

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF INDIANA MICHIGAN POWER)
COMPANY, AN INDIANA CORPORATION, FOR)
AUTHORITY TO INCREASE ITS RATES AND)
CHARGES FOR ELECTRIC UTILITY SERVICE)
THROUGH A PHASE IN RATE ADJUSTMENT; AND)
FOR APPROVAL OF RELATED RELIEF INCLUDING:)
(1) REVISED DEPRECIATION RATES; (2))
ACCOUNTING RELIEF; (3) INCLUSION OF CAPITAL)
INVESTMENT; (4) RATE ADJUSTMENT)
MECHANISM PROPOSALS; (5) CUSTOMER)
PROGRAMS; (6) WAIVER OR DECLINATION OF)
JURISDICTION WITH RESPECT TO CERTAIN)
RULES; AND (7) NEW SCHEDULES OF RATES,)
RULES AND REGULATIONS.)

CAUSE NO. 45576

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

PUBLIC'S EXHIBIT NO. 10

TESTIMONY OF OUCC WITNESS CALEB R. LOVEMAN

OCTOBER 12, 2021

Respectfully submitted,



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TESTIMONY OF OUCC WITNESS CALEB R. LOVEMAN
CAUSE NO. 45576
INDIANA MICHIGAN POWER COMPANY

I. INTRODUCTION

1 **Q: Please state your name and business address.**

2 A: My name is Caleb R. Loveman, and my business address is 115 W. Washington St.,
3 Suite 1500 South, Indianapolis, Indiana 46204.

4 **Q: By whom are you employed and in what capacity?**

5 A: I am employed as a Utility Analyst in the Indiana Office of Utility Consumer
6 Counselor's ("OUCC") Electric Division. A summary of my educational background
7 and experience is included in Appendix A attached to my testimony.

8 **Q: What is the purpose of your testimony?**

9 A: I provide my analysis of and make recommendations to multiple proposals in Indiana
10 Michigan Power Company's ("I&M" or "Petitioner") case-in-chief. Specifically, I
11 address I&M's: (1) request to more broadly implement remote disconnect and
12 reconnect processes through a waiver of 170 Ind. Admin. Code ("I.A.C.") 4-1-6(f); (2)
13 proposal to recover test year capital and operations and maintenance ("O&M") costs
14 related to its proposed Flex Pay Program; and (3) other adjustments to I&M's test year.
15 Ultimately, I recommend the Indiana Utility Regulatory Commission ("Commission"):

16 (1) Require I&M to set certain protections in place if the Commission approves
17 I&M's request for a waiver of 170 I.A.C. 4-1-16(f), which the OUCC does
18 not object to;

19 (2) Deny I&M's request to include \$568,770 of capital and \$11,347 of O&M
20 expenses related to its proposed Flex Pay Program in rates; and

- 1 (3) Approve I&M's proposal to:
- 2 a. Remove expenses related to value advertising (Adjustment O&M-2);
- 3 b. Include expenses related to the amortization of the Cook Plant dry cask
4 storage costs in rates (Adjustment O&M-3);
- 5 c. Include expenses related to the amortization of the Plugged In cost
6 deferral in rates (Adjustment O&M-9); and
- 7 d. Include certain regulatory assets in rate base (Adjustment O&M-10).

8 **Q: Please describe the review and analysis you conducted in order to prepare your**
9 **testimony.**

10 A: I reviewed I&M's petition, testimony and exhibits, workpapers, minimum standard
11 filing requirements ("MSFR"), and responses to certain OUCC data requests ("DR"). I
12 reviewed certain testimonies filed in I&M's last base rate case, Cause No. 45235, and
13 the Commission's Final Order dated March 11, 2020. I reviewed portions of the Indiana
14 Code ("Ind. Code") and the Indiana Administrative Code. I also reviewed certain
15 testimonies filed in Duke Energy Indiana's ("DEI") prior rate case, Cause No. 45253,
16 related to its remote disconnect policies and the Commission's Final Order in that
17 Cause dated June 29, 2020.

18 **Q: To the extent you do not address a specific item or adjustment, should that be**
19 **construed to mean you agree with Petitioner's proposal?**

20 A: No. Excluding any specific adjustments or amounts I&M proposes does not indicate
21 my approval of those adjustments or amounts. Rather, the scope of my testimony is
22 limited to the specific items addressed herein.

II. REMOTE DISCONNECT/RECONNECT

23 **Q: Please provide a brief overview of I&M's remote disconnect/reconnect request.**

24 A: As approved in the Cause No. 44967 Settlement Agreement, I&M is currently
25 authorized to remotely disconnect customers for non-payment in the event those

1 customers have demonstrated a safety risk to I&M personnel. I&M is now requesting
2 to more broadly implement remote disconnect and reconnect processing using its
3 proposed Advanced Metering Infrastructure (“AMI”) and back-office infrastructure.¹
4 Specifically, I&M requests a waiver of 170 I.A.C. 4-1-16(f) which requires a utility
5 employee make an on-site premises visit prior to disconnection.²

6 **Q: If I&M’s request is approved, how does it plan to notify its customers of a**
7 **potential disconnection?**

8 A: I&M witness Dona Seger-Lawson states:

9 I&M will mail a normal disconnect notice seventeen (17) days prior to
10 scheduled disconnect. If payment is not recorded, seven (7) days prior
11 to the scheduled disconnect date, I&M will initiate a series of automated
12 outbound calls to the customer prior to remote disconnect.

13 Our system will try three times to contact the customer of record before
14 it records the call as unsuccessful. Assuming the call reaches the
15 customer or is successful at leaving a message on an answering machine
16 or voicemail, and payment is not made, the customer will be
17 disconnected automatically around 10 a.m. on the day of disconnect
18 identified on the disconnect notice.

19 If the customer is not reached, or the automated outbound calls are
20 recorded as unsuccessful, another disconnection notice will be
21 automatically generated and mailed to the customer at least five (5) days
22 prior to disconnect. If payment is still not made prior to the scheduled
23 day of disconnect, the customer will be disconnected automatically
24 around 10 a.m.³

25 **Q: Will all I&M customers be subject to remote disconnect/reconnect?**

26 A: No. Ms. Seger-Lawson indicates I&M has a coding system identifying customers
27 considered vulnerable and/or are identified as a life support customer. If this code is

¹ Direct Testimony of Dona Seger-Lawson, p. 48, line 19 to p. 49, line 9.

² *Id.* at 50, lines 11-15.

³ *Id.* at 49, lines 11-24.

1 associated with a customer account, that account is blocked from having a remote
2 disconnect and requires an on-site premises visit.⁴

3 **Q: Does I&M indicate it will notify customers if the Commission approves its waiver**
4 **request?**

5 A: Ms. Seger-Lawson indicates I&M plans to modify its disconnection notices to inform
6 all customers that if timely payment is not made, and if an AMI meter is installed on
7 the premise, they may be subject to remote disconnect.⁵ But Ms. Seger-Lawson does
8 not indicate in her testimony how or if I&M will notify all of its customers outside of
9 its disconnection notices that I&M has been granted authority to make remote
10 disconnections. In order to give customers fair warning about a new process that could
11 expedite how a disconnection is made, I&M should notify its customer base of this
12 change and not just when a customer faces an actual disconnection.

13 **Q: Has the Commission granted a waiver from 170 I.A.C. 4-1-16(f) to other Indiana**
14 **utilities to allow for remote disconnection/reconnection?**

15 A: Yes. In DEI's most recent base rate case, Cause No. 45253, the Commission granted it
16 a waiver of 170 I.A.C. 4-1-6(f). Additionally, as proposed by DEI, the Commission
17 required DEI to communicate to all customers the Commission's waiver of the
18 premises visit being approved.⁶

19 **Q: Does the OUCC oppose I&M's remote disconnect/reconnect waiver request?**

20 A: Subject to my recommendation below, no. The OUCC does not object to I&M remote
21 disconnect/reconnect waiver request. The OUCC supports I&M's proposal to exclude

⁴ *Id.* at 51, lines 1-8.

⁵ *Id.* lines 20-24.

⁶ *In re Duke Energy Indiana, LLC*, Cause No. 45253, Final Order p. 149 (Ind. Util. Regul. Comm'n Jun. 29, 2020)

1 customers who are on life support and other vulnerable customers from remote
2 disconnect. This ensures protections are in place for these vulnerable customers.

3 **Q: If I&M's waiver request is approved, how does the OUCC propose I&M notify**
4 **customers who are at risk of a potential disconnection?**

5 A: In addition to the mailing and outbound call process proposed by Ms. Lawson, the
6 OUCC recommends I&M send a series of automated text messages and e-mails to
7 customers who are at risk of a potential disconnection and have a verified mobile phone
8 number and or e-mail address on record. An automated text message and/or e-mail
9 should be sent at the same intervals as the proposed automated phone calls and
10 mailings. One automated text and/or e-mail should be sent seventeen (17) days prior to
11 the scheduled disconnect. If payment is not made, another automated text and/or e-mail
12 should be sent seven (7) days prior to the scheduled disconnect date. If payment is still
13 not made five (5) days prior to the scheduled day of disconnect, an automated text
14 and/or e-mail should be sent each day, including the day of disconnect, informing the
15 customer of potential disconnect on the specified date if payment is not made. By
16 attempting additional communication to its customers through the automated texts,
17 I&M will be making additional efforts to protect its customers from a potential
18 disconnect.

19 **Q: If I&M's waiver request is approved, how does the OUCC propose I&M notify its**
20 **customers of this change?**

21 A: The OUCC recommends I&M be required to include a bill insert, mail a separate
22 notification, and e-mail customers who have an e-mail address on file, indicating the
23 Commission granted I&M a waiver from Commission rules to implement remote

1 disconnect/reconnect processes for customers with an AMI meter. At a minimum, this
2 communication should include:

- 3 • the information from this filing granting the request;
- 4 • an indication regarding whether the customer has an AMI meter installed;
- 5 • a description of the process I&M will use when attempting to contact its
6 customers of a remote disconnect;
- 7 • information on how to contact I&M's customer service department;
- 8 • information on how to add a third-party contact to the account;
- 9 • information on how to add a mobile phone number to the account to receive
10 texts and calls;
- 11 • information on how to add an e-mail address to the account to receive
12 notifications by e-mail;
- 13 • information on how to find information on the Low-Income Home Energy
14 Assistance Program ("LIHEAP"); and
- 15 • any other information I&M deems relevant to remote disconnect.

16 This communication should be provided to all current and future customers. By
17 providing this information through various communication channels, I&M will be
18 making best efforts to keep customers informed of this change.

III. FLEX PAY PROGRAM

19 **Q: Please describe I&M's proposed Flex Pay Program.**

20 A: I&M is proposing a voluntary payment option allowing residential customers to prepay
21 for electric service without the potential requirement for a deposit or other fees
22 associated with post-pay billing ("Flex Pay"). Flex Pay customers are required to keep

1 a positive balance in their Flex Pay account.⁷ Customers will receive electronic
2 notifications before their account balance reaches zero. When a customer's balance
3 reaches zero, the customer will be disconnected from I&M's electric service the next
4 business day, unless the customer re-establishes a positive balance before that time.⁸

5 As part of this request, I&M is requesting to include capital and O&M expenditures
6 related to Flex Pay in its rates set in this Cause.

7 **Q: What capital and O&M costs does I&M propose to include in rates for Flex Pay?**

8 A: I&M includes \$568,770 of capital costs⁹ and \$11,347 of O&M expenses¹⁰ in the test
9 year, for recovery from all customer classes.¹¹

10 **Q: Which I&M customers are eligible to enroll in the Flex Pay?**

11 A: If approved, this program will be available to all residential customers with an AMI
12 meter rated up to 200 amps and who are not on tariff R.S.D. – Residential Service
13 Demand Metered or on tariff R.S. – EZB – Residential EZ Bill. Customers with certain
14 medical and/or life-threatening conditions, customers on partial payment plans,
15 Average Monthly Payment plan customers, Equal Payment Plan customers, and
16 customers having on-site generation operated in parallel with I&M's system are also
17 ineligible for Flex Pay.¹²

18 **Q: Does I&M assert that Flex Pay creates certain benefits?**

⁷ Direct Testimony of David A. Lucas, p. 36, lines 4-14.

⁸ Direct Testimony of Dona Segar-Lawson, p. 52, lines 5-14.

⁹ Direct Testimony of Jon Walter, p. 38, Figure JCW-10, 2021 and 2022 capital columns summed.

¹⁰ *Id.* 2022 O&M column.

¹¹ See OUCC Attachment CRL-1, I&M Response to OUCC DR 3-04.

¹² Direct Testimony of David A. Lucas, p. 36, lines 15-26.

1 A: Yes. In his direct testimony, I&M witness Jon Walter indicates I&M forecasts 10%
2 individual energy savings for customers who enroll in Flex Pay.¹³ I&M witness David
3 A. Lucas also discusses other benefits to I&M customers resulting from the program.¹⁴

4 **Q: Did I&M provide support for its asserted 10% individual energy savings?**

5 A: I&M provided no support for the 10% figure Mr. Walter provided in his case-in-chief.
6 However, in response to DR 3-01, I&M provided three reports, which I have attached
7 to my testimony.¹⁵

8 **Q: Do the reports I&M provided support Mr. Walter's 10% energy savings**
9 **assumption?**

10 A: No. Only one of the three reports provided by I&M, *DEFG, The Effect of Prepayment*
11 *on Energy Usage*, concludes the decrease in energy usage is attributable to a reduction
12 in usage while service is connected and not a consequence of disconnection. The two
13 other reports I&M provided, *Paying Upfront: A Review of Salt River Project's M-*
14 *Power Prepaid Program*, and *Examining Potential for Prepay as an Energy Efficiency*
15 *Program in Minnesota*, are both inconclusive regarding whether prepay electricity
16 programs reduce customers' energy consumption. All three reports conclude more
17 research is needed on this topic. Based on this information, I conclude that I&M's 10%
18 energy savings assertion is not an assumption upon which any determination on Flex
19 Pay customer benefits can be relied.

20 **Q: Will I&M benefit from Flex Pay?**

21 A: Yes. As Mr. Lucas indicates, I&M's affiliate, Public Service Company of Oklahoma,
22 offers a similar program, Power Pay™, and since 2016, Power Pay™ customers have

¹³ Direct Testimony of Jon Walter, p. 37, line 13 to p. 38, line 6.

¹⁴ Direct Testimony of David A. Lucas, p. 43, line 7 to p. 45, line 11.

¹⁵ See OUCC Attachment CRL-1 I&M Response to OUCC DR 3-01 (Relevant pages attached).

1 reduced their arrearages by approximately \$3.5 million (of a total \$5.1 million
2 arrearage balance).¹⁶ If I&M expects its Flex Pay Program will compare to the Power
3 Pay™ program, I&M should experience a similar reduction in customer arrearages.
4 Absent a corresponding reduction to I&M's bad debt expense revenue requirement, any
5 reduction in customer arrearages benefits I&M.

6 **Q: What are the OUCC's recommendations?**

7 A: Flex Pay should be funded by I&M solely with no costs passed through to ratepayers.
8 As stated above, I&M offered no conclusive evidence indicating that usage is reduced
9 as a result of prepay programs. Therefore, the 10% energy savings I&M states should
10 not be classified as a benefit to customers. Without this purported energy savings, this
11 program offers no tangible benefits to non-participating customers. Finally, the
12 potential reduction in customer arrearages resulting from Flex Pay is a benefit to I&M.
13 This benefit is sufficient to fully compensate I&M for the costs of the programs without
14 asking ratepayers to contribute.

15 The OUCC recommends the Commission deny including any capital and O&M
16 costs related to the Flex Pay program in I&M's test year for purposes of setting rates
17 in this Cause. Removing these costs results in a \$568,770 reduction to I&M's rate base
18 and \$11,347 reduction to I&M's test year O&M expense.

IV. OTHER ADJUSTMENTS

19 **Q: What other I&M adjustments did you review?**

20 A: I reviewed the following I&M adjustments:

- 21
- Adjustment O&M-2, to remove expenses related to value advertising;

¹⁶ Direct Testimony of David A. Lucas, p. 41, lines 1-8.

- 1 • Adjustment O&M-3, to remove lobbying expenses related to the I&M State
2 Office;
- 3 • Adjustment O&M-9, I&M's amortization of Indiana Cook Plant dry cask
4 storage cost deferral; and
- 5 • Adjustment O&M-10, I&M's amortization of Indiana Plugged In cost deferral.

6 I also reviewed I&M's proposed inclusion of certain regulatory assets in its rate base,
7 including Baffle Bolt deferral, Cook Turbine carrying costs, Rockport DSI deferrals,
8 Cook Uprate Project Deferrals, and Cook Nuclear Plant survey cost deferral.

9 **Q: Based on your review, do you oppose I&M's proposed adjustments?**

10 A: No. I did not discover any issues with these proposed adjustments and regulatory asset
11 inclusions. I recommend approving Adjustment O&M-2, Adjustment O&M-3,
12 Adjustment O&M-9, and Adjustment O&M-10, as I&M proposes. I also recommend
13 approving I&M's inclusion of the Baffle Bolt deferral, Cook Turbine carrying costs,
14 Rockport DSI deferrals, Cook Uprate Project Deferrals, and Cook Nuclear Plant survey
15 cost deferral regulatory assets in rate base.

V. RECOMMENDATIONS

16 **Q: What do you recommend?**

17 A: Based on my analysis and conclusions described above, I recommend the Commission:

- 18 1) Require I&M to notify customers of its ability to remotely disconnect/reconnect, if
19 I&M's waiver from 170 IAC 4-1-16(f) is approved, which the OUCC does not
20 object to, via a bill insert, direct mailing, and email, including the information
21 outlined in Section 2 of my testimony and send out a series of automated outbound
22 texts and/or e-mails as outlined in Section 2. The OUCC supports I&M's stated
23 intention to exclude customers with certain medical circumstances from remote
24 disconnection;
- 25 2) Deny I&M's request to include \$568,770 in capital cost and \$11,347 O&M
26 expenses related to its Flex Pay Program in its rates;

1 3) Approve I&M's proposed Adjustment O&M-2, Adjustment O&M-3, Adjustment
2 O&M-9; and Adjustment O&M-10; and

3 4) Approve I&M's inclusion of the Baffle Bolt deferral, Cook Turbine carrying costs,
4 Rockport DSI deferrals, Cook Uprate Project Deferrals, and Cook Nuclear Plant
5 survey cost deferral regulatory assets in rate base.

6 **Q: Does this conclude your testimony?**

7 A: Yes.

APPENDIX A – Qualifications of Caleb R. Loveman

1 **Q: Please summarize your educational background and experiences.**

2 A: I graduated from Franklin University in 2015 with a Bachelor of Science in Accounting.

3 From 2016 to 2019, I owned and operated an E-commerce business. In this role I was

4 responsible for all the accounting, finance, and tax related functions of the business. During

5 this time, I also worked as a Staff Accountant for Legacy Administration Services, LLC

6 and as a Financial Analyst for Cummins, Inc. I began my career with the OUCC in July

7 2019 as a Utility Analyst in the Electric Division. I review Indiana utilities' requests for

8 regulatory relief filed with the Commission. I also prepare and present testimony based on

9 my analyses and make recommendations to the Commission on behalf of Indiana utility

10 consumers. Since joining the OUCC, I have attended "The Basics" Practical Regulatory

11 Training for the Electric Industry, sponsored by the National Association of Regulatory

12 Utility Commissioners ("NARUC") and the New Mexico State University Center for

13 Public Utilities, in Albuquerque, New Mexico. I have also attended the 2019 Indiana

14 Energy Association ("IEA") Energy Conference and the 2019 Indiana Energy Conference

15 presented by the Indiana Industrial Energy Consumers, Inc. ("INDIEC").

16 **Q: Have you previously filed testimony in other Commission proceedings?**

17 A: Yes.

INDIANA MICHIGAN POWER COMPANY
INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR
DATA REQUEST SET NO. OUCC DR 3
IURC CAUSE NO. 45576

DATA REQUEST NO. OUCC 3-01

REQUEST

Please refer to p. 37, line 13 to p. 38, line 6 of Mr. Jon Walter's direct testimony. Please provide all supporting documentation and analyses supporting I&M projections that about 2.5% of customers will enroll and annually use Flex Pay.

- a. Please also provide all supporting analyses and documentation I&M used to determine an individual customer will save 10% annual energy savings as a result of the Flex Pay program.

RESPONSE

I&M objects to the request on the grounds and to the extent the request is overly broad and unduly burdensome, particularly to the extent the request seeks "all" supporting analyses and documentation. Subject to and without waiver of the foregoing objection, I&M provides the following response.

The 2.5% Flex Pay participation estimate reflected in the AMI CBA is a steady state enrollment estimate. The AMI CBA participation estimate is based on a similar Pre Pay program at I&M's sister operating company Public Service of Oklahoma (PSO). PSO has a residential customer count similar to I&M (i.e. PSO has approximately 480,000 residential customers while I&M has approximately 400,000 residential customers in Indiana) and has operated their Pre Pay program for several years. PSO's Pre Pay program steady state participation levels are about 12,000 customers, or about 2.5% of their total residential customer base (12,000 divided by 480,000 equals 2.5%).

The individual annual energy savings of 10% reflected in the AMI CBA estimates the energy savings resulting from individual customer engagement with their energy use while managing their electric cost in the Flex Pay program. This AMI CBA energy savings estimate is based on information Accenture received from PSO. PSO had assumed customers used 8% - 12% less energy based on industry studies, which estimate the impact to energy use for customers participating in Pre Pay-type programs. Please OUCC 3-1 Attachment 1 and OUCC 3-1 Attachment 2, for industry studies. See also OUCC 3-1 Attachment 3 for an additional study.

INDIANA MICHIGAN POWER COMPANY
INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR
DATA REQUEST SET NO. OUCC DR 3
IURC CAUSE NO. 45576

DATA REQUEST NO. OUCC 3-04

REQUEST

Please refer to p. 38 of Mr. Jon Walter's testimony.

Line 18 states, "Figure JCW-10 shows these costs for 2022 and 2023." Figure JCW-10 shows the years 2021 and 2022. Which years should be displayed in Figure JCW-10?

Please explain how the costs related to the Flex Pay program are proposed to be recovered from customers. Please provide all supporting documentation

RESPONSE

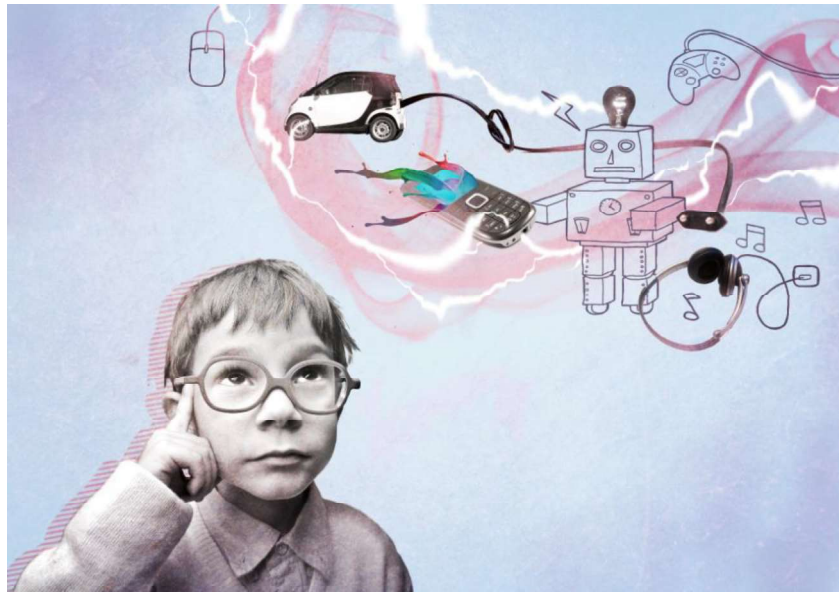
I&M objects to the request on the grounds and to the extent the request is overly broad and unduly burdensome, particularly to the extent the request seeks "all" supporting documentation. Subject to and without waiver of the foregoing objection, I&M provides the following response.

The statement on Line 18 is in error. The correct statement is as follows: "Figure JCW-10 shows these costs for 2021 and 2022." A testimony correction will be filed.

I&M is proposing to recover the Flex Pay program capital costs incurred during the Capital Forecast Period (2021-2022) and Test Year O&M costs through basic rates. Figure JCW-10 in Mr. Walter's testimony, page 38, shows the Capital Forecast Period investment and Test Year O&M costs.



The Effect of Prepayment on Energy Use



*By: Michael Ozog, Ph.D.
Integral Analytics, Inc.*

*A research project commissioned by the
DEFG Prepay Energy Working Group
March 2013*

Conclusion

This study quantified the relationship between prepaying for energy usage using techniques that are accepted and widely used in the evaluation of utility-sponsored energy efficiency programs.

Using Oklahoma Electric Cooperative's consumer data from the Prepaid Account Management System (PAMS) within a regression model, this research determined that enrollment in prepay results in a significant reduction in energy usage of on average 11%. This 11% energy use reduction is quite large relative to other common energy efficiency measures and requires no upfront financial outlay on the part of the customer. Furthermore, the 11% decrease is attributable to reductions in usage while service is connected and is not a consequence of service disconnection.

This analysis also indicates that the level of disconnects is driven by usage and not by deprivation. However, further research needs to be conducted on the relationship between usage and disconnection. There are important questions to explore. (E.g., What actions do customers take to save energy / dollars? What is the "cost" to the household to achieve such savings?) Further insights can help customers to more quickly, practicably and safely reach energy efficiency goals.

Finally, the potential of time-based pricing should be explored. This study confirms that regular communications providing actionable information (usage tied to dollars and cents) result in a material customer response and shift in usage behavior. How might time-based pricing complement the prepay model to result in additional savings?

About DEFG and the Prepay Energy Working Group

Distributed Energy Financial Group LLC (DEFG), a specialized consulting firm focused on energy consumers, manages the Prepay Energy Working Group. Currently in its fourth year, the Prepay Energy Working Group sponsors in-depth research exploring the challenges and opportunities presented by prepaid energy offerings in the North America. To ensure a broad spectrum of perspectives and experiences, working group members include utilities, energy retailers, regulators, consumer advocates, and metering and software solution vendors.

Cindy Boland O'Dwyer, a Vice President with DEFG and a lawyer, leads the Prepay Energy Working Group and DEFG's activities in legal and regulatory matters. Cindy can be reached at: codwyer@defgllc.com.

To receive DEFG's regular notifications, please join our mailing list: <http://defgllc.com/publications/>.

To cite this publication, please use: "The Effect of Prepayment on Energy Use," a report of the Prepay Energy Working Group, DEFG LLC, Washington DC, March 2013.

Paying Upfront: A Review of Salt River Project's M- Power Prepaid Program

1020260

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CONCLUSIONS AND RECOMMENDATIONS

SRP has operated a prepaid electric service, M-Power, since 1993. The technology used has undergone several transformations to take advantage of new service delivery options and fulfill the participants' requirements and expectations that experience revealed. The M-Power customer population has grown to about 100,000 (approximately 12% of all residences served by SRP), expanding from the initial target population, consumers with arrears facing service terminations, to include consumers with different expectations from M-Power service.

The constant aspects of the M-Power experience have been a high level of customer satisfaction and an overall reduction in electricity use (of about 12%) reported by SRP compared to customers served on the standard residential service, despite nearly identical nominal \$/kWh rates on the two services. SRP attributes the conservation effect to a variety of factors, including the increased awareness of when and how electricity is consumed that the program has created, as well as its focus on marketing M-Power as enabling and encouraging reduced electricity usage.

The scale of M-Power participation, along with the magnitude of the change in consumer behavior (the conservation effect) that SRP attributes to the M-Power program warrant attention. This is especially so given that the M-Power delivery technology, while effective, is quaint compared to what can be accomplished with a smart meter system combined with web portal-based information delivery and payment system. Removing the inconvenience of going to a PayCenter may make prepaid service attractive to a larger number of consumers. Moreover, it may reduce attrition among those that enroll initially due to one factor or circumstance (e.g., arrears payback, avoidance of a service initiation deposit), but whose situation changes.

Because smart meter deployment is expanding, and virtually every utility is at least undertaking a comprehensive business case, it seems prudent to acknowledge the SRP experience as presenting the possibility that prepaid service will become a staple in utility service portfolios. The cost of adding the functional capabilities required to support various levels of prepaid services are most easily determined in the context of a larger smart meter business case study. Moreover, such a study provides the means for characterizing how prepaid service influences and affects consumer behavior, and for quantifying the attributable impacts.

But, if prepaid becomes very convenient -- payments can be made electronically, account balance information is available on the web or from a mobile phone -- will that undermine some of the very behavioral forces that are assumed to induce the conservation effect? Prepaid has worked well in and for SRP's circumstances, but is that experience transferrable to other markets, climates, customer circumstances, and supply conditions? These are research questions that must be addressed systematically and thoroughly in order to evaluate the costs and benefits associated with various prepaid service program designs.

A comprehensive research agenda regarding prepaid service costs and benefits would include answering the following questions:

- Consumer behavior influences
 - How does prepaid service influence consumer behavior in the short run? In the long run?
 - Does that influence vary according to customer expectations or circumstances, and if so, by how much?
 - How do those behaviors translate into kW and kWh changes?
 - Is prepaid service compatible with energy efficiency goals? With demand response program objectives? Net Zero Energy Home designs?
 - Is prepaid service compatible with diversified residential services such as on-site generation and storage? Home electric vehicle charging?
- Technology function capabilities
 - What additional measurement, communications, and computation capabilities are required in a smart metering system to support prepaid services?
 - What institutional arrangements are required to accommodate prepaid service transactions?
 - How are prepaid accounts integrated into those that follow a traditional meter-read cycle structure to support financial accounting, regulatory reporting, forecasting, energy efficiency and demand response program participation, etc.?
 - Is prepaid compatible with smart grid technologies such as home area networks?
- Overall market impacts
 - What are the amount and distribution of the benefits attributed to prepaid service?
 - How do the impacts affect wholesale market operations? Retail market operations?
 - Can prepaid service be provided by a third party (technology vendor or commodity provider) through commercial channels?

Obtaining answers to these fundamental research issues will facilitate estimating the net benefits under almost all market circumstances. It is knowledge that will be costly to obtain, but with high public value and only relatively limited corresponding private value (i.e., to an individual utility). In other words, resolving how prepaid service influences and affects consumer electricity consumption behavior is a public or collective good. Some utilities may see sufficient value to undertake some of the research, but probably not the full array of understanding and solid characterizations. An obvious solution is collaboration that spreads the cost among many parties that stand to gain and distribute the finding to everyone.

Examining Potential for Prepay as an Energy Efficiency Program in Minnesota

12/01/2018
Contract 137135

Conservation Applied Research and Development (CARD) FINAL Report

Prepared for: Minnesota Department of Commerce, Division of Energy Resources

Prepared by: American Council for an Energy-Efficient Economy and Seventhwave

Summary and Conclusions

Minnesota's decision as to whether prepaid electricity plans could be used as energy efficiency behavior change programs rests on a combination of three interacting elements:

1. The program's ability to cost-effectively reduce electricity consumption
2. Program elements that cause electricity reduction
3. The nature of the customer actions that result in the usage reduction (i.e., reducing consumption without reducing level of service)

Previous evaluations suggest that electricity consumers likely use less electricity if transferred to prepaid electricity plans. However, this effect may be in part due to factors that reduce customer quality of life, such as going without electricity more often, or to factors that can be easily applied to postpaid programs, such as feedback.

Programs that optimally address the possibility of consumer deprivation may reduce potential energy savings. When the risk of shutoff is removed and costs are reduced, consumers (especially low-income consumers) will be better protected, but electricity savings may decrease or become nonsignificant. More research is needed to determine the impact of removing shutoffs and changing pricing in prepaid program designs and energy savings calculations.

In examining previous research, assessing current evaluations, and interviewing diverse groups of stakeholders, the clearest conclusion is that more research is required to understand how prepay programs work in North America. Minnesota utilities interested in conducting pilot prepay programs can help fill this knowledge gap. While we neither endorse nor condone prepay electricity programs, we offer a program design framework for interested utilities that addresses consumer deprivation concerns and provides answers to key program questions. Any such effort would have to be compatible with the applicable Minnesota regulatory framework.

Prepay electricity offers a possible additional payment option for Minnesota consumers—one that has the potential to change behavior and reduce energy consumption. We recommend that more research be conducted on this new type of program.

AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.



Caleb R. Loveman
Utility Analyst
Indiana Office of Utility Consumer Counsel

Cause No 45576
Indiana Michigan Power Co.

October 12, 2021

CERTIFICATE OF SERVICE

This is to certify that a copy of the Indiana Office of Utility Consumer Counselor's Testimony Filing has been served upon the following parties of record in the captioned proceeding by electronic service on October 12, 2021.

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