Piloting a new Sensus gas meter which has remote disconnect capability and the ability to send an alert when the meter is out of billing tolerance. IPL is currently piloting 2 prototypes, production models will not be available until later in 2022		Currently pilot testing two Sonix IQ meters. Received 10 additional Sonix IQ meters the week of June 13. Further		Currently pilot testing two Sonix IQ meters. Further testing cannot proceed until RNI is updated. RNI expected to be upgraded by the end of 2023, pilot testing of additional meters is anticipated to take place in 2024.	Currently pilot testing two Scnix IO meters. Further testing cannot proceed until RNI is updated. RNI expected to be upgraded by the end 2023, pilot testing of additional meters is anticipated to take place in 2024.	Currently pilot testing two Sonix IQ meters. Further testing cannot proceed until RNI is updated. RNI expected to be upgraded by the e of 2023, pilot testing of additional meters is anticipated to take place 2024.

ategories	OCA identified AMI functions/projects	Corresponding IPL AMI data projects	Customer Benefits Sta	atus	<u>Description</u>	April 2022 OCA Comments	June 2022 IPL Update	July 2022 OCA Comments	September 2022 Update	December 2022 Update	March 2023 Update
stegories	istreating projects	Customer Safety - Hot Socket Detection		perational	<u>several union</u> When a hot socket alarm is received it is investigated and customer notified of potential safety issue.	Sommence	High temperature alerts by individual service point per year are as follows: 2019 - 6,795. 2020 - 3,447. 2021 - 3,215. 2022 (YTD) - 790. IPI	Sul 12022 Con Communa	High temperature alerts by individual service point per year are as follows: 2019 - 6,795. 2020 - 3,447. 2021 - 3,215. 2022 (TDI) - 2,251. ILPL customers are only notified if the investigation of the high temperature alarm requires repair or replacement of customer-owned equipment (ox. Meter scoket). This notification includes a phone call lo exolain the issue alone with a certified letter to the	High temperature alerts by individual service point per year are as follows: 2019 - 6,795. 2020 - 3,447. 2021 - 3,215. 2022 (YTD) - 2,725. IPL customers are only notified if the investigation of the high	High temperature alerts by individual service point per year are as follows: 2019 - 6,795. 2020 - 3,447. 2021 - 3,215. 2022 - 2,854. IPL customers are only notified if the investigation of the high temperature alarm requires repair or replacement of customer-owne
orid Services		OMS/ADMS Model Accuracy - AMI Phase Detection	Proactive investigation of these issues and next steps to resolution.	perational	Phase Detection allows an algorithm to be ran to determine which phase (A, B, C) that a meter is on - this is compared to the GIS May, any meters that reshown incorrectly in GIS are corrected to what is in the field. The result is a more accurate GIS map that is the basis for the OMS/ADMS operational model for outage detection as well as the planning models used for long range studies.		Phase detection activities continue and have been applied to approximately 313,500 active electric meters.		Phase detection activities continue and 381,000 meters have been completed. IPL is on schedule to finish first round of phase detection by end of 2022.	been mapped. IPL will be wrapping up its first round of phase detection at the end of December 2022 and will move into maintenance of our network model. Going forward, we will be running phase detection	IPL has currently completed the 1st pass through of phase detection. As of early February, IPL started its first phase detect on for 2023. This run will encompass all of IPL's AMI meters. IPL transitioned five initial pilot phase in 2023 to the minietrance phase in 2023. The minietrance phase in 2023 to IPL will be running phase detection twice per year.
dditional Use		Street Lighting Module Pilot	Ease of use for customers and in increased transparency and awareness.	progress	Have deployed -5.000 Units - AMI Street Light module replaces the photo eye cell and can be used as a meter, as a photo eye cell, has GPS coordinates, send alerts/alarms, is controllable (on-off-dimming), and can sense the wattage of the fixture.		Pilot continues, -3,600 modules have been deployed. IPL will be able to further utilize data after RNI is updated. RNI expected to be upgraded by the end of 2022.		RNI is updated. RNI is expected to be upgraded by the end of 2023.	Light module replaces the photo eye cell and can be used as a meter,	as a photo eye cell, has GPS coordinates, send alerts/alarms, is controllable (on-off-dimming), and can sense the wattage of the fixtu
dditional Use ases		Forecasting Pilot	Improve accuracy of planning Ck load forecasting and better adjug with company level forecasting.	osed	IPL has shared system level, meter level, feeder level load data with Innowatts who is modeling the data to provide a forecast at the meter/feeder level. This is testing creation of agranular forecast to improve accuracy of planning load forecasting and better align with company level forecasting.		nearing completion.	have a plan to communicate with these	IPL shared data with Innowalts that identified those customers receiving a rebate from IPL for installation of an EV charger. Innowalts results did identify locations for EV charging outside of these locations. At this time, IPL has not determined what additional outreach or investigation may be appropriate.	IPL is not moving forward with this pilot with knowatts. A review of the business case did not support moving forward beyond the pilot.	IPL is not moving forward with this pilot with Innowatts. A review of business case did not support moving forward beyond the pilot.
dullional Ose	13. Near real-time settlement in retail and wholesale markets	None			AMI metering could be used to provide settlement data if it is installed to meter the production output of DER. However, there is no such requirement currently for that, and we on to have DER "production" neters. We rely on AMI metering to provide "net metering", but not for "near real-time settlement". There are significant limitations to providing "near real-time" data from AMI systems. Although our AMI systems has some capacity for more frequent and real test and the companies of the set		No update		No update	Ne update	No Update
dditional Use ases	14. De-identified customer usage data for third parties	None			indusaries or neters sharing the same to -continuous. Currently only sharing data with hird-parties we have contracted with and where the information is protected through use of a data access rider within the contracting process, we have not had any outside requests.		No update		No update OCA Question: Has IPL been contacted by third parties or customers to set up access to usage data by third parties? Please consider this an orgoing request that should be updated quarterly. IPL Response: To date, IPL has not received requests from any outside parties or customers to provide access to customer usage data.	To date, IPL has not received any requests from 3rd parties or customers to receive access to usage data	To date, IPL has not received any requests from 3rd parties or customers to receive access to usage data
dditional Use ases		Load Forecasting	Improve accuracy of planning In I load forecasting and better align with company level forecasting.	Progress	IPL's Forecasting Group is investigating uses for leveraging AMI data to improve internal forecasting.					IPL is using a predictive model of daily residential usage as a check on its monthly corporate forecast. It is also using the daily model as a check on the calendarization of the monthly sales forecast that IPL develops using billing data.	IPL continues to use it's residential model as a check on its monthl corporate forecast, and is currently experimenting with similar mod for non-residential, general service rates.