

DOCKET NO. _____

APPLICATION OF ONCOR ELECTRIC §
DELIVERY COMPANY LLC § BEFORE THE
FOR 2018 ENERGY EFFICIENCY § PUBLIC UTILITY COMMISSION
COST RECOVERY FACTOR § OF TEXAS

**ONCOR ELECTRIC DELIVERY COMPANY LLC'S
APPLICATION FOR 2018 ENERGY EFFICIENCY COST RECOVERY FACTOR**

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ONCOR ELECTRIC DELIVERY
COMPANY LLC'S APPLICATION FOR
2018 ENERGY EFFICIENCY COST
RECOVERY FACTOR

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BEFORE THE
PUBLIC UTILITY COMMISSION
OF TEXAS

**ONCOR ELECTRIC DELIVERY COMPANY LLC'S
APPLICATION FOR 2018 ENERGY EFFICIENCY COST RECOVERY FACTOR**

TO THE HONORABLE PUBLIC UTILITY COMMISSION OF TEXAS ("Commission"):

COMES NOW, Oncor Electric Delivery Company LLC ("Oncor" or the "Company") and files this, its Application for the 2018 Energy Efficiency Cost Recovery Factor ("EECRF") (the "Application"), which is timely filed on or before June 1, 2017, in accordance with PURA¹ § 39.905 and 16 Tex. Admin. Code ("TAC") § 25.181(f)(8). In support of this Application, Oncor respectfully shows the following:

I. Purpose of Filing

Under 16 TAC §§ 25.181(f)(1)(A) and (f)(8), Oncor is required to annually apply not later than June 1 of each year to adjust the EECRF in order to recover "the utility's forecasted annual energy efficiency program expenditures, the preceding year's over- or under-recovery that includes municipal and utility EECRF proceeding expenses, any performance bonus earned under subsection (h) . . . and EM&V (evaluation, measurement and verification) costs allocated to the utility by the commission." Attached to this Application as Attachment A is Oncor's proposed tariff rider that reflects such adjustments to the Company's EECRF.

II. Commission Jurisdiction

The Commission has jurisdiction over this Application pursuant to PURA § 39.905 and 16 TAC § 25.181.

¹ Public Utility Regulatory Act, Tex. Util. Code Ann. §§ 11.001-66.016 (West 2007 & Supp. 2016) ("PURA").

III. Affected Persons

This Application, if granted, will affect all of the retail electric providers (“REPs”) served by Oncor in its service area who serve end-use customers subject to the EECRF sought in this filing.

IV. Filing Overview

In addition to this Application, this filing also includes direct testimony, exhibits, a proposed tariff rider, and workpapers in one volume that satisfy the requirements of 16 TAC § 25.181. The Company’s direct testimony, along with supporting exhibits and workpapers, is presented by Oncor witnesses Messrs. Michael R. Stockard and J. Michael Sherburne.

V. Background & Relief Requested

In Docket No. 46013, the Commission approved Oncor’s 2017 EECRF in the amount of \$54,863,704.² PURA § 39.905 and 16 TAC §§ 25.181(f)(1)(A) and (f)(8) require a utility with an EECRF in an area in which customer choice is offered to apply not later than June 1 of each year to adjust the EECRF in order to recover the utility’s forecasted annual energy efficiency program expenditures, the preceding year’s over- or under-recovery that includes municipal and utility EECRF proceeding expenses, any performance bonus earned under applicable Commission rules, and EM&V costs allocated to the utility by the Commission.

Therefore, Oncor is requesting in the current docket approval of its 2018 EECRF in the amount of \$56,462,432. Oncor’s request regarding the 2018 EECRF is based on the following components:

- \$49,384,580 in energy efficiency expenses forecasted for the 2018 program year;
- allocation of \$6,097,607 for the total over-recovery of 2016 energy efficiency costs;
- inclusion of an \$11,741,562 energy efficiency performance bonus under 16 TAC § 25.181(h) based on Oncor’s energy efficiency achievements in 2016; and
- \$1,427,210 in estimated expenses relating to the Commission’s EM&V costs.

² *Application of Oncor Electric Delivery Company, LLC to Adjust Its Energy Efficiency Cost Recovery Factor*, Docket No. 46013, Order at 7 (September 23, 2016).

The above-referenced request for \$56,462,432 also includes \$6,687 for EECRF proceeding expenses of municipalities that the Steering Committee of Cities Served by Oncor ("Cities") has submitted to Oncor pursuant to 16 TAC § 25.181(f)(3)(B). Oncor anticipates that Cities will provide evidence in this EECRF proceeding supporting the amount of \$6,687 relating to municipalities' EECRF proceeding expenses. Oncor is not seeking rate case expense in this proceeding. If approved, Oncor's 2018 EECRF will go into effect on March 1, 2018 consistent with 16 TAC § 25.181(f)(9)(B).

Please note that in this proceeding Oncor is proposing to write-off the under-recovery of \$137 in connection with the rebilling to the Transmission for Profit Energy Efficiency Rate Class as more fully explained in the direct testimony of Mr. J. Michael Sherburne. If the \$137 write-off is approved, Oncor's request in the current docket of its 2018 EECRF would reduce to \$56,462,295.

VI. Request for Entry of Protective Order

In preparing this filing, Oncor has compiled necessary materials and information that includes specific contractual and other confidential information. In accordance with the privileges and other protections established by Texas law, Oncor requests stringent confidential treatment of such information. Accordingly, Oncor requests issuance of, and adherence to, the Commission's standard protective order pursuant to 16 TAC § 22.142(c). A copy of the standard protective order is attached hereto as Attachment B.

VII. Statement of Confidentiality

The following is a description of confidential, Protected Material, and/or Highly Sensitive Protected Material (material designated under either heading hereinafter called "Protected Material") attached to this filing as Exhibit MRS-7 to Mr. Michael R. Stockard's testimony: contracts regarding energy efficiency administrator and/or service provider that received more than 5% of overall incentive payments from Oncor. Oncor asserts that the information that has been marked as Protected Material is exempt from public disclosure pursuant to § 552.101 and § 552.110 of the Texas Public Information Act ("TPIA") and pursuant to 16 TAC § 25.181(f)(10)(H).

Specifically, the Protected Material contains confidential competitively-sensitive information, trade secret information, and commercial and financial information (e.g.,

contractual scope of work including, but not limited to, pricing) which, if publicly disclosed, would likely cause substantial competitive harm to Oncor, ratepayers, or other third-party entities.

Counsel for Oncor has reviewed the Protected Material sufficiently to state in good faith that the information contained therein is exempt from public disclosure under the TPIA and 16 TAC § 25.181(f)(10)(H). Attachment B of this filing includes a draft standard Protective Order to be used until issuance of a protective order in this docket.

VIII. Notice

Consistent 16 TAC 25.181(f)(13), Oncor will provide within seven (7) days of this filing notice of this filing substantially in the form attached hereto as Attachment C by hand delivery or via courier service, email, fax, overnight delivery, or first class United States mail, postage prepaid, to: a) all parties in Docket No. 46013 (Oncor's most recent completed EECRF docket); b) all REPs that are authorized by the registration agent to provide service in Oncor's service area at the time this Application is filed; c) all parties in Docket No. 38929³ (Oncor's most recent completed base rate case); and d) Texas Department of Housing & Community Affairs, the state agency that administers the federal weatherization program. Oncor will file an affidavit attesting to the completion of notice within fourteen (14) days after this Application is filed consistent with 16 TAC § 25.181(f)(14).

IX. Contact Information and Authorized Representatives

Oncor's authorized representative in this proceeding is:

Darryl Nelson
Oncor Electric Delivery Company LLC
1616 Woodall Rodgers Freeway
Dallas, Texas 75202-1234
Telephone: (214) 486-6443
Facsimile: (214) 486-3221
darryl.nelson@oncor.com

³ *Application of Oncor Electric Delivery Company LLC for Authority to Change Rates, Docket No. 38929, Order (August 26, 2011).*

Oncor's legal representative in this proceeding is:

Ritchie J. Sturgeon
Oncor Electric Delivery Company LLC
1616 Woodall Rodgers Freeway
Dallas, Texas 75202-1234
Telephone: (214) 486-6345
Facsimile: (214) 486-3221
ritchie.sturgeon@oncor.com

General inquiries by non-attorneys concerning this filing should be directed to Mr. Nelson at the above-stated address or telephone number. All pleadings, motions, orders, and other information filed in this proceeding should be served upon Mr. Sturgeon at the above-stated address; and all inquiries by attorneys should be directed to Mr. Sturgeon.

X. Conclusion and Prayer

WHEREFORE, PREMISES CONSIDERED, Oncor prays that this Honorable Commission:

- (a) approve Oncor's proposed 2018 EECRF;
- (b) issue the standard protective order to govern Protected Materials and Highly Sensitive Protected Materials in this proceeding; and
- (c) grant Oncor such other and further relief to which it may be justly entitled.

Respectfully submitted,

Oncor Electric Delivery Company LLC

By: Ritchie J. Sturgeon / th
Ritchie J. Sturgeon *by permission*
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**ATTORNEY FOR ONCOR ELECTRIC
DELIVERY COMPANY LLC**

ATTACHMENT A

Rider EECRF – Energy Efficiency Cost Recovery Factor

**Tariff for Retail Delivery Service
Oncor Electric Delivery Company LLC**

6.1.1 Delivery System Charges
Applicable: Entire Certified Service Area
Effective Date: March 1, 2018

Sheet: 6.3
Page 1 of 1
Revision: Eleven

6.1.1.6.3 Rider EECRF - Energy Efficiency Cost Recovery Factor

APPLICATION

Applicable, pursuant to PURA § 39.905(b)(4) and Substantive Rule § 25.181(f), to all eligible customers in energy efficiency rate classes that receive services under the Company's energy efficiency programs.

METHOD OF CALCULATION

An Energy Efficiency Cost Recovery Factor (EECRF) shall be calculated annually and shall equal by energy efficiency rate class the sum of: forecasted energy efficiency costs, any adjustment for past over-recovery or under-recovery of EECRF costs, any approved energy efficiency performance bonus for the previous year, any municipalities' EECRF proceeding expenses from the previous year, and any applicable evaluation, measurement, and verification costs as determined by the commission; divided by the forecasted billing units for each class in demand or kWh.

MONTHLY RATE

Energy Efficiency Cost Recovery Factor (EECRF)

<u>Effective Date</u>	<u>Residential Service</u>	<u>Secondary Service</u>		<u>Primary Service</u>			<u>Transmission Service</u>		<u>Lighting Service</u>
	(\$/kWh)	≤ 10 kW*	> 10 kW*	≤ 10 kW*	> 10 kW – Distribution Line*	> 10 kW – Substation*	Non-Profit	For Profit	(\$/kWh)
	(\$/ Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)
March 1, 2018	0.000766	(0.000146)	0.000450	0.000142	0.000190	(0.000010)	0.000545	0.000000	0.000000
March 1, 2017	0.000780	0.000329	0.000444	(0.000021)	0.000057	(0.000159)	(0.000104)	0.000000	0.000000
March 1, 2016	0.000995	0.001505	0.000459	0.000461	(0.000005)	(0.000046)	0.001335	0.000000	0.000000
March 1, 2015	0.001025	0.000997	0.000353	(0.000065)	0.000756	0.000025	0.000173	0.000000	0.000001
March 1, 2014	0.001014	0.000437	0.000525	(0.000004)	0.000649	0.000680	0.000525	(0.000002)	0.000000
Dec. 31, 2012	1.23	0.23	11.59	(2.58)	95.76	130.77	132.02	(1.61)	0.00
Jan. 3, 2012	0.99	0.36	6.65	(0.05)	130.77	130.77	(224.74)	(224.74)	0.00
Dec. 30, 2010	0.91	0.01	8.14	4.79	75.91	185.59	(71.62)	(71.62)	0.00
Dec. 30, 2009	0.89	0.11	9.66	0.06	59.87	720.49	273.71	273.71	0.00
Sept. 17, 2009	0.92	0.22	8.68	0.00	76.27	76.27	443.77	443.77	0.00
Dec. 29, 2008	0.22	(0.79)	2.48	(2.17)	26.17	26.17	(227.52)	(227.52)	(0.17)

* Excludes those industrial customers taking electric service at distribution voltage qualifying for the exemption pursuant to Substantive Rule § 25.181(w).

NOTICE

This rate schedule is subject to the Company's Tariff and Applicable Legal Authorities.

ATTACHMENT B

DOCKET NO. _____

ONCOR ELECTRIC DELIVERY	§	BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS
COMPANY LLC'S APPLICATION FOR	§	
2018 ENERGY EFFICIENCY COST	§	
RECOVERY FACTOR	§	

PROTECTIVE ORDER

This Protective Order shall govern the use of all information deemed confidential (Protected Materials) or highly confidential (Highly Sensitive Protected Materials), including information whose confidentiality is currently under dispute, by a party providing information to the Public Utility Commission of Texas (Commission) or to any other party to this proceeding.

It is ORDERED that:

1. **Designation of Protected Materials.** Upon producing or filing a document, including, but not limited to, records on a computer disk or other similar electronic storage medium in this proceeding, the producing party may designate that document, or any portion of it, as confidential pursuant to this Protective Order by typing or stamping on its face "PROTECTED PURSUANT TO PROTECTIVE ORDER ISSUED IN DOCKET NO. _____" (or words to this effect) and consecutively Bates Stamping each page. Protected Materials and Highly Sensitive Protected Materials include the documents so designated, as well as the substance of the information contained in the documents and any description, report, summary, or statement about the substance of the information contained in the documents.
2. **Materials Excluded from Protected Materials Designation.** Protected Materials shall not include any information or document contained in the public files of the Commission or any other federal or state agency, court, or local

governmental authority subject to the Public Information Act.⁴ Protected Materials also shall not include documents or information which at the time of, or prior to disclosure in, a proceeding is or was public knowledge, or which becomes public knowledge other than through disclosure in violation of this Protective Order.

3. **Reviewing Party.** For the purposes of this Protective Order, a “Reviewing Party” is any party to this docket.
4. **Procedures for Designation of Protected Materials.** On or before the date the Protected Materials or Highly Sensitive Protected Materials are provided to the Commission, the producing party shall file with the Commission and deliver to each party to the proceeding a written statement, which may be in the form of an objection, indicating: (a) any exemptions to the Public Information Act claimed to apply to the alleged Protected Materials; (b) the reasons supporting the producing party’s claim that the responsive information is exempt from public disclosure under the Public Information Act and subject to treatment as protected materials; and (c) that counsel for the producing party has reviewed the information sufficiently to state in good faith that the information is exempt from public disclosure under the Public Information Act and merits the Protected Materials designation.
5. **Persons Permitted Access to Protected Materials.** Except as otherwise provided in this Protective Order, a Reviewing Party may access Protected Materials only through its “Reviewing Representatives” who have signed the Protective Order Certification Form (see Exhibit A). Reviewing Representatives of a Reviewing Party include its counsel of record in this proceeding and associated attorneys, paralegals, economists, statisticians, accountants, consultants, or other persons employed or retained by the Reviewing Party and directly engaged in this proceeding. At the request of the PUC Commissioners, copies of Protected Materials may be produced by Commission Staff. The

⁴ TEX. GOV’T CODE ANN. §§ 552.001-552.353 (Vernon 2004 & Supp. 2013).

Commissioners and their staff shall be informed of the existence and coverage of this Protective Order and shall observe the restrictions of the Protective Order.

6. **Highly Sensitive Protected Material Described.** The term “Highly Sensitive Protected Materials” is a subset of Protected Materials and refers to documents or information that a producing party claims is of such a highly sensitive nature that making copies of such documents or information or providing access to such documents to employees of the Reviewing Party (except as specified herein) would expose a producing party to unreasonable risk of harm. Highly Sensitive Protected Materials include but are not limited to: (a) customer-specific information protected by § 32.101(c) of the Public Utility Regulatory Act;⁵ (b) contractual information pertaining to contracts that specify that their terms are confidential or that are confidential pursuant to an order entered in litigation to which the producing party is a party; (c) market-sensitive fuel price forecasts, wholesale transactions information and/or market-sensitive marketing plans; and (d) business operations or financial information that is commercially sensitive. Documents or information so classified by a producing party shall bear the designation “HIGHLY SENSITIVE PROTECTED MATERIALS PROVIDED PURSUANT TO PROTECTIVE ORDER ISSUED IN DOCKET NO. _____” (or words to this effect) and shall be consecutively Bates Stamped. The provisions of this Protective Order pertaining to Protected Materials also apply to Highly Sensitive Protected Materials, except where this Protective Order provides for additional protections for Highly Sensitive Protected Materials. In particular, the procedures herein for challenging the producing party’s designation of information as Protected Materials also apply to information that a producing party designates as Highly Sensitive Protected Materials.
7. **Restrictions on Copying and Inspection of Highly Sensitive Protected Material.** Except as expressly provided herein, only one copy may be made of any Highly Sensitive Protected Materials except that additional copies may be

⁵ Public Utility Regulatory Act, TEX. UTIL. CODE ANN. §§ 11.001-66.016 (Vernon 2007 & Supp. 2013) (PURA).

made to have sufficient copies for introduction of the material into the evidentiary record if the material is to be offered for admission into the record. The Reviewing Party shall maintain a record of all copies made of Highly Sensitive Protected Material and shall send a duplicate of the record to the producing party when the copy or copies are made. The record shall specify the location and the person possessing the copy. Highly Sensitive Protected Material shall be made available for inspection only at the location or locations provided by the producing party, except as specified by Paragraph 9. Limited notes may be made of Highly Sensitive Protected Materials, and such notes shall themselves be treated as Highly Sensitive Protected Materials unless such notes are limited to a description of the document and a general characterization of its subject matter in a manner that does not state any substantive information contained in the document.

8. **Restricting Persons Who May Have Access to Highly Sensitive Protected Material.** With the exception of Commission Staff, the Office of the Attorney General (OAG), and the Office of Public Utility Counsel (OPC), and except as provided herein, the Reviewing Representatives for the purpose of access to Highly Sensitive Protected Materials may be persons who are (a) outside counsel for the Reviewing Party, (b) outside consultants for the Reviewing Party working under the direction of Reviewing Party's counsel, or (c) employees of the Reviewing Party working with and under the direction of Reviewing Party's counsel who have been authorized by the presiding officer to review Highly Sensitive Protected Materials. The Reviewing Party shall limit the number of Reviewing Representatives that review Highly Sensitive Protected Materials to the minimum number of persons necessary. The Reviewing Party is under a good faith obligation to limit access to each portion of any Highly Sensitive Protected Materials to two Reviewing Representatives whenever possible. Reviewing Representatives for Commission Staff, OAG, and OPC, for the purpose of access to Highly Sensitive Protected Materials, shall consist of their respective counsel of record in this proceeding and associated attorneys,

paralegals, economists, statisticians, accountants, consultants, or other persons employed or retained by them and directly engaged in these proceedings.

9. **Copies Provided of Highly Sensitive Protected Material.** A producing party shall provide one copy of Highly Sensitive Protected Materials specifically requested by the Reviewing Party to the person designated by the Reviewing Party who must be a person authorized to review Highly Sensitive Protected Material under Paragraph 8. Representatives of the Reviewing Party who are authorized to view Highly Sensitive Protected Material may review the copy of Highly Sensitive Protected Materials at the office of the Reviewing Party's representative designated to receive the information. Any Highly Sensitive Protected Materials provided to a Reviewing Party may not be copied except as provided in Paragraph 7. The restrictions contained herein do not apply to Commission Staff, OPC, and the OAG when the OAG is representing a party to the proceeding.
10. **Procedures in Paragraphs 10-14 Apply to Commission Staff, OPC, and the OAG and Control in the Event of Conflict.** The procedures in Paragraphs 10 through 14 apply to responses to requests for documents or information that the producing party designates as Highly Sensitive Protected Materials and provides to Commission Staff, OPC, and the OAG in recognition of their purely public functions. To the extent the requirements of Paragraphs 10 through 14 conflict with any requirements contained in other paragraphs of this Protective Order, the requirements of these Paragraphs shall control.
11. **Copy of Highly Sensitive Protected Material to be Provided to Commission Staff, OPC and the OAG.** When, in response to a request for information by a Reviewing Party, the producing party makes available for review documents or information claimed to be Highly Sensitive Protected Materials, the producing party shall also deliver one copy of the Highly Sensitive Protected Materials to the Commission Staff, OPC (if OPC is a party), and the OAG (if the OAG is representing a party) in Austin, Texas. Provided however, that in the event such Highly Sensitive Protected Materials are voluminous, the materials will be made

available for review by Commission Staff, OPC (if OPC is a party), and the OAG (if the OAG is representing a party) at the designated office in Austin, Texas. The Commission Staff, OPC (if OPC is a party) and the OAG (if the OAG is representing a party) may request such copies as are necessary of such voluminous material under the copying procedures specified herein.

12. **Delivery of the Copy of Highly Sensitive Protected Material to Commission Staff and Outside Consultants.** The Commission Staff, OPC (if OPC is a party), and the OAG (if the OAG is representing a party) may deliver the copy of Highly Sensitive Protected Materials received by them to the appropriate members of their staff for review, provided such staff members first sign the certification specified by Paragraph 15. After obtaining the agreement of the producing party, Commission Staff, OPC (if OPC is a party), and the OAG (if the OAG is representing a party) may deliver the copy of Highly Sensitive Protected Materials received by it to the agreed, appropriate members of their outside consultants for review, provided such outside consultants first sign the certification in Exhibit A.
13. **Restriction on Copying by Commission Staff, OPC and the OAG.** Except as allowed by Paragraph 7, Commission Staff, OPC and the OAG may not make additional copies of the Highly Sensitive Protected Materials furnished to them unless the producing party agrees in writing otherwise, or, upon a showing of good cause, the presiding officer directs otherwise. Commission Staff, OPC, and the OAG may make limited notes of Highly Sensitive Protected Materials furnished to them, and all such handwritten notes will be treated as Highly Sensitive Protected Materials as are the materials from which the notes are taken.
14. **Public Information Requests.** In the event of a request for any of the Highly Sensitive Protected Materials under the Public Information Act, an authorized representative of the Commission, OPC, or the OAG may furnish a copy of the requested Highly Sensitive Protected Materials to the Open Records Division at the OAG together with a copy of this Protective Order after notifying the

producing party that such documents are being furnished to the OAG. Such notification may be provided simultaneously with the delivery of the Highly Sensitive Protected Materials to the OAG.

15. **Required Certification.** Each person who inspects the Protected Materials shall, before such inspection, agree in writing to the following certification found in Exhibit A to this Protective Order:

I certify my understanding that the Protected Materials are provided to me pursuant to the terms and restrictions of the Protective Order in this docket, and that I have been given a copy of it and have read the Protective Order and agree to be bound by it. I understand that the contents of the Protected Materials, any notes, memoranda, or any other form of information regarding or derived from the Protected Materials shall not be disclosed to anyone other than in accordance with the Protective Order and unless I am an employee of the Commission or OPC shall be used only for the purpose of the proceeding in Docket No. _____. I acknowledge that the obligations imposed by this certification are pursuant to such Protective Order. Provided, however, if the information contained in the Protected Materials is obtained from independent public sources, the understanding stated herein shall not apply.

In addition, Reviewing Representatives who are permitted access to Highly Sensitive Protected Material under the terms of this Protective Order shall, before inspection of such material, agree in writing to the following certification found in Exhibit A to this Protective Order:

I certify that I am eligible to have access to Highly Sensitive Protected Material under the terms of the Protective Order in this docket.

The Reviewing Party shall provide a copy of each signed certification to Counsel for the producing party and serve a copy upon all parties of record.

16. **Disclosures between Reviewing Representatives and Continuation of Disclosure Restrictions after a Person is no Longer Engaged in the Proceeding.** Any Reviewing Representative may disclose Protected Materials, other than Highly Sensitive Protected Materials, to any other person who is a Reviewing Representative provided that, if the person to whom disclosure is to

be made has not executed and provided for delivery of a signed certification to the party asserting confidentiality, that certification shall be executed prior to any disclosure. A Reviewing Representative may disclose Highly Sensitive Protected Material to other Reviewing Representatives who are permitted access to such material and have executed the additional certification required for persons who receive access to Highly Sensitive Protected Material. In the event that any Reviewing Representative to whom Protected Materials are disclosed ceases to be engaged in these proceedings, access to Protected Materials by that person shall be terminated and all notes, memoranda, or other information derived from the protected material shall either be destroyed or given to another Reviewing Representative of that party who is authorized pursuant to this Protective Order to receive the protected materials. Any person who has agreed to the foregoing certification shall continue to be bound by the provisions of this Protective Order so long as it is in effect, even if no longer engaged in these proceedings.

17. **Producing Party to Provide One Copy of Certain Protected Material and Procedures for Making Additional Copies of Such Materials.** Except for Highly Sensitive Protected Materials, which shall be provided to the Reviewing Parties pursuant to Paragraphs 9, and voluminous Protected Materials, the producing party shall provide a Reviewing Party one copy of the Protected Materials upon receipt of the signed certification described in Paragraph 15. Except for Highly Sensitive Protected Materials, a Reviewing Party may make further copies of Protected Materials for use in this proceeding pursuant to this Protective Order, but a record shall be maintained as to the documents reproduced and the number of copies made, and upon request the Reviewing Party shall provide the party asserting confidentiality with a copy of that record.
18. **Procedures Regarding Voluminous Protected Materials.** P.U.C. PROC. R. 22.144(h) will govern production of voluminous Protected Materials. Voluminous Protected Materials will be made available in the producing party's voluminous room, in Austin, Texas, or at a mutually agreed upon location, Monday through Friday, 9:00 a.m. to 5:00 p.m. (except on state or Federal holidays), and at other mutually convenient times upon reasonable request.

19. **Reviewing Period Defined.** The Protected Materials may be reviewed only during the Reviewing Period, which shall commence upon entry of this Protective Order and continue until the expiration of the Commission's plenary jurisdiction. The Reviewing Period shall reopen if the Commission regains jurisdiction due to a remand as provided by law. Protected materials that are admitted into the evidentiary record or accompanying the evidentiary record as offers of proof may be reviewed throughout the pendency of this proceeding and any appeals.
20. **Procedures for Making Copies of Voluminous Protected Materials.** Other than Highly Sensitive Protected Materials, Reviewing Parties may take notes regarding the information contained in voluminous Protected Materials made available for inspection or they may make photographic, mechanical or electronic copies of the Protected Materials, subject to the conditions in this Protective Order; provided, however, that before photographic, mechanical or electronic copies may be made, the Reviewing Party seeking photographic, mechanical or electronic copies must provide written confirmation of the receipt of copies listed on Exhibit B of this Protective Order identifying each piece of Protected Materials or portions thereof the Reviewing Party will need.
21. **Protected Materials to be Used Solely for the Purposes of These Proceedings.** All Protected Materials shall be made available to the Reviewing Parties and their Reviewing Representatives solely for the purposes of these proceedings. Access to the Protected Materials may not be used in the furtherance of any other purpose, including, without limitation: (a) any other pending or potential proceeding involving any claim, complaint, or other grievance of whatever nature, except appellate review proceedings that may arise from or be subject to these proceedings; or (b) any business or competitive endeavor of whatever nature. Because of their statutory regulatory obligations, these restrictions do not apply to Commission Staff or OPC.
22. **Procedures for Confidential Treatment of Protected Materials and Information Derived from Those Materials.** Protected Materials, as well as a Reviewing Party's notes, memoranda, or other information regarding or derived

from the Protected Materials are to be treated confidentially by the Reviewing Party and shall not be disclosed or used by the Reviewing Party except as permitted and provided in this Protective Order. Information derived from or describing the Protected Materials shall be maintained in a secure place and shall not be placed in the public or general files of the Reviewing Party except in accordance with the provisions of this Protective Order. A Reviewing Party must take all reasonable precautions to insure that the Protected Materials including notes and analyses made from Protected Materials that disclose Protected Materials are not viewed or taken by any person other than a Reviewing Representative of a Reviewing Party.

23. **Procedures for Submission of Protected Materials.** If a Reviewing Party tenders for filing any Protected Materials, including Highly Sensitive Protected Materials, or any written testimony, exhibit, brief, motion or other type of pleading or other submission at the Commission or before any other judicial body that quotes from Protected Materials or discloses the content of Protected Materials, the confidential portion of such submission shall be filed and served in sealed envelopes or other appropriate containers endorsed to the effect that they contain Protected Material or Highly Sensitive Protected Material and are sealed pursuant to this Protective Order. If filed at the Commission, such documents shall be marked "PROTECTED MATERIAL" and shall be filed under seal with the presiding officer and served under seal to the counsel of record for the Reviewing Parties. The presiding officer may subsequently, on his/her own motion or on motion of a party, issue a ruling respecting whether or not the inclusion, incorporation or reference to Protected Materials is such that such submission should remain under seal. If filing before a judicial body, the filing party: (a) shall notify the party which provided the information within sufficient time so that the producing party may seek a temporary sealing order; and (b) shall otherwise follow the procedures in Rule 76a, Texas Rules of Civil Procedure.
24. **Maintenance of Protected Status of Materials during Pendency of Appeal of Order Holding Materials are not Protected Materials.** In the event that the presiding officer at any time in the course of this proceeding finds that all or part

of the Protected Materials are not confidential or proprietary, by finding, for example, that such materials have entered the public domain or materials claimed to be Highly Sensitive Protected Materials are only Protected Materials, those materials shall nevertheless be subject to the protection afforded by this Protective Order for three (3) full working days, unless otherwise ordered, from the date the party asserting confidentiality receives notice of the presiding officer's order. Such notification will be by written communication. This provision establishes a deadline for appeal of a presiding officer's order to the Commission. In the event an appeal to the Commissioners is filed within those three (3) working days from notice, the Protected Materials shall be afforded the confidential treatment and status provided in this Protective Order during the pendency of such appeal. Neither the party asserting confidentiality nor any Reviewing Party waives its right to seek additional administrative or judicial remedies after the Commission's denial of any appeal.

25. **Notice of Intent to Use Protected Materials or Change Materials Designation.** Parties intending to use Protected Materials shall notify the other parties prior to offering them into evidence or otherwise disclosing such information into the record of the proceeding. During the pendency of Docket No. _____ at the Commission, in the event that a Reviewing Party wishes to disclose Protected Materials to any person to whom disclosure is not authorized by this Protective Order, or wishes to have changed the designation of certain information or material as Protected Materials by alleging, for example, that such information or material has entered the public domain, such Reviewing Party shall first file and serve on all parties written notice of such proposed disclosure or request for change in designation, identifying with particularity each of such Protected Materials. A Reviewing Party shall at any time be able to file a written motion to challenge the designation of information as Protected Materials.
26. **Procedures to Contest Disclosure or Change in Designation.** In the event that the party asserting confidentiality wishes to contest a proposed disclosure or request for change in designation, the party asserting confidentiality shall file with the appropriate presiding officer its objection to a proposal, with supporting

affidavits, if any, within five (5) working days after receiving such notice of proposed disclosure or change in designation. Failure of the party asserting confidentiality to file such an objection within this period shall be deemed a waiver of objection to the proposed disclosure or request for change in designation. Within five (5) working days after the party asserting confidentiality files its objection and supporting materials, the party challenging confidentiality may respond. Any such response shall include a statement by counsel for the party challenging such confidentiality that he or she has reviewed all portions of the materials in dispute and, without disclosing the Protected Materials, a statement as to why the Protected Materials should not be held to be confidential under current legal standards, or that the party asserting confidentiality for some reason did not allow such counsel to review such materials. If either party wishes to submit the material in question for in camera inspection, it shall do so no later than five (5) working days after the party challenging confidentiality has made its written filing.

27. **Procedures for Presiding Officer Determination Regarding Proposed Disclosure or Change in Designation.** If the party asserting confidentiality files an objection, the appropriate presiding officer will determine whether the proposed disclosure or change in designation is appropriate. Upon the request of either the producing or Reviewing Party or upon the presiding officer's own initiative, the presiding officer may conduct a prehearing conference. The burden is on the party asserting confidentiality to show that such proposed disclosure or change in designation should not be made. If the presiding officer determines that such proposed disclosure or change in designation should be made, disclosure shall not take place earlier than three (3) full working days after such determination unless otherwise ordered. No party waives any right to seek additional administrative or judicial remedies concerning such presiding officer's ruling.
28. **Maintenance of Protected Status during Periods Specified for Challenging Various Orders.** Any party electing to challenge, in the courts of this state, a Commission or presiding officer determination allowing disclosure or a change in

designation shall have a period of ten (10) days from: (a) the date of an unfavorable Commission order; or (b) if the Commission does not rule on an appeal of an interim order, the date an appeal of an interim order to the Commission is overruled by operation of law, to obtain a favorable ruling in state district court. Any party challenging a state district court determination allowing disclosure or a change in designation shall have an additional period of ten (10) days from the date of the order to obtain a favorable ruling from a state appeals court. Finally, any party challenging a determination of a state appeals court allowing disclosure or a change in designation shall have an additional period of ten (10) days from the date of the order to obtain a favorable ruling from the state supreme court, or other appellate court. All Protected Materials shall be afforded the confidential treatment and status provided for in this Protective Order during the periods for challenging the various orders referenced in this paragraph. For purposes of this paragraph, a favorable ruling of a state district court, state appeals court, Supreme Court or other appellate court includes any order extending the deadlines in this paragraph.

29. **Other Grounds for Objection to Use of Protected Materials Remain Applicable.** Nothing in this Protective Order shall be construed as precluding any party from objecting to the use of Protected Materials on grounds other than confidentiality, including the lack of required relevance. Nothing in this Protective Order constitutes a waiver of the right to argue for more disclosure, provided, however, that unless the Commission or a court orders such additional disclosure, all parties will abide by the restrictions imposed by the Protective Order.
30. **Protection of Materials from Unauthorized Disclosure.** All notices, applications, responses or other correspondence shall be made in a manner which protects Protected Materials from unauthorized disclosure.
31. **Return of Copies of Protected Materials and Destruction of Information Derived from Protected Materials.** Following the conclusion of these proceedings, each Reviewing Party must, no later than thirty (30) days following

receipt of the notice described below, return to the party asserting confidentiality all copies of the Protected Materials provided by that party pursuant to this Protective Order and all copies reproduced by a Reviewing Party, and counsel for each Reviewing Party must provide to the party asserting confidentiality a letter by counsel that, to the best of his or her knowledge, information, and belief, all copies of notes, memoranda, and other documents regarding or derived from the Protected Materials (including copies of Protected Materials) that have not been so returned, if any, have been destroyed, other than notes, memoranda, or other documents which contain information in a form which, if made public, would not cause disclosure of the substance of Protected Materials. As used in this Protective Order, "conclusion of these proceedings" refers to the exhaustion of available appeals, or the running of the time for the making of such appeals, as provided by applicable law. If, following any appeal, the Commission conducts a remand proceeding, then the "conclusion of these proceedings" is extended by the remand to the exhaustion of available appeals of the remand, or the running of the time for making such appeals of the remand, as provided by applicable law. Promptly following the conclusion of these proceedings, counsel for the party asserting confidentiality will send a written notice to all other parties, reminding them of their obligations under this Paragraph. Nothing in this Paragraph shall prohibit counsel for each Reviewing Party from retaining two (2) copies of any filed testimony, brief, application for rehearing, hearing exhibit or other pleading which refers to Protected Materials provided that any such Protected Materials retained by counsel shall remain subject to the provisions of this Protective Order.

32. **Applicability of Other Law.** This Protective Order is subject to the requirements of the Public Information Act, the Open Meetings Act,⁶ the Texas Securities Act⁷ and any other applicable law, provided that parties subject to those acts will notify the party asserting confidentiality, if possible under those acts, prior to

⁶ TEX. GOV'T CODE ANN. § 551.001-551.146 (Vernon 2004 & Supp. 2013).

⁷ TEX. REV. CIV. STAT. ANN. arts. 581-1 to 581-43 (Vernon 1964 & Supp. 2013).

disclosure pursuant to those acts. Such notice shall not be required where the Protected Materials are sought by governmental officials authorized to conduct a criminal or civil investigation that relates to or involves the Protected Materials, and those governmental officials aver in writing that such notice could compromise the investigation and that the governmental entity involved will maintain the confidentiality of the Protected Materials.

33. **Procedures for Release of Information under Order**. If required by order of a governmental or judicial body, the Reviewing Party may release to such body the confidential information required by such order; provided, however, that: (a) the Reviewing Party shall notify the producing party of the order requiring the release of such information within five (5) calendar days of the date the Reviewing Party has notice of the order; (b) the Reviewing Party shall notify the producing party at least five (5) calendar days in advance of the release of the information to allow the producing party to contest any release of the confidential information; and (c) the Reviewing Party shall use its best efforts to prevent such materials from being disclosed to the public. The terms of this Protective Order do not preclude the Reviewing Party from complying with any valid and enforceable order of a state or federal court with competent jurisdiction specifically requiring disclosure of Protected Materials earlier than contemplated herein. The notice specified in this section shall not be required where the Protected Materials are sought by governmental officials authorized to conduct a criminal or civil investigation that relates to or involves the Protected Materials, and those governmental officials aver in writing that such notice could compromise the investigation and that the governmental entity involved will maintain the confidentiality of the Protected Materials.
34. **Best Efforts Defined**. The term "best efforts" as used in the preceding paragraph requires that the Reviewing Party attempt to ensure that disclosure is not made unless such disclosure is pursuant to a final order of a Texas governmental or Texas judicial body, the written opinion of the Texas Attorney General sought in compliance with the Public Information Act, or the request of governmental officials authorized to conduct a criminal or civil investigation that

relates to or involves the Protected Materials. The Reviewing Party is not required to delay compliance with a lawful order to disclose such information but is simply required to timely notify the party asserting confidentiality, or its counsel, that it has received a challenge to the confidentiality of the information and that the Reviewing Party will either proceed under the provisions of §552.301 of the Public Information Act, or intends to comply with the final governmental or court order. Provided, however, that no notice is required where the Protected Materials are sought by governmental officials authorized to conduct a criminal or civil investigation that relates to or involves the Protected Materials, and those governmental officials aver in writing that such notice could compromise the investigation and that the governmental entity involved will maintain the confidentiality of the Protected Materials.

35. **Notify Defined.** “Notify” for purposes of Paragraphs 32, 33 and 34 means written notice to the party asserting confidentiality at least five (5) calendar days prior to release; including when a Reviewing Party receives a request under the Public Information Act. However, the Commission, OAG, or OPC may provide a copy of Protected Materials to the Open Records Division of the OAG as provided herein.
36. **Requests for Non-Disclosure.** If the producing party asserts that the requested information should not be disclosed at all, or should not be disclosed to certain parties under the protection afforded by this Protective Order, the producing party shall tender the information for in camera review to the presiding officer within ten (10) calendar days of the request. At the same time, the producing party shall file and serve on all parties its argument, including any supporting affidavits, in support of its position of non-disclosure. The burden is on the producing party to establish that the material should not be disclosed. The producing party shall serve a copy of the information under the classification of Highly Sensitive Protected Material to all parties requesting the information that the producing party has not alleged should be prohibited from reviewing the information.

Parties wishing to respond to the producing party's argument for non-disclosure shall do so within five working days. Responding parties should explain why the information should be disclosed to them, including why disclosure is necessary for a fair adjudication of the case if the material is determined to constitute a trade secret. If the presiding officer finds that the information should be disclosed as Protected Material under the terms of this Protective Order, the presiding officer shall stay the order of disclosure for such period of time as the presiding officer deems necessary to allow the producing party to appeal the ruling to the Commission.

37. **Sanctions Available for Abuse of Designation.** If the presiding officer finds that a producing party unreasonably designated material as Protected Material or as Highly Sensitive Protected Material, or unreasonably attempted to prevent disclosure pursuant to Paragraph 36, the presiding officer may sanction the producing party pursuant to P.U.C. PROC. R. 22.161.
38. **Modification of Protective Order.** Each party shall have the right to seek changes in this Protective Order as appropriate from the presiding officer.
39. **Breach of Protective Order.** In the event of a breach of the provisions of this Protective Order, the producing party, if it sustains its burden of proof required to establish the right to injunctive relief, shall be entitled to an injunction against such breach without any requirements to post bond as a condition of such relief. The producing party shall not be relieved of proof of any element required to establish the right to injunctive relief. In addition to injunctive relief, the producing party shall be entitled to pursue any other form of relief to which it is entitled.

EXHIBIT A

Protective Order Certification

I certify my understanding that the Protected Materials are provided to me pursuant to the terms and restrictions of the Protective Order in this docket and that I have received a copy of it and have read the Protective Order and agree to be bound by it. I understand that the contents of the Protected Materials, any notes, memoranda, or any other form of information regarding or derived from the Protected Materials shall not be disclosed to anyone other than in accordance with the Protective Order and unless I am an employee of the Commission or OPC shall be used only for the purpose of the proceeding in Docket No. _____. I acknowledge that the obligations imposed by this certification are pursuant to such Protective Order. Provided, however, if the information contained in the Protected Materials is obtained from independent public sources, the understanding stated here shall not apply.

Signature

Party Represented

Printed Name

Date

I certify that I am eligible to have access to Highly Sensitive Protected Material under the terms of the Protective Order in this docket.

Signature

Party Represented

Printed Name

Date

EXHIBIT B

I request to view/copy the following documents:

Document Requested	# of Copies	Non-Confidential	Protected Materials and/or Highly Sensitive Protected Materials

Signature

Party Represented

Printed Name

Date

ATTACHMENT C

NOTICE OF APPLICATION FOR 2018 ENERGY EFFICIENCY COST RECOVERY FACTOR FILED WITH THE PUBLIC UTILITY COMMISSION OF TEXAS

Date

[Title]

[Address 1]

[Address 2]

[City], TX [zip]

Dear [Title] [Last Name]:

Oncor Electric Delivery Company LLC ("Oncor"), a regulated electric transmission and distribution company, wishes to inform you that on June 1, 2017 it filed an Application for its 2018 Energy Efficiency Cost Recovery Factor with the Public Utility Commission of Texas ("Commission") in Docket No. _____, a copy of which Application is kept at Oncor's office at 1616 Woodall Rodgers Freeway, 6th floor, Dallas, TX 75202-1234.

Oncor is requesting that the recovery factor go into effect on March 1, 2018, consistent with 16 Tex. Admin. Code ("TAC") § 25.181(f)(9)(B). The recovery factor will help allow Oncor, in a timely manner, to recover reasonable and necessary costs incurred in administering its energy efficiency programs. Oncor is requesting a nonbypassable charge that, if approved, will be billed to retail electric providers serving end-use customers. Oncor's proposed tariff rider is subject to Commission approval and is summarized in the following table.

Rate Class	EECRF Charge	Billing Unit
Residential Service	0.000766	\$ Per kWh
Secondary Service Less Than or Equal to 10 kW	(0.000146)	\$ Per kWh
Secondary Service Greater Than 10 kW	0.000450	\$ Per kWh
Primary Service Less Than or Equal to 10 kW	0.000142	\$ Per kWh
Primary Service Greater Than 10 kW		
Distribution Line	0.000190	\$ Per kWh
Substation	(0.000010)	\$ Per kWh
Transmission Service		
Non-Profit	0.000545	\$ Per kWh

For Profit	0.000000	\$ Per kWh
Lighting Service	0.000000	\$ Per kWh

Persons who wish to intervene in or comment upon these proceedings should notify the Commission as soon as possible, as an intervention deadline will be imposed. A request to intervene or for further information should be mailed to the Public Utility Commission of Texas, P.O. Box 13326, Austin, Texas 78711-3326. Further information may also be obtained by calling the Public Utility Commission at (512) 936-7120 or (888) 782-8477. Hearing- and speech-impaired individuals with text telephones (TTY) may contact the Commission at (800) 735-2989.

Sincerely,

[Applicant's Representative]
Oncor Electric Delivery Company LLC

**INDEX TO THE DIRECT TESTIMONY
OF MICHAEL R. STOCKARD, WITNESS FOR
ONCOR ELECTRIC DELIVERY COMPANY LLC**

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EXHIBITS:

EXHIBIT MRS-1 Oncor's 2017 Energy Efficiency Plan and Report
 EXHIBIT MRS-2 Oncor's Energy Efficiency Expenses by Rate Code for 2016
 Program Year
 EXHIBIT MRS-3 Oncor's 2016 Earned Energy Efficiency Performance Bonus
 Calculation
 EXHIBIT MRS-4 Oncor's Total 2018 EECRF Request by Rate Code
 EXHIBIT MRS-5 South Urban Consumer Price Index Change
 EXHIBIT MRS-6 Oncor's 2016 Cost-Effectiveness Calculation
 EXHIBIT MRS-7 Contracts Regarding Administrator and/or Service Provider
 that Received More Than 5% of Overall Incentive Payments
 (Confidential)

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1 Electric Utility Marketing Managers of Texas and have served on the
2 Board of Directors of the Association of Energy Services Professionals. I
3 am currently serving as Board Chair of the Consortium for Energy
4 Efficiency and Board Chair of the Texas Energy Poverty Research
5 Institute.

6 Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY COMMISSION
7 PROCEEDINGS?

8 A. Yes. I have previously testified before the Commission regarding
9 Demand-Side Management in TU Electric's Integrated Resource Plan
10 Filing, Docket No. 13575. I also filed testimony in Docket No. 34040,
11 *Commission Staff's Petition for Review of the Rates of TXU Electric*
12 *Delivery Company*, but did not testify in person. I also filed testimony, but
13 did not testify in person, in Docket No. 35634 regarding Oncor's Energy
14 Efficiency Cost Recovery Factor ("EECRF") for the 2009 program year,
15 Docket No. 36958 regarding Oncor's EECRF for the 2010 program year,
16 Docket No. 38217 regarding Oncor's EECRF for the 2011 program year,
17 Docket No. 39375 regarding Oncor's EECRF for the 2012 program year,
18 Docket No. 40361 regarding Oncor's EECRF for the 2013 program year,
19 Docket No. 41544 regarding Oncor's EECRF for the 2014 program year,
20 Docket No. 42559 regarding Oncor's EECRF for the 2015 program year,
21 Docket No. 44784 regarding Oncor's EECRF for the 2016 program year,
22 and Docket No. 46013 regarding Oncor's EECRF for the 2017 program
23 year. Additionally, I testified in Docket No. 35717 (Oncor's base rate
24 case) and filed testimony in Docket No. 38929 (Oncor's base rate case),
25 but did not testify in person.

26 **II. PURPOSE OF DIRECT TESTIMONY**

27 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

28 A. The purpose of my direct testimony is to: (1) present the results of
29 Oncor's 2016 energy efficiency program year; (2) describe and support
30 Oncor's calculation of the energy efficiency performance bonus; (3)

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1 discuss Oncor's over-recovery of total 2016 energy efficiency costs; and
2 (4) describe and support Oncor's forecasted 2018 energy efficiency
3 program costs, along with the Company's requested performance bonus,
4 over-recovery of total 2016 costs, and estimated evaluation, measurement
5 and verification ("EM&V") costs included in Oncor's proposed 2018
6 EECRF. I will also discuss Oncor's compliance with Rule 25.181 and the
7 reasonableness of Oncor's EECRF expenses in 2016.

8 For more information related to the Company's proposed 2018
9 EECRF, please refer to the direct testimony of Oncor witness Mr. J.
10 Michael Sherburne.

11 Q. PLEASE SUMMARIZE ONCOR'S PROPOSED 2018 EECRF.

12 A. Oncor is requesting an EECRF that will recover \$56,462,432 for the 2018
13 program year. This request is made under PURA §39.905 and Rule
14 25.181 and is comprised of the following components: (a) \$11,741,562
15 energy efficiency performance bonus under Rule 25.181(h) for 2016
16 program year achievements; (b) return (i.e., credit) of \$6,097,607 for the
17 total over-recovery of 2016 energy efficiency costs; (c) \$49,384,580 in
18 energy efficiency expenses forecasted for the 2018 program year; (d)
19 \$1,427,210 of estimated EM&V costs provided by the Commission Staff
20 for evaluation of the 2016 and 2017 program years; and (e) \$6,687 for
21 municipalities' EECRF proceeding expenses related to Oncor's EECRF
22 proceeding in Docket No. 46013.

23 For the reasons that I discuss below, Oncor's proposed 2018
24 EECRF is accurately calculated consistent with Rule 25.181 and,
25 furthermore, is reasonable and necessary because it is based on the
26 estimated costs for Oncor to continue successfully fulfilling the energy
27 efficiency goals of the legislature and the Commission.

28 **III. 2016 ENERGY EFFICIENCY PROGRAM RESULTS**

29 Q. WHAT ENERGY EFFICIENCY PROGRAMS DID ONCOR OFFER
30 DURING THE 2016 PROGRAM YEAR?

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1 A. During 2016, Oncor offered 12 standard offer programs (“SOPs”) and
2 market transformation programs (“MTPs”), including the Targeted Low-
3 Income Weatherization required by PURA § 39.905(f), Rule 25.181(r), and
4 various Commission orders. Oncor also funded energy efficiency
5 research and development efforts consistent with Rule 25.181.

6 Attached to this direct testimony as Exhibit MRS-1 is Oncor’s 2017
7 Energy Efficiency Plan and Report filed with the Commission on March 31,
8 2017 (the “2017 EEPR”). The 2017 EEPR provides, among other
9 information, the details about Oncor’s energy efficiency programs for the
10 most recently completed program year (2016), including specific
11 information associated with that year’s demand and energy savings, the
12 projected annual growth in demand, and the expenses associated with
13 Oncor’s energy efficiency programs, including incentive payments and
14 administrative costs. The 2017 EEPR also describes how Oncor intends
15 to fulfill the requirements of Rule 25.181 for the 2017 and 2018 program
16 years. The plan includes a projection of the annual growth in demand, an
17 estimation of the energy and peak demand reduction savings to be
18 obtained through each individual SOP and MTP, a description of the
19 customer classes targeted by Oncor’s energy efficiency programs, and the
20 proposed annual budget required to implement the SOPs and MTPs for
21 each eligible customer class.

22 Q. WHAT WERE ONCOR’S ENERGY EFFICIENCY PROGRAM
23 EXPENDITURES DURING THE 2016 PROGRAM YEAR?

24 A. In 2016, Oncor spent \$53,805,949 on its energy efficiency programs, as
25 shown in Section VIII, Table 10, of Exhibit MRS-1 (p. 26), which included
26 its research and development expenditures and EM&V costs. The total
27 EM&V costs incurred in 2016 was \$649,617. In Docket No. 44784, a total
28 of \$737,269 was approved by the Commission for EM&V costs for the
29 review of the 2015 program year which began in 2015 and concluded in
30 2016. Of the approved \$737,269, \$87,652 was incurred in 2015 and

1 \$649,617 was incurred in 2016, for a total of \$737,269, and these EM&V
2 costs are being reconciled in this EECRF filing. A detailed breakdown of
3 the amounts spent by Oncor on the various programs employed by it
4 during the 2016 program year is shown in Section VIII, Table 10, of Exhibit
5 MRS-1 (p. 26). In addition, Exhibit MRS-2 details the allocation of 2016
6 program expenses by rate code and details of the EM&V costs for
7 evaluation of the 2015 program year that is being reconciled in this filing
8 can be found in WP/MRS/5.

9 Q. WHAT WAS ONCOR'S DEMAND REDUCTION GOAL FOR THE 2016
10 PROGRAM YEAR?

11 A. Oncor's minimum calculated statutory demand reduction goal for the 2016
12 program year was 69,400 kW, as shown in MW (megawatts) in Section V,
13 Table 7, of Exhibit MRS-1 (p. 21).

14 Q. DURING THE 2016 PROGRAM YEAR, WHAT REDUCTION IN PEAK
15 DEMAND DID ONCOR ACHIEVE THROUGH ITS ENERGY EFFICIENCY
16 PROGRAMS?

17 A. A total of 128,830 kW in demand reduction was achieved during the 2016
18 program year. Section VI, Table 8, of Exhibit MRS-1 (p. 22) provides a
19 breakdown of the peak demand saved by each of Oncor's energy
20 efficiency programs during the 2016 program year.

21 Q. DID ONCOR MAKE ANY ADJUSTMENTS TO ITS REPORTED DEMAND
22 AND ENERGY SAVINGS DUE TO THE COMMISSION'S EM&V
23 EVALUATOR REVIEW OF ONCOR'S 2016 PROGRAMS?

24 A. No. However, prior to this filing, the Commission Evaluator found minor
25 differences in two of Oncor's 2016 commercial programs. The Healthcare
26 MTP evaluation determined a negative adjustment of 2.04 kW and 4,434.8
27 kWh to the program savings of 496 kW and 3,809,470 kWh. The Basic
28 SOP evaluation determined a positive adjustment of 5.25 kW and
29 12,642.4 kWh to the program savings of 8,712 kW and 50,595,032 kWh.
30 The net adjustment was positive with 3.21 kW and 8,207.6 kWh. This

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- 1 positive net adjustment would have increased Oncor's 2016 Energy
2 Efficiency Performance Bonus by approximately \$676. Oncor elected to
3 not include the net positive savings in its reported demand and energy
4 savings or to increase its 2016 Energy Efficiency Performance Bonus.
- 5 Q. DOES RULE 25.181 HAVE REQUIREMENTS CONCERNING HOW
6 PROGRAMS ARE IMPLEMENTED?
- 7 A. Yes.
- 8 Q. PLEASE DESCRIBE HOW ONCOR SET ITS INCENTIVE PAYMENTS
9 WITH THE OBJECTIVE OF ACHIEVING ITS 2016 ENERGY AND
10 DEMAND GOALS AT THE LOWEST REASONABLE COST PER
11 PROGRAM.
- 12 A. Program incentives are established at the measure level and are based on
13 the installed cost and the estimated useful life of the measure. Installed
14 cost data is obtained through discussions with energy efficiency service
15 providers and other external sources. Other factors, such as historical
16 program participation consistent with Rule 25.181(c)(29), goal attainment,
17 deemed savings, and regulatory changes are considered as part of
18 incentive development. The measure incentives are compared across
19 programs to ensure consistency and cost-effectiveness.
- 20 Q. PLEASE DESCRIBE WHETHER ANY ONCOR ENERGY EFFICIENCY
21 ADMINISTRATOR AND/OR SERVICE PROVIDER RECEIVED MORE
22 THAN 5% OF ONCOR'S OVERALL INCENTIVE PAYMENTS FOR THE
23 2016 PROGRAM YEAR.
- 24 A. Oncor's total incentive payments for the 2016 program were \$47,694,692
25 as shown in Section VIII, Table 10, of Exhibit MRS-1 (p. 26). Based on
26 the total incentives paid, 5% would equate to \$2,384,735 or ($\$47,694,692$
27 $\times .05$). There were two program implementers who received incentive
28 payments in excess of \$2,384,735. However, there were two types of
29 incentive payments; one incentive payment was for program
30 implementation fees (implementer incentives) and the other incentive

1 payment was for energy efficiency projects (customer/service provider
2 incentives). Implementer incentives were payments that were paid directly
3 to the implementer for their services in implementing the program, and the
4 customer/service provider incentives were payments made to the
5 implementer that were passed on to the customer or third-party service
6 provider.

7 One implementer implemented Oncor's Targeted Low-Income
8 Weatherization Standard Offer Program (Targeted SOP). A total of
9 \$4,697,901 or 9.85% (\$4,697,901 divided by \$47,694,692) in incentive
10 payments were paid to the implementer, which included \$427,082 in
11 implementer incentives or 0.90% (\$427,082 divided by \$47,694,692) and
12 the remaining \$4,270,819 of incentives paid were passed along to sub-
13 recipient agencies and customer/service provider by the implementer.

14 The second implementer implemented Oncor's Targeted Low-
15 Income Weatherization Multi-Family HVAC Program (Targeted MF HVAC
16 Program) and Oncor's HEE Multi-Family HVAC Program (HEE MF HVAC
17 Program). For the Targeted MF HVAC Program, a total of \$466,531 or
18 0.98% (\$466,531 divided by \$47,694,692) in implementer incentives were
19 paid to the implementer, which included \$42,411 in implementer
20 incentives or 0.09% (\$42,411 divided by \$47,694,692) and the remaining
21 \$424,120 of incentives were passed along to the customer/service
22 provider. For the HEE MF HVAC Program, a total of \$1,995,455 or 4.18%
23 (\$1,995,455 divided by \$47,694,692) in implementer incentives were paid
24 to the implementer, which included \$181,405 in implementer incentives or
25 0.38% (\$181,405 divided by \$47,694,692) and the remaining \$1,814,050
26 of incentives were passed along to the customer/service provider.
27 Therefore, the total incentives paid to the implementer for both programs
28 were 5.16% or $((\$466,531 + \$1,995,455) \text{ divided by } \$47,694,692)$.

29 As described above, while total incentive payments for each
30 implementer exceeded 5% of Oncor's overall incentive payments, the first

1 implementer only kept approximately 0.90% of Oncor's overall incentive
2 payments and the second implementer approximately 0.47%. The names
3 of the implementers described above and their related contracts are
4 contained in Exhibit MRS-7, which is confidential.

5 Q. DID ONCOR'S CONSERVATION LOAD FACTOR FOR THE 2016
6 PROGRAM YEAR COMPLY WITH RULE 25.181?

7 A. Yes, it did. Rule 25.181(e)(4) requires that "[a]n electric utility shall
8 administer a portfolio of energy efficiency programs designed to meet an
9 energy savings goal calculated from its demand savings goal, using a
10 20% conservation load factor." Rule 25.181(c)(6) defines the conservation
11 load factor as "[t]he ratio of the annual energy savings goal, in kilowatt
12 hours (kWh), to the peak demand goal for the year, measured in kilowatts
13 (kW) and multiplied by the number of hours in the year."

14 In 2016, Oncor's peak demand goal was 69,400 kW as shown in
15 Section V, Table 7, of Exhibit MRS-1 (p. 21). The energy goal based on
16 the peak demand goal is 121,588,800 kWh [(69,400 kW peak demand
17 goal X 8,760 hrs/yr) X .2 = 121,588,800 kWh]. Oncor's actual energy
18 savings was 198,742,869 kWh as shown in Section VI, Table 8, of Exhibit
19 MRS-1 (p. 22). Oncor exceeded the required 20% conservation load
20 factor by 77,154,069 kWh (198,742,869 actual kWh savings -
21 121,588,800 kWh energy savings goal = 77,154,069 kWh) or more than
22 63%.

23 Q. DID ONCOR'S 2016 ENERGY EFFICIENCY PROGRAMS MEET THE
24 COST-EFFECTIVENESS STANDARD OF RULE 25.181?

25 A. Yes. Please see Exhibit MRS-6 for the cost-effectiveness of the 2016
26 energy efficiency programs as required by Rule 25.181(d) and (r)(2).

27 Q. DID ANY OF ONCOR'S 2016 REPORTED ENERGY EFFICIENCY
28 SAVINGS INCLUDE DEMAND OR ENERGY SAVINGS THAT
29 RESULTED FROM PROGRAMS OTHER THAN PROGRAMS
30 IMPLEMENTED UNDER RULE 25.181?

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1 A. No.

2 Q. DID ONCOR'S 2016 PROGRAM IMPLEMENTATION INCLUDE
3 RECOMMENDATIONS FROM THE COMMISSION'S EM&V
4 CONTRACTOR?

5 A. Yes. The Commission's EM&V Contractor provided recommendations
6 that enhanced Oncor's programs which were incorporated into the 2016
7 programs, such as:

8 1. Implementation of the high 5 of 10 baseline guidelines for the
9 Commercial Load Management Program.

10 2. Implementation and calculation of the residential air conditioning
11 early retirement process.

12 3. Development of the retro-commissioning measurement and
13 verification methodology.

14 4. Calculation and treatment of individual meter readings in the
15 Residential Demand Response Program.

16 Q. DID ONCOR MAKE ANY PAYMENTS FOR 2016 ENERGY EFFICIENCY
17 ADMINISTRATIVE EXPENSES TO AFFILIATES?

18 A. No, however Oncor's Retail Electric Provider affiliate participated in the
19 Commercial Standard Offer Program (Basic); and an incentive payment
20 totaling \$6,562.55 was made for one qualifying energy efficiency project
21 submitted to the program.

22 **IV. ENERGY EFFICIENCY PERFORMANCE BONUS**

23 Q. DID ONCOR EARN AN ENERGY EFFICIENCY PERFORMANCE
24 BONUS UNDER RULE 25.181(h) BASED ON ITS 2016 PROGRAM
25 YEAR ACHIEVEMENTS?

26 A. Yes, it did. As Rule 25.181(h) provides, "[a] utility that exceeds its
27 demand and energy reduction goals established in this section at a cost
28 that does not exceed the cost caps established in subsection (f)(7) of this
29 section shall be awarded a performance bonus calculated in accordance
30 with this subsection." Oncor's statutory demand reduction goal for the
31 2016 program year was 69,400 kW, as shown in MW in Section V, Table
32 7, of Exhibit MRS-1 (p. 21). Oncor achieved verified savings of 128,830

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1 kW (85.63% over the statutory goal) and 198,742,869 kWh as shown in
2 Section VI, Table 8, of Exhibit MRS-1 (p. 22).

3 Oncor's 2016 EECRF for residential customers was \$0.000995 per
4 kWh as approved by the Commission in Docket No. 44784. The
5 residential EECRF not-to-exceed amount, per the Rule 25.181(f)(7)(A)
6 approved in Project No. 46388, is "For residential customers for program
7 years 2016 and 2017, \$0.001266 per kWh." The not-to-exceed amount is
8 based on a per kWh basis and excludes EM&V costs and municipal
9 EECRF proceeding expenses, as shown in Rule 25.181(f)(7).

10 The eligible weather-adjusted residential consumption for 2016 was
11 43,132,738,000 kWh, as shown in Mr. Sherburne's WP/JMS/3. Therefore,
12 the residential EECRF not-to-exceed amount was \$54,606,046
13 (43,132,738,000 X \$0.001266).

14 The total cost for residential customers in 2016 was \$40,367,053
15 as shown in Mr. Sherburne's WP/JMS/2 Residential Service (c + e + f + g)
16 or (\$34,135,130 + \$5,916,923 + \$8,854 + 306,146 = \$40,367,053). Rule
17 25.181(f)(7) provides that EM&V costs and municipal EECRF proceeding
18 expenses are excluded from the total EECRF costs. Therefore, the total
19 EECRF cost for residential customers in the 2016 program year was
20 \$40,023,443 or (\$40,367,053 – \$334,756 EM&V costs – \$8,854 EECRF
21 proceeding expenses) and was less than the not-to-exceed amount of
22 \$54,606,046.

23 The not-to-exceed amount for commercial customers is based on a
24 cost per kWh times the aggregate of all eligible commercial customers'
25 kWh consumption, as required in Rule 25.181(f)(7)(C), approved in Project
26 No. 46388. The cost per kWh for 2016 was \$0.000791.

27 Oncor's total costs for commercial customers in the 2016
28 program year were \$19,316,750, as shown in Mr. Sherburne's WP/JMS/2;
29 Total [c + e + f + g] – Residential Service [c + e + f + g] or [\$53,887,935 +
30 \$9,820,813 + \$14,696 + (\$4,039,641)] – [\$34,135,130 + \$5,916,923 +

1 \$8,854 + \$306,146] = \$19,316,750. The weather-adjusted aggregate of
2 all eligible commercial customers' kWh consumption in 2016 was
3 59,980,996,000 kWh, as shown in WP/JMS/3 (Retail Total
4 103,113,734,000 kWh – Residential 43,132,738,000 kWh =
5 59,980,996,000 kWh). The not-to-exceed amount was \$47,444,968 or
6 (59,980,996,000 kWh X \$0.000791). Rule 25.181(f)(7) provides that
7 EM&V costs and municipal EECRF proceeding expenses are excluded
8 from the total EECRF costs. Therefore, the total EECRF cost for
9 commercial customers in the 2016 program year was \$18,932,059
10 (\$19,316,750 – \$378,849 EM&V costs – \$5,842 EECRF proceeding
11 expenses) and was less than the not-to-exceed amount of \$47,444,968.

12 Q. HOW IS THE ENERGY EFFICIENCY PERFORMANCE BONUS
13 CALCULATED?

14 A. Rule 25.181(h) defines how the energy efficiency performance bonus is
15 calculated. The bonus is based on a share of the "net benefits" realized
16 as a result of the utility having met its demand reduction goal. "Net
17 benefits" are calculated according to Rule 25.181(h)(2), which states that
18 they "shall be calculated as the sum of total avoided cost associated with
19 the eligible programs administered by the utility minus the sum of all
20 program costs. Total avoided costs and program costs shall be calculated
21 in accordance with this section."

22 Rule 25.181(h)(3) defines the percentage of net benefits that
23 qualifies for a bonus, stating that "[a] utility that exceeds 100% of its
24 demand and energy reduction goals shall receive a bonus equal to 1% of
25 the net benefits for every 2% that the demand reduction goal has been
26 exceeded, with a maximum of 10% of the utility's total net benefits."

27 Thus, the maximum energy efficiency performance bonus that a
28 utility can earn if the Rule 25.181 requirements are met is 10% of the
29 utility's total net benefits.

1 Q. WHAT IS THE TOTAL AMOUNT OF ONCOR'S EARNED ENERGY
2 EFFICIENCY PERFORMANCE BONUS FOR THE 2016 PROGRAM
3 YEAR?

4 A. The total amount of Oncor's earned energy efficiency performance bonus
5 for the 2016 program year is \$11,741,562.

6 Q. HOW WAS ONCOR'S EARNED ENERGY EFFICIENCY
7 PERFORMANCE BONUS OF \$11,741,562 CALCULATED?

8 A. As reflected in Section VI, Table 8, of Exhibit MRS-1 (p. 22), each of
9 Oncor's 2016 energy efficiency programs that resulted in actual savings
10 did so in verified kW and kWh savings. Total avoided costs were
11 calculated from the savings for each program using the present value of
12 the avoided cost of capacity under Rule 25.181(d) of \$80/kW per year and
13 avoided cost of energy under the same Rule of \$0.05088/kWh per year
14 based on the appropriate estimated useful life of each measure in the
15 specific energy efficiency program. The present value was calculated
16 using the Estimated Useful Life values for each program's measures
17 approved in the Technical Resource Manual v3.1, a 2% escalation rate,
18 and an 8.14% discount rate based upon Oncor's weighted average cost of
19 capital approved by the Commission in Docket No. 38929. The 2%
20 escalation rate and 8.14% discount rate were used as required in Rule
21 25.181(h)(5), and calculated based on the methodology approved by the
22 Commission in *APPLICATION OF CENTERPOINT ENERGY HOUSTON*
23 *ELECTRIC LLC FOR APPROVAL OF AN ADJUSTMENT TO ITS ENERGY*
24 *EFFICIENCY COST RECOVERY FACTOR*, Docket No. 42560, Order at
25 Findings of Facts 29 – 35 and 47 and Conclusions of Laws 8 – 9
26 (November 24, 2014). The kW savings avoided costs were then summed
27 with the kWh savings avoided costs to calculate the total savings avoided
28 costs for each program. Next, all program total savings avoided costs
29 were summed to calculate the total savings avoided costs for the entire
30 2016 energy efficiency program set, or \$171,285,561 as shown in Exhibit

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1 MRS-3. The net benefits were then calculated according to Rule
2 25.181(h)(2) where net benefits are the sum of total avoided cost
3 associated with the eligible programs (\$171,285,561), minus the sum of all
4 program costs (\$53,869,937), or \$117,415,624 (i.e., \$171,285,561 -
5 \$53,869,937 = \$117,415,624).

6 Oncor's statutory demand reduction goal in 2016 was 69,400 kW
7 and a total of 128,830 kW was actually achieved, which is 85.63% above
8 the statutory goal ([128,830 kW minus 69,400 kW] divided by 69,400 kW).
9 Rule 25.181(h)(3) states that "[a] utility that exceeds 100% of its demand
10 and energy reduction goals shall receive a bonus equal to 1% of the net
11 benefits for every 2% that the demand reduction goal has been exceeded,
12 with a maximum of 10% of the utility's total net benefits." As previously
13 shown, Oncor exceeded its statutory demand reduction goal by 85.63%,
14 which results in a qualified bonus of 42.82% of the net benefits (85.63%
15 divided by 2), or \$50,277,370 (earned bonus) = (\$117,415,624 [net
16 benefits] X .4282). However, Rule 25.181(h)(3) also states that the
17 maximum bonus can only be 10% of the utility's total net benefits.
18 Therefore, Oncor's maximum earned bonus is limited to \$11,741,562 (i.e.,
19 .1 X \$117,415,624 [Oncor's 2016 total net benefits] = \$11,741,562).

20 Additionally, as required by Rule 25.181(h), Oncor's performance
21 bonus calculation does not include demand or energy savings that
22 resulted from programs other than programs implemented under Rule
23 25.181.

24 Please see Exhibit MRS-3 for a summary of the above-described
25 calculation, Section VI, Table 8, of Exhibit MRS-1 (p. 22) for the 2016
26 energy efficiency program year reported and verified savings amounts and
27 Section VIII, Table 10, of Exhibit MRS-1 (p. 26) for the 2016 program year
28 costs. Please note that the EM&V costs used in this calculation were
29 \$713,605 as shown in WP/MRS/6. This is the amount that was budgeted
30 by the Commission EM&V contractor for the evaluation of the 2016

1 program year and is different than the actual costs of \$649,617 shown in
2 Section VIII, Table 10, of Exhibit MRS-1 (p. 26), which are the actual costs
3 incurred in 2016 for the evaluation of the 2015 program year as previously
4 described.

5 **V. OVER-RECOVERY OF TOTAL 2016 ENERGY EFFICIENCY COSTS**

6 Q. DID ONCOR HAVE AN OVER-RECOVERY OF 2016 ENERGY
7 EFFICIENCY COSTS?

8 A. Yes, it did. Oncor had \$6,097,607 in total over-recovery of 2016 energy
9 efficiency costs.

10 Q. WHY WAS THERE AN OVER-RECOVERY OF COSTS FROM THE 2016
11 PROGRAM YEAR?

12 A. Please refer to Section VIII of Exhibit MRS-1 (p. 25) for information on
13 program funding for the 2016 program year and Mr. Sherburne's direct
14 testimony for the calculation and analysis of the total over-recovery of
15 energy efficiency costs.

16 Q. WILL THE OVER-RECOVERY OF ENERGY EFFICIENCY COSTS BE
17 CREDITED BACK TO RATEPAYERS?

18 A. Yes. The over-recovery is included in Oncor's requested 2018 EECRF
19 application.

20 Please refer to Mr. Sherburne's direct testimony for more
21 information on the calculation of the amount to be allocated by energy
22 efficiency rate class through the proposed 2018 EECRF.

23 **VI. 2018 FORECASTED ENERGY EFFICIENCY COSTS**

24 Q. WHAT COSTS DOES ONCOR FORECAST FOR 2018 TO OPERATE
25 COST-EFFECTIVE ENERGY EFFICIENCY PROGRAMS THAT
26 ACHIEVE HIGH LEVELS OF ENERGY EFFICIENCY SAVINGS?

27 A. Oncor's proposed EECRF is based upon a total request of \$56,462,432
28 for the 2018 program year. This amount is comprised of an \$11,741,562
29 performance bonus, \$6,097,607 credit for the total over-recovery of 2016
30 energy efficiency costs, both of which are set forth above, a \$49,384,580

1 program year budget that Oncor projects is required for 2018, \$1,427,210
2 of estimated EM&V costs (for the evaluation of the 2016 and 2017
3 program years) and \$6,687 of municipal rate case expenses. For a more
4 detailed description of the estimated costs for the 2018 energy efficiency
5 program year budget broken out by program for each customer class,
6 please refer to Section IV, Table 6, of Exhibit MRS-1 (p. 20); and Exhibit
7 MRS-4 for the allocation of the forecasted 2018 budget by rate code.

8 **VII. ESTIMATED EVALUATION, MEASUREMENT & VERIFICATION (EM&V)**

9 **COSTS**

10 Q. PLEASE EXPLAIN THE 2018 EM&V COSTS DESCRIBED ABOVE.

11 A. PURA §39.905(b)(6) requires the Commission to provide oversight and
12 adopt rules and procedures to ensure that programs are evaluated,
13 measured and verified using a framework established by the Commission.
14 Rule 25.181(q)(10) states, “[t]he utilities shall be assigned the EM&V costs
15 in proportion to their annual program costs and shall pay the invoices
16 approved by the commission. The 2013 and 2014 EM&V expenses
17 outlined in the EM&V contractor’s budget shall be recovered through the
18 EECRFs approved by the commission in the EECRF proceedings initiated
19 by the utilities in 2013. The commission shall at least biennially review the
20 EM&V contractor’s costs and establish a budget for its services sufficient
21 to pay for those services that it determines are economic and beneficial to
22 be performed”.

23 Q. HOW DID ONCOR DETERMINE THE ESTIMATED EM&V COSTS OF
24 \$1,427,210 FOR THE 2018 PROGRAM YEAR?

25 A. In Docket No. 46013, no EM&V costs were provided for inclusion in the
26 2017 program year (for the evaluation of the 2016 program year) by the
27 Commission Staff, due to the need to issue a Request for Proposals
28 (RFP) for the continuation of the EM&V process beyond the evaluation of
29 the 2015 program year. The RFP was posted on November 18, 2016 and
30 since then an Evaluator has been selected by the Commission to continue

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1 evaluation of the 2016 program year and future years. The Commission
2 Staff provided estimated budgets for the evaluation of the 2016 program
3 year of \$713,605 and evaluation of the 2017 program year of \$713,605,
4 for a total of \$1,427,210. Oncor is currently incurring costs in 2017 for the
5 evaluation the 2016 program year and will incur costs in 2018 for the
6 evaluation of the 2017 program year. These costs for both years will be
7 reconciled in the EECRF filed in 2019. Program years 2012 through
8 2015 have been evaluated by the Commission's EM&V contractor and
9 costs for the evaluation of the 2015 program year incurred in 2015 and
10 2016 of \$737,269 are being reconciled in this filing.

11 Q. HOW WERE THE 2018 ESTIMATED EM&V COSTS ALLOCATED TO
12 RATE CLASSES?

13 A. The 2018 estimated EM&V costs were allocated to energy efficiency
14 programs based on a proration provided by the Commission Staff and
15 EM&V contractor. The cost allocation by program reflects the EM&V level
16 of effort and utilizes a methodology to allocate costs based on a
17 combination of energy savings and an assigned evaluation priority.
18 Please see WP/MRS/7 for the costs by program for the 2016 and 2017
19 program years. Also, please see WP/MRS/4 for the allocation of EM&V
20 costs by program. The total program costs of each program were then
21 prorated to the appropriate rate class based on the actual rate codes and
22 incentive ratios from the 2016 program year as shown in WP/MRS/1 and
23 Exhibit MRS-4.

24 **VIII. EECRF PROCEEDING EXPENSES**

25 Q. HOW WAS THE \$6,687 OF MUNICIPALITIES' EECRF PROCEEDING
26 EXPENSES DETERMINED AND ALLOCATED TO ENERGY
27 EFFICIENCY RATE CLASSES?

28 A. Please refer to Mr. Sherburne's direct testimony for more information
29 regarding the municipalities' EECRF proceeding expenses.

1 Q. DID ONCOR INCUR ANY EECRF PROCEEDING (i.e., RATE CASE)
2 EXPENSES NOTED IN RULE 25.181(f)(3)(A) IN REGARDS TO ITS
3 LAST EECRF PROCEEDING THAT WAS CONDUCTED AND
4 CONCLUDED IN DOCKET NO. 46013?

5 A. No, Oncor did not incur any EECRF proceeding (i.e. rate case) expenses
6 in Docket No. 46013 and is not seeking EECRF proceeding (i.e., rate
7 case) expenses in this current proceeding. Specifically, Oncor did not
8 incur any outside legal or consulting fees, expenses for lodging, traveling,
9 etc. in connection with its participation in Docket No.46013.

10 **IX. RULE COMPLIANCE**

11 Q. DOES ONCOR'S 2018 REQUESTED EECRF FOR ENERGY
12 EFFICIENCY PROGRAMS MEET THE COST RECOVERY
13 REQUIREMENTS IN RULE 25.181(f)(7)?

14 A. Yes. Rule 25.181(f)(7) states, "[t]he total EECRF costs outlined in
15 paragraph (1) of this subsection, excluding EM&V costs and municipal
16 EECRF proceeding expenses shall not exceed the amounts prescribed in
17 this paragraph unless a good cause exception filed pursuant to subsection
18 (e)(2) of this section is granted." Rule 25.181(f)(7)(B) approved in Project
19 No. 46388, provides for the not-to-exceed amount for residential
20 customers in 2018 as follows: "For residential customers for program year
21 2018, \$0.001263 per kWh increased or decreased by a rate equal to the
22 2016 calendar year's percentage change in the South urban consumer
23 price index (CPI), as determined by the Federal Bureau of Labor
24 Statistics." As shown in Exhibit MRS – 5, the percentage change in the
25 CPI for the 2016 calendar year was 1.11%. Therefore, the 2018 not-to-
26 exceed amount is \$0.001277 per kWh or ($\$0.001263 \times 1.011 =$
27 $\$0.001277$). Oncor's 2018 residential EECRF is \$0.000766 per kWh, as
28 shown in Exhibit JMS-5.

29 Oncor's 2018 forecasted consumption for residential customers is
30 43,885,550,000 kWh as shown in WP/JMS/3 and would equate to a not-

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1 to-exceed amount of \$56,041,847 or $(43,885,550,000 \times \$0.001277)$.
2 Oncor's 2018 total requested EECRF costs for residential customers is
3 \$33,631,901 as shown in Exhibit JMS-5. Rule 25.181(f)(7) excludes
4 EM&V costs and municipalities' EECRF proceeding expenses from the
5 not-to-exceed amounts. Excluding EM&V costs for residential programs
6 of \$686,849 as shown in WP/MRS/4, column (e) and residential
7 municipalities' EECRF proceeding expenses of \$4,236, as shown in
8 Exhibit JMS-5 in the testimony of Mr. Sherburne, the total 2018 residential
9 customer EECRF costs are \$32,940,816 $(\$33,631,901 - (\$686,849 +$
10 $\$4,236))$ which is less than the not-to-exceed amount of \$56,041,847.

11 Rule 25.181(f)(7)(D) approved in Project No. 46388, provides for
12 the not-to-exceed amount for commercial customers in 2018 as follows:
13 "For commercial customers for program year 2018, rates designed to
14 recover revenues equal to \$0.000790 per kWh increased or decreased by
15 a rate equal to the 2016 calendar year's percentage change in the South
16 urban CPI, as determined by the Federal Bureau of Labor Statistics times
17 the aggregate of all eligible commercial customers' kWh consumption."
18 Therefore the not-to-exceed amount for 2018 is \$0.000799 per kWh or
19 $(\$0.000790 \times 1.011 = \$0.000799)$.

20 Oncor's 2018 forecasted aggregate of all eligible commercial
21 customers kWh consumption is 61,165,858,000 kWh (Total Retail
22 105,051,408,000 kWh – Residential 43,885,550,000 kWh) as shown in
23 WP/JMS/3 and would equate to a not-to-exceed amount of \$48,871,521 or
24 $(61,165,858,000 \times \$0.000799)$. Oncor's 2018 total requested EECRF
25 costs for commercial customers is \$22,830,394 as shown in Exhibit JMS-5
26 (Total EECRF costs \$56,462,295 – Residential EECRF costs \$33,631,901
27 = \$22,830,394). Excluding EM&V costs for commercial programs of
28 \$740,361, as shown in WP/MRS/4, column (e) and commercial
29 municipalities' EECRF proceeding costs of \$2,451 (Total EECRF
30 proceeding costs \$6,687 – Residential Service EECRF proceeding costs

1 of \$4,236), as shown in Exhibit JMS-5 in the testimony of Mr. Sherburne,
2 the total 2018 commercial customer EECRF costs are \$22,087,582
3 (\$22,830,394 – (\$740,361 + \$2,451)), which is less than the not-to-exceed
4 amount of \$48,871,521.

5 Q. WILL ANY AMOUNT OF THE 2018 REQUESTED EECRF FOR ENERGY
6 EFFICIENCY PROGRAMS BE USED TO FUND ANY OTHER ENERGY
7 EFFICIENCY PROGRAMS OUTSIDE OF THE RULE 25.181
8 PROGRAMS?

9 A. No.

10 **X. REASONABLENESS OF ONCOR'S EECRF EXPENSES IN 2016**

11 Q. DID ONCOR INCUR PROGRAM EXPENSES FOR PROGRAM YEAR
12 2016?

13 A. Yes.

14 Q. WHAT WERE ONCOR'S PROPOSED PROGRAM EXPENSES FOR THE
15 2016 PROGRAM YEAR AND WERE THESE EXPENSES REVIEWED
16 AND APPROVED BY THE COMMISSION?

17 A. In Docket No. 44784, Oncor's proposed 2016 program expenses in the
18 amount of \$60,291,681 was reviewed by other parties, including
19 Commission Staff. The commission approved Oncor's request of
20 \$60,291,681 for the 2016 program expenses in the Final Order in Docket
21 No. 44784 and determined that amount was a reasonable estimate of the
22 costs necessary for Oncor to provide energy efficiency programs in 2016
23 and meet its goals consistent with PURA §39.905 and Rule 25.181.

24 Q. WERE ONCOR'S ACTUAL EECRF EXPENSES IN 2016 REASONABLE?

25 A. Yes. Oncor's actual 2016 EECRF expenses complied with the cost
26 recovery requirements in Rule 25.181. Please see Section VIII of Exhibit
27 MRS-1 (p. 25) for an explanation of any differences between Oncor's
28 actual 2016 EECRF expenses and the 2016 EECRF expenses authorized
29 by the Commission.

1 **XI. CONCLUSION**

2 Q. IS ONCOR'S PROPOSED 2018 EECRF REASONABLE AND
3 NECESSARY?

4 A. Yes. Oncor has accurately and correctly calculated its proposed EECRF
5 for 2018 consistent with the requirements of Rule 25.181 and its 2018
6 demand goal of 69.4 MW, based on 30% annual growth in demand with
7 6.655% line loss. For a detailed calculation of the 6.655% line loss,
8 please see WP/JMS/4.

9 Approval of this EECRF will provide Oncor the flexibility to continue
10 to pursue an aggressive set of energy efficiency programs necessary to
11 meet the Company's savings goals, in a cost-effective manner, as
12 established by the legislature and the Commission. For this and the other
13 reasons discussed above and addressed by Mr. Sherburne's direct
14 testimony and the exhibits and workpapers supporting the Company's
15 Application, Oncor's proposed 2018 EECRF is reasonable and necessary
16 and should be approved.

17 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

18 A. Yes, it does.

STATE OF TEXAS §
 §
COUNTY OF DALLAS §

BEFORE ME, the undersigned authority, on this day personally appeared Michael R. Stockard, who, having been placed under oath by me, did depose as follows:

My name is Michael R. Stockard. I am of legal age and a resident of the State of Texas. The foregoing direct testimony and the attached exhibits offered by me are true and correct, and the opinions stated therein are, to the best of my knowledge and belief, accurate, true and correct.

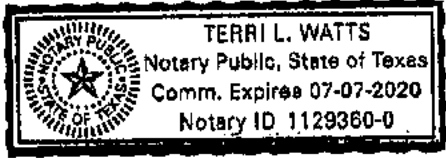


Michael R. Stockard

SUBSCRIBED AND SWORN TO BEFORE ME by the said Michael R. Stockard this 26 day of May, 2017.



Notary Public, State of Texas



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**ONCOR ELECTRIC DELIVERY
COMPANY LLC**

2017 Energy Efficiency Plan and Report
16 Tex. Admin Code §25.181 and §25.183 (“TAC”)

March 31, 2017

Project No. 46907

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INTRODUCTION

Oncor Electric Delivery Company LLC (Oncor or Company) presents this Energy Efficiency Plan and Report (EEPR) to comply with Public Utility Commission of Texas (Commission) 16 TAC §25.181 and §25.183 (the Energy Efficiency Rule or EE Rule), which implement Public Utility Regulatory Act (PURA) §39.905. PURA §39.905 and the EE Rule require that each investor owned electric utility achieve the following minimum savings goals through market-based standard offer programs (SOPs), targeted market transformation programs (MTPs), or utility self-delivered programs:

- 30% reduction of the electric utility's annual growth in demand of residential and commercial customers for the 2013 program year and for subsequent program years until the trigger described in the next paragraph is reached.

Additionally, effective September 1, 2011, PURA §39.905 requires that an electric utility whose amount of energy efficiency to be acquired is equivalent to at least four-tenths of one percent of its summer weather-adjusted peak demand for residential and commercial customers in the previous calendar year, maintain a goal of no less than four-tenths of one percent of that summer weather-adjusted peak demand for residential and commercial customers by December 31 of each subsequent year and that the energy efficiency to be required not be less than the preceding year.

The EE Rule includes specific requirements related to the implementation of SOPs and MTPs by investor-owned electric utilities that control the manner in which they must administer their portfolio of energy efficiency programs in order to achieve their mandated energy efficiency savings goals. Oncor's EEPR is intended to enable the Company to meet its statutory savings goals through implementation of energy efficiency programs in a manner that complies with PURA §39.905 and the EE Rule. As outlined in the EE Rule, this EEPR covers the previous five years of demand savings goals and energy targets, including 2016 achievements, and reports plans for achieving 2017 and 2018 projected energy efficiency savings. The following section provides a description of what information is contained in each of the subsequent sections and appendices.

ENERGY EFFICIENCY PLAN AND REPORT ORGANIZATION

This EEPR consists of an executive summary, ten sections, a list of acronyms, a glossary and three appendices.

- The Executive Summary highlights Oncor's reported achievements for 2016 and Oncor's plans for achieving its 2017 and 2018 projected energy efficiency savings.

Energy Efficiency Plan (EEP)

- Section I describes Oncor's program portfolio. It details how each program will be implemented, discusses related informational and outreach activities, and provides an introduction to any programs not included in Oncor's previous EEP.
- Section II explains Oncor's targeted customer classes, specifying the size of each class and the method for determining those sizes.
- Section III presents Oncor's projected energy efficiency savings goals for the prescribed planning period broken out by program for each customer class.

- Section IV describes Oncor's proposed energy efficiency budgets for the prescribed planning period broken out by program for each customer class.

Energy Efficiency Report

- Section V documents Oncor's actual weather-adjusted demand savings goals and energy targets for the previous five years (2012-2016).
- Section VI compares Oncor's projected energy and demand savings to its reported and verified savings by program for calendar year 2016.
- Section VII details Oncor's incentive and administration expenditures for the previous five years (2012-2016) broken out by program for each customer class.
- Section VIII compares Oncor's actual and budgeted program costs from 2016 broken out by program for each customer class. It also explains any cost increases or decreases of more than 10 percent for Oncor's overall program budget.
- Section IX describes the results from Oncor's MTPs and Research & Development activities. It compares existing baselines and existing milestones with actual results, and details any updates to those baselines and milestones.
- Section X provides details on Oncor's 2016 Energy Efficiency Cost Recovery Factor (EECRF) and discusses any over- or under-recovery of energy efficiency costs.

Acronyms

- Abbreviations for a list of common terms.

Glossary

- Definitions for a list of common terms.

Appendices

- Appendix A – Reported kW and kWh savings broken out by county for each program.
- Appendix B – Program templates for any new or newly-modified programs and any programs not included in Oncor's previous EEPRs.
- Appendix C – 2016 Energy Efficiency Service Providers.

EXECUTIVE SUMMARY

The Energy Efficiency Plan portion of this EEPR details Oncor’s plans to achieve a 30% reduction in its annual growth in demand of residential and commercial customers for the 2017 program year and a 30% reduction for the 2018 program year. Oncor will also address the corresponding energy savings goal, which is calculated from its demand savings goal using a 20% conservation load factor. The goals, budgets and implementation plans that are included in this EEPR are highly influenced by requirements of the EE Rule and lessons learned regarding energy efficiency service provider and customer participation in the various energy efficiency programs. A summary of annual goals and budgets is presented in Table 1.

The Energy Efficiency Report portion of this EEPR demonstrates that in 2016 Oncor successfully implemented SOPs and MTPs, as required by PURA §39.905, that met Oncor’s 30% energy efficiency savings goal by procuring 128,830 kW in demand savings. These programs included the Home Energy Efficiency SOP, Hard-to-Reach SOP, Targeted Weatherization Low-Income SOP, Residential Solar Photovoltaic Installation SOP, Residential Demand Response Pilot SOP, Commercial Solar Photovoltaic Installation SOP, Small Business Direct Install MTP, Commercial SOP, Commercial Load Management SOP, and the Healthcare MTP.

Table 1: Summary of Goals, Projected Savings, and Projected Budgets¹

Calendar Year	Average Growth in Demand (MW at Source)	MW Goal (% of Growth in Demand)	Demand (MW) Goal (at Meter)*	Energy MWh Goal (at Meter)**	Demand (MW) at 0.4% of Peak Demand***	Projected MW Savings (at Meter)	Projected MWh Savings (at Meter)	Projected Budget (000's)
2017	235.4	30%	69.4	121,589	89.4	145.8	208,513	\$49,892
2018	198.0	30%	69.4	121,589	90.2	155.3	206,072	\$50,098

* The 2018 Demand Goal is actually 55.4 MW when calculated per the EE Rule (198.0 MW x 30% annual growth in demand reduction) x (1- .06655 line loss). However, under the EE Rule, a utility’s demand reduction goal shall not be less than the prior year’s goal, thus, the 2018 goal is 69.4. Line loss is derived from the line loss factors in Oncor’s last rate case proceeding (Docket No. 38929, work paper WP II-H-1.3) with the estimated peak demand of eligible energy efficiency premises.

** Calculated using a 20% conservation load factor.

***The Demand Goal at 0.4% of peak demand is calculated according to 16 TAC §25.181(e)(3)(B) and includes line loss.

In order to reach the above projected savings, Oncor proposes to continue implementation of the programs listed above in 2017 (less the Healthcare MTP).

The programs Oncor has chosen to implement target both broad market segments and specific market sub-segments that offer significant opportunities for cost-effective savings. Oncor plans to conduct ongoing informational activities to encourage participation in these SOPs and MTPs. For each program, potential participants will be identified and program information will then be tailored to the types of specific participants. At a minimum this will include a program website, brochures, and an introductory meeting to explain the program prior to the program start-date. Furthermore, Oncor plans to participate in conferences to provide information related to its Energy Efficiency Program.

¹ Projected MW and MWh taken from Table 5 in this document. Budget data is taken from Table 6 in this document.

Oncor is continuing its effort to increase Retail Electric Provider (REP) participation in the energy efficiency programs it manages. This plan involves multiple activities and approaches that will reflect Oncor's commitment to this effort. This plan includes, but is not limited to, the following activities:

- Invite REPs to program outreach meetings with Energy Efficiency Service Providers.
- Coordinated effort with Oncor's REP Relations group to identify key REP contacts. Through REP Executive and on-site visits, Oncor will conduct energy efficiency discussions while sharing related program information and materials during these visits.
- Make contact with individual REPs at local, regional, and national conferences, trade shows and/or events as the opportunity is available.

Once an energy efficiency program has been initiated, Oncor plans to offer the program on a first-come, first-served basis.

ENERGY EFFICIENCY PLAN

I. 2017 Programs

A. 2017 Program Portfolio

Oncor plans to implement 10 market transformation and standard offer programs that are based upon Commission-approved program templates. One program, the Targeted Weatherization Low-Income SOP, is required by Senate Bill 712, which was passed by the Texas Legislature in 2005. Additional requirements were passed by the Texas Legislature in 2011. Senate Bill 1434 requires that annual expenditures for the Targeted Weatherization Low-Income SOP are not less than 10 percent of the utility's energy efficiency budget for the year.

As discussed below, the Company's programs target both broad market segments and specific market sub-segments that offer significant opportunities for cost-effective savings. Oncor anticipates that outreach to a broad range of service provider types will be necessary in order to meet the savings goals required by PURA §39.905 and the EE Rule on a continuing basis. Table 2 summarizes the programs and target markets.

Table 2: 2017 Energy Efficiency Program Portfolio

Program	Target Market	Application
Commercial SOP	Commercial	Retrofit; New Construction
Hard-to-Reach SOP	Hard-to-Reach Residential	Retrofit
Emergency Load Management SOP	Existing Industrial	Load Management
Commercial Load Management SOP	Large Commercial	Load Management
Small Business Direct Install MTP	Small Commercial	Retrofit
Home Energy Efficiency SOP	Residential	Retrofit
Targeted Weatherization Low-Income SOP	Low-Income Residential	Retrofit
Commercial Solar Photovoltaic Installation SOP	Commercial	Retrofit
Residential Solar Photovoltaic Installation SOP	Residential	Retrofit
Residential Demand Response SOP	Residential	Load Management

The programs listed in Table 2 are described in further detail below. Oncor maintains a website containing links to the program manuals of the SOPs, all of the requirements for project participation, the forms required for project submission, and the current available funding at <https://www.oncoreepm.com/>. This website will be the primary method of communication used to provide potential Energy Efficiency Service Providers with program updates and information, including information on future opportunities to bid to be an implementer of an Oncor Market Transformation Program. Additional information to help residential consumers, business owners and government and educational facilities with their energy efficiency efforts can be found at <http://www.takealoadofftexas.com/>.

B. Existing Programs

Commercial Standard Offer Program (CSOP)

Custom - The Custom Component of the Commercial SOP targets large commercial customers with new or retrofit projects that require measurement and verification with an incentive of \$10,000 or larger. Oncor provides incentives to Energy Efficiency Service Providers who install approved energy efficiency measures in business, government, nonprofit, and worship facilities in Oncor's service area. These include, but are not limited to, lighting, motors, variable frequency drives, cooling, ENERGY STAR[®] Roofs, window film, and process upgrades as well as new construction that exceeds existing energy code baselines per the Texas Resource Manual (TRM). These energy-saving projects must be approved by Oncor prior to project start. Once completed, Oncor verifies the savings and the Energy Efficiency Service Providers receive incentive payments based on the project's actual savings. The 2017 budget for the Custom Component of the Commercial SOP is \$2,975,110 with targeted impacts of 3,778 kW and 24,129,709 kWh.

Basic - The Basic Component of the Commercial SOP targets commercial customers with new or retrofit projects that do not require measurement and verification who install approved energy efficiency measures in business, government, educational, nonprofit, and worship facilities in Oncor's service area. These include, but are not limited to, lighting, air conditioning, ENERGY STAR[®] roofs and food service equipment, refrigeration measures, and window film as well as new construction that exceeds existing energy code baselines per the TRM. The energy saving projects must be approved by Oncor prior to project start. Once completed, Oncor verifies the savings and the Energy Efficiency Service Providers receive incentive payments based on the project's actual savings. Saving and incentives are based on deemed savings. The 2017 budget for the Basic Component of the Commercial SOP is \$9,024,042 with targeted impacts of 12,789 kW and 67,722,246 kWh.

Home Energy Efficiency Standard Offer Program (HEE SOP)

The HEE SOP targets residential customers with existing homes. This program is designed to achieve energy and demand savings in the residential market with the installation of a wide range of energy-efficiency measures in homes. Incentives are paid to Energy Efficiency Service Providers to help offset the cost of these energy efficiency measures. Oncor provides the incentive directly to the Service Provider. Charges to customers vary by Service Provider and no incentives for this program are paid directly to the customer by Oncor. The 2017 budget for this program is \$14,209,090 with targeted impacts of 26,394 kW and 70,365,671 kWh. The most common energy-efficient measures installed in the HEE SOP are attic insulation and caulking/weather-stripping

around doors and windows. Energy Efficiency Service Providers must test for air leakage before and after installation when installing caulking/weather-stripping measures. Other eligible energy-efficient measures include replacement of air conditioning units, heat pumps, and installation of ENERGY STAR® windows, refrigerators, dishwashers, and clothes washers, wall insulation, floor insulation, and water heater jackets. Where savings from early replacement of residential HVAC equipment is claimed for individual multifamily installations in any Oncor program, the following requirements must be met:

- The unit must be fully operational at the time of replacement. Pre-installation inspection may be required to verify the operational status of the unit.
- A photograph of the existing condensing unit nameplate must be taken.
- Manufacturer, model and serial number of the existing condensing unit must be recorded.
- If nameplate of the existing condensing unit is illegible, additional documentation or pre-installation inspection may be required to verify the age of the existing unit. If the age cannot be documented or verified, then demand and energy savings of the existing unit will be calculated as Replacement-on-Burnout.
- Property Owner/Manager may provide responses to a survey to document the condition of the replaced unit, and the customer's motivation for replacing the unit before the end of its useful life.
- The new unit must have a nominal capacity that is less than or equal to that of the existing unit.

Hard-to-Reach Standard Offer Program (HTR SOP)

The HTR SOP targets residences with household incomes at or below 200% of the federal poverty guidelines. This program is designed to achieve energy and demand savings with the installation of a wide range of energy-efficiency measures. Energy Efficiency Service Providers implement energy saving projects in homes located in Oncor's service area. Incentives are paid to these Energy Efficiency Service Providers to help offset the cost of these energy efficiency measures. The most common measures, such as insulation and caulking/weather-stripping are installed at low or no cost to the customer. Energy Efficiency Service Providers must test for air leakage before and after installation when installing caulking/weather-stripping measures. Oncor provides the incentive directly to the Service Provider. The 2017 budget for this program is \$6,567,780 with targeted impacts of 7,388 kW and 17,797,136 kWh. Qualifying measures are similar to those described above for the HEE SOP, as well as water-saving devices.

Emergency Load Management Standard Offer Program (ELM SOP)

The ELM SOP targets industrial customers with demands greater than 700 kW. This program is grandfathered under the provisions of 16 TAC §25.181(v). The program is offered to for-profit transmission voltage level end-use customers, which includes large industrial sites. Participants are requested to reduce load when called for by Oncor. The demand reductions must be verified by Oncor in order for the incentives to be paid. This is accomplished by reviewing data recorded on Interval Data Recorders (IDRs) and calculating the amount of demand savings achieved through the "curtailment" during the summer on-peak season. The incentive is paid directly to the program participant and a ten-year contract is required to participate in the program. No customers have participated in this program since 2007 and no customers are expected to participate in 2017.

Commercial Load Management Standard Offer Program (CLM SOP)

Oncor pays incentives to Energy Efficiency Service Providers and Aggregators who work with local commercial and manufacturing facilities to achieve documented summer, on-peak demand reductions in those facilities. End-use customers may also act as the Energy Efficiency Service Provider. The program is designed to assist businesses reduce their summer on-peak energy demand and help meet the state's energy efficiency goals. The demand reductions must be verified by Oncor in order for the incentives to be paid. This is accomplished by reviewing data recorded by meters and calculating the amount of demand savings achieved through the "curtailment" during the summer on-peak season. The incentive is paid directly to the Service Provider, Aggregator or End-Use Customer. Each project must achieve a total estimated demand savings of at least 100 kW during the summer on-peak demand period. Participating customer facilities must reduce load when called for by Oncor. The 2017 budget for this program is \$2,508,000 with targeted impacts of 55,000 kW and 165,000 kWh.

Commercial Solar Photovoltaic Installation Standard Offer Program (CSPV SOP)

The Commercial Solar Photovoltaic Installation SOP provides incentives for the installation of Solar Photovoltaic systems that reduce customer energy costs, reduce peak demand and save energy in existing commercial customer structures. Incentives are paid to Energy Efficiency Service Providers on the basis of standardized savings values or formulas ("Deemed Savings"). The 2017 budget for the CSPV SOP is \$2,933,040 with targeted impacts of 2,840 kW and 11,632,080 kWh.

Residential Solar Photovoltaic Installation Standard Offer Program (RSPV SOP)

The Residential Solar Photovoltaic Installation SOP provides incentives for the installation of Solar Photovoltaic systems that reduce customer energy costs, reduce peak demand and save energy in existing residential customer structures. Incentives are paid to Energy Efficiency Service Providers on the basis of standardized savings values or formulas ("Deemed Savings"). The 2017 budget for the RSPV SOP is \$1,671,700 with targeted impacts of 1,096 kW and 4,646,400 kWh.

Small Business Direct Install MTP (SBDI MTP)

Oncor's Small Business Direct Install MTP is a market transformation program designed to offer contractors and customers education on energy efficiency technologies, equip participating contractors with the tools they need to succeed in installing projects in the small business market, and offer incentives to assist small (≤ 200 kW) and very small (≤ 10 kW) businesses to install energy-efficient products such as high efficiency lighting and refrigeration measures. The program is focused on the non-Metro counties served by Oncor. Customers in the counties of Dallas, Collin, Tarrant, Denton and Rockwall are not eligible to participate in this program but can participate in the other commercial programs offered by Oncor. The 2017 budget for the SBDI MTP is \$2,077,520 with targeted impacts of 1,934 kW and 7,917,695 kWh.

Targeted Weatherization Low-Income SOP

For the 2017 Program year Oncor is implementing the Targeted Low-Income Weatherization Program to comply with the Public Utility Regulatory Act (PURA) §39.905(f) which states, "Unless funding is provided under §39.903, each unbundled transmission and distribution utility shall include in its energy efficiency plan a targeted low-income energy efficiency program as

described by Section 39.903(f)(2), and the savings achieved by the program shall count toward the transmission and distribution utility's energy efficiency goal. The commission shall determine the appropriate level of funding to be allocated to both targeted and standard offer low-income energy efficiency programs in each unbundled transmission and distribution utility service area. The level of funding for low-income energy efficiency programs shall be provided from money approved by the commission for the transmission and distribution utility's energy efficiency programs. The commission shall ensure that annual expenditures for the targeted low-income energy efficiency programs of each unbundled transmission and distribution utility are not less than 10 percent of the transmission and distribution utility's energy efficiency budget for the year. A targeted low-income energy efficiency program must comply with the same audit requirements that apply to federal weatherization subrecipients." Section 39.903(f)(2) states that targeted energy efficiency programs are to be administered by the Texas Department of Housing and Community Affairs (TDHCA) in coordination with existing weatherization programs.

16 TAC §25.181(r) states, "Unless funding is provided under PURA §39.903, each unbundled transmission and distribution utility shall include in its energy efficiency plan a targeted low-income energy efficiency program as described by PURA §39.903(f)(2). A utility in an area in which customer choice is not offered may include in its energy efficiency plan a targeted low-income energy efficiency program that utilizes the cost-effectiveness methodology provided in paragraph (2) of this subsection. Savings achieved by the program shall count toward the utility's energy efficiency goal.

- (1) Each utility shall ensure that annual expenditures for the targeted low-income energy efficiency program are not less than 10% of the utility's energy efficiency budget for the program year.
- (2) The utility's targeted low-income program shall incorporate a whole-house assessment that will evaluate all applicable energy efficiency measures for which there are commission-approved deemed savings. The cost-effectiveness of measures eligible to be installed and the overall program shall be evaluated using the Savings-to-Investment (SIR) ratio.
- (3) Any funds that are not obligated after July of a program year may be made available for use in the hard-to-reach program."

Oncor is implementing a Program through Texas Association of Community Action Agencies (TACAA) who will provide funds to designated federal Weather Assistance Program (WAP) Subrecipient agencies enabling them to provide weatherization services to residential electric distribution customers of Oncor who have household incomes at or below 200% of current federal poverty level guidelines.

TACAA will be entitled to compensation for materials, labor and program support used by the federally funded Sub recipient to install weatherization measures for up to \$6,500 per weatherized Dwelling Unit. TACAA may reimburse the federally funded Subrecipient for program support costs and up to 10% of the invoice amount for administration, which amounts are not part of the 8% program administration fee paid to TACAA. Federally funded Sub recipient program support costs shall be included in the calculation of the \$6,500 per Dwelling Unit cap, but shall not be included in calculating the Whole House SIR.

Energy-efficient measures installed include aerators, attic insulation, air infiltration, central air conditioning units, central heat pumps, floor insulation, ENERGY STAR[®] refrigerators, dishwashers, clothes washers and windows, showerheads, window air conditioning units, wall insulation, water heater jackets and water heater pipe insulation.

The 2017 budget for this program is \$5,035,440 with targeted impacts of 1,518 kW and 2,737,531 kWh.

Program History - This program targeted Oncor's low-income residential customers who met DOE's income eligibility guidelines which are at or below 200% of the federal poverty level guidelines and are connected to Oncor's electric system. Incentive funds were provided to the TDHCA sub-recipient agencies and other not-for-profit or local government agencies, enabling them to provide weatherization services to qualifying customers. Participating agencies provided outreach, eligibility verification, assessments, and could either install or contract for the installation of cost-effective energy-efficient measures. Agencies received reimbursement for conducting assessments and installing the measures, plus an administrative fee equal to eight percent of the measure installation costs. The maximum expenditure per home was \$6,500.

Energy-efficient measures installed included attic insulation, duct sealing and caulking/weatherstripping around doors and windows, central air conditioning units, central heat pumps, window air conditioning units, replacement of electric water heaters, installation of ENERGY STAR[®] refrigerators, solar window screens, wall insulation, CFLs, water heater jackets and ENERGY STAR[®] ceiling fans with a light kit.

Prior to 2005, the TDHCA administered a targeted energy efficiency program that was funded through the System Benefit Fund (SBF). When appropriations from the SBF were discontinued for TDHCA's program in 2005, the Texas Legislature enacted SB 712. SB 712 amended PURA §39.905(f), requiring unbundled utilities like Oncor to fund through rates a targeted low-income energy efficiency program that would be administered by TDHCA. In the summer of 2006, the Commission approved (in Docket No. 32103) an agreement among TLSC/Texas ROSE, the Commission Staff, Oncor (then TXU Electric Delivery Company), AEP Texas Central Company, AEP Texas North Company, CenterPoint Energy Houston Electric, LLC, and Texas-New Mexico Power Company, that reflected a plan for implementing SB 712's requirements in calendar years 2006 and 2007 (the Docket No. 32103 Agreement). Oncor agreed to provide \$3,412,941 annually to TDHCA for the Company's SB 712 obligation. Among other terms, the Docket No. 32103 Agreement provided that the program would be targeted to households with income at or below 125% of the federal poverty guidelines.

On May 23, 2007, TDHCA informed Oncor that it was not authorized to spend the funds paid by Oncor due to a ruling by the Office of Comptroller of Public Accounts, and that Oncor should make alternative arrangements to complete the program that did not involve TDHCA. Thus, Oncor promptly entered into talks with Frontier Associates LLC (Frontier) and ultimately reached an agreement with Frontier for it to administer the SB 712 program in Oncor's service area, *i.e.*, the Pilot Targeted Weatherization Low-Income Program.

On July 27, 2007, TLSC/Texas ROSE filed a petition with the Commission seeking to have Texas Association of Community Action Agencies (TACAA) designated as the sole administrator for the

SB 712 programs of all the unbundled utilities, including Oncor. TLSC/Texas ROSE's petition was litigated in Docket No. 34630, *Petition of Texas Legal Services Center and Texas Ratepayers' Organization to Save Energy to Modify the Commission's Final Order in Docket No. 32103 and to Reform the Agreement to Implement Weatherization Programs*. The Commission found that the utilities should have the flexibility to contract with a provider of their choice, as Oncor did with Frontier, to implement SB 712 programs.

During the 2011 Texas Legislative session SB 1434 was passed and signed into law by the Governor of Texas. Contained in the 2011 legislation is the following language related to the Targeted LIW Program:

Unless funding is provided under Section 39.903, each unbundled transmission and distribution utility shall include in its energy efficiency plan a targeted low-income energy efficiency program as described by Section 39.903(f)(2), and the savings achieved by the program shall count toward the transmission and distribution utility's energy efficiency goal. The commission shall determine the appropriate level of funding to be allocated to both targeted and standard offer low-income energy efficiency programs in each unbundled transmission and distribution utility service area. The level of funding for low-income energy efficiency programs shall be provided from money approved by the commission for the transmission and distribution utility's energy efficiency programs. The commission shall ensure that annual expenditures for the targeted low-income energy efficiency programs of each unbundled transmission and distribution utility are not less than 10 percent of the transmission and distribution utility's energy efficiency budget for the year. A targeted low-income energy efficiency program must comply with the same audit requirements that apply to federal weatherization subrecipients. In an energy efficiency cost recovery factor proceeding related to expenditures under this subsection, the commission shall make findings of fact regarding whether the utility meets requirements imposed under this subsection. The state agency that administers the federal weatherization assistance program shall provide reports as required by the commission to provide the most current information available on energy and peak demand savings achieved in each transmission and distribution utility service area. The agency shall participate in energy efficiency cost recovery factor proceedings related to expenditures under this subsection to ensure that targeted low-income weatherization programs are consistent with federal weatherization programs and adequately funded.

In 2012 Oncor implemented the program to provide funds to TDHCA sub-recipient agencies and other not-for-profit or local government agencies, enabling them to provide weatherization services to residential electric distribution end-use consumers of Oncor who had household incomes at or below 200% of the current federal poverty guidelines. Participating agencies provided outreach, eligibility verification, assessments, and either installed or contracted for the installation of cost-effective measures. Agencies received reimbursement for conducting assessments and installing the measures, plus an administrative fee equal to 8 percent of the measure installation costs. The maximum expenditure per home was \$6,500. The \$6,500 per home cap included assessment and/or testing fees from homes that did not qualify for installed measures based on the assessment.

Residential Demand Response SOP

Oncor's Residential Demand Response SOP is an expansion of the 2015-2016 pilots, which provided incentives to participating providers for reducing peak electric demand at residential premises. In 2017, the program will engage providers to provide demand response capability using remotely controlled load control devices in homes. The providers will use various control strategies, such as pre-cooling and cycling to reduce overall demand during the peak period. Implementation will occur in the Oncor service territory and target residential homes. The participating providers are responsible for ensuring the presence of load control devices in participating residences. The actual demand savings will be determined by Oncor using advanced meter data. The 2017 Program budget is \$1,500,240, with targeted impacts of 32,900 kW and 197,400 kWh.

Research and Development

During 2017, Oncor will continue collaboration with the General Services Administration Green Proving Ground (GSA). Annually, the GSA issues an RFI for vendors to submit new energy efficient technologies into the program for evaluation. The GSA and national laboratories review the submittals and select several for installation on Federal facilities. Technologies are evaluated for equipment performance, as well as energy and demand savings. The collaboration allows utilities to recommend technologies for inclusion in the program, and have the technologies evaluated on facilities within ERCOT, and other areas with similar weather zones.

The focus of the R&D efforts will move from the national GSA program to Region 7, which encompasses Texas and the contiguous states. Participation in this program provides Oncor with a pipeline of technologies for future programs. Oncor submitted two new technologies from the GSA program to the State Evaluation Team in late 2016. Wireless Data Center Controls and Variable Refrigerant Flow are currently being evaluated for inclusion in the Texas Technical Reference Manual (TRM). Oncor anticipates that these measures will be available in the TRM by mid-2017.

Additionally, Oncor will continue its membership in the Texas Energy Poverty Research Institute (TEPRI) for 2017. TEPRI is a 501(c) (3) whose mission is to research the root causes of energy and fuel poverty and provide data for solutions that have an impact on low-income households. In 2017, TEPRI will be compiling Best Practices of Low-Income Services, Programs, and Technologies. Additionally, TEPRI will create a portal of information on publications, websites, and other resources that are specific to the topic of energy and poverty in Texas and the nation.

For more details on these programs, please see Section IX.

C. New Programs for 2017

Oncor has no new programs for 2017.

II. Customer Classes

Customer classes targeted by Oncor's energy efficiency programs are the Hard-to-Reach, Residential, and Commercial customer classes. The annual demand goal will be allocated to customer classes by examining historical program results, evaluating economic trends, and

complying with 16 TAC §25.181(e)(3)(F), which states that no less than 5% of the utility’s total demand reduction savings goal should be achieved through programs for hard-to-reach customers. Also factored into the allocation is the PURA §39.905 requirement that annual expenditures for the targeted low-income energy efficiency programs are not less than 10 percent of the annual energy efficiency budget for the year. Table 3 summarizes the number of customers in each of the customer classes, which was used to determine budget allocations for those classes. Oncor used year-end 2016 Customer Information System (CIS) premise-level data to estimate the number of customers in each class. The Hard-to-Reach class was estimated by multiplying the total number of residential customers by 29.5%. According to the U.S. Census Bureau’s 2016 Current Population Survey (CPS), 29.5% of Texas families fall below 200% of the poverty threshold. Applying that percentage to Oncor’s residential customer totals, the number of HTR customers is estimated at 863,025. This calculation is only an estimate. Oncor does not have access to its residential customers’ income levels. The actual percentage may be higher or lower.

It should be noted, however, that the actual distribution of the goal and budget must remain flexible based upon the response of the marketplace, the potential interest that a customer class may have toward a specific program and the overriding objective of meeting the legislative goal. Oncor will offer a portfolio of Standard Offer and Market Transformation Programs that will be available to all customer classes.

Table 3: Summary of Customer Classes

Program	Number of Customers
Commercial	448,668*
Residential	2,062,484
Hard-to-Reach	863,025
Total	3,374,177

* Customer count takes into account 2,447 qualifying for-profit industrial customers who have elected to exclude themselves from participation in Oncor’s energy efficiency programs per 16 TAC 25.181(w), as well as lighting premises.

III. Projected Energy Efficiency Savings and Goals

As prescribed by 16 TAC §25.181, Oncor’s demand goal is specified as a percent of its historical five-year average rate of growth in demand. As an example, the annual growth in demand defined for the 2017 goal reflects the average annual growth in peak demand from 2011 to 2015. The demand goals are based on meeting 30% of the electric utility’s annual growth in demand of eligible residential and commercial customers for the 2016, 2017 and 2018 program years. The corresponding energy savings goals are determined by applying a 20% conservation load factor to the applicable demand savings goals.

Table 4 presents historical annual growth in demand for the previous five years. Total System numbers include all customers (including transmission voltage and qualifying for-profit industrial customers who elected to exclude themselves from participation in Oncor’s energy efficiency programs) while Residential and Commercial totals include eligible residential and non-residential customers taking delivery at a distribution voltage and non-profit customers and government entities, including educational institutions. Table 5 presents the projected demand and energy

savings broken out by program for each customer class for 2017 and 2018. The program-level goals presented in Table 5 are at the meter and take into account transmission and distribution line losses.

Table 4: Annual Growth in Demand and Energy Consumption *

Calendar Year	Peak Demand (MW) (at Source)				Energy Consumption (MWh) (at Meter)				Residential & Commercial		
	Total System		Opt-Out	Residential & Commercial		Total System		Residential & Commercial		Growth (MW)	Avg 5 Yr (MW) Growth
	Actual	Actual Weather Adjusted ²	Secondary/ Primary, & Transmission Voltage**	Actual	Actual Weather Adjusted ²	Actual	Actual Weather Adjusted ²	Actual	Actual Weather Adjusted ²	Actual Weather Adjusted ²	Actual Weather Adjusted ²
2011	25,660	24,6860	1,050	24,610	23,636	113,836,638	106,782,934	104,135,429	97,081,725		
2012	24,933	24,715	1,133	23,800	23,582	110,370,554	109,019,934	100,351,162	99,000,542	-54	
2013	24,502	25,095	1,124	23,378	23,971	112,312,279	111,791,813	101,919,737	99,104,671	390	
2014	23,788	25,720	1,445	22,343	24,275	114,905,829	113,939,185	101,640,875	100,674,230	304	
2015	25,139	25,791	1,476	23,663	24,315	116,594,625	116,554,605	102,634,272	102,594,252	40	
2016	25,361	26,190	1,565	23,796	24,625	115,791,379	117,927,439	100,977,674	103,113,734	310	198.0
2017 ³	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2018 ³	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* Table 4 values can differ from prior years due to restatement of historic demands from a method based on 4CP demand to using ERCOT Settlement interval data.

Additional variance is due to changing the weather adjustment process to better match the ERCOT Settlement method.

** Includes the peak demand of qualifying for-profit industrial customers who receive service at primary/secondary voltage and have elected to exclude themselves from participation in Oncor's energy efficiency programs in the following amounts: Year 2014 - 243 MW, Year 2015 - 238 MW, Year 2016 - 232 MW.

² "Actual Weather Adjusted" Peak Demand and "Energy Consumption" are adjusted for weather fluctuations using weather data for the most recent ten years.

³ "NA" = Not Applicable. Energy efficiency goals are calculated based upon the actual weather-adjusted growth in demand; so peak demand and energy consumption forecasts for 2017 and 2018 are not applicable.

Table 5: Projected Demand and Energy Savings Broken Out by Program for Each Customer Class (at Meter)

Customer Class and Program	2017 Projected Savings		2018 Projected Savings	
	(kW)	(kWh)	(kW)	(kWh)
Commercial				
Commercial SOP (Custom)	76,479	112,768,790	82,888	121,300,631
Commercial SOP (Basic)	3,778	24,129,709	4,074	27,547,542
Emergency Load Management SOP	12,789	67,722,246	13,680	68,573,107
Commercial Load Management SOP	0	0	0	0
Commercial Load Management SOP	55,000	165,000	60,000	180,000
Small Business Direct Install MTP	1,934	7,917,695	2,294	13,367,902
Solar PV SOP	2,840	11,632,080	2,840	11,632,080
Healthcare MTP*	138	1,202,060	0	0
Residential				
Home Energy Efficiency SOP	60,390	75,209,471	63,117	63,416,133
Solar PV SOP	26,394	70,365,671	29,121	58,572,333
Residential Demand Response SOP	1,096	4,646,400	1,096	4,646,400
Hard-to-Reach	32,900	197,400	32,900	197,400
Hard-to-Reach SOP	8,906	20,534,667	9,293	21,354,929
Targeted Weatherization Low-Income SOP	7,388	17,797,136	7,850	18,815,742
Total Annual Savings Goals	145,775	208,512,928	155,298	206,071,693

*The Healthcare MTP has carry-over savings from the 2016 program year but will not be offered in 2017.

IV. Program Budgets

Table 6 represents total proposed budget allocations required to achieve the projected demand and energy savings shown in Table 5. The budget allocations are defined by the overall demand and energy savings presented above, allocation of demand savings goals among customer classes, and SB 712 and SB 1434 Targeted Low-Income mandates. The budget allocations presented in Table 6 below are first broken down by customer class and program, and are then further subdivided into the incentive payments and administration categories.

Administration costs include labor and loading, evaluation, outreach, Energy Efficiency Program Management (tracking and reporting system), program development, program implementation, regulatory reporting, and any costs incurred associated with the EECRF filing by the company. Costs associated with specific programs are charged directly to those programs, while costs not associated with specific programs are allocated among all programs.

While Oncor has estimated budgets by customer class, Oncor plans to track and report budgets by program, since individual programs may serve multiple customer classes.

Table 6: Proposed Annual Budget Broken Out by Program for Each Customer Class

2017 Customer Class and Program	Incentives	Administration	Total Budget
Commercial	\$17,200,900	\$2,683,570	\$19,884,470
Commercial SOP (Custom)	\$2,587,050	\$388,060	\$2,975,110
Commercial SOP (Basic)	\$7,654,862	\$1,369,180	\$9,024,042
Emergency Load Management SOP	\$0	\$0	\$0
Commercial Load Management SOP	\$2,200,000	\$308,000	\$2,508,000
Solar PV SOP	\$2,572,840	\$360,200	\$2,933,040
Small Business Direct Install MTP	\$1,822,390	\$255,130	\$2,077,520
Healthcare MTP*	\$363,758	\$3,000	\$366,758
Residential	\$15,259,490	\$2,121,540	\$17,381,030
Home Energy Efficiency SOP	\$12,464,110	\$1,744,980	\$14,209,090
Solar PV SOP	\$1,479,380	\$192,320	\$1,671,700
Residential Demand Response SOP	\$1,316,000	\$184,240	\$1,500,240
Hard-to-Reach	\$10,217,350	\$1,385,870	\$11,603,220
Hard-to-Reach SOP	\$5,761,210	\$806,570	\$6,567,780
Targeted Weatherization Low-Income SOP	\$4,456,140	\$579,300	\$5,035,440
Research & Development**	\$0	\$310,000	\$310,000
Evaluation, Measurement & Verification***	\$0	\$713,605	\$713,605
Total Budgets by Category	\$42,677,740	\$7,214,585	\$49,892,325

2018 Customer Class and Program	Incentives	Administration	Total Budget
Commercial	\$20,054,780	\$2,722,180	\$22,776,960
Commercial SOP (Custom)	\$3,560,580	\$433,440	\$3,994,020
Commercial SOP (Basic)	\$8,499,900	\$1,169,540	\$9,669,440
Emergency Load Management SOP	\$0	\$0	\$0
Commercial Load Management SOP	\$2,280,000	\$319,200	\$2,599,200
Solar PV SOP	\$2,572,840	\$360,200	\$2,933,040
Small Business Direct Install MTP	\$3,141,460	\$439,800	\$3,581,260
Residential	\$13,926,400	\$1,934,900	\$15,861,300
Home Energy Efficiency SOP	\$11,131,020	\$1,558,340	\$12,689,360
Solar PV SOP	\$1,479,380	\$192,320	\$1,671,700
Residential Demand Response SOP	\$1,316,000	\$184,240	\$1,500,240
Hard-to-Reach	\$9,193,400	\$1,242,920	\$10,436,320
Hard-to-Reach SOP	\$4,777,780	\$668,890	\$5,446,670
Targeted Weatherization Low-Income SOP	\$4,415,620	\$574,030	\$4,989,650
Research & Development**	\$0	\$310,000	\$310,000
Evaluation, Measurement & Verification***	\$0	\$713,605	\$713,605
Total Budgets by Category	\$43,174,580	\$6,923,605	\$50,098,185

* The Healthcare MTP has carry-over expenditures from the 2016 program year but will not be offered in 2017.

** Research & Development costs will be split into Residential and Commercial classes and then allocated among the programs (by class) in proportion to the program incentives in Oncor's EECRF filings.

*** EM&V costs shown for 2017 are projected expenditures Oncor will incur in 2017 for completing review of Program Year 2016. EM&V costs shown for 2018 are projected expenditures Oncor will incur in 2018 for EM&V of 2017 programs.

ENERGY EFFICIENCY REPORT

V. Historical Demand Savings Goals and Energy Targets for Previous Five Years

Table 7 documents Oncor's projected demand savings, actual demand goals and projected energy savings for the previous five years (2012-2016) calculated in accordance with 16 TAC §25.181.

Table 7: Historical Demand Savings Goals and Energy Targets

Calendar Year	Actual Demand Goal (MW at Source)	Projected Savings (MW at Meter)	Projected Energy Savings (MWh at Meter)	Reported & Verified Savings (MW at Meter)	Reported & Verified Energy Savings (MWh at Meter)
2016 ⁴	69.4	138.1	225,783	128.8	198,743
2015 ⁵	69.4	110.3	197,436	115.8	178,908
2014 ⁶	69.4	120.9	209,595	125.3	202,105
2013 ⁷	54.6	118.4	234,471	112.7	224,666
2012 ⁸	53.1	99.2	193,650	129.5	194,827

⁴ Projected MW Savings and Projected Energy Savings as reported in the 2016 Energy Efficiency Plan & Report (EEPR) filed in April of 2016 under Project No. 45675. Actual Demand Goal as discussed in Table 4.

⁵ Projected MW Savings and Projected Energy Savings as reported in the 2015 Energy Efficiency Plan & Report (EEPR) filed in April of 2015 under Project No. 44480. Actual Demand Goal as discussed in Table 4.

⁶ Projected MW Savings and Projected Energy Savings as reported in the 2014 Energy Efficiency Plan & Report (EEPR) filed in April of 2014 under Project No. 42264. Actual Demand Goal as discussed in Table 4.

⁷ Projected MW Savings and Projected Energy Savings as reported in the 2013 Energy Efficiency Plan & Report (EEPR) filed in April of 2013 under Project No. 41196. Actual Demand Goal as discussed in Table 4.

⁸ Projected MW Savings and Projected Energy Savings as reported in the 2012 Energy Efficiency Plan & Report (EEPR) filed in April of 2012 under Project No. 40194. Actual Demand Goal as discussed in Table 4.

VI. Projected, Reported and Verified Demand and Energy Savings

Table 8: Projected versus Reported and Verified Savings for 2016 and 2015⁹ (at Meter)

2016	Projected Savings		Reported and Verified Savings	
Customer Class and Program	kW	kWh	kW	kWh
Commercial	85,284	108,844,014	79,326	90,038,254
Commercial SOP (Custom)	3,940	17,530,789	1,849	15,975,618
Commercial SOP (Basic)	12,210	64,972,658	8,712	50,595,032
Emergency Load Management SOP	0	0	0	0
Commercial Load Management SOP	60,000	252,288	60,017	180,050
Solar PV SOP	6,325	12,189,540	7,859	17,253,019
Small Business Direct Install MTP	1,423	6,656,171	392	2,225,065
Healthcare MTP	1,386	7,242,568	496	3,809,470
Residential	44,068	97,714,787	39,710	84,653,405
Home Energy Efficiency SOP	34,068	90,356,387	30,137	74,366,440
Solar PV SOP	3,500	7,358,400	4,687	10,286,966
Residential Demand Response SOP	6,500	0	4,886	0
Hard-to-Reach	8,734	19,224,654	9,793	24,051,210
Hard-to-Reach SOP	6,929	17,145,309	7,640	20,135,627
Targeted Weatherization LI SOP	1,805	2,079,345	2,153	3,915,584
Total Annual Savings Goals	138,086	225,783,455	128,830	198,742,869
2015 ¹⁰	Projected Savings		Reported and Verified Savings	
Customer Class and Program	kW	kWh	kW	kWh
Commercial	76,735	89,869,069	74,147	90,342,021
Commercial SOP (Custom)	4,482	19,943,734	2,254	15,219,358
Commercial SOP (Basic)	13,000	60,323,557	11,493	58,742,627
Emergency Load Management SOP	0	0	0	0
Commercial Load Management SOP	55,000	165,000	54,902	171,505
Solar PV SOP	3,250	6,265,600	3,862	8,527,109
Small Business Direct Install MTP	1,003	3,171,178	1,636	7,681,422
Residential	26,795	81,302,080	32,344	65,522,508
Home Energy Efficiency SOP	18,100	76,106,880	22,692	59,421,878
Solar PV SOP	2,695	5,195,200	2,766	6,100,630
Residential Demand Response MTP	6,000	0	6,886	0
Hard-to-Reach	6,769	26,264,582	9,317	23,043,586
Hard-to-Reach SOP	5,719	23,045,282	7,416	19,601,569
Targeted Weatherization LI SOP	1,050	3,219,300	1,901	3,442,017
Total Annual Savings Goals	110,299	197,435,731	115,808	178,908,115

⁹ Projected Savings totals for 2016 and 2015 from Table 7. Reported Savings may not add due to rounding.

¹⁰ Reported and Verified Savings data for 2015 taken from EEPF, Project 45675.

VII. Historical Program Expenditures

This section documents Oncor's incentive and administration expenditures for the previous five years (2012-2016) broken out by program for each customer class.

Table 9: Historical Program Incentive and Administrative Expenditures for 2012 through 2016

	2016		2015		2014		2013		2012	
	Incentive (\$)	Admin (\$)	Incentive (\$)	Admin (\$)	Incentive (\$)	Admin (\$)	Incentive (\$)	Admin (\$)	Incentive (\$)	Admin (\$)
Commercial	17,200,144	2,172,123	16,348,143	2,405,110	19,377,464	2,165,471	19,551,051	1,839,924	18,654,020	2,563,706
Solar PV SOP	6,027,919	497,068	4,815,294	489,580	8,836,015	982,403	3,690,362	191,731	NA	NA
Commercial SOP (Custom)	1,630,922	264,240	1,457,162	299,232	2,096,336	255,912	2,174,265	225,750	6,893,602	1,136,211
Emergency Load Management SOP	0	0	0	0	0	0	0	0	0	0
Commercial Load Management SOP	2,400,661	183,537	2,196,080	204,745	2,369,800	218,750	2,200,000	219,024	3,393,960	415,550
Educational Facilities MTP	NA	NA	NA	NA	NA	NA	4,433,441	436,861	3,820,735	439,693
Government Facilities MTP	NA	NA	NA	NA	NA	NA	1,362,956	135,036	1,289,202	154,061
Small Business Direct Install MTP	544,189	50,966	1,784,748	151,836	1,339,022	122,469	103,916	9,843	NA	NA
Healthcare MTP	931,556	74,226	NA	NA	NA	NA	NA	NA	NA	NA
Commercial SOP (Basic)	5,664,897	1,102,086	6,094,859	1,259,717	4,736,291	585,937	5,265,440	588,785	3,023,424	388,632
Air Conditioning MTP	NA	NA	NA	NA	NA	NA	320,671	33,904	243,097	29,539
Residential	19,377,105	2,040,667	13,659,678	1,911,756	18,237,838	2,008,173	18,444,393	2,130,467	11,141,966	1,578,061
Home Energy Efficiency SOP	14,435,266	1,521,569	10,005,295	1,435,699	12,950,424	1,474,757	13,564,608	1,624,208	10,007,239	1,437,642
ENERGY STAR [®] Homes MTP	NA	NA	NA	NA	NA	NA	NA	NA	472,500	58,194
Solar PV SOP	4,757,415	490,263	3,414,383	456,130	5,219,930	527,249	4,152,680	429,265	NA	NA
Air Conditioning MTP	NA	NA	NA	NA	67,484	6,167	727,105	76,994	756,497	92,502
Residential Demand Response SOP	184,424	28,835	240,000	19,927	NA	NA	NA	NA	NA	NA
ENERGY STAR [®] Low Rise MTP	NA	NA	NA	NA	NA	NA	NA	NA	(94,270)	(10,277)
Hard-to-Reach	11,117,443	1,117,681	11,853,832	1,327,473	12,495,958	1,281,622	12,731,505	1,392,930	13,137,110	1,697,983

Hard-to-Reach SOP	5,953,011	750,470	6,004,832	849,060	6,499,328	732,039	6,941,505	841,064	8,206,413	1,145,918
Target Weatherization (known as TDHCA in 2006 & 2007)	5,164,432	367,211	5,649,000	478,413	5,996,630	549,583	5,790,000	551,866	4,930,697	552,065
Total Program Expenditures	47,694,692	5,330,471	41,661,653	5,644,339	50,111,260	5,455,266	50,726,949	5,363,321	42,943,096	5,839,750

VIII. Program Funding for Calendar Year 2016

Oncor exceeded its 2016 mandated demand goal of 69.4 MW by obtaining 128.8 MW in energy efficiency savings. As shown on Table 10, funds were either spent or committed by contracts with energy efficiency service providers in the amount of \$58,795,183.

The **Small Business Direct Install MTP** was under budget in 2016 because a contract was awarded to a new implementer and the program start-up took longer than anticipated.

The **Commercial SOP (Custom)** was under budget in 2016 because several large projects totaling \$613,935 in committed incentives had delays, causing them to push out to 2017 completion dates. Incentive funding was reallocated from the Commercial SOP (Custom) to the Basic Commercial SOP.

The **Healthcare MTP** was under budget in 2016 because the contract was awarded to a new implementer and the program start-up took longer than anticipated. The implementer started completing projects in June 2016, and 14 of the 23 total projects were completed in the month of December. This program will not be continued in 2017.

The **Commercial Solar Photovoltaic Installation SOP** was under budget in 2016 because \$2,033,789 in incentives were committed but not spent during the year. Multiple large projects were not completed during the program year because of financial or construction issues and were cancelled too late in the year to have the associated incentives reallocated to other projects.

The **Residential Demand Response Pilot SOP** was under budget in 2016 due to the nature of the pilot program and communication errors experienced by two of the Service Providers. One of the primary goals of the pilot was to better understand the average curtailment per home, which proved to be lower during the 2016 pilot with four providers than it was during the 2015 pilot with only a single provider. Also, two providers failed to fully deploy their curtailments during the scheduled tests due to communication errors in their systems.

Table 10: Program Funding for Calendar Year 2016

	Numbers of Customer Meters	Total Projected Budget ¹¹	Actual Funds Expended (Incentives)	Actual Funds Expended (Admin) [*]	Total Funds Expended	Funds Committed (Not Expended)	Funds Remaining (Not Committed)
Commercial	925	\$24,537,021	\$17,200,144	\$2,172,123	\$19,372,267	\$5,352,992	\$(188,238)
Commercial SOP (Custom)	27	\$2,816,576	\$1,630,922	\$264,240	\$1,895,162	\$613,935	\$307,479
Emergency Load Management SOP	0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Load Management SOP	161	\$2,888,000	\$2,400,661	\$183,537	\$2,584,198	\$0	\$103,802
Commercial SOP (Basic)	561	\$7,476,053	\$5,664,897	\$1,102,086	\$6,766,983	\$2,341,510	\$(1,632,440)
Solar PV SOP	92	\$8,236,052	\$6,027,919	\$497,068	\$6,524,987	\$2,033,789	\$(322,724)
Small Business Direct Install MTP	61	\$1,767,807	\$544,189	\$50,966	\$595,155	\$0	\$1,172,652
Healthcare MTP	23	\$1,552,533	\$931,556	\$74,226	\$1,005,782	\$363,758	\$182,993
Residential	22,660	\$22,568,283	\$19,377,105	\$2,040,667	\$21,417,772	\$0	\$1,150,511
Home Energy Efficiency SOP	14,711	\$17,138,305	\$14,435,266	\$1,521,569	\$15,956,835	\$0	\$1,181,470
Solar PV SOP	887	\$5,052,635	\$4,757,415	\$490,263	\$5,247,678	\$0	\$(195,043)
Residential Demand Response	7,062	\$377,343	\$184,424	\$28,835	\$213,259	\$0	\$164,084
Hard-to-Reach	6,370	\$12,686,377	\$11,117,443	\$1,117,681	\$12,235,124	\$0	\$451,253
Hard-to-Reach SOP	5,368	\$6,598,141	\$5,953,011	\$750,470	\$6,703,481	\$0	\$(105,340)
Targeted Low-Income SOP	1,002	\$6,088,236	\$5,164,432	\$367,211	\$5,531,643	\$0	\$556,593
Research & Development	NA	\$500,000	\$0	\$131,169	\$131,169	\$0	\$368,831
EM&V**	NA	\$649,617	\$0	\$649,617	\$649,617	NA	\$0
Total	29,955	\$60,941,298	\$47,694,692	\$6,111,257	\$53,805,949	\$5,352,992	\$1,782,357

* Administration funds include \$5,666 of Rate Case Expenses approved in Docket No. 46013

**EM&V costs shown are actual booked costs for 2016. For purposes of cost-effectiveness and bonus calculations, \$713,605 is used per TetraTech's 2016 EM&V cost allocation.

¹¹ Projected Budget taken from the EEPR filed in April 2016 under Project No. 45675.

IX. Market Transformation & Research & Development Results

Energy Efficiency Service Providers have the opportunity to bid to become an implementer of one or more of Oncor's Market Transformation Programs. The process Oncor uses to choose implementers includes identifying potential bidders, distributing a RFP (Request for Proposal), conducting a Bidders Conference, evaluating proposals, narrowing bidders to a shortlist, conducting oral presentations, selecting the winning bid, and negotiating and finalizing the contract.

Oncor's 2016 Market Transformation and Research & Development Programs are described below.

Small Business Direct Install Program (MTP)

Oncor's Small Business Direct Install MTP was launched during the third quarter of 2013. A new implementer was awarded the contract in 2016 after a RFP process was completed. The implementer has managed similar programs for utilities across the United States. This program was developed to assist an under-served segment identified by Oncor. The SBDI is a market transformation program designed to offer participating small commercial customers education on energy efficiency technologies, equip participating sub-contractors with the tools they need to succeed in installing projects in the small business market, and offer incentives to assist small (≤ 200 kW) businesses to install energy-efficient products such as high efficiency lighting and refrigeration measures. The program is focused on the non-Metro counties served by Oncor. The counties of Dallas, Collin, Tarrant, Denton and Rockwall are not eligible to participate in this program but can participate in the other commercial programs offered by Oncor. In 2016 participants installed measures that resulted in savings of 392 kW and 2,225,065 kWh.

The Program goals for 2016 were to provide convenient, turn-key select energy efficient measures to small and mid-sized non-residential customers.

Healthcare MTP

Oncor's Healthcare MTP was launched during the first quarter of 2016. The implementer, who has managed similar programs for other utilities, was awarded the contract through a RFP process in late 2015. This MTP was developed to provide an incentive for healthcare facilities to implement electric energy efficiency projects at eligible customer facilities served by Oncor. The primary objective of the program is to achieve cost-effective reduction in electric energy consumption. In 2016, participants installed measures that resulted in savings of 496 kW and 3,809,470 kWh.

Research and Development

Oncor collaborated with the U.S. General Services Administration's Green Proving Ground. The Program uses the GSA's real estate portfolio to evaluate innovative sustainable building technologies. Each fall, the GSA issues a Request for Information to identify new energy efficient technologies. Vendors provide detailed descriptions of their technologies to the GSA for review. Typically, the GSA will receive applications for 130 to 140 technologies. After several rounds of review by the GSA and National Laboratories, several technologies are selected for installation on GSA properties. The technologies undergo a stringent measurement and verification process for

up to one year. Energy savings, demand savings, and equipment performance are evaluated to determine overall viability of the technology. Oncor collaborates with the GSA, and funds energy-efficient technologies that have savings potential in the Oncor service territory and Texas. The results of the GSA technology evaluations are reviewed by a consultant to determine whether technologies are ready for introduction into the ERCOT market. If appropriate, petitions could be filed for deemed savings approval. The purpose of the collaboration is to introduce new technologies and deemed savings into the ERCOT market. In late 2016, Oncor submitted Wireless Data Center Controls and Variable Refrigerant Flow as new measures for inclusion in the Texas Technical Reference Manual (TRM). The measures are currently under evaluation by the State Evaluation Team.

Oncor also continued its membership in the Texas Energy Poverty Research Institute. TEPRI is a 501(c) (3) whose mission is to research the root causes of energy and fuel poverty and provide data for solutions that have an impact on low-income households.

X. Current Energy Efficiency Cost Recovery Factor (EECRF)

Oncor billed \$65,783,661 during 2016 through the EECRF.

Revenue Billed
\$65,783,661

Over- or Under-recovery

\$6,097,607 (Over) - This amount will be trued-up by rate class in Oncor's EECRF filing in 2017.

Shown below is a calculation detailing the performance bonus Oncor qualifies for based on 2016 program results.

Performance Bonus Calculation

Total Energy Efficiency Benefits	\$171,285,561
Total Energy Efficiency Expenditures	\$53,869,937
Total Net Benefits	\$117,415,624

2016 Minimum Goal MW	69.4
2016 Achieved Goal MW	128.83
Percentage Over Goal	85.63%

Bonus Calculation % of Net Benefits (1% of every 2% the Demand Goal is exceeded)	0.4282
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Bonus Based on 42.82% of Net Benefits (\$117,415,624 x .4282)	\$50,277,370
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Bonus Capped at 10% of 2016 Total Net Benefits (\$117,415,624 x .1)	\$11,741,562
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Total Bonus	\$11,741,562
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ACRONYMS

DR	Demand Response
DSM	Demand Side Management
EEP	Energy Efficiency Plan, which was filed as a separate document prior to April 2008
EEPR	Energy Efficiency Plan and Report
EER	Energy Efficiency Report, which was filed as a separate document prior to April 2008
EE Rule	Energy Efficiency Rule, PUCT 16 TAC §25.181 and §25.183
ERCOT	Electric Reliability Council of Texas
HTR	Hard-To-Reach
M&V	Measurement and Verification
MTP	Market Transformation Program
PUCT	Public Utility Commission of Texas
REP	Retail Electrical Provider
RES	Residential
SOP	Standard Offer Program

GLOSSARY

Actual weather adjusted -- “Actual weather adjusted” peak demand and energy consumption is the historical peak demand and energy consumption adjusted for weather fluctuations using weather data for the most recent ten years.

At meter -- Demand (kW/MW) and Energy (kWh/MWh) figures reported throughout the EEPR are reflective of impacts at the customer meter. This is the original format of the measured and deemed impacts which the utilities collect for their energy efficiency programs. Goals are necessarily calculated “at source” (generator) using utility system peak data at the transmission level. In order to accurately compare program impacts, goals and projected savings have been adjusted for the line losses (6.653%) that one would expect going from the source to the meter.

Average Growth -- Average historical growth in demand (kW) over the prior five years for residential and commercial customers adjusted for weather fluctuations.

Baseline -- A relevant condition that would have existed in the absence of the energy efficiency project or program being implemented, including energy consumption that would have occurred. Baselines are used to calculate program-related demand and energy savings. Baselines can be defined as either project-specific baselines or performance standard baselines (e.g. building codes).

Commercial customer -- A non-residential customer taking service at a metered point of delivery at a distribution voltage under an electric utility’s tariff during the prior program year or a non-profit customer or government entity, including an educational institution. For purposes of this section, each metered point of delivery shall be considered a separate customer.

Competitive energy efficiency services -- Energy efficiency services that are defined as competitive under §25.341 of the PUCT’s 16 TAC rules.

Conservation load factor – The ratio of the annual energy savings goal, in kilowatt hours (kWh), to the peak demand goal for the year, measured in kilowatts (kW) and multiplied by the number of hours in the year.

Deemed savings calculation -- An industry-wide engineering algorithm used to calculate energy and/or demand savings of the installed energy efficiency measure that has been developed from common practice that is widely considered acceptable for the measure and purpose, and is applicable to the situation being evaluated. May include stipulated assumptions for one or more parameters in the algorithm, but typically requires some data associated with actual installed measure. An electric utility may use the calculation with documented measure-specific assumptions, instead of energy and peak demand savings determined through measurement and verification activities or the use of deemed savings.

Deemed savings value -- An estimate of energy or demand savings for a single unit of an installed energy efficiency measure that has been developed from data sources and analytical methods that are widely considered acceptable for the measure and purpose, and is applicable to the situation being evaluated. An electric utility may use deemed savings values instead of energy and peak demand savings determined through measurement and verification activities.

Demand -- The rate at which electric energy is used at a given instant, or averaged over a designated period, usually expressed in kilowatts (kW) or megawatts (MW).

Demand savings -- A quantifiable reduction in demand.

Eligible customers -- Residential and commercial customers. In addition, to the extent that they meet the criteria for participation in load management standard offer programs developed for industrial customers and implemented prior to May 1, 2007, industrial customers are eligible customers solely for the purpose of participating in such programs.

Energy efficiency -- Improvements in the use of electricity that are achieved through customer facility or customer equipment improvements, devices, processes, or behavioral or operational changes that produce reductions in demand or energy consumption with the same or higher level of end-use service and that do not materially degrade existing levels of comfort, convenience, and productivity.

Energy Efficiency Cost Recovery Factor (EECRF) -- An electric tariff provision, compliant with subsection (f) of 16 TAC §25.181, ensuring timely and reasonable cost recovery for utility expenditures made to satisfy the goal of PURA §39.905 that provide for a cost-effective portfolio of energy efficiency programs pursuant to this section.

Energy efficiency measures -- Equipment, materials, and practices, including practices that result in behavioral or operational changes, implemented at a customer's site on the customer's side of the meter that result in a reduction at the customer level and/or on the utility's system in electric energy consumption, measured in kWh, or peak demand, measured in kW, or both. These measures may include thermal energy storage and removal of an inefficient appliance so long as the customer need satisfied by the appliance is still met.

Energy efficiency program -- The aggregate of the energy efficiency activities carried out by an electric utility under this section or a set of energy efficiency projects carried out by an electric utility under the same name and operating rules.

Energy efficiency project -- An energy efficiency measure or combination of measures undertaken in accordance with a standard offer, market transformation program, or self-delivered program.

Energy efficiency service provider -- A person or other entity that installs energy efficiency measures or performs other energy efficiency services under 16 TAC §25.181. An energy efficiency service provider may be a retail electric provider or commercial customer, provided that the commercial customer has a peak load equal to or greater than 50 kW. An energy efficiency service provider may also be a governmental entity or a non-profit organization, but may not be an electric utility.

Energy savings -- A quantifiable reduction in a customer's consumption of energy that is attributable to energy efficiency measures, usually expressed in kWh or MWh.

Estimated useful life (EUL) -- The number of years until 50% of installed measures are still operable and providing savings, and is used interchangeably with the term "measure life". The

EUL determines the period of time over which the benefits of the energy efficiency measure are expected to accrue.

Growth in demand -- The annual increase in demand in the Texas portion of an electric utility's service area at time of peak demand, as measured in accordance with 16 TAC Rule §25.181.

Hard-to-reach (HTR) customers -- Residential customers with an annual household income at or below 200% of the federal poverty guidelines.

Incentive payment -- Payment made by a utility to an energy efficiency service provider, an end-use customer, or third-party contractor to implement and/or attract customers to energy efficiency programs, including standard offer, market transformation, and self-delivered programs.

Industrial customer -- A for-profit entity engaged in an industrial process taking electric service at transmission voltage, or a for-profit entity engaged in an industrial process taking electric service at distribution voltage that qualifies for a tax exemption under Tax Code §151.317 and has submitted an identification notice pursuant to subsection (w) of 16 TAC §25.181.

Inspection -- Examination of a project to verify that an energy efficiency measure has been installed, is capable of performing its intended function, and is producing an energy savings or demand reduction equivalent to the energy savings or demand reduction reported towards meeting the energy efficiency goals of this section.

Lifetime energy (demand) savings -- The energy (demand) savings over the lifetime of an installed measure(s), project(s), or program(s). May include consideration of measure estimated useful life, technical degradation, and other factors. Can be gross or net savings.

Load control -- Activities that place the operation of electricity-consuming equipment under the control or dispatch of an energy efficiency service provider, an independent system operator, or other transmission organization or that are controlled by the customer, with the objective of producing energy or demand savings.

Load management -- Load control activities that result in a reduction in peak demand, or a shifting of energy usage from a peak to an off-peak period or from high-price periods to lower price periods.

Market transformation program -- Strategic programs intended to induce lasting structural or behavioral changes in the market that result in increased adoption of energy efficient technologies, services, and practices, as described in 16 TAC Rule §25.181.

Measurement and verification -- A subset of program impact evaluation that is associated with the documentation of energy or demand savings at individual sites or projects using one or more methods that can involve measurements, engineering calculations, statistical analyses, and/or computer simulation modeling. M&V approaches are defined in the IPMVP.

Off-peak period -- Period during which the demand on an electric utility system is not at or near its maximum. For the purpose of this section, the off-peak period includes all hours that are not in the peak period.

Peak demand -- Electrical demand at the times of highest annual demand on the utility's system. Peak demand refers to Texas retail peak demand and, therefore, does not include demand of retail customers in other states or wholesale customers.

Peak demand reduction -- Reduction in demand on the utility's system at the times of the utility's summer peak period or winter peak period.

Peak period -- For the purpose of this section, the peak period consists of the hours from one p.m. to seven p.m., during the months of June, July, August, and September, and the hours of 6 to 10 a.m. and 6 to 10 p.m., during the months of December, January, and February, excluding weekends and Federal holidays.

Program Year -- A year in which an energy efficiency incentive program is implemented, beginning January 1 and ending December 31.

Projected Demand and Energy Savings -- Peak demand reduction and energy savings for the current and following calendar year that Oncor is planning and budgeting for in the EEPR.

Renewable demand side management (DSM) technologies -- Equipment that uses a renewable energy resource (renewable resource), as defined in §25.173(c) (relating to Goal for Renewable Energy), a geothermal heat pump, a solar water heater, or another natural mechanism of the environment, that when installed at a customer site, reduces the customer's net purchases of energy, demand, or both.

Savings-to-Investment Ratio (SIR) -- The ratio of the present value of a customer's estimated lifetime electricity cost savings from energy efficiency measures to the present value of the installation costs, inclusive of any incidental repairs, of those energy efficiency measures.

Self-delivered program -- A program developed by a utility in an area in which customer choice is not offered that provides incentives directly to customers. The utility may use internal or external resources to design and administer the program.

Standard offer contract -- A contract between an energy efficiency service provider and a participating utility or between a participating utility and a commercial customer specifying standard payments based upon the amount of energy and peak demand savings achieved through energy efficiency measures, the measurement and verification protocols, and other terms and conditions, consistent with this section.

Standard offer program -- A program under which a utility administers standard offer contracts between the utility and energy efficiency service providers.

Underserved County -- A county that did not have reported demand or energy savings through a prior year's SOP or MTP.

APPENDICES

APPENDIX A: REPORTED DEMAND AND ENERGY REDUCTION BY COUNTY

Appendix A: Demand and Energy Reduction by County

COUNTY	Hard to Reach SOP	Small Business Direct Install MTP	Commercial SOP (Custom)	Residential Demand Response SOP	Commercial Load Mgmt. SOP	Hims Energy Efficiency SOP	Commercial SOP (Basic)	Commercial Solar PV SOP	Residential Solar PV SOP	Targeted Low Income SOP	Healthcare MTP
ANDERSON	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
ANDREWS	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
ANGELINA	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
ARCHER	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
BASTROP	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
BELL	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
BROWN	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
BURNETT	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
CHEROKEE	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
CLAY	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
COLEMAN	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
COLLIN	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
COMANCHE	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
COOKE	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
CORYELL	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh
CRANE	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh	KW KWh

DALLAS	KW 3,201.8	KW 7,813,315.5	KW 403.6	KW 3,766,024.1	KW 17,066.7	KW 51,200.2	KW 24,444,346.2	KW 0,820.2	KW 3,406.8	KW 2,618.9	KW 1,785,285.0	KW 803.6	KW 1,96,602.0	KW 6,938	KW 127.6
DAWSON	KW 14.5	KW 21,374	KW 14.5	KW 21,374	KW 14.5	KW 21,374	KW 14.5	KW 21,374	KW 14.5	KW 21,374	KW 14.5	KW 21,374	KW 14.5	KW 21,374	KW 14.5
DELTA	KW 2,376.9	KW 2,376.9	KW 4.5	KW 395,542.0	KW 14,708.5	KW 23.0	KW 14,708.5	KW 23.0	KW 14,708.5	KW 23.0	KW 14,708.5	KW 23.0	KW 14,708.5	KW 23.0	KW 14,708.5
DENTON	KW 10.2	KW 323,234	KW 123.3	KW 652,839.8	KW 2,541.8	KW 7,825.2	KW 2,478,125.6	KW 122.4	KW 104.8	KW 287,003.9	KW 41,735.3	KW 80.9	KW 41,735.3	KW 80.9	KW 22.5
EASTLAND	KW 118	KW 83,201.1	KW 118	KW 83,201.1	KW 363.3	KW 1,150.0	KW 34.3	KW 202.6	KW 403,832.0	KW 202.6	KW 403,832.0	KW 202.6	KW 403,832.0	KW 202.6	KW 403,832.0
ECTOR	KW 34.1	KW 174,888.9	KW 34.1	KW 174,888.9	KW 2,344.1	KW 6,402.2	KW 2,344.1	KW 6,402.2	KW 2,344.1	KW 6,402.2	KW 2,344.1	KW 6,402.2	KW 2,344.1	KW 6,402.2	KW 2,344.1
ELLIS	KW 7.1	KW 2,172.7	KW 6.8	KW 25,256.8	KW 7.1	KW 2,172.7	KW 6.8	KW 25,256.8	KW 7.1	KW 2,172.7	KW 6.8	KW 25,256.8	KW 7.1	KW 2,172.7	KW 6.8
ERATH	KW 77.7	KW 339,487.4	KW 77.7	KW 339,487.4	KW 9.9	KW 339,487.4	KW 9.9	KW 339,487.4	KW 9.9	KW 339,487.4	KW 9.9	KW 339,487.4	KW 9.9	KW 339,487.4	KW 9.9
FALLS	KW 15	KW 2,591.5	KW 15	KW 2,591.5	KW 15	KW 2,591.5	KW 15	KW 2,591.5	KW 15	KW 2,591.5	KW 15	KW 2,591.5	KW 15	KW 2,591.5	KW 15
FANNIN	KW 7.1	KW 2,172.7	KW 6.8	KW 25,256.8	KW 7.1	KW 2,172.7	KW 6.8	KW 25,256.8	KW 7.1	KW 2,172.7	KW 6.8	KW 25,256.8	KW 7.1	KW 2,172.7	KW 6.8
FREESTONE	KW 33.7	KW 119,419.4	KW 33.7	KW 119,419.4	KW 33.7	KW 119,419.4	KW 33.7	KW 119,419.4	KW 33.7	KW 119,419.4	KW 33.7	KW 119,419.4	KW 33.7	KW 119,419.4	KW 33.7
GLASSCOCK	KW 8.9	KW 22,297.8	KW 8.9	KW 22,297.8	KW 8.9	KW 22,297.8	KW 8.9	KW 22,297.8	KW 8.9	KW 22,297.8	KW 8.9	KW 22,297.8	KW 8.9	KW 22,297.8	KW 8.9
GRAYSON	KW 99.8	KW 657,329.7	KW 99.8	KW 657,329.7	KW 343.4	KW 1,398,784.7	KW 692.1	KW 1,398,784.7	KW 692.1	KW 1,398,784.7	KW 692.1	KW 1,398,784.7	KW 692.1	KW 1,398,784.7	KW 692.1
HENDERSON	KW 487.8	KW 869,556.3	KW 487.8	KW 869,556.3	KW 9.4	KW 869,556.3	KW 487.8	KW 869,556.3	KW 9.4	KW 869,556.3	KW 487.8	KW 869,556.3	KW 9.4	KW 869,556.3	KW 487.8
HILL	KW 71.0	KW 994,525.5	KW 71.0	KW 994,525.5	KW 71.0	KW 994,525.5	KW 71.0	KW 994,525.5	KW 71.0	KW 994,525.5	KW 71.0	KW 994,525.5	KW 71.0	KW 994,525.5	KW 71.0
HOOD	KW 16	KW 5,395.6	KW 16	KW 5,395.6	KW 35.8	KW 3,766.0	KW 0.7	KW 3,766.0	KW 35.8	KW 3,766.0	KW 0.7	KW 3,766.0	KW 35.8	KW 3,766.0	KW 0.7
HOPKINS	KW 212	KW 92,289.1	KW 212	KW 92,289.1	KW 45.6	KW 187,159.5	KW 226.0	KW 187,159.5	KW 45.6	KW 187,159.5	KW 226.0	KW 187,159.5	KW 45.6	KW 187,159.5	KW 226.0
HOUSTON	KW 14.2	KW 42,943.6	KW 14.2	KW 42,943.6	KW 14.2	KW 42,943.6	KW 14.2	KW 42,943.6	KW 14.2	KW 42,943.6	KW 14.2	KW 42,943.6	KW 14.2	KW 42,943.6	KW 14.2
HOWARD	KW 17	KW 114,471.1	KW 17	KW 114,471.1	KW 17	KW 114,471.1	KW 17	KW 114,471.1	KW 17	KW 114,471.1	KW 17	KW 114,471.1	KW 17	KW 114,471.1	KW 17

HUNT	KW KWh	33.7 85,574.8	KW KWh	20.8 26,770.1	KW KWh	40.0	KW KWh	179.1 407,223.6	KW KWh	55.0 2,02,248.5	KW KWh	42.7 59,532.6	KW KWh	28.5 69,341.5	KW KWh	4.0 9,968.5
JACK	KW KWh	7.5 8,694.8	KW KWh	46.4	KW KWh	46.4	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
JOHNSON	KW KWh	39.6 83,325.3	KW KWh	91.4 42,344.8	KW KWh	28.1	KW KWh	190.8 535,055.8	KW KWh	62.8 345,118.8	KW KWh	42.7 59,532.6	KW KWh	28.5 69,341.5	KW KWh	4.0 9,968.5
KAUFMAN	KW KWh	91.7 378,934.5	KW KWh	24.2 85,481.3	KW KWh	342.8	KW KWh	95.0 675,234.4	KW KWh	437.9 2,322,132.5	KW KWh		KW KWh		KW KWh	
LAMAR	KW KWh	31.7 103,492.2	KW KWh	24.2	KW KWh	57.4	KW KWh	65.0 180,239.8	KW KWh	21.8 96,433.2	KW KWh	25.5 49,200.0	KW KWh		KW KWh	4.0 9,968.5
LAMPASAS	KW KWh		KW KWh		KW KWh	22.9	KW KWh	12 6,505.6	KW KWh		KW KWh	7.2 13,888.0	KW KWh		KW KWh	
LEON	KW KWh		KW KWh		KW KWh	3.5	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	2.0 2,241.7
LIMESTONE	KW KWh		KW KWh		KW KWh	16.2	KW KWh	17.0 34,666.0	KW KWh		KW KWh		KW KWh		KW KWh	
LOVING	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
LYNN	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
MARTIN	KW KWh		KW KWh		KW KWh	0.8	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
MCGLENNAN	KW KWh	52.8 368,486.8	KW KWh	6.2 38,707.7	KW KWh	24.1	KW KWh	417.7 952,988.1	KW KWh	167.7 1,420,239.8	KW KWh	10.6 228,038.1	KW KWh	19.3 86,698.0	KW KWh	19.3 86,698.0
MIDLAND	KW KWh		KW KWh		KW KWh	23.3	KW KWh		KW KWh		KW KWh	60.7 117,072.0	KW KWh	40.1 83,145.5	KW KWh	4.8 6,547.5
MILAM	KW KWh		KW KWh		KW KWh	33.7	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	8.1 11,999.0
MITCHELL	KW KWh		KW KWh		KW KWh	0.0	KW KWh		KW KWh	55.7 92,542.4	KW KWh		KW KWh		KW KWh	2.5 2,207.5
MONTAGUE	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
NACOGDOCHES	KW KWh	31.7 145,799.1	KW KWh	15 9,399.4	KW KWh	207.4	KW KWh	23.1 11,800.0	KW KWh	16.9 74,645.1	KW KWh	18.7 31,880.0	KW KWh	44.8 103,278.8	KW KWh	6.1 7,942.4
NAVARRO	KW KWh	4.9 1,085.1	KW KWh	15 9,399.4	KW KWh	91.8	KW KWh	63.8 155,474.6	KW KWh	45.6 312,457.7	KW KWh	8.5 16,430.0	KW KWh		KW KWh	
NOLAN	KW KWh		KW KWh		KW KWh	58.3	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	0.9 1,033.9
PALO PINTO	KW KWh	18 1,889.6	KW KWh	2.9 22,261.3	KW KWh	43.7	KW KWh	11 3,888.4	KW KWh		KW KWh		KW KWh		KW KWh	

PARKER	KW KWh	3.9 23,209.8	KW KWh		KW KWh	247.1 50,819.9	KW KWh	64.1 96,636.0	KW KWh	44.9 96,700.4	KW KWh	34.7 99,742.3
PECOS	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
REAGAN	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
RED RIVER	KW KWh		KW KWh	4.1	KW KWh	0.9 4,259.2	KW KWh		KW KWh		KW KWh	10 9617
REEVES	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
ROCKWALL	KW KWh	42.6 84,803.6	KW KWh	299.0 258.6	KW KWh	74.6 356,519.5	KW KWh	25.5 24,000.0	KW KWh	51.5 20,595.4	KW KWh	16 3,599
RUSK	KW KWh		KW KWh	84.8	KW KWh	37.5 6,820.8	KW KWh		KW KWh		KW KWh	
SCURRY	KW KWh		KW KWh	24.5	KW KWh		KW KWh		KW KWh		KW KWh	3.6 9,904.9
SHADKLEFORD	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
SMITH	KW KWh	204.7 654,298.9	KW KWh	16.5 28,955.8	KW KWh	1600.0 4,821,831.7	KW KWh	292.5 13,923,828.3	KW KWh	56.4 37,028.0	KW KWh	12.5 21,833.4
STEPHENS	KW KWh		KW KWh	69.9	KW KWh	7.1 46,577.4	KW KWh		KW KWh		KW KWh	19 2,486.4
TARRANT	KW KWh	1887.2 4,998,775.2	KW KWh	48.9 61,828.9	KW KWh	7,654.4 20,017,599.3	KW KWh	1892.1 11,241,662.1	KW KWh	884.6 19,433,004.5	KW KWh	349.3 564,921.1
TERRY	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
TOM GREEN	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
TRAVIS	KW KWh		KW KWh	110 3,986.6	KW KWh	4.2 9,570.1	KW KWh	8.9 66,694.5	KW KWh	200.2 490,248.2	KW KWh	
TRINITY	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
UPTON	KW KWh		KW KWh		KW KWh		KW KWh		KW KWh		KW KWh	
VAN ZANDT	KW KWh	2.7 11,244.0	KW KWh	14.9	KW KWh	88.2 311,587.9	KW KWh	118 53,289.2	KW KWh	5.9 11,440.0	KW KWh	
WARD	KW KWh		KW KWh	49.1	KW KWh		KW KWh		KW KWh		KW KWh	3.4 6,075.7
WACHITA	KW KWh	28.5 56,845.9	KW KWh	18.5	KW KWh	262.7 560,962.6	KW KWh	32.3 241,669.4	KW KWh	65.1 306,797.5	KW KWh	0.7 9,478.9

APPENDIX B: PROGRAM TEMPLATES

Oncor has no new Program Templates for 2017.

**APPENDIX C: LIST OF 2016 ENERGY EFFICIENCY SERVICE
PROVIDERS**

2016 Energy Efficiency Service Providers

Commercial SOP (Custom)

Ally Energy Solutions, LLC
B3 Energy Consulting
Blackhawk Equipment Corporation
Bluestone Energy Services, LLC
Building Energy Solutions & Tech., dba Bes-Tech, Inc.
Byrd electric
Carrier Corporation
CEC Facilities Group, LLC
cVal Innovations LLC
Enabled Energy, Inc.
Energy & Automation, Inc
Entech Sales & Service
Ex3 Facility Solutions, LLC
Global Electrical Solutions, Inc.
Greenleaf Energy Solutions LLC
H & G Systems, L.P.
Heat Transfer Solutions, Inc.
Johnson Controls Inc
Kevco Electrical Construction, Inc.
KirEnergy Services LLC
Mechanical Solutions, Inc
MP2 Energy, LLC
NexRev, Inc
NORDCO, INC.
Pepco Energy Services, Inc.
PepsiCo
Pflugerville ISD
Rapid Power Management LLC
Realwinwin, Inc.
ROI Energy Investments LLC
Schneider Electric Buildings Americas Inc
Simple Power Systems LLC
SmartWatt Energy Inc
Smith Engineering PLLC
Summers Group Inc
TDIndustries
Telios Corporation
The Brandt Companies, LLC

The Dannon Company, Inc.
Trane
Trane
TXU Energy Retail Company LLC
US Energy Management
Way Service LTD
Waypoint Lighting LLC
Wachter, Inc.
Way Service LTD
WESCO Distribution, Inc.
Zoom Air, Inc.

Small Business Direct Install MTP

Lime Energy Services Company

Targeted Weatherization LI SOP

Texas Association of Community
Action Agencies, Inc.
Frontier Associates

Commercial Load Management SOP

Amerex Brokers LLC
Bridgevue Energy Services, LLC
Children's Health System of Texas
Dorskocil Manufacturing Company, Inc.
EnerNOC, Inc.
Enerwise Global Technologies, DBA CPower
Innovari Market Solutions LLC
L5E, LLC
MJB Wood Group
Murata Energy Solutions Americas
North Texas Municipal Water District
NRG Curtailment Solutions Inc
PI Holdings Inc DBA Plastics Holdings Inc
Tierpoint Texas LLC
Verdigris Energy

HEE

1 Way Services AKA One Way Services
A Better Insulation
A Cooler House
A Plus Energy Solution LLC
A&E HOME INSULATION
AAA Efficiency
ACT Home Energy Specialists LP
Affordable Solarscreens & Blinds Inc
Agape electrical services llc
Air Conditioning Pros Energy Services
Aire Design Systems Inc.
Allied Energy Savers
AllSave Energy Solutions, LLC
Alternatex Solutions, LLC
Anderson Energy Services
Area Wide Services, Inc.
Arthur Hagar Corp
B & B TEXAS CONTRACTORS
B and D Efficiency
Better Than Lights
Burson Services
Chuck Hart's Energy Connection
Classica la fe
Cole Air Conditioning Company Inc
Conergy
D&R Insulation
D T Air Conditioning & Heating Inc,
D&A Conservation, Inc
Dallas Insulation LLC
DeRocher Associates
DES Dynamic Energy Solutions, LLC
Designs By Marlene
Duong Tran, LLC
E2 Conservation
E3 Solutions, LLC
Ecoenergy Conservation Group, LLC
ECOGREEN ENERGY SOLUTIONS
Eden Energy Solutions, LLC
Electric Reducer
Energy Audits Of Texas
ENERGY CONSERVATION CONCEPTS
Energy Efficient Measures LLC
Energy Improvements
Energy Misers, Inc.
Energy Saver Pro
Excel 5-Star Energy Inc.
Foamaster Insulation
FREE Specialists, LLC
Frontier Associates
Garden of Eden
GNS Energy Efficiency
Gonzalez Insulation
Green Conservation
Green Leaf Corporation
Green Start Energy Specialists
GREEN ZONE
GS CONSERVATION LLC
HARLEN JOHNSON HEAT & AC CO.
Hightower Service, Inc
HML Energy Solutions LLC
Hobson Air Conditioning Inc
Home Electric Saving
Home Energy Efficiency
Home Energy Program
Home Improvement Systems, Inc.
Home Save Energy
Honest Air Conditioning LLC
Infinity Texas Mechanical Inc
INSUL ATTIC CORPORATION
JP Energy Conservation
LONE STAR INSULATION LLC
Lonestar Energy Solutions
Lu and Sons
Mascot Mechanical LLC
Master Tech Service Corp
Matts Home Sealers
Milestone Electric Inc.
Mueller Energy Conservation
North Texas Air, LLC.
NRG Conservation, Inc. DBA Energy Experts
NRG Pros
NRG Savers
P D Construction Company dba Elect Saver
Plan B Remodeling Systems

HEE continued -

Raiz
RAYS EMERGENCY AC AND HEATING LLC
Reliant Heating & Air Conditioning, Inc.
Rescue Air, LLC
River Co
Samm's Heating and Air Conditioning
San Miguel and Associates, Inc.
Saving Energreen Houses, LLC
Saving Energy Solutions LLC
Signature Sales (Energy Project)
SRV Solutions
The Right Choice Heating & Air Inc
TheGreenHomeMakeover.com
Total Air and Heat Co
TRANSOFT CORPORATION LLC
Tuffy's Air Conditioning & Heating Service Inc.
TXE Solutions LLC DBA Service City Electric
Victor Reyes
W&B, Inc. dba ALL SERVICE HEATING AND AIR
Yella Rose Development Corporation

Residential Demand Response MTP

Direct Energy Services, LLC
Earth Networks, Inc.
Just Energy (U.S.) Corp
Reliant Energy Retail Services, LLC

Healthcare MTP

Willdan Energy Solutions

Commercial Solar PV SOP

512 Solar, LLC
Able Electric
Advent Systems INC., DBA SolarTechs
AffordaSolar Inc
Alba Energy LLC
Amos Electric Supply, Inc.
AT&T Services Inc
Axium Solar Inc.
Aztec Renewable Energy, Inc
Brightergy, LLC
Byrd electric
Circular Solar, Inc. DBA Circular Energy
City of Dallas
CRsolar Energy Solutions / CR-Invent LLC
Davis Electric Co.
DFW SOLAR ELECTRIC, LLC
Ecolectrics LLC
Ecological Estates LLC
Energy One LLC
Entero Energy LLC
Freedom Solar LLC
Good Faith Energy
GoSolarGo, Inc.
Green Ox Energy Solutions, LLC
Green Wolf Energy Inc
Greenbelt Solar LLC
GreenLife Technologies, Inc.
Guardian Exteriors, Inc.
HEB Grocery Company, LP
Hobson Air Conditioning Inc
Holtek Enterprises Inc. dba Holtek Solar
INFINITY SOLAR SOLUTIONS LLC
KOHL'S Department Stores, Inc.
Lighthouse Solar Austin
Longhorn Solar
Major Solar & Electrical Services
Meridian Solar, Inc.
Native Inc
NCH Corporation
New Day Energy, LLC
NRG RESIDENTIAL SOLAR SOLUTIONS
Performance Contracting Inc
REC Solar Commercial Corporation
Revolve Solar LLC
RonRush Investment dba Universal Solar System
Self Reliant Solar LLC
Simple Power Systems LLC
SoCore Installation Services LLC
Solar CenTex LLC
Solar Haven Energy L L C
SolarCity Corporation
SolarLife Technology LLC
Solarview Inc
Sun City Solar Energy-North Texas LLC
SunPower Corporation, Systems
Target Corp
Texas Responsible Energy & Efficiency
Texas Sun Power LLC
Texoma Energy Solutions
The Energy Shop, Inc.
Trusted Energy Services
Wells Solar & Electrical Services LLC

Residential Solar

1st Choice Energy, LLC
512 Solar, LLC
Able Electric
Abundant Solar LLC
Advent Systems INC., DBA SolarTechs
AffordaSolar Inc
Alba Energy LLC
Altitude Marketing DBA AC Solar Solutions
Amos Electric Supply, Inc.
APEX HOME ENERGY SAVINGS LLC
Axiom Solar Inc.
Aztec Renewable Energy, Inc
Byrd Electric
Circle L industries
CRsolar Energy Solutions / CR-Invent LLC
Davis Electric Co.
DFW SOLAR ELECTRIC, LLC
Diversified Solar Solutions, LLC
Ecolectrics LLC
Ecological Estates LLC
Energy One LLC
Fisher Renewables LLC
Freedom Solar LLC
Global Efficient Energy, LLC
Good Faith Energy
GoSolarGo, Inc.
Green Ox Energy Solutions, LLC
Green Wolf Energy Inc
Greenbelt Solar LLC
GreenLife Technologies, Inc.
Guardian Exteriors, Inc.
GWTW Renewables LLC DBA That Solar Company
HESolar LLC
Hobson Air Conditioning Inc
Holtek Enterprises Inc. dba Holtek Solar
INFINITY SOLAR SOLUTIONS LLC
Lighthouse Solar Austin
Longhorn Solar
Major Solar & Electrical Services
Max Electric
Native Inc
Longhorn Solar
Major Solar & Electrical Services
Max Electric
Native Inc
New Day Energy, LLC
Now Energy LLC
NRG RESIDENTIAL SOLAR SOLUTIONS
PetersenDean Texas INC
Revolve Solar LLC
RonRush Investment dba Universal Solar System
Second Energy LLC
Self Reliant Solar LLC
Simple Power Systems LLC
Solar CenTex LLC
Solar Haven Energy L L C
Solar Side Up LLC
Solarch Integration LLC
SolarCity Corporation
SolarLife Technology LLC
SOLARTEK ENERGY OF AUSTIN
Solarugreen Corporation
Solarview Inc
Speir Innovations LLC
Sun City Solar Energy-North Texas LLC
Sunvergence Energy, LLC.
Sustainable Services LLC
Texas Responsible Energy & Efficiency
Texas Solar Power Company
Texas Sun Power LLC
Texoma Energy Solutions
The Energy Shop, Inc.
Tower Association Crue
Trusted Energy Services
Vision Solar LLC
Wells Solar & Electrical Services LLC

Hard-to-Reach SOP

1 Way Services AKA One Way Services
5 Star Energy Savers
A Better Insulation
A Cooler House
A Plus Energy Solution LLC
A&E HOME INSULATION
AAA Efficiency
ACT Home Energy Specialists LP
Allied Energy Savers
AllSave Energy Solutions, LLC
Anderson Energy Services
B & B TEXAS CONTRACTORS
B and D Efficiency
Bearwall Energy Efficient Solutions LLC
Better Than Lights
Burson Services
Chuck hart's energy connection
Classica la fe
Conergy
D&A Conservation, Inc
Dallas Insulation LLC
DeRocher Associates
DES Dynamic Energy Solutions, LLC
Designs By Marlene
E3 Solutions, LLC
Ecoenergy Conservation Group, LLC
Eden Energy Solutions, LLC
Electric Reducer
Energy Audits Of Texas
ENERGY CONSERVATION CONCEPTS
Energy Efficient Measures LLC
Energy Improvements
Energy Misers, Inc.
Energy Saver Pro
Excel 5-Star Energy Inc.
FREE Specialists, LLC
Garden of Eden
GNS Energy Efficiency
Gonzalez Insulation
Green Conservation

Green Start Energy Specialists
GREEN ZONE
GS CONSERVATION LLC
HML Energy Solutions LLC
Home Energy Efficiency
Home Energy Program
Home Improvement Systems, Inc.
Home Save Energy
INSUL ATTIC CORPORATION
JP Energy Conservation
LONE STAR INSULATION LLC
Lonestar Energy Solutions
Lu and Sons
Mueller Energy Conservation
NRG Conservation, Inc. DBA Energy Experts
NRG Pros
NRG Savers
NRG Savers
P D Construction Company dba Elect Saver
Plan B Remodeling Systems
River Co
San Miguel and Associates, Inc.
Saving Energreen Houses, LLC
Saving Energy Solutions LLC
Signature Sales (Energy Project)
SRV Solutions
TheGreenHomeMakeover.com
TXE Solutions LLC DBA Service City Electric
Victor Reyes
Yeila Rose Development Corporation

Commercial SOP (Basic)

7-Eleven Inc
9G Energy
A Better Insulation
A Cooler House
ADA Lighting Group Inc
Advanced E Lighting LLC dba Advanced Energy Rec.
Aelux, LLC
AERC of Texas, LLC
Agape electrical services llc
Ali Phase Electric
Ally Energy Solutions, LLC
Ameresco Dallas LLC
American Energy Efficiencies Inc.
American Wholesale Lighting Inc.
Amerlight LLC
Amos Electric Supply, Inc.
Area Wide Services, Inc.
ARIES CORPORATION
Bambu Energy
Blue Heeler Electric, LLC
BNSF Railway Company
Brazos Electric Power Cooperative, Inc.
Bright Star Energy Management, LLC
Brookshire Grocery Co
Capstone Mechanical LP
Carrier Corporation
CEC Facilities Group, LLC
Chaparral Baptist Assembly, INC.
Chateau Energy Solutions LLC
Cho's electric inc
City of Temple, Texas
City Park Construction, LLC
Cole Air Conditioning Company Inc
Columbia Med. Center of Arlington Subsidiary, L.P.
Consolidated Edison Solutions Inc
Crescent Electric Supply Company
CSM
Curtis H. Stout, Inc.
Custom Performance Contracting, LLC
CVal Innovations LLC
Davis Electric Co.
Delta T Corporation dba Big Ass Solutions
Discalced Carmelite Nuns
E-TEX ENERGY SOLUTIONS LLC
E3 Entegral Solutions Inc
E4 Lighting LLC
East Texas Lighthouse for the Blind
Eden Energy Solutions, LLC
Eden Trading INC
EES Consulting
Efficient Facilities International Inc.
Energy Design Service Systems
Energy Management Collaborative, llc
Energy Partners Alliance, LLC
Entech Sales & Service
Envirolite LLC
Environmental Lighting Service, LLC
Essential Lighting Solutions, Inc.
Estes, McClure & Associates, Inc.
Facility Solutions Group
FacilitySource, LLC
Graybar Electric Company, Inc.
Green Energy Texas Tech
Green Light Southwest
Green Ox Energy Solutions, LLC
Groom Energy Solutions LLC
Grubbs Nissan Mid-Cities, Ltd
Hargis Electric LLC.
Harrison, Walker & Harper,LP
HEB Grocery Company, LP
Home Improvement Systems, Inc.
Hulen Mall, LLC
Hurst Electric, LP
Hurst Euless Bedford Independent School District
Independent Lighting Solutions, LLC
Intelligent Energy Solutions, LLC
JBI ELECTRICAL SYSTEMS, INC
Johnson Controls Inc
JSK Ventures, LLC
Killeen Independent School district

Commercial SOP (Basic) continued-

KirEnergy Services LLC
KMH Ventures, LLC
kWik Energy Solutions, LLC
Landlord Utility Mgmt. LLC dba JEC Energy Saving
Learning Care Group, Inc
LightSource Unlimited
Linda Gregory, LLC dba Energy Saving Strategies
Lochridge-Priest, Inc.
Lonestar energy solutions
Maneri~Agraz Enterprises, Ltd.
Mark Henderson Electric Inc.
McKinstry Essention, LLC
MD Engineering LP,LLP
Mechanical Solutions, Inc
MEP Consulting Engineers, Inc.
MHSC Energy Management LLC
Mills Systems Solutions
Monterey Energy, Inc.
MP2 Energy, LLC
National Retrofitting Group, LLC
Newfit Dallas Ltd
Next Step Energy Solutions
NORDCO, INC.
North Coast Lighting Service
North East Mall
NRG Conservation, Inc. DBA Energy Experts
OnPoint, LLC
OpTerra Energy Services, Inc.
P D Construction Company dba Elect Saver
Pacific Energy Concepts LLC
PDI Green Technology
Pepco Energy Services, Inc.
PepsiCo
Performance Services, Inc.
Pflugerville ISD
Ponder ISD
PR/Crow Penn Distribution, LP
PRO Electric & Lighting, LLC
Product Support Services, Inc.
ProSource Power LLC
R.K. Bass Electric, Inc.
RaceTrac Petroleum, Inc
Rapid Power Management LLC
RE-Energy, LLC
Realwinwin, Inc.
Reed, Wells, Benson and Company
Regency Enterprises Inc. dba Regency Lighting
San Miguel and Associates, Inc.
Schneider Electric Buildings Americas Inc
Scott-Del Electric, Inc.
SIEMENS INDUSTRY, INC.
SK electric.inc
SmartWatt Energy Inc
Solar CenTX DBA Energy Solutions of Texas
Southpoint Solutions, LLC
Southwest Energy Solutions
Spark Lighting, LLC
Spirit Foundation
St. Ann Catholic Parish
Stephenville City Electric Inc
Summers Group Inc
Summit Energy Services, Inc.
Superior Group LLC
Sylvania Lighting Services
TDIndustries
Texal Energy LLC
Texas Sun Power LLC
The Brandt Companies, LLC
The Ogni Group
Top Quality Heating & Air
Town North Presbyterian Church
Trammell Bell, llc
Trane
TravelCenters of America LLC
Trinity Christian Academy
TRINITY ELECTRIC SUPPLY CO., LLC
Trinity Lighting and Electrical Services
Triton Supply
TXU Energy Retail Company LLC
US Energy Management

Commercial SOP (Basic) continued-

US Total Green Light LLC dba PT LED

Voss Lighting

WALKER AC AND HEATING INC

Walmart Stores

Way Service LTD

WESCO Distribution, Inc.

WLS Lighting Systems

Wylie Independent School District

YES LED Lighting, Inc

Zoom Air, Inc.

Oncor's Energy Efficiency Expenses by Rate Code for 2016 Program Year

a	b	c	d	e	f	g	h
	Residential	Secondary ≤ 10 kW	Secondary > 10 kW	Primary > 10 kW Distribution Line	Primary > 10 kW Substation	Transmission Service Non-Profit	Total
		Rate Code B0, B1, B4	Rate Code D0, D1, D4, D6, DC, DJ, DK, DQ, DR, E0, E1, E4, EC, EJ, EQ	Rate Code J0, K0, K1, K4	Rate Code L0	Rate Code N0, N4	
Home Energy Efficiency SOP	\$15,970,643	\$0	\$0	\$0	\$0	\$0	\$15,970,643
Solar PV - Residential	\$5,252,229	\$0	\$0	\$0	\$0	\$0	\$5,252,229
Residential Demand Response MTP	\$213,436	\$0	\$0	\$0	\$0	\$0	\$213,436
Hard-to-Reach SOP	\$6,709,176	\$0	\$0	\$0	\$0	\$0	\$6,709,176
Targeted Weatherization Low-Income SOP (SB 712)	\$5,536,583	\$0	\$0	\$0	\$0	\$0	\$5,536,583
Commercial Load Management SOP	\$0	\$0	\$1,702,132	\$895,512	\$0	\$0	\$2,597,644
Commercial SOP (Basic)	\$0	\$234,963	\$5,899,907	\$674,840	\$0	\$0	\$6,799,710
Commercial SOP (Custom)	\$0	\$0	\$1,836,095	\$268,201	\$0	\$0	\$1,904,296
Solar PV - Commercial	\$0	\$256,939	\$6,037,917	\$261,891	\$0	\$0	\$6,556,747
Small Business Direct Install	\$0	\$0	\$598,203	\$0	\$0	\$0	\$598,203
Healthcare MTP	\$0	\$155,047	\$431,919	\$424,033	\$0	\$0	\$1,010,999
Program Expenses by Rate Code	\$33,682,067	\$648,849	\$16,285,173	\$2,524,477	\$0	\$0	\$53,150,566
Evaluation, Measurement & Verification (EM&V) Costs for Program Year 2015	\$453,063	\$13,560	\$235,083	\$35,261	\$0	\$302	\$737,269
Total (Program Expenses by Rate Code + EM&V Costs)	\$34,135,130	\$662,509	\$16,530,256	\$2,558,738	\$0	\$302	\$53,687,935

Program totals include incentives, administration costs and research and development costs as shown in worksheet WP/MRS/3 (total program costs are shown in column (g))
Commercial program rate class allocations are based on rate codes found in WP/MRS/1
Allocation of EM&V costs can be found in worksheet WP/MRS/5

Oncor's 2016 Earned Energy Efficiency Performance Bonus Calculation

	Total Program Costs*	KW Saved	kWh Saved	Measure Life - Yrs	kW Avoided Costs	kWh Avoided Costs	Total Avoided Costs kW	Total Avoided Costs kWh	Total Avoided Costs	Net Benefits	Benefit Cost Ratio
Residential											
Solar Residential SOP	\$5,317,790	4,687.29	10,286,965.5	30.0	\$1,098.88	\$0.69888	\$5,150,769.24	\$7,189,467.32	\$12,340,226.55	\$7,022,436.55	2.32
Targeted Weatherization Low Income	\$5,589,742	2,133.12	3,915,583.6								
Air Infiltration		116.72	147,913.5	11.0	\$630.32	\$0.40088	\$1,742,773.96	\$2,023,430.39	\$3,766,204.34	-\$1,789,537.66	0.68
Ceiling Insulation		164.19	275,312.5	25.0	\$1,020.77	\$0.84921	\$72,940.63	\$58,295.56	\$132,236.19		
Central A/C		72.08	149,044.0	18.0	\$864.93	\$0.55010	\$167,600.23	\$178,796.93	\$346,335.85		
Heat Pump		1,541.86	2,704,476.9	15.0	\$775.99	\$0.49353	\$1,196,487.94	\$1,334,740.48	\$2,531,208.43		
Aerators		0.01	31.2	10.0	\$586.26	\$0.37413	\$5.86	\$11.67	\$17.53		
Energy Star Refrigerator		0.82	3,743.9	16.0	\$807.38	\$0.51350	\$742.79	\$1,922.49	\$2,665.28		
Showerheads		0.68	2,193.0	10.0	\$588.26	\$0.37413	\$400.02	\$820.47	\$1,220.48		
Solar Screens		11.97	22,741.6	10.0	\$588.26	\$0.37413	\$7,041.47	\$8,508.31	\$15,549.79		
Water Heater Jacket		0.04	294.8	7.0	\$446.28	\$0.28383	\$17.85	\$63.67	\$101.52		
Water Heater Pipe Insulation		0.00	34.6	13.0	\$707.40	\$0.44991	\$0.00	\$15.57	\$15.57		
Wall Insulation		108.12	165,928.5	25.0	\$1,020.77	\$0.64921	\$108,324.11	\$107,722.44	\$216,046.55		
Duct Improvement		98.40	387,162.5	18.0	\$864.93	\$0.55010	\$65,109.11	\$212,978.09	\$298,087.20		
Energy Star Window		29.99	45,291.4	25.0	\$1,020.77	\$0.64921	\$30,612.89	\$29,403.63	\$60,016.52		
Floor Insulation		10.75	10,782.7	25.0	\$1,020.77	\$0.64921	\$10,973.28	\$7,006.73	\$17,980.01		
Window A/C		0.39	622.5	8.0	\$496.40	\$0.31571	\$193.60	\$193.53	\$380.13		
Hard-to-Reach SOP	\$6,761,538	7,640.26	20,135,626.6								
Air Infiltration		1,759.89	3,014,184.7	11.0	\$630.32	\$0.40088	\$1,109,956.90	\$1,208,316.34	\$2,317,675.24		
Ceiling Insulation		5,093.00	11,715,876.5	25.0	\$1,020.77	\$0.64921	\$5,198,781.61	\$7,606,064.18	\$12,804,845.79		
Central A/C		0.41	838.0	18.0	\$864.93	\$0.55010	\$354.62	\$460.96	\$815.61		
Duct Improvement		788.72	5,403,992.8	18.0	\$864.93	\$0.55010	\$680,457.73	\$2,972,730.94	\$3,653,188.67		
Water Heater Jacket		0.14	764.6	7.0	\$446.28	\$0.28383	\$62.48	\$217.02	\$279.50		
Residential Demand Response SOP	\$260,046	4,885.78	0.0	1.0	\$75.46	\$0.04799	\$368,680.96	\$0.00	\$368,680.96	\$108,634.96	1.42
Home Energy Efficiency SOP	\$16,121,328	30,137.35	74,366,439.8								
Air Infiltration		9,989.54	16,984,232.5	11.0	\$630.32	\$0.40088	\$25,057,079.75	\$40,535,814.46	\$65,602,694.22	\$49,481,588.22	4.07
Ceiling Insulation		11,337.24	26,639,593.9	25.0	\$1,020.77	\$0.64921	\$11,572,714.47	\$17,294,690.76	\$28,867,405.23		
Central A/C		1,007.43	2,848,504.2	18.0	\$864.93	\$0.55010	\$871,356.43	\$1,291,912.16	\$2,163,288.59		
Heat Pump		4,748.83	8,411,568.0	15.0	\$775.99	\$0.49353	\$3,685,044.59	\$4,151,261.16	\$7,836,405.75		
Duct Improvement		3,039.18	19,932,179.5	18.0	\$864.93	\$0.55010	\$2,628,877.96	\$10,964,691.94	\$13,593,369.90		
Energy Star Window		1.46	2,029.7	25.0	\$1,020.77	\$0.64921	\$1,490.32	\$1,317.70	\$2,808.03		
Ground Source Heat Pump		10.83	31,735.6	20.0	\$916.13	\$0.58268	\$9,921.69	\$18,491.06	\$28,412.75		
Water Heater Jacket		2.84	16,596.4	7.0	\$446.28	\$0.28383	\$1,267.44	\$4,710.56	\$5,977.99		
Residential Total	\$34,020,444	49,503.80	108,704,815.5				\$39,518,377.24	\$51,536,493.63	\$100,864,810.87	\$66,834,366.87	2.96

Oncor's 2016 Earned Energy Efficiency Performance Bonus Calculation

	Total Program Costs	kW Saved	kWh Saved	Measure Life - Yrs	kW Avoided Costs	kWh Avoided Costs	Total Avoided Costs kW	Total Avoided Costs kWh	Total Avoided Costs	Net Benefits	Benefit Cost Ratio
Commercial											
Commercial SOP (Custom)	\$1,979,689	1,849.48	15,975,518.2				\$1,435,679.53	\$7,975,495.15	\$9,411,174.68	\$7,431,465.68	4.75
Geothermal		10.96	13,966.6	20.0	\$916.13	\$0.58266	\$10,040.78	\$6,155.26	\$16,196.04		
Lighting		6.03	33,265.5	9.0	\$543.67	\$0.34577	\$3,278.33	\$11,502.21	\$14,780.54		
Lighting		722.89	5,759,611.6	15.0	\$775.99	\$0.49353	\$560,800.21	\$2,842,541.11	\$3,403,341.33		
Lighting		-3.92	-19,421.9	15.5	\$791.91	\$0.50366	-\$3,104.29	-\$9,782.03	-\$12,886.32		
Air Compressor		231.57	2,210,829.4	10.0	\$588.26	\$0.37413	\$136,223.37	\$827,175.02	\$963,398.38		
DX-HVAC		318.24	1,227,203.4	15.0	\$775.99	\$0.49353	\$245,399.08	\$605,681.89	\$851,060.77		
Metered Cooling		33.16	53,520.0	20.0	\$916.13	\$0.58266	\$30,376.87	\$31,183.99	\$61,562.83		
Lighting Controls		28.26	457,753.2	10.0	\$588.26	\$0.37413	\$16,624.23	\$171,259.20	\$187,883.43		
Centrifugal Chiller		182.04	2,525,792.0	25.0	\$1,020.77	\$0.64921	\$185,820.97	\$1,704,090.42	\$1,890,511.40		
Motor		322.45	3,612,968.4	15.0	\$775.99	\$0.49353	\$250,217.98	\$1,783,108.29	\$2,033,326.27		
Commercial Load Mgt SOP	\$2,644,804	60,016.51	180,049.7	1.0	\$75.46	\$0.04799	\$4,528,845.84	\$8,640.59	\$4,537,486.43	\$1,892,682.43	1.72
Commercial SOP (Basic)	\$8,936,725	8,712.48	50,596,032.1				\$6,764,307.25	\$25,355,192.25	\$32,119,499.50	\$25,182,774.50	4.63
DX HVAC		1,345.19	5,052,402.8	15.0	\$775.99	\$0.49353	\$1,043,853.99	\$2,987,042.35	\$4,030,896.34		
Lighting		874.38	4,575,592.4	15.5	\$791.91	\$0.50366	\$692,438.18	\$2,304,542.87	\$2,996,981.05		
Lighting		4,905.82	29,352,326.7	15.0	\$775.99	\$0.49353	\$3,806,867.26	\$14,584,959.80	\$18,391,827.06		
Lighting		4.09	29,345.2	16.0	\$807.38	\$0.51350	\$3,302.18	\$15,068.76	\$18,370.94		
Lighting		109.07	588,402.8	8.5	\$520.38	\$0.33096	\$56,757.85	\$194,737.79	\$251,495.64		
Lighting		182.36	1,086,258.7	9.0	\$643.77	\$0.34577	\$104,580.36	\$375,595.67	\$480,176.03		
Centrifugal Chiller		368.79	4,833,469.5	25.0	\$1,020.77	\$0.64921	\$376,449.77	\$3,137,936.73	\$3,514,386.50		
Lighting Controls		475.14	2,402,549.4	10.0	\$588.26	\$0.37413	\$279,505.86	\$898,865.81	\$1,178,371.66		
Air Handler: Control		2.67	31,384.0	15.0	\$775.99	\$0.49353	\$2,071.89	\$15,488.95	\$17,560.84		
Chiller		434.96	1,463,300.6	20.0	\$916.13	\$0.58266	\$98,479.90	\$840,953.53	\$1,239,433.43		
Commercial Solar PV SOP	\$8,656,945	7,859.19	17,253,019.3	30.0	\$1,098.88	\$0.60889	\$8,636,306.71	\$12,057,962.66	\$20,694,269.37	\$14,057,324.37	3.12
Small Business Direct Install MTP	\$617,817	392.23	2,225,064.8				\$292,171.42	\$1,061,548.77	\$1,353,720.19	\$735,908.19	2.19
Lighting Controls		0.82	5,685.7	10.0	\$588.26	\$0.37413	\$482.37	\$2,127.19	\$2,609.56		
Lighting		62.46	299,514.6	9.0	\$543.67	\$0.34577	\$33,957.63	\$103,563.16	\$137,520.79		
Lighting		173.83	1,095,808.7	15.0	\$775.99	\$0.49353	\$134,850.34	\$540,814.47	\$675,704.81		
Lighting		155.12	824,055.8	15.5	\$791.91	\$0.50366	\$122,841.08	\$415,043.94	\$537,885.02		
Healthcare MTP	\$1,033,513	498.30	3,609,469.80				\$374,881.86	\$1,936,918.01	\$2,314,599.87	\$1,281,086.67	2.24
DX HVAC		113.40	855,003.5	15.0	\$775.99	\$0.49353	\$87,997.27	\$421,969.88	\$509,967.14		
Lighting		40.68	274,401.8	15.5	\$791.91	\$0.50366	\$32,214.90	\$138,205.21	\$170,420.11		
Lighting		61.49	333,941.7	15.0	\$775.99	\$0.49353	\$47,715.63	\$164,810.26	\$212,525.87		
Lighting		46.19	274,444.3	16.0	\$607.36	\$0.51350	\$37,292.88	\$140,827.15	\$178,220.03		
Lighting		132.36	846,105.3	9.0	\$543.67	\$0.34577	\$71,950.16	\$292,557.83	\$364,517.99		
Window Film		7.03	19,187.8	10.0	\$588.26	\$0.37413	\$4,135.47	\$7,171.25	\$11,306.72		
Centrifugal Chiller		80.63	1,153,714.4	25.0	\$1,020.77	\$0.64921	\$82,304.69	\$749,002.93	\$831,307.61		
Air Handler: Control		2.06	39,531.0	15.0	\$775.99	\$0.49353	\$1,598.54	\$19,609.73	\$21,108.27		
Lighting Controls		1.10	6,122.8	10.0	\$588.26	\$0.37413	\$647.09	\$2,290.72	\$2,937.81		

Oncor's 2016 Earned Energy Efficiency Performance Bonus Calculation

	Total Program Costs	kW Saved	kWh Saved	Measure Life - Yrs	kW Avoided Costs	kWh Avoided Costs	Total Avoided Costs kW	Total Avoided Costs kWh	Total Avoided Costs	Net Benefits	Benefit Cost Ratio
Energy Slat Roof		11.36	7037.2	15	775.99	0.49353	8815.2464	3473.069316	12288.31572		
Commercial Total	\$19,849,493	79,326.19	90,036,253.9		\$22,031,993		\$48,398,757		\$70,430,750	\$50,581,257.04	3.55
R&D	\$0										
EM&V	\$0										
Grand Total	\$53,669,937	128,829.99	198,742,869.4		\$61,350,309.85		\$108,935,251.06		\$171,285,560.91	\$117,415,623.91	3.18

* Program costs include direct incentive and administration expenses along with R&D, EM&V, and indirect administration expenses which are allocated among all programs. Total program costs are shown column (f) of WP/MRS/6.

2016 Minimum Goal MW	89.40
2016 Achieved Goal MW	128.83
Percentage Over Goal	85.63%

Bonus Calculation % of Net Benefits (1% of every 2% the Demand Goal is exceeded)	0.4282
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Bonus Based on 42.82% of Net Benefits (\$117,415,624 X .4282)	\$50,277,370
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Bonus Capped at 10% of 2016 Total Net Benefits (\$117,415,624 x .1)	\$11,741,562
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Total Bonus	\$11,741,562
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Net Benefit Calculation
\$171,285,561 Total Avoided Costs
- \$53,669,937 - Sum of Total Program Costs
\$117,415,624 = Net Benefits

Avoided Costs are calculated using the present value of Commission-approved avoided capacity cost of \$80/kW and avoided energy cost of \$0.05086/kWh as stated in Rule 25.181(d)(2) and (c)(3); and based on measure life, 2% escalation rate and 8.14% discount rate as noted in § Rule 25.181(h)(6).

Oncor's Total 2018 EECRF Request by Rate Code

a	b	c	d	e	f	g	h
	Residential	Secondary ≤ 10 kW Rate Code B0, B1, B4	Secondary > 10 kW Rate Code D0, D1, D4, D6, DC, DJ, DK, DQ, EQ, E1, E4, EC, EJ, EQ	Primary > 10 kW Distribution Line Rate Code J0, K4, K0	Primary > 10 kW Substation Rate Code L0	Transmission Service Non-Profit Rate Code N0, N4	Total
Home Energy Efficiency SOP	\$13,045,589	\$0	\$0	\$0	\$0	\$0	\$13,045,589
Solar PV SOP - Residential	\$1,779,328	\$0	\$0	\$0	\$0	\$0	\$1,779,328
Hard-to-Reach SOP	\$5,594,391	\$0	\$0	\$0	\$0	\$0	\$5,594,391
Targeted Weatherization Low-Income SOP (SB 712)	\$5,061,386	\$0	\$0	\$0	\$0	\$0	\$5,061,386
Residential Demand Response MTP	\$1,581,277	\$0	\$0	\$0	\$0	\$0	\$1,581,277
Commercial SOP (Basic)	\$0	\$345,562	\$8,685,918	\$995,364	\$0	\$0	\$10,027,844
Commercial SOP (Custom)	\$0	\$0	\$3,588,258	\$588,214	\$0	\$0	\$4,176,472
Commercial Load Management SOP	\$0	\$0	\$1,770,870	\$831,675	\$0	\$0	\$2,702,545
Solar PV SOP - Commercial	\$0	\$121,993	\$2,844,630	\$123,384	\$0	\$0	\$3,090,007
Small Business Direct Install MTP	\$0	\$0	\$3,660,702	\$0	\$0	\$0	\$3,660,702
Healthcare MTP	\$0	\$14,148	\$39,411	\$38,692	\$0	\$0	\$92,251
Total Estimated Program Expenses by Rate Code	\$27,061,959	\$482,703	\$20,589,789	\$2,677,329	\$0	\$0	\$50,811,780
2016 EECRF Over Recovery							-\$6,037,607
Municipal Rate Case Expenses for 2016							\$6,687
Requested Energy Efficiency Performance Bonus for 2016							\$11,741,562
Total 2018 EECRF Request							\$58,462,432

Program totals include incentives, administration costs, research and development costs and evaluation, measurement & verification costs as shown in WPMRS/4 (column f). Commercial program rate class allocation are based on rate codes found in WPMRS/1.

Consumer Price Index - All Urban Consumers
Original Data Value

Series Id: CUUR0300SA0, CUUS0300SA0
 Not Seasonally Adjusted
 Area: South urban
 Item: All items
 Base Period: 1982-84=100
 Years: 2003 to 2016

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Increase over prior year	% Increase
2003	176.1	176.4	177.5	177.4	176.8	177.2	177.3	177.9	178.3	178.1	177.5	177.5	177.3		
2004	178.2	178.1	180.1	180.9	182.0	182.9	182.6	182.6	182.8	183.7	183.7	183.3	181.8	4.500	2.54%
2005	183.6	184.7	185.9	187.3	187.3	187.8	188.5	189.4	192.0	192.5	190.7	190.1	188.3	6.500	3.59%
2006	191.5	191.8	192.8	194.7	195.5	196.3	197.0	197.1	195.8	194.7	194.3	194.9	194.7	6.400	3.40%
2007	195.021	195.950	197.904	198.618	200.804	201.675	201.571	201.041	201.697	202.155	203.437	203.457	200.361	5.661	2.91%
2008	204.510	205.080	206.676	208.085	210.006	212.324	213.304	212.387	212.650	210.108	205.559	208.501	209.681	8.320	4.15%
2009	204.288	205.343	206.001	206.657	207.265	208.343	208.519	209.000	208.912	209.292	209.738	209.478	207.845	-0.836	-0.40%
2010	210.056	210.020	211.216	211.528	211.423	211.232	210.988	211.308	211.775	212.026	211.996	212.488	211.338	3.493	1.68%
2011	213.589	214.735	217.214	218.820	219.820	219.318	219.682	220.471	220.371	219.969	219.961	219.469	218.618	7.250	3.44%
2012	220.497	221.802	223.314	224.275	223.356	223.004	222.667	223.919	225.052	224.504	223.404	223.109	223.242	4.624	2.12%
2013	223.933	225.874	226.628	226.202	226.289	227.148	227.548	227.837	227.876	227.420	226.811	227.082	226.721	3.479	1.56%
2014	227.673	228.664	230.095	231.346	231.762	232.269	232.013	231.611	231.762	231.131	229.845	228.451	230.552	3.831	1.69%
2015	228.855	227.944	229.337	229.957	230.688	232.026	231.719	231.260	230.913	230.860	230.422	229.581	230.147	-0.405	-0.18%
2016	229.469	229.646	230.977	231.975	232.905	233.838	233.292	233.561	234.089	234.337	234.029	234.204	232.692	2.545	1.11%

Source: Bureau of Labor Statistics - http://data.bls.gov/pdq/SurveyOutputServlet?series_id=CUUR0300SA0, CUUS0300SA0

Oncor's 2016 Energy Efficiency Cost Effectiveness Calculation

	Total Program Costs*	KW Saved	kWh Saved	Measure Life - Yrs	kW Avoided Costs	kWh Avoided Costs	Total Avoided Costs kW	Total Avoided Costs kWh	Total Avoided Costs	Net Benefits	Benefit Cost Ratio
Residential											
Solar Residential MTP	\$6,286,696	4,687.29	10,266,965.5	30.0	\$1,098.88	\$0.69889	\$5,150,769.24	\$7,189,457.32	\$12,340,226.55	\$6,053,530.55	1.96
Targeted LIP	\$6,572,731	2,153.12	3,915,583.6								
Air Infiltration		115.72	147,913.5	11.0	\$690.32	\$0.40088	\$1,742,773.96	\$2,023,430.39	\$3,766,204.34	\$2,808,528.66	0.57
Ceiling Insulation		164.19	275,312.5	25.0	\$1,020.77	\$0.64921	\$72,940.63	\$69,295.56	\$132,236.19		
Central A/C		72.08	149,044.0	18.0	\$864.93	\$0.55010	\$167,600.23	\$178,735.93	\$346,335.85		
Heat Pump		1,541.86	2,704,476.9	15.0	\$775.99	\$0.49353	\$1,198,467.94	\$1,334,740.48	\$2,531,208.43		
Aerators		0.01	31.2	10.0	\$586.28	\$0.37413	\$5.88	\$11.67	\$17.56		
Energy Star Refrigerator		0.82	3,743.9	16.0	\$807.38	\$0.51850	\$742.79	\$1,922.49	\$2,886.28		
Showersheds		0.68	2,193.0	10.0	\$588.26	\$0.37413	\$400.02	\$820.47	\$1,220.48		
Solar Screens		11.97	22,741.8	10.0	\$588.26	\$0.37413	\$7,041.47	\$9,508.31	\$15,549.79		
Water Heater Jacket		0.04	294.8	7.0	\$440.28	\$0.28383	\$17.85	\$83.67	\$101.52		
Water Heater Pipe Insulation		0.00	34.6	13.0	\$707.40	\$0.44891	\$0.00	\$15.57	\$15.57		
Wall Insulation		106.12	165,928.5	25.0	\$1,020.77	\$0.64921	\$108,324.11	\$107,722.44	\$216,046.55		
Duct Improvement		98.40	387,162.5	18.0	\$884.93	\$0.55010	\$85,109.11	\$212,978.09	\$298,087.20		
Energy Star Window		29.99	45,291.4	25.0	\$1,020.77	\$0.64921	\$30,612.89	\$29,403.63	\$60,018.52		
Floor Insulation		10.75	10,782.7	25.0	\$1,020.77	\$0.64921	\$10,973.28	\$7,006.73	\$17,980.01		
Window A/C		0.39	622.5	8.0	\$495.40	\$0.31571	\$193.60	\$196.53	\$390.13		
Hard-to-Reach SOP											
Air Infiltration	\$7,993,486	7,640.26	20,135,626.6				\$6,989,013.34	\$11,787,791.47	\$18,776,804.80	\$10,783,308.80	2.35
Ceiling Insulation		1,759.99	3,014,164.7	11.0	\$630.32	\$0.40088	\$1,109,356.80	\$1,208,318.34	\$2,317,675.24		
Central A/C		5,093.00	11,715,876.5	25.0	\$1,020.77	\$0.64921	\$5,198,781.61	\$7,608,064.18	\$12,804,845.79		
Duct Improvement		0.41	838.0	18.0	\$884.93	\$0.55010	\$354.62	\$460.98	\$815.61		
Water Heater Jacket		786.72	5,403,982.8	18.0	\$884.93	\$0.55010	\$680,457.73	\$2,972,730.94	\$3,653,186.67		
		0.14	764.6	7.0	\$446.28	\$0.28383	\$62.48	\$217.02	\$279.50		
Residential Demand Response MTP											
Home Energy Efficiency SOP	\$307,427	4,885.78	0.0	1.0	\$75.46	\$0.04799	\$368,890.96	\$0.00	\$368,890.96	\$61,253.96	1.20
Air Infiltration	\$19,058,946	30,137.35	74,356,439.8								
Ceiling Insulation		9,989.54	16,984,232.5	11.0	\$630.32	\$0.40088	\$25,067,079.75	\$40,535,814.46	\$65,602,894.22	\$46,544,248.22	3.44
Central A/C		11,387.24	26,689,589.9	25.0	\$1,020.77	\$0.64921	\$6,296,608.85	\$6,808,639.12	\$13,105,245.98		
Heat Pump		1,007.43	2,348,504.2	18.0	\$864.93	\$0.55010	\$11,572,714.47	\$17,294,650.76	\$28,967,405.23		
Duct Improvement		4,748.83	8,411,589.0	15.0	\$775.99	\$0.49353	\$871,356.43	\$1,291,912.16	\$2,163,268.59		
Energy Star Window		3,039.18	19,932,179.5	18.0	\$864.93	\$0.55010	\$3,685,044.59	\$4,151,361.15	\$7,836,405.75		
Ground Source Heat Pump		1.46	2,029.7	25.0	\$1,020.77	\$0.64921	\$2,628,677.96	\$10,964,991.94	\$13,593,669.90		
Water Heater Jacket		10.83	31,735.6	20.0	\$916.13	\$0.58266	\$9,921.69	\$18,491.08	\$28,412.75		
		2.84	16,596.4	7.0	\$446.28	\$0.28383	\$1,267.44	\$4,710.56	\$5,977.99		
Residential Total	\$40,218,996	49,503.80	108,704,615.5				\$39,318,317.24	\$61,536,493.63	\$100,854,810.87	\$60,635,814.87	2.51

Oncor's 2016 Energy Efficiency Cost Effectiveness Calculation

Commercial	Total Program Costs	kW Saved	kWh Saved	Measure Life - Yrs	kW Avoided Costs	kWh Avoided Costs	Total Avoided Costs kW	Total Avoided Costs kWh	Total Avoided Costs	Net Benefits	Benefit Cost Ratio
Commercial SOP (Custom)	\$2,340,390	1,849.48	15,975,618.2				\$1,436,679.93	\$7,975,495.15	\$9,411,174.68	\$7,070,784.66	4.02
Geothermal		10.96	13,996.6	20.0	\$916.13	\$0.58266	\$10,040.78	\$8,155.26	\$18,196.04		
Lighting		6.03	33,265.5	9.0	\$543.67	\$0.34577	\$3,278.33	\$11,502.21	\$14,780.54		
Lighting		722.89	5,759,611.6	15.0	\$775.89	\$0.49353	\$560,800.21	\$2,842,541.11	\$3,403,341.33		
Lighting		-3.92	-19,421.9	15.5	\$791.91	\$0.50366	-\$3,104.29	-\$9,782.03	-\$12,886.32		
Air Compressor		231.57	2,210,829.4	10.0	\$588.26	\$0.37413	\$136,223.37	\$827,175.02	\$963,398.39		
DX-HVAC		316.24	1,227,203.4	15.0	\$775.99	\$0.49353	\$245,399.08	\$605,661.69	\$851,060.77		
Metered Cooling		33.16	53,520.0	20.0	\$916.13	\$0.58266	\$30,678.87	\$31,183.96	\$61,562.83		
Lighting Controls		28.26	457,763.2	10.0	\$588.26	\$0.37413	\$16,624.23	\$171,259.20	\$187,883.43		
Centrifugal Chiller		182.04	2,625,792.0	25.0	\$1,020.77	\$0.64921	\$185,820.97	\$1,704,690.42	\$1,890,511.40		
Motor		322.45	3,612,968.4	15.0	\$775.99	\$0.49353	\$250,217.88	\$1,763,108.29	\$2,033,326.27		
Commercial Load Mgt	\$3,126,690	60,016.51	180,049.7	1.0	\$75.46	\$0.04799	\$4,528,845.84	\$8,640.59	\$4,537,486.43	\$1,410,796.43	1.45
Commercial SOP (Basic)	\$8,200,602	8,712.48	50,595,032.1				\$6,764,307.25	\$25,355,192.25	\$82,119,499.50	\$23,918,897.50	3.92
DX HVAC		1,945.19	6,052,402.8	15.0	\$775.99	\$0.49353	\$1,043,853.99	\$2,967,042.35	\$4,030,896.34		
Lighting		874.39	4,575,592.4	15.5	\$791.91	\$0.50366	\$692,438.18	\$2,304,542.87	\$2,996,981.05		
Lighting		4,905.82	29,552,326.7	15.0	\$775.99	\$0.49353	\$3,806,867.28	\$14,594,959.80	\$18,391,827.08		
Lighting		4.09	29,345.2	16.0	\$807.38	\$0.51350	\$3,302.18	\$15,066.76	\$18,370.94		
Lighting		109.07	588,402.8	8.5	\$520.38	\$0.33086	\$56,757.95	\$194,737.79	\$251,495.64		
Lighting		192.96	1,086,258.7	9.0	\$543.67	\$0.34577	\$104,580.36	\$376,585.67	\$480,176.03		
Centrifugal Chiller		368.79	4,833,459.5	25.0	\$1,020.77	\$0.64921	\$376,449.77	\$3,137,936.73	\$3,514,386.50		
Lighting Controls		475.14	2,402,549.4	10.0	\$588.26	\$0.37413	\$279,505.86	\$896,865.81	\$1,176,371.66		
Air Handler Control		2.67	31,384.0	15.0	\$775.99	\$0.49353	\$2,071.89	\$15,488.95	\$17,560.84		
Chiller		434.96	1,443,300.6	20.0	\$916.13	\$0.58266	\$388,479.90	\$840,953.53	\$1,229,433.43		
Commercial Solar PV	\$7,846,202	7,859.19	17,253,019.3	30.0	\$1,098.88	\$0.69889	\$8,636,306.71	\$12,057,962.68	\$20,694,269.37	\$12,848,067.37	2.64
Direct Install		392.23	2,225,064.6				\$282,171.42	\$1,061,548.77	\$1,353,720.19	\$623,336.19	1.85
Lighting Controls		0.82	5,695.7	10.0	\$588.26	\$0.37413	\$482.37	\$2,127.19	\$2,609.56		
Lighting		62.46	299,514.6	9.0	\$543.67	\$0.34577	\$33,957.63	\$103,563.16	\$137,520.79		
Lighting		173.83	1,095,808.7	15.0	\$775.99	\$0.49353	\$134,990.34	\$540,914.47	\$675,704.81		
Lighting		155.12	624,065.8	15.5	\$791.91	\$0.50366	\$122,841.05	\$415,043.94	\$537,885.02		
Healthcare MTP	\$1,221,820	496.30	3,809,489.80				\$374,681.96	\$1,939,918.01	\$2,314,599.87	\$1,092,779.87	1.89
DX HVAC		113.40	855,003.5	15.0	\$775.99	\$0.49353	\$87,997.27	\$421,969.88	\$509,967.14		
Lighting		40.68	274,401.8	15.5	\$791.91	\$0.50366	\$32,214.90	\$188,205.21	\$170,420.11		
Lighting		61.49	393,941.7	15.0	\$775.99	\$0.49353	\$47,715.63	\$164,810.25	\$212,525.87		
Lighting		46.19	274,444.3	16.0	\$807.38	\$0.51350	\$37,292.88	\$140,927.15	\$178,220.03		
Lighting		132.36	846,105.3	9.0	\$543.67	\$0.34577	\$71,980.16	\$282,557.83	\$354,517.99		
Window Film		7.03	19,167.8	10.0	\$588.26	\$0.37413	\$4,135.47	\$7,171.25	\$11,306.72		
Centrifugal Chiller		80.63	1,153,714.4	25.0	\$1,020.77	\$0.64921	\$82,304.69	\$749,002.93	\$831,307.61		
Air Handler Control		2.06	39,531.0	15.0	\$775.99	\$0.49353	\$1,598.54	\$19,509.73	\$21,108.27		
Lighting Controls		1.10	6,122.8	10.0	\$588.26	\$0.37413	\$647.09	\$2,290.72	\$2,937.81		

Oncor's 2016 Energy Efficiency Cost Effectiveness Calculation

	Total Program Costs	kW Saved	kWh Saved	Measure Life - Yrs	kW Avoided Costs	kWh Avoided Costs	Total Avoided Costs kW	Total Avoided Costs kWh	Total Avoided Costs	Net Benefits	Benefit Cost Ratio
Energy Star Roof		11.36	7037.2	15	775.99	0.48353	8815.2464	3473.059316	12286.31572		
Commercial Total	\$23,466,088	79,326.19	90,038,253.9				\$22,031,993	\$48,388,757	\$70,430,750	\$46,964,662.04	3.00
R&D	\$0										
EM&V	\$0										
Grand Total	\$63,685,084	128,829.99	198,742,869.4				\$51,350,309.85	\$109,935,251.06	\$171,285,560.91	\$107,600,476.91	2.69

* Program costs include incentives, direct and allocated administration expenses (less municipal rate case expenses), R&D, performance bonus and EM&V expenses as shown in column (i) of WPMRS/6 for each program.

Avoided Costs are calculated using the present value of Commission-approved initial avoided capacity cost of \$80/kW and initial avoided energy cost of \$0.05008/kWh as stated in Rule § 25.181(d)(2) and (d)(3); and based on measure life, 2% escalation rate and 8.14% discount rate as noted in § Rule 25.181(f)(5).

Contract Regarding Administrator and/or Service Provider That Received More Than 5% of Overall Incentive Payments

This information is confidential and will be made available only after execution of a certification to be bound by the Protective Order set forth in Attachment B of this Application and delivery of same to Teri Smart, Oncor Electric Delivery Company, LLC, 1616 Woodall Rodgers Frwy, Suite 6A-001, Dallas, TX 75202.

**INDEX TO THE DIRECT TESTIMONY
OF J. MICHAEL SHERBURNE, WITNESS FOR
ONCOR ELECTRIC DELIVERY COMPANY LLC**

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EXHIBITS:

- EXHIBIT JMS-1 List of J. Michael Sherburne's Prior Commission Testimony
- EXHIBIT JMS-2 2018 Program Costs and 2016 (Over)/Under Recovery of Energy Efficiency Costs
- EXHIBIT JMS-3 Performance Bonus Allocation
- EXHIBIT JMS-4 Municipalities' EECRF Proceeding Expense Allocation
- EXHIBIT JMS-5 Calculation of 2018 Energy Efficiency Cost Recovery Factors

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- EXHIBIT JMS-6 Rider EECRF – Energy Efficiency Cost Recovery Factor
- EXHIBIT JMS-7 Rider EECRF – Energy Efficiency Cost Recovery Factor
(Redline Version)

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1 Company and began working on a remote meter reading system for a high
2 rise apartment complex in Dallas. In December 1987, I was named
3 Manager, Facilities Management for DP&L and became responsible for
4 the construction, operation, and maintenance of DP&L office facilities. I
5 continued that responsibility until February 1991, when I was named to the
6 position of Rates and Cost Analysis Manager for Texas Utilities Electric
7 Company. In that role, I had responsibility for interpreting and
8 administering the Company's Tariff for Electric Service, determining the
9 appropriate rate class cost allocation methodology for the Company's rate
10 class cost of service, and reviewing and participating in rulemakings at the
11 Public Utility Commission of Texas ("Commission"). In May 1999, I was
12 named Electric Rates Manager - TXU Business Services and became the
13 Company's advocate in virtually all of the rulemakings associated with the
14 opening of the retail electricity market in the Electric Reliability Council of
15 Texas ("ERCOT"). I participated in countless workshops dealing with the
16 unbundling rules, especially the creation of the Pro Forma Tariff for Retail
17 Delivery Service (Substantive Rule 25.241). Subsequent to the opening of
18 the retail market in Texas, I continued to represent the Company in rate
19 and regulatory proceedings at the Commission. In February 2008, I was
20 named Director – Rates and Retail Regulation for Oncor, and in April,
21 2009, I was named to my current position of Senior Director – Rates &
22 Financial Analysis for Oncor.

23 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

24 A. Yes. Please see Exhibit JMS-1 for a list of the Commission proceedings
25 in which I have provided testimony.

26 **II. PURPOSE OF DIRECT TESTIMONY**

27 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

28 A. The purpose of my direct testimony is to: (1) provide background on
29 Oncor's recovery of energy efficiency program costs in calendar year

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1 2016; (2) describe and support the methodology used to develop the
2 proposed energy efficiency cost recovery factor (“EECRF”) charges to
3 recover the proposed 2018 energy efficiency costs pursuant to 16 Tex.
4 Admin. Code (“TAC”) § 25.181 (“Rule 25.181”); (3) describe and support
5 the under-recovery of energy efficiency costs for the Transmission For
6 Profit energy efficiency rate class; (4) describe and support the
7 methodology used to allocate Oncor’s 2016 earned energy efficiency
8 performance bonus to the energy efficiency rate classes; (5) describe and
9 support the methodology used to allocate the municipalities’ EECRF
10 proceeding expenses incurred in 2016 to the energy efficiency rate
11 classes; (6) describe and support the process Oncor used to exempt
12 industrial distribution voltage customers from EECRF charges; (7)
13 describe and support the calculation of the line loss factor used in
14 determining Oncor’s energy efficiency goals; and (8) support Oncor’s
15 proposed adjustments to its Rider EECRF – Energy Efficiency Cost
16 Recovery Factor. For more information related to the Company’s
17 proposed 2018 EECRF, please refer to the direct testimony of Oncor
18 witness Mr. Michael R. Stockard.

19 **III. ONCOR’S RECOVERY OF ENERGY EFFICIENCY PROGRAM COSTS**

20 Q. HOW WERE COSTS ASSOCIATED WITH ENERGY EFFICIENCY
21 PROGRAMS RECOVERED BY ONCOR IN 2016?

22 A. Oncor recovered energy efficiency costs in 2016 through EECRF factors
23 approved by the Commission in Docket Nos. 44784 and 42559¹. Please
24 refer to my WP/JMS/1 for the energy efficiency revenues recovered in
25 2016 through these EECRF factors.

26 Q WHY IS ONCOR REQUESTING AN EECRF FOR 2018?

27 A. Oncor is requesting an EECRF for 2018 in compliance with Rule
28 25.181(f)(8), which provides as follows: “Not later than June 1 of each

¹ Docket No. 42559 effective March 1, 2015 through February 29, 2016.
Docket No. 44784 effective March 1, 2016 through February 28, 2016.

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1 year, a utility in an area in which customer choice is offered shall apply to
2 adjust its EECRF effective March 1 of the following year.”

3 **IV. CALCULATION OF THE AMOUNT TO BE RECOVERED BY ENERGY**
4 **EFFICIENCY RATE CLASS THROUGH THE 2018 EECRF**

5 Q. HOW IS THE AMOUNT TO BE RECOVERED THROUGH ONCOR'S
6 PROPOSED 2018 EECRF DETERMINED?

7 A. The methodology used to determine the amount to be recovered through
8 the EECRF is specified in Rule 25.181(f) and is described in the direct
9 testimony of Oncor witness Mr. Michael R. Stockard. Oncor's proposed
10 2018 EECRF is designed to include the forecasted costs of the 2018
11 program year (including applicable evaluation, measurement, and
12 verification costs), Oncor's overall over-recovery of actual 2016 energy
13 efficiency costs, Oncor's earned energy efficiency performance bonus for
14 2016 program year achievements, and the municipalities' EECRF
15 proceeding expenses incurred in 2016. The total amount requested for
16 recovery through the 2018 EECRF is \$56,462,295 (i.e. \$56,462,432 less
17 \$137 being requested by Oncor for the under-recovery of energy
18 efficiency costs for the Transmission For Profit Energy Efficiency rate
19 class as later explained in my testimony) as shown on my Exhibit JMS-5.

20 Q. PLEASE DESCRIBE HOW THE 2018 ENERGY EFFICIENCY PROGRAM
21 COSTS, BY ENERGY EFFICIENCY RATE CLASS, WERE DERIVED.

22 A. Oncor witness Mr. Stockard assigned the energy efficiency program costs
23 for 2018 at the rate code level. Mr. Stockard then aggregated these
24 program costs to the energy efficiency rate class level as shown in his
25 Exhibit MRS-4. The energy efficiency rate class aggregation was verified
26 by me.

27 Q. DID ONCOR EXPERIENCE AN OVERALL OVER-RECOVERY OF 2016
28 ENERGY EFFICIENCY PROGRAM COSTS?

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1 A. Yes. Oncor experienced an overall over-recovery of \$6,097,744 (which
2 reflects the \$137 reduction being requested by Oncor for the Transmission
3 For Profit Energy Efficiency rate class in the 2016 program year as shown
4 on WP/JMS/2, column (h)).

5 Q. PLEASE DESCRIBE HOW THE (OVER)/UNDER-RECOVERY OF 2016
6 ENERGY EFFICIENCY PROGRAM COSTS, BY ENERGY EFFICIENCY
7 RATE CLASS, WAS DERIVED.

8 A. The amount of (over)/under-recovery for 2016 by energy efficiency rate
9 class was calculated by subtracting the revenues collected through the
10 EECRF factors effective in 2016 adjusted to remove the 2014
11 performance bonus amount, the 2014 (over)/under-collection amount, and
12 the municipal rate case expense incurred in 2015 from the actual 2016
13 energy efficiency program expenses.

14 The energy efficiency revenues for 2016 were aggregated to the
15 energy efficiency rate class level from Company's books and records as
16 reflected in WP/JMS/2 column (d).

17 Oncor witness Mr. Stockard identified the actual energy efficiency
18 program expenses by rate code for 2016 as described in his direct
19 testimony. The actual 2016 energy efficiency program expenses were
20 then aggregated to the energy efficiency rate class level as shown in his
21 Exhibit MRS-2 and my WP/JMS/2, column (c). The 2014 performance
22 bonus and 2014 (over)/under-recovery were taken from Docket No. 44784
23 and are shown on WP/JMS/2 columns (e) and (g), respectively. The
24 municipal rate case expense incurred in 2015 is for the prosecution of
25 Docket No. 42559, Oncor's 2015 EECRF filing.

26 The 2016 (over)/under-recovery as shown in WP/JMS/2 column (h)
27 (and reflected in Exhibit JMS-2, column (d)) was then calculated by
28 subtracting the actual 2016 energy efficiency revenues (column (d))
29 adjusted for the 2014 performance bonus (column (e)), the 2014

1 (over)/under-recovery (column (g)) and the municipal rate case expenses
2 incurred in 2015 (column (f)) from the 2016 actual energy efficiency
3 program costs (column (c)).

4 **V. UNDER-RECOVERY OF ENERGY EFFICIENCY COSTS FOR THE**
5 **TRANSMISSION FOR PROFIT ENERGY EFFICIENCY RATE CLASS**

6 Q. HOW IS ONCOR PROPOSING TO TREAT THE 2016 UNDER-
7 RECOVERY OF ENERGY EFFICIENCY COSTS FOR THE
8 TRANSMISSION FOR PROFIT ENERGY EFFICIENCY RATE CLASS?

9 A. There were two instances of rebilling situations during 2016 in the
10 Transmission For Profit Energy Efficiency Rate Class that resulted in an
11 under-recovery of \$137 (WP/JMS/2). Oncor is proposing to write-off the
12 under-recovery of \$137 because that amount is too small to be recovered
13 through the EECRF and the Transmission For Profit Energy Efficiency
14 Rate Class is not anticipated to incur any additional Energy Efficiency
15 costs. Therefore, rather than having to account for the 2016 under-
16 recovery in two years, an amount that will never be able to be charged,
17 Oncor is proposing to write-off the under-recovery balance of \$137 for
18 administrative efficiency.

19 Q. WHAT IS THE EFFECT OF WRITING-OFF THE \$137 NET UNDER-
20 RECOVERY FOR TRANSMISSION FOR PROFIT RATE CLASS?

21 A. By writing-off the \$137 under-recovery of energy efficiency costs for the
22 Transmission For Profit rate class, the under-recovery balance for the
23 rate class would go to zero (\$0). The effect of this write-off would
24 decrease by \$137 the Total 2017 Energy Efficiency Costs to \$56,462,295.

25 Q. WHAT TREATMENT IS ONCOR SEEKING REGARDING THE
26 PROPOSED WRITING-OFF OF UNDER-RECOVERY COSTS?

27 A. Oncor is seeking approval for its proposed write-off of \$137 for the
28 Transmission For Profit rate class. In addition, Oncor is seeking a specific

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1 Finding of Fact for this adjustment so that the record is clear for future
2 EECRF proceedings.

3 Q. WILL THIS WRITE-OFF AFFECT OTHER ENERGY EFFICIENCY RATE
4 CLASSES?

5 A. No.

6 **VI. ALLOCATION OF THE EARNED 2016 ENERGY EFFICIENCY**
7 **PERFORMANCE BONUS**

8 Q. DID ONCOR EARN AN ENERGY EFFICIENCY PERFORMANCE
9 BONUS BASED ON THE RESULTS OF ITS 2016 ENERGY EFFICIENCY
10 PROGRAMS?

11 A. Yes. Rule 25.181(h) states that a “utility that exceeds its demand and
12 energy reduction goals established in this section at a cost that does not
13 exceed the cost caps established in subsection (f)(7) of this section shall
14 be awarded a performance bonus...” Details of how Oncor exceeded its
15 demand and energy reduction goals without exceeding the applicable cost
16 caps, thus qualifying for a performance bonus, are described in Mr.
17 Stockard’s direct testimony.

18 Q. WHAT IS THE AMOUNT OF THE 2016 ENERGY EFFICIENCY
19 PERFORMANCE BONUS EARNED BY ONCOR AND HOW WAS IT
20 DETERMINED?

21 A. Under Rule 25.181(h), Oncor earned an \$11,741,562 energy efficiency
22 performance bonus for its 2016 program year achievements as shown on
23 Exhibit MRS-3, page 3. Oncor is requesting to recover this earned
24 performance bonus of \$11,741,562 through the 2018 EECRF. Mr.
25 Stockard’s direct testimony provides further explanation of the calculation
26 of Oncor’s earned performance bonus.

27 Q. PLEASE DESCRIBE THE METHODOLOGY USED BY ONCOR TO
28 ALLOCATE THE EARNED 2016 PERFORMANCE BONUS TO THE
29 ENERGY EFFICIENCY RATE CLASSES.

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1 A. Oncor is proposing to use allocation factors based on the actual 2016
2 energy efficiency program costs by energy efficiency rate class. The 2016
3 performance bonus allocation for each energy efficiency rate class is
4 calculated by multiplying the earned performance bonus amount of
5 \$11,741,562 (column (a) of Exhibit JMS-3) by the allocation factor for
6 each energy efficiency rate class (column (c) of Exhibit JMS-3). The
7 performance bonus allocation factors are the ratio of the energy efficiency
8 rate class' actual 2016 energy efficiency program costs to the actual 2016
9 total energy efficiency program costs.

10 Q. WHY IS ONCOR USING THIS METHODOLOGY FOR ALLOCATING
11 THE ENERGY EFFICIENCY PERFORMANCE BONUS?

12 A. Oncor is adhering to the Commission Rules regarding performance bonus
13 allocation. Rule 25.181(h)(6) states: "The bonus shall be allocated in
14 proportion to the program costs associated with meeting the demand and
15 energy goals and allocated to eligible customers on a rate class basis."

16 VII. **ALLOCATION OF THE 2016 MUNICIPALITIES' EECRF PROCEEDING**
17 **EXPENSES**

18 Q. WHY IS ONCOR INCLUDING THE MUNICIPALITIES' EECRF
19 PROCEEDING EXPENSES INCURRED IN 2016 IN ITS 2018 TOTAL
20 ENERGY EFFICIENCY COSTS?

21 A. Substantive Rule 25.181(f) specifies that the determination of EECRFs are
22 ratemaking proceedings for purposes of PURA § 33.023. As such,
23 municipalities' EECRF proceeding (or rate case) expenses from EECRF
24 proceedings are reimbursable. Oncor is including these expenses
25 incurred in 2016 regarding Oncor's 2017 EECRF proceeding in Docket
26 No. 46013 as directed by Rule 25.181(f)(3)(B) which states: "For
27 municipalities' EECRF proceeding expenses, the utility may include only
28 expenses paid or owed for the immediately previous EECRF proceeding

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1 conducted under this subsection for services reimbursable under PURA
2 §33.023(b)."

3 Q. WHAT IS THE AMOUNT OF THE MUNICIPALITIES' EECRF
4 PROCEEDING EXPENSE INCURRED IN 2016 AND HOW WAS IT
5 DETERMINED?

6 A. The amount of the municipalities' EECRF proceeding expense for 2016
7 that was submitted to Oncor is \$6,687. These expenses were determined
8 by the entity (i.e., Steering Committee of Cities Served by Oncor ["Cities"])
9 representing several municipalities in Oncor's previous EECRF filing in
10 Docket No. 46013.

11 Q. PLEASE DESCRIBE THE METHODOLOGY USED BY ONCOR TO
12 ALLOCATE THE MUNICIPALITIES' EECRF PROCEEDING EXPENSE
13 TO THE ENERGY EFFICIENCY RATE CLASSES.

14 A. Oncor is proposing to use allocation factors based on the actual 2016
15 energy efficiency program costs by energy efficiency rate class. The
16 municipalities' EECRF proceeding expense incurred in 2016 for each
17 energy efficiency rate class is calculated by multiplying the total
18 municipalities' EECRF proceeding expense of \$6,687 (column (a) of
19 Exhibit JMS-4) by the allocation factor for each energy efficiency rate
20 class (column (c) of Exhibit JMS-4).

21 Q. WHY IS ONCOR USING THIS METHODOLOGY FOR ALLOCATING
22 THE MUNICIPALITIES' EECRF PROCEEDING EXPENSE?

23 A. Since the rule does not give direction on how to allocate the municipalities'
24 EECRF proceeding expenses to the energy efficiency rate classes, and
25 because through Cities the municipalities intervene and participate in the
26 EECRF proceedings on behalf of all of their constituents (i.e., all energy
27 efficiency rate classes), Oncor believes its proposed allocation
28 methodology for the municipalities' EECRF proceeding expenses incurred
29 in 2016 is most reasonably and fairly accomplished by using the ratio of

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1 actual 2016 energy efficiency programs costs for each energy efficiency
2 rate class to the total 2016 actual energy efficiency program costs. This is
3 the same methodology used to allocate the performance bonus.

4 Q. HAS ONCOR REVIEWED THE REASONABLENESS OF THE
5 MUNICIPALITIES' EECRF PROCEEDING EXPENSE?

6 A. No, Oncor has not reviewed those expenses for reasonableness. The
7 burden of proof for those expenses is the responsibility of the Cities. It is
8 my understanding that Cities will provide testimony or other evidence
9 proving the reasonableness of these expenses. If the Commission
10 ultimately determines that some of these expenses were not reasonable,
11 Oncor will modify the amount to equal the Commission approved amount.

12 **VIII. EXEMPTION OF INDUSTRIAL CUSTOMERS FROM EECRF CHARGES**

13 Q. WAS THERE A PROVISION ADDED IN THE ENERGY EFFICIENCY
14 RULEMAKING (PROJECT NO. 39674) THAT ALLOWED CERTAIN
15 INDUSTRIAL CUSTOMERS TO OPT-OUT OF PARTICIPATING IN AND
16 PAYING FOR ENERGY EFFICIENCY PROGRAMS?

17 A. Yes. The addition of Substantive Rule 25.181(w) requires utilities like
18 Oncor to exclude certain industrial customers from any energy efficiency
19 programs and costs included in the EECRF. Subsection (w) states, "The
20 account number(s) or ESID number(s) identified by the industrial customer
21 under this section shall not be charged for any costs associated with
22 programs provided under this section, including any shareholder bonus
23 awarded; nor shall the identified facilities be eligible to participate in utility-
24 administered energy efficiency programs during the term."

25 Q. HOW DID ONCOR DETERMINE THE ESIDS THAT QUALIFIED TO OPT-
26 OUT FROM EECRF CHARGES UNDER RULE 25.181(w)?

27 A. According to the rule, the following information was required to be
28 presented to the utility in order for an industrial customer taking electric
29 service at distribution voltage to qualify for the EECRF exemption: the

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1 name of the industrial customer, a copy of the customer's Texas Sales
2 and Use Tax Exemption Certification (pursuant to Tax Code §151.317), a
3 description of the industrial process taking place at the consuming
4 facilities, and the customer's applicable account number or ESID number.
5 To facilitate an orderly process, Oncor posted on its website an application
6 form, directions to complete the form and a description of the opt-out
7 process. If an industrial customer provided the necessary information as
8 stated in the rule, then Oncor accepted the request for the EECRF opt-out
9 and notified the customer that the ESID(s) would not be charged the
10 EECRF.

11 Q. WHEN DID ONCOR BEGIN THE INDUSTRIAL OPT-OUT PROCESS?

12 A. As stated in Subsection (w), "...notices shall be submitted not later than
13 February 1 to be effective for the following program year." Oncor began
14 the industrial opt-out process when notices were received through
15 February 1, 2013 that became effective with the first billing cycle of
16 January 2014. Oncor has subsequently received notices through
17 February 1 of every year that became effective with the first billing cycle of
18 January the following year. Notices are effective for three years after their
19 acceptance.

20 Q. HOW DOES THE INDUSTRIAL OPT-OUT PROCESS AFFECT THE
21 NUMBER OF BILLING UNITS PER ENERGY EFFICIENCY RATE
22 CLASS?

23 A. Oncor estimated the amount of energy (kWh) for 2018 for each opt-out
24 ESID (i.e., those qualified for 2016-2018, 2017-2019, and 2018-2020) and
25 reduced the total estimated energy efficiency rate class energy amount
26 shown on my workpaper WP/JMS/3 accordingly. The 2018 billing units
27 used in the calculation of the 2018 EECRFs are shown on my Exhibit
28 JMS-5 column (b) and reflect the amount of energy for each energy
29 efficiency rate class adjusted for industrial opt-out ESIDs.

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1 **IX. CALCULATION OF ONCOR'S LINE LOSS FACTOR USED IN**
2 **DETERMINING ENERGY EFFICIENCY GOALS**

3 Q. WHY IS ONCOR PROVIDING THE CALCULATION OF THE LINE LOSS
4 FACTOR IN THIS PROCEEDING?

5 A. According to Rule 25.181(f)(12)(F), the order in an EECRF proceeding
6 shall contain findings of fact regarding the reasonableness of "any
7 calculations or estimates of system losses and line losses used in
8 calculating the charges...." Even though line losses are not used in
9 determining Oncor's EECRF charges, they are used in the calculation of
10 energy efficiency goals. See the direct testimony of Oncor witness Mr.
11 Stockard for more information regarding Oncor's demand reduction and
12 energy savings goals. It is Oncor's understanding that at a previous open
13 meeting approving a utility's EECRF case, the commissioners pointed out
14 that the demand reduction goal was reported at the meter rather than at
15 the source. Staff was directed to investigate how all utilities reported
16 energy efficiency goals and the application of line losses. In the spirit of
17 consistency and transparency, Staff has previously requested that utilities
18 use the utility's latest approved line loss study in determining its line loss
19 factor for the calculation of demand reduction goal.

20 Q. HAS ONCOR CALCULATED THE LINE LOSS FACTOR USED IN
21 DETERMINING ENERGY EFFICIENCY GOALS?

22 A. Yes. Oncor has calculated the line loss factor used in determining energy
23 efficiency goals according to Staff's recommendation as shown in my
24 workpaper WP/JMS/4. The calculation uses the loss factors approved in
25 Oncor's last rate case proceeding in Docket No. 38929 applied to the
26 actual Oncor annual system peak demand by voltage level using load
27 research data adjusted for industrial customers who have claimed the
28 exemption from energy efficiency program participation. The final
29 calculation is a 5-year weighted average of the annual loss factors

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1 adjusted for industrial opt-out to match the 5-year average peak demand
2 used in the calculation of the energy efficiency demand goal. The
3 resulting weighted line loss factor used in calculating the demand
4 reduction goal is 6.655%. This line loss factor is also shown in Mr.
5 Stockard's direct testimony in Exhibit MRS-1, page 5, footnote in Table 1.

6 **X. CALCULATION OF THE PROPOSED 2018 ENERGY EFFICIENCY**
7 **COST RECOVERY FACTORS**

8 Q. HOW ARE THE PROPOSED ENERGY EFFICIENCY COST RECOVERY
9 FACTORS CALCULATED?

10 A. The proposed EECRFs are calculated by dividing the Total 2018 Energy
11 Efficiency Costs (column (d) of my Exhibit JMS-5) by the 2018 forecasted
12 opt-out adjusted energy for each energy efficiency rate class (column (b)
13 of my Exhibit JMS-5). These EECRFs are also included in proposed Rider
14 EECRF - Energy Efficiency Cost Recovery Factor (my Exhibits JMS-6
15 (clean) and JMS-7 (annotated)).

16 Q. HOW WAS THE 2018 FORECASTED OPT-OUT ADJUSTED ENERGY
17 BILLING UNITS BY ENERGY EFFICIENCY RATE CLASS
18 DETERMINED?

19 A. The forecasted number of energy billing units by energy efficiency rate
20 class for 2018, adjusted for industrial opt-outs, is based on the information
21 contained in Oncor's 2017 Energy and Demand Plan – 2018 Projections
22 as shown in WP/JMS/3.

23 **XI. CONCLUSION**

24 Q. PLEASE SUMMARIZE YOUR DIRECT TESTIMONY.

25 A. Oncor has accurately calculated allocation factors based on the actual
26 2016 energy efficiency program costs by energy efficiency rate class. I
27 have used those factors to allocate the earned performance bonus
28 discussed by Mr. Stockard, and I have accurately calculated the amounts
29 by energy efficiency rate class to be recovered through an EECRF. I have

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Sherburne – Direct
Oncor Electric Delivery
Application for 2018 EECRF

1 also used those same factors to allocate the municipalities' EECRF
2 proceeding expense, and I have accurately calculated the amounts by
3 energy efficiency rate class to be recovered through an EECRF. I have
4 compared the actual 2016 energy efficiency costs provided by Mr.
5 Stockard to the energy efficiency revenues recovered in 2016 adjusted for
6 the 2014 performance bonus amount, the 2014 (over)/under-collection of
7 energy efficiency costs, and the municipal rate case expense incurred in
8 2015 to correctly calculate the 2016 (over)/under-recovery by energy
9 efficiency rate class. I have also accurately calculated the proposed
10 EECRFs on a per kWh basis (reasonably adjusted for the exclusion of
11 certain industrial customers) and have included those factors in Rider
12 EECRF - Energy Efficiency Cost Recovery Factor. The proposed 2018
13 EECRF will result in the recovery of Oncor's forecasted 2018 energy
14 efficiency program costs, the allocation of the 2016 (over)/under-
15 recovered energy efficiency costs, collection of the municipalities' EECRF
16 proceeding expenses incurred in 2016, Oncor's estimated expenses
17 relating to the Commission's evaluation, measurement, and verification,
18 and recovery of the earned 2016 energy efficiency performance bonus. In
19 addition, I have accurately calculated the line loss factor used in
20 determining Oncor's energy efficiency goals according to Staff's
21 recommendation to use the latest approved line loss study. For all of
22 these reasons, the proposed Rider EECRF is calculated correctly, is just
23 and reasonable and should be approved. The 2018 EECRF factors
24 should be made effective beginning with bills rendered on March 1, 2018.
25 I have proposed that Oncor write-off the under-recovery of energy
26 efficiency costs for a certain rate class which are too small to recover
27 through the EECRF, and seek a specific Finding of Fact for this
28 adjustment.

29 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

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1 A. Yes, it does.


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Application for 2018 EECRF**

STATE OF TEXAS §
 §
COUNTY OF DALLAS §

BEFORE ME, the undersigned authority, on this day personally appeared J. Michael Sherburne, who, having been placed under oath by me, did depose as follows:

My name is J. Michael Sherburne. I am of legal age and a resident of the State of Texas. The foregoing direct testimony and the attached exhibits offered by me are true and correct, and the opinions stated therein are, to the best of my knowledge and belief, accurate, true and correct.



J. Michael Sherburne

SUBSCRIBED AND SWORN TO BEFORE ME by the said J. Michael Sherburne this 30th day of May, 2017.





Notary Public, State of Texas

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**Sherburne – Direct
Oncor Electric Delivery
Application for 2018 EECRF**

**Oncor Electric Delivery Company LLC
Application for 2018 Energy Efficiency Cost Recovery Factor**

List of J. Michael Sherburne's Prior Commission Testimony

<u>Docket No.</u>	<u>Case Style</u>
11037	APPLICATION OF TEXAS UTILITIES ELECTRIC COMPANY FOR APPROVAL OF CALCULATION OF HOUSE BILL TAX ADJUSTMENT FACTORS FOR 1992. PURSUANT TO SUBST R. 23.21(d)
11632	APPL. OF TU ELECTRIC CO. FOR APPROVAL OF CALCULATION OF H.B. 11 TAX ADJUSTMENT FACTORS FOR 1993. PURSUANT TO SUBST. R. 23.21(d)
11735	APPLICATION OF TEXAS UTILITIES ELECTRIC COMPANY FOR AUTHORITY TO CHANGE RATES
13575	APPL. OF TEXAS UTILITIES ELEC CO FOR APPROVAL OF ITS 1995 INTEGRATED RESOURCE PLAN (IRP) AND THE DEMAND-SIDE MANAGEMENT PROGRAMS AND CONTRACTS, RENEWABLE RESOURCES AGREEMENT, AND NOTICES OF INTENT ASSOCIATED THEREWITH, FOR APPROVAL OF CERTAIN COST RECOVER
20200	COMPLAINT OF TEXAS DEPARTMENT OF TRANSPORTATION AGAINST TEXAS UTILITIES ELECTRIC COMPANY
20546	FULL SWITCHOVER COMPLIANCE FILINGS OF TEXAS-NEW MEXICO POWER COMPANY, TEXAS UTILITIES ELECTRIC COMPANY, SOUTHWESTERN ELECTRIC SERVICE COMPANY, AND THEIR COOPERATIVE COMPETITORS
21527	APPLICATION OF TXU ELECTRIC COMPANY FOR FINANCING ORDER TO SECURITIZE REGULATORY ASSETS AND OTHER QUALIFIED COSTS
22051	APPLICATION OF TXU ELECTRIC COMPANY TO REVISE TARIFF; TABLE OF CONTENTS; SECTION 2.1 CITIES SERVED LISTING AND TARIFF PAGES REFLECTING THE PROPOSED CHANGES
22344	GENERIC ISSUES ASSOCIATED WITH APPLICATIONS FOR APPROVAL OF UNBUNDLED COST OF SERVICE RATE PURSUANT TO PURA SECTION 39.201 AND PUBLIC UTILITY COMMISSION SUBST. R. 25.344
22350	APPLICATION OF TXU ELECTRIC COMPANY FOR APPROVAL OF UNBUNDLED COST OF SERVICE RATE PURSUANT TO PURA §39.201 AND PUBLIC UTILITY COMMISSION SUBSTANTIVE RULE §25.344
24040	APPLICATION OF TXU ELECTRIC COMPANY TO IMPLEMENT PRICE TO BEAT FUEL FACTOR
24236	APPLICATION OF TXU ELECTRIC COMPANY FOR APPROVAL OF PRICE TO BEAT RATES IN COMPLIANCE WITH SUBST. R. 25.41(f)(1)(c)
25230	JOINT APPLICATION FOR APPROVAL OF STIPULATION REGARDING TXU ELECTRIC COMPANY TRANSITION TO COMPETITION ISSUES
25802	APPLICATION OF TXU ENERGY RETAIL COMPANY TO INCREASE PRICE TO BEAT FUEL FACTORS
27281	APPLICATION OF TXU ENERGY RETAIL COMPANY TO INCREASE PRICE TO BEAT FUEL FACTORS
27561	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. 25.192(g)(1)
28563	ONCOR ELECTRIC DELIVERY COMPANY'S COMPLIANCE TARIFF FILING AND PETITION TO PROVIDE COMPETITIVE METERING CREDIT PURSUANT TO SUBST. R. §25.311
28585	APPLICATION OF TXU SESCO ENERGY SERVICES COMPANY TO INCREASE PRICE TO BEAT FUEL FACTORS AND REDUCE PRICE TO BEAT BASE RATES
28636	PETITION OF ONCOR ELECTRIC DELIVERY COMPANY PURSUANT TO P.U.C. SUBST. R. 25.41(j)(1) REGARDING SMALL COMMERCIAL POWER CONSUMPTION THRESHOLD TARGET
29208	TXU SESCO ENERGY SERVICES COMPANY TRUE-UP FILING PURSUANT TO PURA §39.262(e)
29425	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBSTANTIVE RULE 25.192(g)(1)
29516	APPLICATION OF TXU ENERGY RETAIL COMPANY TO INCREASE PRICE TO BEAT FUEL FACTORS
29837	APPLICATION OF TXU ENERGY RETAIL COMPANY TO INCREASE PRICE TO BEAT FUEL FACTORS
30802	APPLICATION OF TXU ELECTRIC DELIVERY COMPANY FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. 25.192(g)(1)
31841	PETITION OF TXU GENERATION COMPANY LP FOR ADMINISTRATIVE DETERMINATION THAT THE FORTY PERCENT THRESHOLD TARGET OF PURA §39.153(b) HAS BEEN MET
32462	APPLICATION OF TXU ELECTRIC DELIVERY COMPANY FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. 25.192(g)(1)
33904	APPLICATION OF TXU ELECTRIC DELIVERY COMPANY FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(g)(1)
34040	PETITION BY COMMISSION STAFF FOR A REVIEW OF THE RATES OF TXU ELECTRIC DELIVERY COMPANY
35398	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(g)(1)
35634	ONCOR ELECTRIC DELIVERY COMPANY LLC'S REQUEST FOR APPROVAL OF ENERGY EFFICIENCY COST RECOVERY FACTOR
35690	PETITION OF BIG COUNTRY ELECTRIC COOPERATIVE, INC. FOR A CEASE AND DESIST ORDER

**Oncor Electric Delivery Company LLC
Application for 2018 Energy Efficiency Cost Recovery Factor**

List of J. Michael Sherburne's Prior Commission Testimony

Docket No.	Case Style
35717	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR AUTHORITY TO CHANGE RATES
35718	ONCOR ELECTRIC DELIVERY COMPANY LLC'S REQUEST FOR APPROVAL OF ADVANCED METERING SYSTEM (AMS) DEPLOYMENT PLAN AND REQUEST FOR ADVANCED METERING SYSTEM (AMS) SURCHARGE
36530	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR RATE CASE EXPENSES PERTAINING TO PUC DOCKET NO. 35717
36958	ONCOR ELECTRIC DELIVERY LLC'S APPLICATION FOR 2010 ENERGY EFFICIENCY COST RECOVERY FACTOR
37496	APPLICATION OF ONCOR ELECTRIC DELIVERY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(g)(1)
38217	ONCOR ELECTRIC DELIVERY LLC'S APPLICATION FOR 2011 ENERGY EFFICIENCY COST RECOVERY FACTOR
38495	APPLICATION OF ONCOR ELECTRIC DELIVERY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(g)(1)
38929	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR AUTHORITY TO CHANGE RATES
39239	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR RATE CASE EXPENSE SEVERED FROM PUC DOCKET NO. 38929
39375	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC FOR 2012 ENERGY EFFICIENCY COST RECOVERY FACTOR
39644	APPLICATION OF ONCOR ELECTRIC DELIVERY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
40142	APPLICATION OF ONCOR ELECTRIC DELIVERY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
40361	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC FOR 2013 ENERGY EFFICIENCY COST RECOVERY FACTOR
40603	APPLICATION OF ONCOR ELECTRIC DELIVERY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
41166	APPLICATION OF ONCOR ELECTRIC DELIVERY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
41544	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC FOR 2014 ENERGY EFFICIENCY COST RECOVERY FACTOR
41706	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
41890	COMPLIANCE TARIFF OF ONCOR ELECTRIC DELIVERY COMPANY LLC REGARDING THE RULEMAKING RELATED TO ADVANCED METERING ALTERNATIVES, PURSUANT TO SUBST. R. §25.133(e)(1)
42113	REMAND OF DOCKET NO. 36530 (APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR RATE CASE EXPENSES RELATED TO PUC DOCKET NO. 35717)
42267	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
42559	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC FOR 2015 ENERGY EFFICIENCY COST RECOVERY FACTOR
42706	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
44363	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
44784	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC TO ADJUST ITS ENERGY EFFICIENCY COST RECOVERY FACTOR
44968	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO SUBST. R. §25.192(h)(1)
45854	COMPLAINT OF GIOVANNI HOMES CORPORATION AGAINST ONCOR ELECTRIC DELIVERY COMPANY LLC
46013	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY, LLC TO ADJUST ITS ENERGY EFFICIENCY COST RECOVERY FACTOR
46210	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO 16 TEX. ADMIN. CODE §25.192(h)(1)
46825	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR INTERIM UPDATE OF WHOLESALE TRANSMISSION RATES PURSUANT TO 16 TEX. ADMIN. CODE §25.192(h)(1)
46957	APPLICATION OF ONCOR ELECTRIC DELIVERY COMPANY LLC FOR AUTHORITY TO CHANGE RATES

Oncor Electric Delivery Company LLC
Application of 2018 Energy Efficiency Cost Recovery Factor

2018 Program Costs and 2016 (Over)/Under Recovery of Energy Efficiency Costs

(a)	(b)	(c)	(d)	(e) = (c) + (d)
<u>Energy Efficiency Rate Class</u>	<u>2018 Estimated Energy Efficiency Program Costs as shown on Exhibit MRS-4 Column</u>	<u>Program Cost</u>	<u>2016 (Over)/Under Recovery of Energy Efficiency Costs as Shown on WP/JMS/2 Col. (h) Amount</u>	<u>2018 Program Costs and 2016 (Over)/Under Recovery of EE Costs Amount</u>
Residential Service	(b)	27,061,969	(871,956)	26,190,013
Secondary Service ≤ 10 kW	(c)	482,703	(884,381)	(401,678)
Secondary Service > 10 kW	(d)	20,589,789	(3,541,070)	17,048,719
Primary Service ≤ 10 kW		0	2,479	2,479
Primary Service > 10 kW				
Distribution Line	(e)	2,677,329	(1,269,632)	1,407,697
Substation	(f)	0	(23,071)	(23,071)
Transmission Service				
Non Profit	(g)	0	489,887	489,887
For Profit		0	0	0
Lighting Service		0	0	0
Total		50,811,790	(6,097,744)	44,714,046

Oncor Electric Delivery Company LLC
Application for 2018 Energy Efficiency Cost Recovery Factor

Performance Bonus Allocation

	(a) Performance Bonus ¹ \$11,741,562	(b) 2016 Energy Efficiency Program Costs ²	(c) Performance Bonus Allocation Factors	(d) = (a) * (c) Allocated Performance Bonus
<u>Energy Efficiency Rate Class</u>				
Residential Service		34,135,130	63.34466147%	\$7,437,652
Secondary Service ≤ 10 kW		662,509	1.22941991%	\$144,353
Secondary Service > 10 kW		16,530,256	30.67524484%	\$3,601,753
Primary Service ≤ 10 kW		0	0.00000000%	\$0
Primary Service > 10 kW				
Distribution Line		2,559,738	4.75011336%	\$557,738
Substation		0	0.00000000%	\$0
Transmission Service				
Non Profit		302	0.00056042%	\$66
For Profit		0	0.00000000%	\$0
Lighting Service		0	0.00000000%	\$0
Total		<u>53,887,935</u>	<u>100.00000000%</u>	<u>\$11,741,562</u>

¹Exhibit MRS-4 column (h)

²Workpaper WP/JMS/2 column (c)

Oncor Electric Delivery Company LLC
Application for 2018 Energy Efficiency Cost Recovery Factor

Municipalities' EECRF Proceeding Expense Allocation

Energy Efficiency Rate Class	(b) 2016 Energy Efficiency Program Costs ²	(a) Municipalities' EECRF Proceeding Expense ¹	(c) Municipalities' EECRF Proceeding Expense Allocation Factors	(d) = (a) * (c) Allocated Municipalities' EECRF Proceeding Expense
Residential Service	34,135,130	<u>\$6,687</u>	63.34466147%	\$4,236
Secondary Service ≤ 10 kW	662,509		1.22941991%	\$82
Secondary Service > 10 kW	16,530,256		30.67524484%	\$2,051
Primary Service ≤ 10 kW	0		0.00000000%	\$0
Primary Service > 10 kW				
Distribution Line	2,559,738		4.75011336%	\$318
Substation	0		0.00000000%	\$0
Transmission Service				
Non Profit	302		0.00056042%	\$0
For Profit	0		0.00000000%	\$0
Lighting Service				
Total	<u>53,887,935</u>		<u>100.00000000%</u>	<u>\$6,687</u>

¹Exhibit MRS-4 column (h)

²Workpaper WP/JMS/2 column (c)

Oncor Electric Delivery Company LLC
Application for 2018 Energy Efficiency Cost Recovery Factor
Calculation of 2018 Energy Efficiency Cost Recovery Factors

Line	Energy Efficiency Rate Class (a)	Billing Determinant ¹ (c)	Type (c)	2018 Energy Efficiency Costs (d) = (i)	2018 Energy Efficiency Cost Recovery Factor (EECRF) (e) = (d) / (b)
1	Residential Service	43,885,550,000	kWh	\$ 33,631,901	\$ 0.000765
2	Secondary Service ≤ 10 kW	1,762,349,000	kWh	(257,243)	(0.000146)
3	Secondary Service > 10 kW	45,918,660,000	kWh	20,652,523	0.000450
4	Primary Service ≤ 10 kW	17,481,000	kWh	2,479	0.000142
5	Primary Service > 10 kW	10,365,367,000	kWh	1,985,753	0.000190
6	Distribution Line	2,201,197,000	kWh	(23,071)	(0.0000110)
7	Substation				
8	Transmission Service				
9	Non Profit	899,804,000	kWh	489,953	0.000545
10	For Profit	12,450,796,000	kWh	-	-
11	Lighting Service	428,100,000	kWh	-	-
12					
13	Total			\$ 56,462,295	

Line	Energy Efficiency Rate Class (f)	2018 Program Costs and 2016 (Over)/Under Recovery ² (g)	2016 Performance Bonus ³ (h)	2016 Municipalities' EECRF Proceeding Expense ⁴ (i)	Total 2018 Energy Efficiency Costs (j) = (g)+(h)+(i)
1	Residential Service	\$ 28,190,013	\$ 7,437,652	\$ 4,236	\$ 33,631,901
2	Secondary Service ≤ 10 kW	\$ (401,678)	\$ 144,353	\$ 82	\$ (257,243)
3	Secondary Service > 10 kW	\$ 17,048,719	\$ 3,604,753	\$ 2,051	\$ 20,652,523
4	Primary Service ≤ 10 kW	\$ 2,479	\$ -	\$ -	\$ 2,479
5	Primary Service > 10 kW	\$ 1,407,697	\$ 557,738	\$ 318	\$ 1,965,753
6	Distribution Line	\$ (23,071)	\$ -	\$ -	\$ (23,071)
7	Substation				
8	Transmission Service				
9	Non Profit	\$ 489,887	\$ 68	\$ -	\$ 489,953
10	For Profit	\$ -	\$ -	\$ -	\$ -
11	Lighting Service	\$ -	\$ -	\$ -	\$ -
12					
13	Total	\$ 44,714,046	\$ 11,741,562	\$ 6,687	\$ 56,462,295

¹Source: Oncor Electric Delivery Company LLC's 2017 Energy and Demand Plan as shown on WPA/JMS/S
²Exhibit JMS-2 column (e)
³Exhibit JMS-3 column (d)
⁴Exhibit JMS-4 column (d)

**Tariff for Retail Delivery Service
Oncor Electric Delivery Company LLC**

6.1.1 Delivery System Charges

Applicable: Entire Certified Service Area

Effective Date: March 1, 2018

Sheet: 6.3

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Revision: Eleven

6.1.1.6.3 Rider EECRF - Energy Efficiency Cost Recovery Factor

APPLICATION

Applicable, pursuant to PURA § 39.905(b)(4) and Substantive Rule § 25.181(f), to all eligible customers in energy efficiency rate classes that receive services under the Company's energy efficiency programs.

METHOD OF CALCULATION

An Energy Efficiency Cost Recovery Factor (EECRF) shall be calculated annually and shall equal by energy efficiency rate class the sum of: forecasted energy efficiency costs, any adjustment for past over-recovery or under-recovery of EECRF costs, any approved energy efficiency performance bonus for the previous year, any municipalities' EECRF proceeding expenses from the previous year, and any applicable evaluation, measurement, and verification costs as determined by the commission; divided by the forecasted billing units for each class in demand or kWh.

MONTHLY RATE**Energy Efficiency Cost Recovery Factor (EECRF)**

<u>Effective Date</u>	<u>Residential Service</u>	<u>Secondary Service</u>		<u>Primary Service</u>			<u>Transmission Service</u>		<u>Lighting Service</u>
	(\$/kWh)	≤ 10 kW* (\$/kWh)	> 10 kW* (\$/kWh)	≤ 10 kW* (\$/kWh)	> 10 kW – Distribution Line* (\$/kWh)	> 10 kW – Substation* (\$/kWh)	Non-Profit (\$/kWh)	For Profit (\$/kWh)	(\$/kWh)
March 1, 2018	0.000766	(0.000146)	0.000450	0.000142	0.000190	(0.000010)	0.000545	0.000000	0.000000
March 1, 2017	0.000780	0.000329	0.000444	(0.000021)	0.000057	(0.000159)	(0.000104)	0.000000	0.000000
March 1, 2016	0.000995	0.001505	0.000459	0.000461	(0.000005)	(0.000046)	0.001335	0.000000	0.000000
March 1, 2015	0.001025	0.000997	0.000363	(0.000065)	0.000756	0.000025	0.000173	0.000000	0.000001
March 1, 2014	0.001014	0.000437	0.000525	(0.000004)	0.000649	0.000680	0.000525	(0.000002)	0.000000
	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)
Dec. 31, 2012	1.23	0.23	11.59	(2.58)	95.76	130.77	132.02	(1.61)	0.00
Jan. 3, 2012	0.99	0.36	6.65	(0.05)	130.77	130.77	(224.74)	(224.74)	0.00
Dec. 30, 2010	0.91	0.01	8.14	4.79	75.91	185.59	(71.62)	(71.62)	0.00
Dec. 30, 2009	0.89	0.11	9.66	0.06	59.87	720.49	273.71	273.71	0.00
Sept. 17, 2009	0.92	0.22	8.68	0.00	76.27	76.27	443.77	443.77	0.00
Dec. 29, 2008	0.22	(0.79)	2.48	(2.17)	26.17	26.17	(227.52)	(227.52)	(0.17)

* Excludes those industrial customers taking electric service at distribution voltage qualifying for the exemption pursuant to Substantive Rule § 25.181(w).

NOTICE

This rate schedule is subject to the Company's Tariff and Applicable Legal Authorities.

**Tariff for Retail Delivery Service
Oncor Electric Delivery Company LLC**

6.1.1 Delivery System Charges
Applicable: Entire Certified Service Area
Effective Date: March 1, 2018

Sheet: 6.3
Page 1 of 1
Revision: Eleven

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6.1.1.6.3 Rider EECRF - Energy Efficiency Cost Recovery Factor

APPLICATION

Applicable, pursuant to PURA § 39.905(b)(4) and Substantive Rule § 25.181(f), to all eligible customers in energy efficiency rate classes that receive services under the Company's energy efficiency programs.

METHOD OF CALCULATION

An Energy Efficiency Cost Recovery Factor (EECRF) shall be calculated annually and shall equal by energy efficiency rate class the sum of: forecasted energy efficiency costs, any adjustment for past over-recovery or under-recovery of EECRF costs, any approved energy efficiency performance bonus for the previous year, any municipalities' EECRF proceeding expenses from the previous year, and any applicable evaluation, measurement, and verification costs as determined by the commission; divided by the forecasted billing units for each class in demand or kWh.

MONTHLY RATE

Energy Efficiency Cost Recovery Factor (EECRF)

Effective Date	Residential Service	Secondary Service		Primary Service			Transmission Service		Lighting Service
	(\$/kWh)	≤ 10 kW* (\$/kWh)	> 10 kW* (\$/kWh)	≤ 10 kW* (\$/kWh)	> 10 kW – Distribution Line* (\$/kWh)	> 10 kW – Substation* (\$/kWh)	Non-Profit (\$/kWh)	For Profit (\$/kWh)	(\$/kWh)
March 1, 2018	0.000766	(0.000146)	0.000450	0.000142	0.000190	(0.000010)	0.000545	0.000000	0.000000
March 1, 2017	0.000780	0.000329	0.000444	(0.000021)	0.000057	(0.000159)	(0.000104)	0.000000	0.000000
March 1, 2016	0.000995	0.001505	0.000459	0.000461	(0.000005)	(0.000046)	0.001335	0.000000	0.000000
March 1, 2015	0.001025	0.000997	0.000353	(0.000065)	0.000756	0.000025	0.000173	0.000000	0.000001
March 1, 2014	0.001014	0.000437	0.000525	(0.000004)	0.000649	0.000680	0.000525	(0.000002)	0.000000
	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)	(\$ / Retail Customer)
Dec. 31, 2012	1.23	0.23	11.59	(2.58)	95.76	130.77	132.02	(1.61)	0.00
Jan. 3, 2012	0.99	0.36	6.65	(0.05)	130.77	130.77	(224.74)	(224.74)	0.00
Dec. 30, 2010	0.91	0.01	8.14	4.79	75.91	185.59	(71.62)	(71.62)	0.00
Dec. 30, 2009	0.89	0.11	9.66	0.06	59.87	720.49	273.71	273.71	0.00
Sept. 17, 2009	0.92	0.22	8.68	0.00	76.27	76.27	443.77	443.77	0.00
Dec. 29, 2008	0.22	(0.79)	2.48	(2.17)	26.17	26.17	(227.52)	(227.52)	(0.17)

I,
R,

* Excludes those industrial customers taking electric service at distribution voltage qualifying for the exemption pursuant to Substantive Rule § 25.181(w).

NOTICE

This rate schedule is subject to the Company's Tariff and Applicable Legal Authorities.

Testimony
Workpapers
Of
Michael R. Stockard

2016 Commercial Load Management By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
D0	4,639.52	13,918.50	\$185,580.25
E0	28,099.39	84,298.40	\$1,123,975.85
EJ	4,530.09	13,590.30	\$181,203.65
EQ	2,057.35	6,172.10	\$82,294.48
K0	20,690.16	62,070.40	\$827,606.57
Total	60,016.51	180,049.70	\$2,400,660.80

0.07730
0.46820
0.07548
0.03428
0.34474
1.00000

Rate Code	kW Savings	kWh Savings	Incentive
D0	(69.77)	(209.30)	-\$2,790.99
D0	(23.70)	(71.10)	-\$948.10
D0	(0.49)	(1.50)	-\$19.45
D0	0.27	0.80	\$10.95
D0	1.40	4.20	\$56.16
D0	35.03	105.10	\$1,401.02
D0	42.07	126.20	\$1,682.79
D0	48.08	144.20	\$1,923.04
D0	49.39	148.20	\$1,975.46
D0	65.25	195.80	\$2,610.15
D0	75.62	226.90	\$3,024.72
D0	80.16	240.50	\$3,206.44
D0	87.04	261.10	\$3,481.78
D0	87.40	262.20	\$3,496.17
D0	90.92	272.70	\$3,636.65
D0	105.50	316.50	\$4,219.87
D0	108.57	325.70	\$4,342.69
D0	112.95	338.90	\$4,518.16
D0	113.90	341.70	\$4,556.05
D0	116.53	349.60	\$4,661.06
D0	118.31	354.90	\$4,732.26
D0	118.52	355.50	\$4,740.65
D0	138.34	415.00	\$5,533.76
D0	144.56	433.70	\$5,782.22

Rate Code	kW Savings	kWh Savings	Incentive
D0	161.87	485.60	\$6,474.64
D0	162.18	486.50	\$6,487.06
D0	179.12	537.40	\$7,164.99
D0	192.52	577.60	\$7,700.90
D0	234.16	702.50	\$9,366.56
D0	277.91	833.70	\$11,116.28
D0	284.70	854.10	\$11,387.97
D0	357.62	1,072.80	\$14,304.63
D0	381.25	1,143.80	\$15,250.03
D0	762.34	2,287.00	\$30,493.71
E0	6.58	19.70	\$263.20
E0	8.37	25.10	\$334.80
E0	17.15	51.50	\$686.13
E0	17.41	52.20	\$696.25
E0	(47.78)	(143.30)	-\$1,911.06
E0	(38.35)	(115.10)	-\$1,534.02
E0	(17.88)	(53.60)	-\$715.04
E0	(9.19)	(27.60)	-\$367.78
E0	(1.78)	(5.30)	-\$71.04
E0	4.41	13.20	\$176.60
E0	131.56	394.70	\$5,262.33
E0	158.49	475.50	\$6,339.61
E0	159.60	478.80	\$6,383.88
E0	198.49	595.50	\$7,939.66

2016 Commercial Load Management By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
E0	18.04	54.10	\$721.66
E0	21.29	63.90	\$851.77
E0	21.30	63.90	\$852.01
E0	26.58	79.70	\$1,063.21
E0	27.21	81.60	\$1,088.26
E0	28.44	85.30	\$1,137.73
E0	63.55	190.60	\$2,541.83
E0	72.30	216.90	\$2,892.00
E0	76.49	229.50	\$3,059.45
E0	78.65	236.00	\$3,146.00
E0	82.68	248.00	\$3,307.16
E0	84.86	254.60	\$3,394.25
E0	92.99	279.00	\$3,719.44
E0	99.70	299.10	\$3,988.05
E0	102.16	306.50	\$4,086.40
E0	104.83	314.50	\$4,193.13
E0	105.29	315.90	\$4,211.53
E0	106.30	318.90	\$4,252.18
E0	107.78	323.30	\$4,311.13
E0	108.39	325.20	\$4,335.65
E0	110.98	332.90	\$4,439.05
E0	110.99	333.00	\$4,439.71
E0	113.92	341.80	\$4,556.73
E0	118.73	356.20	\$4,749.21
E0	123.93	371.80	\$4,957.21
E0	1198.19	3594.6	\$47,927.49
E0	1353	4059	\$54,120.00
E0	2134.06	6402.2	\$85,362.34
E0	2659.51	7978.5	\$106,380.56
E0	4101.4	12304.2	\$164,055.86
E0	224.98	674.90	\$8,999.22
E0	251.75	755.30	\$10,070.04
E0	251.89	755.70	\$10,075.78
E0	260.40	781.20	\$10,416.06
E0	279.20	837.60	\$11,168.16

Rate Code	kW Savings	kWh Savings	Incentive
E0	285.44	856.30	\$11,417.50
E0	322.89	968.70	\$12,915.62
E0	346.06	1,038.20	\$13,842.51
E0	373.53	1,120.60	\$14,941.23
E0	378.36	1,135.10	\$15,134.43
E0	466.00	1,398.00	\$18,640.19
E0	510.12	1,530.40	\$20,404.93
E0	567.28	1,701.90	\$22,691.37
E0	581.64	1,744.90	\$23,265.60
E0	593.46	1,780.40	\$23,738.42
E0	622.80	1,868.40	\$24,912.04
E0	636.04	1,908.10	\$25,441.64
E0	646.28	1,938.80	\$25,851.05
E0	734.37	2,203.10	\$29,374.78
E0	739.17	2,217.50	\$29,566.70
E0	864.18	2,592.50	\$34,567.14
E0	899.72	2,699.20	\$35,988.71
E0	1,070.20	3,210.60	\$42,808.08
E0	1,071.44	3,214.30	\$42,857.40
E0	1,081.57	3,244.70	\$43,262.74
EJ	-7.32	-22	-\$292.92
EJ	5.13	15.4	\$205.12
EJ	30.34	91	\$1,213.72
EJ	40.1	120.3	\$1,603.97
EJ	62.51	187.5	\$2,500.51
EJ	74.73	224.2	\$2,989.16
EJ	110.21	330.6	\$4,408.25
EJ	117.51	352.5	\$4,700.24
EJ	123.53	370.6	\$4,941.20
EJ	132.77	398.3	\$5,310.71
EJ	163.09	489.3	\$6,523.68
EJ	185.36	556.1	\$7,414.46
EJ	203.28	609.9	\$8,131.37
EJ	214.75	644.3	\$8,590.19
EJ	606.43	1819.3	\$24,257.22

2016 Commercial Load Management By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
EJ	2467.67	7403	\$98,706.78
EQ	-9.21	-27.6	-\$368.34
EQ	34.49	103.5	\$1,379.78
EQ	60.85	182.6	\$2,434.11
EQ	61.77	185.3	\$2,470.67
EQ	89.19	267.6	\$3,567.40
EQ	97.84	293.5	\$3,913.61
EQ	107.01	321	\$4,280.37
EQ	114.65	344	\$4,586.10
EQ	131.81	395.4	\$5,272.56
EQ	149.61	448.8	\$5,984.49
EQ	1219.34	3658	\$48,773.74
K0	-20.1	-60.3	-\$804.17
K0	-7.75	-23.3	-\$310.16
K0	-3.17	-9.5	-\$126.64
K0	2.18	6.6	\$87.36
K0	29.86	89.6	\$1,194.25
K0	51.42	154.3	\$2,056.98
K0	83.22	249.7	\$3,328.88
K0	1716.21	5148.6	\$68,648.44
K0	1745	5235	\$69,800.00

Rate Code	kW Savings	kWh Savings	Incentive
K0	102.81	308.4	\$4,112.41
K0	106.1	318.3	\$4,244.17
K0	107.74	323.2	\$4,309.77
K0	109.89	329.7	\$4,395.80
K0	118.12	354.4	\$4,724.86
K0	124.3	372.9	\$4,972.09
K0	131.75	395.2	\$5,269.86
K0	138.06	414.2	\$5,522.32
K0	145.64	436.9	\$5,825.64
K0	234.96	704.9	\$9,398.38
K0	457.37	1372.1	\$18,294.78
K0	595.68	1787	\$23,827.16
K0	685.74	2057.2	\$27,429.59
K0	727.83	2183.5	\$29,113.20
K0	750.58	2251.7	\$30,023.02
K0	784	2352	\$31,360.00
K0	785.11	2355.3	\$31,404.58
K0	948.48	2845.4	\$37,939.08
K0	1597.73	4793.2	\$63,909.11
K0	2123.71	6371.1	\$84,948.42
K0	2854.3	8562.9	\$114,171.84
K0	3463.39	10390.2	\$138,535.58

2016 Custom CSOP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
D0	362.10	3,388,389.20	\$486,138.52
D6	57.78	621,712.00	\$45,912.06
DQ	32.62	41,649.80	\$13,105.62
E0	952.23	8,900,158.40	\$762,508.42
EJ	137.91	591,790.20	\$93,571.09
J0	5.28	24,490.80	\$2,765.78
K0	301.56	2,407,427.80	\$226,920.32
Total	1,849.48	15,975,618.20	\$1,630,921.81

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Rate Code	kW Savings	kWh Savings	Incentive
D0	-3.92	-19,421.90	-\$1,967.22
D0	0.30	1,762.80	\$181.81
D0	4.91	36,944.90	\$3,606.28
D0	10.96	13,996.60	\$6,196.10
D0	20.92	26,710.10	\$10,012.85
D0	59.62	277,570.20	\$43,971.60
D0	87.27	425,034.50	\$42,509.77
D0	182.04	2,625,792.00	\$381,627.33
D6	6.37	77,748.20	\$5,767.90
D6	6.65	78,506.60	\$5,871.46
D6	7.61	88,647.30	\$6,649.46
D6	7.72	83,505.10	\$6,379.56
D6	14.55	150,168.80	\$9,963.72
D6	14.88	143,136.00	\$11,279.96
DQ	32.62	41,649.80	\$13,105.62
E0	0.77	93,284.80	\$5,524.11
E0	1.30	11,694.40	\$917.76
E0	2.41	11,151.70	\$798.63

Rate Code	kW Savings	kWh Savings	Incentive
E0	2.70	17,702.80	\$1,103.80
E0	20.93	958,350.70	\$78,083.05
E0	27.37	170,088.50	\$15,431.70
E0	34.99	275,080.50	\$23,016.13
E0	35.00	318,517.50	\$32,884.93
E0	37.55	236,075.30	\$21,325.91
E0	39.72	347,947.20	\$35,000.00
E0	65.17	289,483.10	\$46,740.55
E0	225.95	1,971,699.50	\$183,736.20
E0	226.80	1,988,153.00	\$179,945.65
E0	231.57	2,210,929.40	\$138,000.00
EJ	137.91	591,790.20	\$93,571.09
J0	0.64	2,979.80	\$336.34
J0	4.64	21,511.00	\$2,429.44
K0	0.92	4,411.00	\$358.39
K0	25.25	348,031.40	\$28,524.88
K0	33.16	53,520.00	\$16,580.06
K0	242.23	2,001,465.40	\$181,456.99

2016 Basic CSOP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
B0	365.03	1,822,466.60	\$195,590.53
B1	0.29	412.00	\$142.83
D0	3,877.12	21,828,432.50	\$2,250,621.47
D1	34.17	150,115.50	\$19,511.79
D4	52.71	634,914.50	\$78,433.68
D6	27.09	145,431.50	\$14,828.65
D7	0.28	1,595.60	\$170.73
DC	153.79	825,438.00	\$98,507.57
DD	0.99	5,595.00	\$613.00
DJ	267.61	1,479,997.30	\$163,711.77
DK	1.23	6,933.60	\$757.19
DQ	340.53	1,436,239.40	\$205,460.53
DR	18.42	52,794.50	\$9,838.50
E0	2,166.15	14,239,550.90	\$1,751,072.03
E6	6.10	40,011.00	\$3,813.81
EC	39.43	92,435.10	\$22,189.29
EJ	285.77	1,501,159.80	\$162,637.46
EQ	221.72	736,966.40	\$124,683.08
J0	14.95	94,477.90	\$8,325.22
K0	763.05	4,895,756.40	\$503,885.88
K4	76.65	604,308.60	\$50,101.94
Total	8,712.48	50,595,032.10	\$5,664,896.95

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0.00174
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Rate Code	kW Savings	kWh Savings	Incentive
B0	0.01	27.30	\$1.97
B0	0.04	190.60	\$15.65
B0	0.08	439.10	\$34.07
B0	0.13	611.30	\$50.36
B0	0.20	1,309.60	\$116.56
B0	0.39	1,734.20	\$172.45
B0	0.40	1,807.70	\$191.02
B0	0.32	2,123.90	\$192.83
B0	0.41	2,706.90	\$277.03
B0	0.47	2,094.80	\$225.79

2016 Basic CSOP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
B0	0.50	3,278.40	\$291.76
B0	0.51	3,320.80	\$295.53
B0	0.52	2,711.00	\$212.79
B0	0.54	3,522.90	\$313.52
B0	0.56	3,639.60	\$323.90
B0	0.57	3,149.50	\$299.85
B0	0.61	4,014.40	\$357.27
B0	0.63	4,147.80	\$369.13
B0	0.65	4,264.20	\$379.50
B0	0.65	4,264.20	\$379.50
B0	0.66	3,621.80	\$344.80
B0	0.69	3,779.40	\$359.82
B0	0.69	3,779.20	\$359.72
B0	0.69	4,504.30	\$400.84
B0	0.69	4,494.20	\$399.96
B0	0.72	3,936.80	\$374.79
B0	0.72	4,736.00	\$421.48
B0	0.83	4,566.60	\$434.73
B0	0.89	4,898.60	\$466.30
B0	0.89	5,818.20	\$595.43
B0	0.97	5,313.10	\$505.81
B0	1.05	6,865.00	\$610.93
B0	1.14	6,276.50	\$597.47
B0	1.40	7,654.50	\$728.71
B0	1.76	7,877.70	\$783.74
B0	1.82	10,112.20	\$958.53
B0	2.24	3,923.00	\$1,032.89
B0	2.37	11,906.70	\$1,831.11
B0	2.45	16,046.10	\$1,427.98
B0	2.84	14,719.20	\$1,682.30
B0	3.41	22,347.20	\$1,988.76

Rate Code	kW Savings	kWh Savings	Incentive
B0	3.50	19,971.00	\$1,872.42
B0	3.54	19,741.80	\$1,867.02
B0	3.59	23,540.40	\$2,094.91
B0	3.70	11,257.20	\$2,484.39
B0	3.70	11,257.20	\$2,484.39
B0	4.26	24,113.30	\$2,266.76
B0	4.26	4,454.40	\$1,678.64
B0	5.82	45,921.60	\$3,838.73
B0	6.48	35,980.80	\$3,408.83
B0	7.67	33,928.10	\$3,394.05
B0	7.68	42,111.50	\$2,220.22
B0	9.43	61,794.20	\$5,499.25
B0	10.29	41,025.90	\$4,493.00
B0	10.57	83,335.30	\$7,107.09
B0	11.82	53,286.20	\$6,341.09
B0	13.57	48,636.20	\$8,624.42
B0	17.89	141,019.30	\$11,788.17
B0	31.64	173,529.10	\$13,057.72
B0	41.38	171,530.20	\$32,787.08
B0	41.48	188,452.10	\$19,431.11
B0	85.65	381,046.30	\$38,044.66
B1	0.29	412.00	\$142.83
D0	-5.57	-25,347.20	(\$2,665.36)
D0	-4.18	-15,099.40	(\$1,771.10)
D0	-3.02	-13,753.00	(\$1,446.17)
D0	-2.71	-9,785.00	(\$1,147.73)
D0	-0.98	-3,698.90	(\$487.53)
D0	-0.41	-1,477.10	(\$173.31)
D0	-0.13	-493.40	(\$56.55)
D0	-0.09	-433.20	(\$46.06)
D0	-0.01	-25.40	(\$1.76)

2016 Basic CSOP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
D0	-0.01	-53.80	(\$5.42)
D0	0.00	-31.10	(\$3.26)
D0	0.01	73.50	\$4.42
D0	0.01	57.50	\$4.06
D0	0.01	73.30	\$4.57
D0	0.01	71.90	\$5.16
D0	0.02	164.30	\$9.90
D0	0.02	87.80	\$9.61
D0	0.02	98.40	\$7.06
D0	0.03	246.50	\$14.82
D0	0.03	246.50	\$14.82
D0	0.03	246.50	\$14.82
D0	0.03	246.50	\$14.82
D0	0.03	246.50	\$14.82
D0	0.03	168.80	\$11.64
D0	0.04	317.60	\$19.09
D0	0.04	184.00	\$13.17
D0	0.04	274.90	\$19.33
D0	0.04	195.00	\$13.66
D0	0.04	153.20	\$12.34
D0	0.05	328.70	\$19.77
D0	0.05	328.70	\$22.73
D0	0.05	354.00	\$21.77
D0	0.05	328.70	\$19.77
D0	0.05	345.10	\$21.23
D0	0.05	304.80	\$19.04
D0	0.06	387.00	\$24.13
D0	0.06	237.30	\$30.49
D0	0.07	342.40	\$24.43
D0	0.08	370.30	\$27.07
D0	0.08	393.60	\$44.41
D0	0.08	511.20	\$31.87
D0	0.10	754.70	\$74.56
D0	0.11	472.80	\$50.36

Rate Code	kW Savings	kWh Savings	Incentive
D0	0.11	751.60	\$46.86
D0	0.11	502.40	\$41.09
D0	0.12	509.90	\$42.88
D0	0.12	453.30	\$35.21
D0	0.13	168.10	\$54.81
D0	0.14	1,097.40	\$89.40
D0	0.15	689.10	\$49.79
D0	0.15	987.70	\$61.59
D0	0.15	1,014.30	\$90.25
D0	0.15	537.10	\$58.84
D0	0.16	1,016.30	\$104.00
D0	0.16	759.90	\$62.59
D0	0.17	767.50	\$52.57
D0	0.17	783.10	\$81.66
D0	0.18	819.40	\$97.50
D0	0.18	779.80	\$78.65
D0	0.18	1,198.80	\$106.69
D0	0.18	1,148.70	\$102.22
D0	0.20	971.00	\$68.36
D0	0.21	1,354.10	\$80.76
D0	0.21	1,224.70	\$79.34
D0	0.23	1,101.00	\$116.31
D0	0.25	935.20	\$123.26
D0	0.27	1,658.60	\$105.87
D0	0.27	1,563.30	\$117.50
D0	0.29	1,037.80	\$79.95
D0	0.30	1,534.30	\$157.44
D0	0.33	2,151.80	\$195.35
D0	0.34	3,226.00	\$250.04
D0	0.35	2,297.50	\$204.46
D0	0.35	1,371.10	\$144.81
D0	0.36	2,343.90	\$208.59
D0	0.37	2,914.50	\$237.37
D0	0.38	2,497.50	\$255.61

2016 Basic CSOP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
D0	0.39	1,397.60	\$107.68
D0	0.39	3,089.00	\$251.86
D0	0.39	3,054.60	\$260.52
D0	0.39	4,278.70	\$599.21
D0	0.40	2,606.00	\$231.92
D0	0.40	2,616.90	\$187.65
D0	0.42	1,891.30	\$228.90
D0	0.50	12,108.20	\$1,300.09
D0	0.51	1,910.30	\$151.76
D0	0.53	2,389.10	\$165.80
D0	0.55	1,983.20	\$232.63
D0	0.56	3,668.30	\$375.43
D0	0.57	3,742.20	\$223.20
D0	0.59	3,700.60	\$234.64
D0	0.59	3,891.10	\$346.26
D0	0.59	3,877.90	\$345.10
D0	0.60	3,910.40	\$348.00
D0	0.63	2,620.50	\$197.19
D0	0.63	4,134.90	\$367.98
D0	0.71	5,556.10	\$452.84
D0	0.73	4,134.30	\$389.21
D0	0.75	3,393.40	\$358.53
D0	0.76	4,980.70	\$443.23
D0	0.87	4,755.10	\$452.72
D0	0.90	5,926.00	\$627.35
D0	0.90	6,680.10	\$554.66
D0	0.96	4,449.60	\$318.69
D0	1.10	7,992.50	\$700.69
D0	1.10	5,115.50	\$350.44
D0	1.10	7,212.80	\$641.90
D0	1.15	7,525.80	\$669.71
D0	1.16	9,167.70	\$746.66
D0	1.18	9,275.70	\$755.43
D0	1.19	7,814.90	\$799.80

Rate Code	kW Savings	kWh Savings	Incentive
D0	1.22	5,638.50	\$662.84
D0	1.22	5,655.60	\$589.87
D0	1.27	6,989.00	\$665.35
D0	1.30	8,983.90	\$783.70
D0	1.34	6,304.20	\$448.49
D0	1.34	8,787.30	\$775.56
D0	1.34	4,223.80	\$797.98
D0	1.34	3,103.40	\$691.44
D0	1.34	3,103.40	\$691.44
D0	1.36	6,813.80	\$674.29
D0	1.36	8,905.10	\$792.52
D0	1.39	10,948.70	\$952.26
D0	1.42	9,136.10	\$573.78
D0	1.43	9,381.90	\$584.98
D0	1.46	9,558.70	\$850.65
D0	1.47	10,192.20	\$888.93
D0	1.48	6,859.10	\$701.17
D0	1.49	9,739.70	\$866.76
D0	1.50	10,882.80	\$720.17
D0	1.54	5,195.20	\$947.14
D0	1.58	5,721.90	\$627.04
D0	1.62	10,635.80	\$946.50
D0	1.66	5,991.90	\$703.34
D0	1.69	11,087.30	\$986.72
D0	1.73	7,780.40	\$822.18
D0	1.73	7,791.40	\$650.26
D0	1.76	6,214.10	\$737.25
D0	1.77	11,616.40	\$1,033.79
D0	1.79	14,122.20	\$1,228.28
D0	1.79	12,990.70	\$859.66
D0	1.84	8,374.80	\$828.32
D0	1.85	12,087.80	\$1,237.08
D0	1.87	6,769.20	\$521.64
D0	1.95	8,634.90	\$919.58

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Rate Code	kW Savings	kWh Savings	Incentive
D0	1.95	11,102.70	\$1,040.40
D0	1.96	12,867.20	\$1,145.09
D0	1.98	11,843.30	\$1,252.46
D0	2.07	9,300.50	\$983.20
D0	2.11	13,800.70	\$1,228.22
D0	2.12	20,921.60	\$2,614.84
D0	2.15	9,767.20	\$966.74
D0	2.19	15,217.50	\$1,526.41
D0	2.20	9,968.70	\$829.01
D0	2.21	15,303.90	\$1,334.95
D0	2.22	14,529.50	\$1,293.03
D0	2.28	8,203.30	\$633.21
D0	2.28	7,440.70	\$1,585.65
D0	2.30	18,164.70	\$1,518.44
D0	2.33	15,271.30	\$1,358.65
D0	2.35	10,667.10	\$1,055.09
D0	2.40	13,164.40	\$877.84
D0	2.44	16,931.10	\$1,698.32
D0	2.44	10,798.60	\$789.87
D0	2.44	15,978.60	\$1,421.94
D0	2.58	9,768.40	\$1,097.37
D0	2.59	11,795.30	\$1,166.64
D0	2.63	12,061.80	\$1,262.83
D0	2.68	12,064.80	\$1,274.84
D0	2.78	14,565.70	\$990.06
D0	2.81	15,845.50	\$1,441.30
D0	2.84	13,140.30	\$1,370.56
D0	2.85	22,506.20	\$1,833.04
D0	2.89	13,247.40	\$1,360.55
D0	2.90	18,998.80	\$1,690.45
D0	2.91	12,856.10	\$899.51
D0	2.91	8,994.30	\$1,712.04
D0	2.93	23,068.90	\$1,967.40

Rate Code	kW Savings	kWh Savings	Incentive
D0	2.94	17,351.00	\$1,636.80
D0	2.94	13,222.30	\$1,397.13
D0	3.00	19,676.20	\$1,751.06
D0	3.02	16,239.10	\$1,557.52
D0	3.04	19,892.10	\$2,035.81
D0	3.08	17,556.20	\$1,646.22
D0	3.16	14,226.30	\$1,471.85
D0	3.16	14,200.30	\$1,500.62
D0	3.16	17,060.70	\$1,635.31
D0	3.27	21,409.60	\$1,905.30
D0	3.27	21,413.10	\$1,905.61
D0	3.29	21,526.40	\$1,915.68
D0	3.30	21,606.40	\$1,961.71
D0	3.31	15,204.30	\$2,422.68
D0	3.31	7,431.60	\$1,682.36
D0	3.33	21,827.60	\$1,942.52
D0	3.38	14,871.90	\$1,587.12
D0	3.41	19,521.60	\$2,861.78
D0	3.49	22,906.00	\$2,343.21
D0	3.51	16,607.60	\$1,682.36
D0	3.51	22,974.70	\$2,044.59
D0	3.58	29,003.80	\$3,813.60
D0	3.70	11,257.20	\$2,160.33
D0	3.73	31,399.70	\$4,697.76
D0	3.74	19,970.10	\$1,346.04
D0	3.81	29,910.70	\$2,438.69
D0	3.83	34,594.00	\$4,418.46
D0	3.84	22,900.90	\$2,110.88
D0	3.85	38,481.60	\$4,795.65
D0	3.87	21,244.90	\$2,022.51
D0	3.88	25,395.20	\$2,259.99
D0	3.88	25,446.50	\$2,264.57
D0	3.88	25,446.50	\$2,264.57

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Rate Code	kW Savings	kWh Savings	Incentive
D0	3.90	20,290.10	\$1,382.34
D0	3.91	18,455.40	\$2,194.58
D0	3.92	25,678.10	\$2,285.19
D0	3.94	25,791.00	\$2,295.26
D0	3.95	17,777.50	\$1,766.46
D0	3.98	31,277.90	\$2,549.28
D0	4.00	21,214.00	\$2,048.06
D0	4.05	35,764.40	\$4,595.49
D0	4.21	27,563.00	\$2,452.91
D0	4.22	19,122.80	\$1,893.52
D0	4.26	32,316.40	\$4,329.01
D0	4.28	28,052.90	\$2,496.51
D0	4.30	34,299.60	\$4,530.19
D0	4.34	19,197.00	\$1,343.22
D0	4.37	9,951.20	\$2,235.87
D0	4.50	20,440.60	\$2,325.01
D0	4.53	29,675.30	\$2,640.90
D0	4.56	29,858.10	\$3,055.74
D0	4.61	30,203.70	\$2,742.29
D0	4.63	30,318.90	\$2,698.17
D0	4.71	34,618.00	\$5,381.51
D0	4.76	33,055.50	\$2,799.05
D0	4.78	37,685.70	\$3,150.25
D0	4.80	42,634.00	\$5,470.37
D0	4.80	22,720.10	\$2,301.57
D0	4.83	25,261.10	\$2,452.55
D0	4.85	31,760.10	\$2,826.43
D0	4.87	33,286.90	\$4,601.47
D0	4.95	32,447.50	\$2,887.61
D0	5.03	32,972.60	\$2,934.35
D0	5.04	22,293.80	\$2,974.26
D0	5.04	23,265.10	\$1,596.00
D0	5.07	26,521.80	\$1,804.11

Rate Code	kW Savings	kWh Savings	Incentive
D0	5.17	33,860.30	\$3,013.33
D0	5.22	43,564.80	\$5,682.64
D0	5.29	34,681.70	\$3,086.13
D0	5.32	28,491.50	\$1,918.41
D0	5.32	38,479.90	\$5,226.40
D0	5.38	35,463.30	\$3,149.26
D0	5.41	35,450.70	\$3,154.85
D0	5.54	36,269.80	\$3,227.77
D0	5.65	25,692.30	\$2,648.12
D0	5.74	25,345.80	\$1,773.34
D0	5.95	21,690.30	\$1,664.21
D0	6.04	39,596.70	\$3,523.83
D0	6.04	39,567.10	\$3,521.20
D0	6.04	39,567.10	\$3,521.20
D0	6.05	45,440.60	\$3,859.98
D0	6.27	37,031.30	\$3,424.13
D0	6.29	41,174.80	\$1,226.93
D0	6.40	23,128.00	\$2,712.82
D0	6.50	42,560.90	\$3,787.60
D0	6.56	16,837.70	\$3,534.91
D0	6.73	44,520.50	\$3,948.57
D0	6.80	44,530.00	\$3,962.87
D0	6.93	30,078.10	\$3,033.73
D0	7.05	46,161.60	\$4,108.08
D0	7.11	46,577.40	\$4,766.85
D0	7.19	47,131.70	\$4,823.59
D0	7.27	52,026.20	\$4,490.08
D0	7.30	47,832.10	\$4,256.74
D0	7.38	41,326.00	\$3,901.28
D0	7.40	42,344.10	\$7,333.01
D0	7.53	49,317.20	\$5,047.24
D0	7.62	28,457.80	\$3,701.31
D0	7.65	50,093.80	\$4,458.01

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Rate Code	kW Savings	kWh Savings	Incentive
D0	7.70	34,988.80	\$3,460.82
D0	7.96	30,126.10	\$3,384.32
D0	8.08	53,934.90	\$5,482.25
D0	8.25	65,011.50	\$5,434.50
D0	8.26	54,142.00	\$4,818.25
D0	8.45	38,427.80	\$3,960.75
D0	8.45	37,899.80	\$3,931.14
D0	8.62	39,055.60	\$4,113.72
D0	8.74	39,529.60	\$6,334.82
D0	8.77	69,135.50	\$5,896.13
D0	8.78	39,932.40	\$3,949.59
D0	8.91	58,356.60	\$5,972.29
D0	8.97	40,719.80	\$4,030.60
D0	9.18	60,123.50	\$5,350.59
D0	9.39	61,498.50	\$5,472.95
D0	9.49	42,799.30	\$6,868.06
D0	9.54	28,970.30	\$5,566.39
D0	9.54	71,317.60	\$6,065.24
D0	9.64	64,720.00	\$6,565.83
D0	9.75	209,088.80	\$22,757.56
D0	9.89	46,784.20	\$4,739.30
D0	10.07	43,716.60	\$4,694.40
D0	10.28	46,714.40	\$4,620.45
D0	10.48	47,651.90	\$5,010.88
D0	10.54	41,531.50	\$4,575.00
D0	10.58	50,040.50	\$5,069.14
D0	10.61	69,528.70	\$6,187.60
D0	10.74	38,795.70	\$4,550.61
D0	10.75	42,779.40	\$7,236.43
D0	11.31	74,088.50	\$6,593.37
D0	11.44	113,823.10	\$14,196.34
D0	11.54	41,674.60	\$4,886.28

Rate Code	kW Savings	kWh Savings	Incentive
D0	11.56	29,185.20	\$7,300.34
D0	11.72	42,339.70	\$4,966.30
D0	11.82	53,095.10	\$3,855.41
D0	11.97	54,409.50	\$5,607.96
D0	12.31	80,617.00	\$7,174.38
D0	12.61	45,544.20	\$5,342.15
D0	12.71	92,239.80	\$12,517.44
D0	12.82	100,118.60	\$8,394.30
D0	13.12	59,630.90	\$6,270.53
D0	13.20	47,675.60	\$5,592.15
D0	13.41	69,050.30	\$4,726.66
D0	13.41	60,969.60	\$6,411.32
D0	13.58	61,728.40	\$6,105.49
D0	13.64	61,170.70	\$4,251.92
D0	13.70	89,726.30	\$7,985.01
D0	13.76	64,078.80	\$7,667.54
D0	13.81	62,461.10	\$6,452.07
D0	13.82	75,804.90	\$7,216.19
D0	13.90	52,620.90	\$6,935.56
D0	14.64	80,902.50	\$7,409.83
D0	14.75	96,622.30	\$8,977.67
D0	14.76	55,848.30	\$7,214.98
D0	14.96	67,884.50	\$6,719.79
D0	15.04	98,492.00	\$8,765.17
D0	15.35	100,571.40	\$8,950.16
D0	15.64	82,330.00	\$7,969.36
D0	15.93	19,811.90	\$6,578.84
D0	16.46	62,288.90	\$6,997.43
D0	16.49	74,845.10	\$13,773.65
D0	16.62	108,903.00	\$11,145.49
D0	16.76	130,321.30	\$10,941.72
D0	16.82	60,775.80	\$6,987.42

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Rate Code	kW Savings	kWh Savings	Incentive
D0	16.90	110,696.10	\$9,851.22
D0	17.26	113,085.80	\$11,573.45
D0	18.09	142,607.30	\$12,162.11
D0	18.33	120,103.90	\$12,291.73
D0	18.35	144,686.40	\$12,339.41
D0	18.46	83,926.30	\$8,300.97
D0	18.77	122,956.80	\$12,583.77
D0	18.83	123,376.10	\$10,979.61
D0	18.93	86,047.70	\$10,199.28
D0	19.45	84,423.20	\$9,066.29
D0	19.66	97,278.30	\$11,337.42
D0	19.81	117,023.10	\$10,820.48
D0	20.04	91,112.80	\$9,580.97
D0	20.14	122,077.30	\$11,178.80
D0	20.57	147,469.60	\$8,522.72
D0	20.74	135,897.10	\$12,093.88
D0	21.75	171,484.50	\$14,334.89
D0	22.81	179,339.40	\$15,307.72
D0	22.98	179,572.10	\$15,054.39
D0	23.39	104,296.00	\$10,843.38
D0	24.13	32,705.00	\$10,222.19
D0	24.23	119,840.60	\$11,907.45
D0	25.13	195,660.40	\$16,422.01
D0	25.41	199,786.00	\$19,610.96
D0	26.19	171,537.40	\$15,265.70
D0	26.46	119,660.60	\$12,363.05
D0	27.54	217,118.70	\$18,149.58
D0	28.26	221,188.20	\$18,533.52
D0	28.38	127,378.20	\$13,472.15
D0	29.56	42,068.90	\$12,713.66
D0	30.10	136,875.00	\$13,536.45
D0	31.25	282,120.90	\$36,039.54
D0	31.38	247,399.30	\$20,680.79
D0	31.45	206,041.90	\$21,086.70
D0	31.88	134,077.40	\$14,320.24

Rate Code	kW Savings	kWh Savings	Incentive
D0	33.25	144,296.70	\$15,189.03
D0	33.90	43,297.50	\$14,112.21
D0	34.57	33,834.00	\$13,408.33
D0	35.75	95,975.10	\$23,223.27
D0	36.64	35,317.50	\$14,159.48
D0	37.60	217,834.40	\$31,799.94
D0	37.63	246,497.30	\$25,227.07
D0	37.81	171,935.40	\$18,079.53
D0	38.67	175,834.10	\$18,123.22
D0	38.69	175,899.50	\$18,129.98
D0	38.89	254,761.20	\$26,072.93
D0	39.14	256,403.20	\$26,240.95
D0	41.68	212,916.80	\$23,997.26
D0	42.49	278,325.60	\$24,769.07
D0	44.58	350,547.60	\$29,328.09
D0	47.60	237,434.20	\$23,505.36
D0	48.82	219,935.70	\$22,761.72
D0	49.17	322,105.80	\$32,964.95
D0	52.75	240,845.50	\$24,778.30
D0	53.08	417,401.40	\$35,627.81
D0	55.99	375,112.70	\$52,175.83
D0	56.39	416,298.20	\$35,549.18
D0	57.64	55,805.40	\$22,298.04
D0	58.79	222,491.90	\$24,994.30
D0	68.33	296,576.30	\$29,912.60
D0	68.74	783,167.50	\$94,738.17
D0	71.62	469,779.40	\$41,787.37
D0	76.56	495,319.20	\$44,279.06
D0	81.95	371,787.80	\$39,133.15
D0	82.20	373,153.50	\$39,267.30
D0	90.75	412,537.60	\$42,524.33
D0	92.57	731,469.30	\$42,511.99
D1	0.48	2,727.90	\$285.27
D1	0.64	3,599.00	\$397.56
D1	1.08	3,050.20	\$699.67

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Rate Code	kW Savings	kWh Savings	Incentive
D1	1.40	7,886.10	\$824.57
D1	2.69	15,162.00	\$1,674.84
D1	3.55	20,005.20	\$2,166.04
D1	6.04	27,455.40	\$3,254.26
D1	6.48	16,552.70	\$4,008.54
D1	11.81	53,677.00	\$6,201.04
D4	20.89	119,340.00	\$20,674.18
D4	31.82	515,574.50	\$57,759.50
D6	-0.01	-47.50	(\$4.39)
D6	6.94	35,148.80	\$3,456.39
D6	8.26	54,142.90	\$4,817.84
D6	11.90	56,187.30	\$6,558.81
D7	0.12	696.60	\$72.84
D7	0.16	899.00	\$97.89
DC	-0.09	-583.60	(\$34.81)
DC	0.01	70.00	\$4.37
DC	0.09	426.60	\$50.15
DC	0.10	479.20	\$52.67
DC	0.26	1,184.40	\$135.18
DC	0.62	3,053.30	\$335.56
DC	0.70	4,604.70	\$409.78
DC	0.83	3,832.60	\$459.64
DC	1.23	8,027.90	\$821.60
DC	1.37	8,955.00	\$796.93
DC	1.73	11,356.60	\$1,010.65
DC	1.76	11,512.60	\$1,024.54
DC	1.82	11,930.50	\$1,061.71
DC	1.97	8,866.40	\$1,054.92
DC	1.99	10,046.50	\$1,161.21
DC	2.87	3,952.70	\$1,220.69
DC	3.10	4,301.80	\$1,322.59
DC	3.34	16,560.70	\$1,929.20

Rate-Code	kW Savings	kWh Savings	Incentive
DC	3.89	25,494.40	\$2,609.15
DC	4.14	26,969.00	\$2,766.75
DC	4.63	15,317.80	\$1,291.16
DC	6.62	30,094.70	\$3,101.86
DC	7.00	34,595.30	\$3,802.35
DC	7.97	40,791.30	\$3,218.38
DC	21.07	137,973.00	\$14,121.36
DC	26.60	131,752.00	\$15,349.84
DC	48.17	273,872.60	\$39,430.14
DD	0.39	2,211.50	\$244.29
DD	0.60	3,383.50	\$368.71
DJ	-0.11	-534.50	(\$54.16)
DJ	-0.01	-38.00	(\$3.45)
DJ	-0.01	-38.00	(\$3.45)
DJ	0.03	150.20	\$11.51
DJ	0.04	176.50	\$14.54
DJ	0.08	398.20	\$30.48
DJ	0.12	793.20	\$49.44
DJ	0.16	656.00	\$125.30
DJ	0.16	1,077.60	\$110.28
DJ	0.32	1,937.80	\$197.85
DJ	0.40	1,983.10	\$158.73
DJ	0.40	1,983.10	\$158.73
DJ	0.40	1,983.10	\$158.73
DJ	0.47	1,960.80	\$374.54
DJ	0.56	2,468.70	\$207.66
DJ	0.57	3,230.80	\$304.17
DJ	0.71	4,653.20	\$476.21
DJ	0.94	6,183.70	\$632.84
DJ	1.19	7,897.60	\$804.07
DJ	1.67	8,458.40	\$1,490.37
DJ	1.69	11,056.90	\$1,131.60

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Rate Code	kW Savings	kWh Savings	Incentive
DJ	2.18	13,910.10	\$1,006.50
DJ	2.40	13,541.20	\$893.25
DJ	3.03	19,875.00	\$1,768.73
DJ	3.80	24,922.40	\$2,217.94
DJ	4.07	26,629.30	\$2,725.30
DJ	4.54	29,715.30	\$2,644.47
DJ	4.69	28,293.70	\$2,888.36
DJ	4.73	30,983.80	\$2,757.36
DJ	4.87	31,861.10	\$3,262.79
DJ	4.98	30,010.40	\$3,063.38
DJ	5.24	31,590.00	\$3,224.70
DJ	5.30	27,374.90	\$2,671.73
DJ	5.56	36,449.90	\$3,243.78
DJ	6.15	30,240.30	\$3,533.60
DJ	6.16	40,218.10	\$4,120.05
DJ	6.31	41,366.70	\$4,233.51
DJ	6.46	42,327.90	\$3,766.91
DJ	7.24	18,609.40	\$3,904.12
DJ	7.68	37,918.10	\$2,906.54
DJ	7.73	50,616.70	\$4,504.58
DJ	7.84	38,780.10	\$2,581.69
DJ	7.87	26,032.90	\$2,194.77
DJ	9.00	44,547.00	\$3,100.36
DJ	9.97	106,329.60	\$17,722.58
DJ	10.11	51,930.10	\$9,349.81
DJ	12.34	46,716.70	\$5,248.07
DJ	14.71	72,520.30	\$8,465.89
DJ	15.60	76,881.60	\$8,975.17
DJ	15.78	78,503.10	\$9,129.05
DJ	19.78	36,827.00	\$9,334.45
DJ	31.71	238,036.20	\$21,896.34
DK	0.07	396.50	\$41.45
DK	0.10	554.20	\$61.20

Rate Code	kW Savings	kWh Savings	Incentive
DK	1.06	5,982.90	\$654.54
DQ	-0.17	-768.50	(\$91.57)
DQ	0.03	158.90	\$10.03
DQ	0.08	390.60	\$29.91
DQ	0.08	390.60	\$29.91
DQ	0.27	1,510.50	\$137.35
DQ	0.27	1,510.50	\$137.35
DQ	0.40	1,983.10	\$158.73
DQ	0.40	1,983.10	\$158.73
DQ	0.48	2,718.90	\$247.23
DQ	0.55	2,478.50	\$206.84
DQ	0.68	3,099.60	\$306.55
DQ	1.08	7,085.00	\$725.10
DQ	2.26	14,820.20	\$1,318.87
DQ	3.11	13,086.70	\$1,397.04
DQ	3.30	16,320.40	\$1,250.60
DQ	3.44	22,502.60	\$2,302.94
DQ	3.57	20,119.40	\$1,894.26
DQ	3.57	20,119.40	\$1,894.26
DQ	4.09	24,669.40	\$2,518.21
DQ	5.30	31,927.90	\$3,259.19
DQ	5.40	32,556.60	\$3,323.34
DQ	5.59	25,210.30	\$2,608.26
DQ	6.08	39,844.20	\$4,077.69
DQ	6.11	40,019.90	\$3,561.49
DQ	6.42	36,214.90	\$3,409.67
DQ	6.53	42,805.10	\$4,380.74
DQ	7.31	43,638.50	\$4,020.17
DQ	8.32	37,518.30	\$3,881.66
DQ	8.47	22,891.90	\$4,674.47
DQ	10.25	45,951.40	\$8,727.56
DQ	10.74	16,423.40	\$4,726.40
DQ	11.36	50,897.40	\$5,281.45

2016 Basic CSOP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
DQ	12.24	55,658.10	\$5,736.63
DQ	13.90	32,188.40	\$8,232.78
DQ	15.30	100,243.60	\$8,921.02
DQ	15.41	75,986.00	\$8,869.11
DQ	15.78	77,822.90	\$9,083.68
DQ	17.47	86,361.70	\$10,068.49
DQ	34.39	120,036.40	\$29,269.88
DQ	34.97	145,321.20	\$24,129.30
DQ	55.70	122,542.40	\$30,585.21
DR	0.36	2,030.50	\$224.26
DR	0.49	2,775.50	\$290.15
DR	0.92	5,214.70	\$576.03
DR	1.62	9,109.40	\$952.63
DR	2.71	15,266.20	\$1,686.42
DR	4.68	7,305.70	\$2,385.75
DR	7.64	11,092.50	\$3,723.26
E0	-0.50	-2,278.00	(\$239.54)
E0	-0.29	-2,176.70	(\$189.18)
E0	0.19	1,265.10	\$112.58
E0	0.27	1,257.20	\$123.38
E0	0.35	2,768.60	\$225.50
E0	0.36	1,648.40	\$186.04
E0	0.38	3,390.10	\$267.44
E0	0.38	2,980.10	\$249.11
E0	0.48	3,120.50	\$277.71
E0	0.60	4,730.40	\$395.43
E0	0.65	3,142.30	\$302.56
E0	0.67	104,716.10	\$13,360.44
E0	0.75	2,449.60	\$303.56
E0	0.82	6,484.70	\$528.12
E0	0.92	8,804.60	\$680.65
E0	1.16	8,825.30	\$500.51
E0	1.20	7,887.60	\$701.95

Rate Code	kW Savings	kWh Savings	Incentive
E0	1.22	7,960.00	\$708.38
E0	1.35	10,389.50	\$612.69
E0	1.50	10,093.10	\$1,401.05
E0	1.50	10,093.10	\$1,401.05
E0	1.62	7,377.00	\$838.78
E0	1.90	18,179.20	\$1,404.61
E0	2.00	15,400.10	\$908.10
E0	2.10	13,756.90	\$1,224.27
E0	2.35	11,401.60	\$1,142.06
E0	2.41	15,808.20	\$737.83
E0	2.67	31,384.00	\$3,446.59
E0	2.71	12,584.10	\$1,476.69
E0	3.03	19,867.50	\$1,768.07
E0	3.07	20,087.90	\$1,787.69
E0	3.25	17,124.30	\$1,835.36
E0	3.63	28,626.70	\$2,331.54
E0	3.73	21,037.90	\$1,980.73
E0	3.87	29,070.70	\$2,839.35
E0	4.31	61,260.00	\$7,095.96
E0	4.31	61,260.00	\$7,095.96
E0	4.34	28,441.10	\$2,531.05
E0	4.40	19,079.30	\$1,924.58
E0	4.52	19,615.60	\$1,978.69
E0	4.80	20,837.70	\$2,237.30
E0	4.82	21,893.60	\$2,165.46
E0	4.84	31,733.20	\$2,823.96
E0	5.01	32,823.20	\$2,921.06
E0	5.28	34,562.60	\$3,075.85
E0	5.57	36,499.50	\$3,248.21
E0	5.69	24,673.40	\$2,649.69
E0	5.84	38,229.30	\$3,402.20
E0	6.54	28,379.00	\$3,047.62
E0	6.85	44,843.10	\$2,014.00

2016 Basic CSOP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
E0	6.96	17,906.50	\$4,432.21
E0	7.01	68,756.50	\$10,160.81
E0	7.03	33,225.60	\$3,365.70
E0	7.15	32,327.50	\$3,204.56
E0	7.37	55,344.80	\$5,405.34
E0	7.42	48,612.80	\$4,326.20
E0	7.54	59,429.70	\$5,068.40
E0	7.72	50,568.10	\$4,500.21
E0	8.03	52,629.20	\$4,683.62
E0	8.53	112,827.00	\$17,421.90
E0	9.14	72,036.10	\$4,035.67
E0	9.89	64,803.50	\$5,767.08
E0	11.26	73,742.10	\$6,562.55
E0	11.59	57,888.30	\$8,922.74
E0	12.05	93,685.90	\$7,867.28
E0	13.44	60,307.20	\$12,756.60
E0	13.75	90,083.20	\$8,016.83
E0	13.79	61,133.60	\$6,109.96
E0	13.90	63,173.70	\$6,248.55
E0	13.94	373,775.60	\$52,165.40
E0	15.17	387,972.80	\$54,418.64
E0	15.28	30,763.30	\$7,428.45
E0	15.68	123,659.50	\$10,071.64
E0	16.63	95,185.00	\$18,356.76
E0	16.99	111,324.80	\$9,907.16
E0	18.25	63,264.50	\$13,457.77
E0	18.72	143,270.20	\$12,090.59
E0	19.98	71,317.30	\$14,963.49
E0	20.41	225,055.80	\$36,070.46
E0	20.43	133,866.00	\$8,346.71
E0	20.67	135,384.50	\$12,048.34
E0	21.02	165,729.60	\$13,853.80
E0	21.03	97,440.50	\$9,960.05

Rate Code	kW Savings	kWh Savings	Incentive
E0	21.98	210,400.00	\$40,070.08
E0	22.69	148,651.20	\$9,268.60
E0	22.81	149,443.10	\$13,299.40
E0	23.09	182,033.80	\$15,216.72
E0	23.60	183,128.70	\$15,385.70
E0	25.37	198,254.50	\$16,620.44
E0	26.18	171,507.60	\$15,263.04
E0	27.21	55,977.50	\$17,556.53
E0	30.15	193,499.50	\$17,348.44
E0	32.23	146,527.80	\$17,368.92
E0	32.66	147,264.60	\$15,236.04
E0	34.11	63,533.60	\$19,010.16
E0	34.66	170,888.00	\$19,551.16
E0	36.65	240,075.60	\$21,365.17
E0	44.82	194,708.70	\$20,487.17
E0	46.97	213,607.90	\$22,015.38
E0	52.41	396,090.30	\$33,564.40
E0	58.17	1,060,606.80	\$155,239.23
E0	58.17	1,060,606.80	\$155,239.23
E0	63.29	498,939.20	\$41,707.79
E0	63.73	149,631.40	\$38,988.60
E0	78.00	552,035.30	\$99,308.80
E0	78.11	615,780.00	\$51,474.84
E0	86.00	391,014.90	\$40,301.92
E0	89.00	630,862.30	\$86,229.44
E0	96.91	267,230.50	\$63,748.10
E0	107.08	486,856.20	\$50,180.20
E0	138.14	904,898.60	\$80,530.12
E0	144.77	265,617.50	\$63,658.25
E6	2.85	18,693.00	\$1,663.56
E6	3.25	21,318.00	\$2,150.25
EC	0.27	1,510.50	\$137.35
EC	3.57	20,119.40	\$1,894.26

2016 Basic CSOP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive
EC	35.59	70,805.20	\$20,157.68
EJ	0.00	-9.10	(\$0.97)
EJ	0.00	-10.60	(\$0.96)
EJ	0.03	158.60	\$17.44
EJ	0.09	585.50	\$59.93
EJ	0.28	1,821.30	\$186.39
EJ	0.40	1,983.10	\$158.73
EJ	1.18	5,859.10	\$468.94
EJ	1.40	9,190.50	\$940.59
EJ	1.47	9,606.30	\$854.86
EJ	1.71	11,184.90	\$1,144.69
EJ	2.66	17,452.90	\$1,553.18
EJ	3.28	21,489.60	\$1,339.91
EJ	3.35	16,590.20	\$1,823.25
EJ	4.00	21,777.00	\$2,391.85
EJ	6.45	31,913.50	\$3,507.87
EJ	12.62	62,417.30	\$6,860.68
EJ	14.91	97,696.10	\$8,694.37
EJ	15.30	75,721.90	\$8,649.75
EJ	50.39	260,020.40	\$29,183.79
EJ	166.25	855,711.30	\$94,803.17
EQ	0.00	-6.20	(\$0.44)
EQ	0.03	222.60	\$15.96
EQ	0.55	3,247.00	\$201.22
EQ	2.48	5,561.40	\$1,449.62
EQ	2.95	19,332.30	\$1,978.48
EQ	3.59	20,270.10	\$2,194.72
EQ	3.92	25,671.00	\$2,627.14
EQ	4.21	26,032.90	\$2,366.48
EQ	8.16	40,382.90	\$4,613.16
EQ	10.43	12,975.60	\$4,955.14
EQ	12.10	59,763.20	\$10,924.62

Rate Code	kW Savings	kWh Savings	Incentive
EQ	12.52	81,997.90	\$7,297.27
EQ	19.21	29,411.80	\$8,460.96
EQ	37.14	183,780.20	\$18,255.53
EQ	104.43	228,323.70	\$59,343.22
J0	6.38	42,657.50	\$3,769.13
J0	7.97	51,820.40	\$4,556.09
K0	0.26	1,950.00	\$161.20
K0	3.17	24,297.10	\$1,435.28
K0	6.73	29,212.70	\$3,536.21
K0	9.60	72,884.40	\$6,902.85
K0	10.18	50,334.30	\$5,532.21
K0	10.31	44,751.90	\$3,630.55
K0	11.21	88,137.50	\$5,941.41
K0	12.41	94,490.00	\$7,987.02
K0	13.41	73,472.90	\$5,638.01
K0	13.64	61,992.00	\$6,131.54
K0	15.63	102,369.60	\$9,110.18
K0	18.28	119,676.20	\$12,251.56
K0	36.47	534,003.60	\$80,947.13
K0	36.56	166,165.60	\$18,900.32
K0	57.28	285,905.50	\$33,199.52
K0	58.00	457,240.40	\$38,222.11
K0	82.63	406,892.80	\$40,502.66
K0	89.60	681,218.90	\$66,255.58
K0	102.19	802,857.80	\$67,187.88
K0	175.49	797,903.20	\$90,412.66
K4	76.65	604,308.60	\$50,101.94

2016 Healthcare MTP By Rate Code

Rate Code	kW Savings	kWh Savings	Incentive \$
B0	59.62	519,251.20	\$66,954.10
D0	211.39	1,201,518.70	\$123,946.33
E0	136.71	854,813.20	\$62,570.79
K0	88.58	1,233,886.70	\$183,120.45
Total	496.30	3,809,469.80	436,591.67

0.15336
0.28390
0.14332
0.41942
1.00000

*Includes implementer payments of \$494,964.63 for a total of 2016 spend of \$931,556.30

Rate Code	kW Savings	kWh Savings	Incentive
B0	59.62	519,251.20	\$66,954.10
D0	0.10	521.40	\$2.67
D0	0.17	1,126.80	\$100.30
D0	0.22	1,512.40	\$127.65
D0	0.29	1,509.80	\$152.54
D0	0.88	4,610.40	\$431.11
D0	1.22	24,181.50	\$2,659.93
D0	1.40	9,803.90	\$852.07
D0	2.07	10,841.20	\$1,095.16
D0	2.30	12,040.60	\$1,215.83
D0	3.07	16,068.80	\$1,092.81
D0	3.77	19,683.40	\$1,912.08
D0	5.49	28,720.60	\$2,787.62
D0	6.02	18,528.80	\$3,585.36
D0	6.02	105,197.40	\$11,776.94
D0	6.10	31,859.20	\$3,155.54
D0	6.84	47,972.10	\$4,337.04
D0	7.74	42,192.10	\$2,821.65
D0	8.74	24,613.30	\$4,917.45
D0	8.94	46,712.10	\$3,177.16
D0	9.24	25,456.50	\$5,143.58

Rate Code	kW Savings	kWh Savings	Incentive
D0	9.79	84,156.20	\$10,889.54
D0	9.84	52,190.50	\$3,529.34
D0	10.24	53,516.10	\$5,195.38
D0	11.33	59,204.40	\$5,747.66
D0	12.75	53,618.60	\$8,857.39
D0	13.48	94,536.20	\$8,380.57
D0	17.20	90,012.90	\$6,119.97
D0	22.94	119,886.30	\$12,111.09
D0	23.20	121,245.20	\$11,770.90
E0	5.51	38,637.30	\$2,352.14
E0	7.03	19,167.80	\$2,235.10
E0	7.42	52,060.10	\$3,169.33
E0	11.36	7,037.20	\$3,344.41
E0	11.65	81,672.90	\$7,386.20
E0	21.10	148,006.40	\$13,119.40
E0	21.58	150,187.70	\$9,166.67
E0	22.51	157,826.70	\$9,608.52
E0	28.55	200,217.10	\$12,189.02
K0	2.06	39,531.00	\$3,971.83
K0	5.89	40,641.30	\$3,551.73
K0	80.63	1,153,714.40	\$175,596.89

2016 Commercial Solar By Rate Code

Rate Code	kw Savings	kWh Savings	Incentive
B0	231.88	449,095.00	\$237,995.16
D0	1,454.27	2,948,605.10	\$1,471,824.11
D1	58.27	112,320.00	\$59,670.20
D6	63.99	123,360.00	\$65,535.22
DC	101.24	216,188.70	\$110,352.95
DJ	215.19	436,193.00	\$225,751.74
DQ	237.76	458,360.00	\$243,504.73
E0	4,661.09	10,525,106.70	\$3,372,626.22
J0	60.73	117,072.00	\$62,194.71
K0	774.77	1,866,718.80	\$178,463.49
Total	7,859.19	17,253,019.30	\$6,027,918.53

0.03948
0.24417
0.00990
0.01087
0.01831
0.03745
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1.00000

Rate code	kw Savings	kWh Savings	Incentive
B0	26.15	50,400.00	\$26,775.09
B0	26.33	50,752.00	\$26,962.08
B0	49.40	95,232.00	\$50,592.17
B0	58.43	112,640.00	\$59,840.20
B0	8.37	16,128.00	\$8,568.03
B0	27.85	53,680.00	\$28,517.59
B0	5.23	10,080.00	\$5,355.02
B0	8.23	15,872.00	\$8,432.03
B0	9.26	17,856.00	\$9,486.03
B0	2.15	4,480.00	\$2,286.30
B0	5.93	11,440.00	\$6,077.52
B0	4.55	10,535.00	\$5,103.10
D0	72.00	155,520.00	\$77,947.98
D0	31.87	61,440.00	\$32,640.12
D0	49.40	95,232.00	\$50,592.17
D0	64.30	123,952.00	\$65,849.70
D0	8.30	16,000.00	\$8,500.03
D0	44.64	101,184.00	\$49,527.14
D0	116.45	224,480.00	\$63,135.17
D0	74.92	144,432.00	\$76,729.89

Rate code	kW Savings	kWh Savings	Incentive
D0	20.25	39,040.00	\$20,740.07
D0	45.00	99,792.00	\$50,696.38
D0	7.47	14,400.00	\$7,650.03
D0	17.14	33,040.00	\$17,552.56
D0	47.06	90,720.00	\$48,195.15
D0	11.58	22,320.00	\$11,857.54
D0	74.00	159,984.00	\$80,149.48
D0	65.81	127,917.70	\$67,663.70
D0	64.07	123,504.00	\$65,611.72
D0	46.26	116,998.70	\$54,383.17
D0	17.64	34,000.00	\$18,062.56
D0	33.16	63,920.00	\$33,957.66
D0	12.35	23,808.00	\$12,648.04
D0	80.00	158,080.00	\$82,901.08
D0	25.52	49,200.00	\$26,137.64
D0	43.20	83,968.00	\$44,415.14
D0	77.48	155,286.80	\$80,841.79
D0	82.62	159,264.00	\$84,609.28
D0	42.58	82,080.00	\$43,605.14
D0	19.44	41,184.00	\$21,568.27

Rate code	kW Savings	kWh Savings	Incentive
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Rate code	kW Savings	kWh Savings	Incentive
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2016 Commercial Solar By Rate Code

D0	37.04	88,181.00	\$42,157.81
D0	37.04	88,181.00	\$42,157.81
D0	12.35	23,806.00	\$12,648.04
D0	3.51	7,995.90	\$3,905.51
D0	58.73	113,216.00	\$60,146.20
D0	11.09	26,476.00	\$12,640.14
D1	58.27	112,320.00	\$59,670.20
D6	9.41	18,144.00	\$9,639.03
D6	17.93	34,560.00	\$18,360.06
D6	11.95	23,040.00	\$12,240.04
D6	8.23	15,872.00	\$8,432.03
D6	16.47	31,744.00	\$16,864.06
DC	6.05	21,244.50	\$8,611.52
DC	16.73	32,256.00	\$17,136.06
DC	10.84	26,992.20	\$12,634.24
DC	16.47	31,744.00	\$16,864.05
DC	11.12	21,440.00	\$11,390.04
DC	8.23	15,872.00	\$8,432.03
DC	13.90	26,800.00	\$14,237.55
DC	13.67	31,680.00	\$16,712.45
DC	4.23	8,160.00	\$4,335.01
DJ	22.80	49,104.00	\$24,647.21
DJ	16.56	31,920.00	\$16,957.56
DJ	20.90	40,280.00	\$21,398.85
DJ	14.39	27,744.00	\$14,739.10
DJ	12.45	24,000.00	\$12,750.04

DJ	31.54	60,800.00	\$32,300.11
DJ	83.00	159,990.80	\$84,995.38
DJ	13.55	42,354.20	\$17,963.49
DQ	82.02	158,112.00	\$83,997.30
DQ	22.41	43,200.00	\$22,950.08
DQ	24.81	47,824.00	\$25,406.58
DQ	30.00	57,856.00	\$30,736.10
DQ	78.52	151,368.00	\$80,414.67
E0	900.00	1,774,080.00	\$199,581.43
E0	80.00	159,744.00	\$83,320.20
E0	80.00	159,744.00	\$83,320.20
E0	56.16	111,936.00	\$59,466.20
E0	80.00	159,720.00	\$83,380.72
E0	55.99	139,886.80	\$65,385.68
E0	432.00	1,017,792.00	\$413,475.38
E0	504.00	1,187,424.00	\$348,808.58
E0	324.00	775,656.00	\$237,546.01
E0	432.00	1,017,792.00	\$413,475.38
E0	82.62	159,264.00	\$84,609.28
E0	50.32	135,635.90	\$61,265.13
E0	360.00	842,688.00	\$262,288.28
E0	360.00	848,160.00	\$255,772.02
E0	360.00	848,160.00	\$238,543.79
E0	504.00	1,187,424.00	\$482,387.94
J0	60.73	117,072.00	\$62,194.71
K0	774.77	1,866,718.80	\$178,463.49

2016 Small Business Direct Install MTP

Rate Code	kW Savings	kWh Savings	Incentive
D0	392.23	2,225,064.80	\$525,385.13
Total	392.23	2,225,064.80	\$525,385.13

Implementer payments of \$18,804.05 for a total 2016 spend of \$544,189.18

Rate Code	kW Savings	kWh Savings	Incentive
D0	-	-	(\$0.01)
D0	-	-	\$0.01
D0	0.02	134.30	\$31.55
D0	0.03	191.80	\$45.07
D0	0.04	298.40	\$43.97
D0	0.04	263.70	\$61.98
D0	0.04	187.30	\$44.03
D0	0.05	229.00	\$53.81
D0	0.05	208.20	\$48.92
D0	0.06	231.60	\$54.43
D0	0.06	223.40	\$52.49
D0	0.07	483.40	\$113.59
D0	0.07	288.90	\$63.97
D0	0.07	261.90	\$61.55
D0	0.08	296.30	\$69.64
D0	0.09	575.40	\$135.22
D0	0.09	723.20	\$114.28
D0	0.09	440.30	\$103.47
D0	0.10	374.70	\$88.04
D0	0.12	1,443.50	\$339.22
D0	0.13	464.90	\$109.24
D0	0.14	985.30	\$231.54
D0	0.16	613.10	\$144.07
D0	0.16	590.10	\$138.67
D0	0.21	1,021.60	\$240.08
D0	0.21	1,478.00	\$347.33
D0	0.23	1,836.80	\$429.59
D0	0.23	1,005.00	\$236.14

Rate Code	kW Savings	kWh Savings	Incentive
D0	0.24	1,680.80	\$394.99
D0	0.33	1,253.40	\$294.55
D0	0.37	1,702.00	\$357.18
D0	0.38	2,385.40	\$536.79
D0	0.38	1,577.90	\$370.80
D0	0.38	2,517.50	\$591.61
D0	0.38	2,517.50	\$591.61
D0	0.40	1,690.30	\$397.21
D0	0.44	2,284.00	\$536.75
D0	0.46	1,652.20	\$388.28
D0	0.46	2,253.60	\$529.56
D0	0.49	2,312.60	\$536.51
D0	0.50	5,850.80	\$1,374.97
D0	0.51	3,845.20	\$607.54
D0	0.55	2,133.60	\$501.41
D0	0.57	2,916.90	\$422.51
D0	0.69	4,796.70	\$1,127.23
D0	0.70	4,765.40	\$1,119.88
D0	0.71	2,773.00	\$651.66
D0	0.71	2,749.90	\$646.23
D0	0.72	2,707.80	\$636.33
D0	0.73	5,068.00	\$1,190.99
D0	0.74	4,835.10	\$1,136.27
D0	0.75	3,164.10	\$743.55
D0	0.83	3,497.20	\$821.83
D0	0.89	6,172.80	\$1,450.60
D0	0.97	7,358.90	\$1,671.33
D0	1.04	8,156.60	\$1,505.01

2016 Small Business Direct Install MTP

Rate Code	kW Savings	kWh Savings	Incentive
D0	1.06	4,932.30	\$643.41
D0	1.06	7,324.70	\$1,721.30
D0	1.09	4,579.60	\$473.22
D0	1.09	8,195.30	\$1,925.90
D0	1.11	4,679.50	\$1,099.68
D0	1.12	9,069.90	\$1,336.73
D0	1.15	4,687.70	\$1,101.61
D0	1.20	5,062.50	\$1,130.82
D0	1.34	4,906.40	\$1,152.99
D0	1.36	5,703.70	\$1,340.36
D0	1.39	5,184.70	\$1,218.43
D0	1.40	5,442.00	\$1,205.14
D0	1.44	6,065.80	\$1,425.47
D0	1.52	10,073.40	\$2,367.27
D0	1.54	10,085.90	\$2,370.18
D0	1.57	5,686.30	\$1,172.34
D0	1.62	10,613.40	\$2,494.14
D0	1.65	11,447.10	\$2,690.07
D0	1.73	13,580.80	\$3,176.37
D0	1.76	8,312.70	\$1,953.51
D0	1.81	9,333.40	\$2,193.31
D0	1.82	13,987.80	\$3,176.84
D0	1.88	9,663.50	\$2,270.95
D0	1.89	7,926.80	\$1,862.80
D0	1.95	8,567.40	\$1,939.77
D0	1.97	9,205.00	\$2,038.49
D0	1.98	9,368.70	\$2,020.29
D0	2.06	16,221.20	\$3,324.42
D0	2.07	8,949.00	\$2,103.00
D0	2.27	15,707.30	\$3,691.18
D0	2.44	9,511.80	\$2,235.24
D0	2.81	18,425.50	\$4,330.01
D0	2.88	14,272.30	\$3,353.98
D0	3.04	10,975.70	\$2,579.27

Rate Code	kW Savings	kWh Savings	Incentive
D0	3.14	12,383.20	\$2,910.05
D0	3.26	21,154.20	\$4,971.22
D0	3.30	22,439.20	\$5,273.22
D0	3.77	24,687.30	\$5,801.51
D0	4.12	21,198.20	\$4,981.61
D0	4.30	16,738.20	\$2,278.94
D0	4.30	15,521.10	\$3,647.48
D0	4.41	31,128.80	\$7,273.86
D0	4.77	21,671.10	\$5,092.72
D0	4.85	38,107.90	\$7,031.53
D0	5.25	33,893.20	\$7,964.94
D0	5.41	42,553.50	\$10,000.07
D0	5.97	35,655.50	\$8,379.05
D0	6.04	23,506.90	\$5,524.15
D0	6.06	23,582.10	\$5,541.80
D0	6.39	50,213.50	\$11,800.18
D0	7.84	29,513.40	\$6,935.63
D0	8.25	64,870.70	\$15,244.59
D0	8.40	39,834.90	\$9,361.21
D0	8.87	61,440.10	\$14,438.43
D0	9.12	37,160.50	\$7,515.89
D0	9.33	62,166.90	\$14,293.65
D0	9.95	66,476.40	\$15,621.90
D0	10.26	68,306.20	\$16,051.90
D0	11.01	86,564.90	\$20,078.20
D0	13.14	87,265.50	\$20,507.35
D0	13.15	86,121.80	\$20,238.62
D0	13.38	105,191.20	\$23,142.08
D0	17.38	75,423.40	\$17,724.49
D0	19.28	81,058.40	\$24,317.56
D0	21.15	82,289.10	\$21,312.85
D0	24.55	193,047.70	\$42,470.48
D0	34.80	146,681.40	\$44,004.41

Oncor's 2016 Energy Efficiency Measure Estimated Useful Life (EUL) NPV Calculation

Avoided Costs kW	\$80.00
WACC	8.14%
Escalation Rate	2.00%
EUL	
Avoided Costs kWh	\$0.05088

YR	kW	kWh
1	\$75.46	\$0.04799
2	\$146.63	\$0.09326
3	\$213.76	\$0.13595
4	\$277.08	\$0.17623
5	\$336.81	\$0.21421
6	\$393.14	\$0.25004
7	\$446.28	\$0.28383
8	\$496.40	\$0.31571
9	\$543.67	\$0.34577
10	\$588.26	\$0.37413
11	\$630.32	\$0.40088
12	\$669.99	\$0.42611
13	\$707.40	\$0.44991
14	\$742.70	\$0.47236
15	\$775.99	\$0.49353
16	\$807.38	\$0.51350
17	\$837.00	\$0.53233
18	\$864.93	\$0.55010
19	\$891.28	\$0.56686
20	\$916.13	\$0.58266
25	\$1,020.77	\$0.64921
30	\$1,098.88	\$0.69889

YR	kW	kWh
1.1	\$82.76	\$0.05264
1.2	\$90.03	\$0.05726
1.3	\$97.25	\$0.06185
1.4	\$104.43	\$0.06642
1.5	\$111.56	\$0.07095
1.6	\$118.66	\$0.07547
1.7	\$125.71	\$0.07995
1.8	\$132.73	\$0.08441
1.9	\$139.70	\$0.08885
2.1	\$153.52	\$0.09764
2.2	\$160.37	\$0.10200
2.3	\$167.18	\$0.10633
2.4	\$173.96	\$0.11064
2.5	\$180.69	\$0.11492
2.6	\$187.38	\$0.11917
2.7	\$194.03	\$0.12341
2.8	\$200.65	\$0.12761
2.9	\$207.23	\$0.13180
3.1	\$220.26	\$0.14009
3.2	\$226.73	\$0.14420
3.3	\$233.15	\$0.14828
3.4	\$239.54	\$0.15235
3.5	\$245.89	\$0.15638
3.6	\$252.20	\$0.16040
3.7	\$258.47	\$0.16439
3.8	\$264.71	\$0.16836
3.9	\$270.92	\$0.17230

YR	kW	kWh
4.1	\$283.21	\$0.18012
4.2	\$289.31	\$0.18400
4.3	\$295.37	\$0.18786
4.4	\$301.39	\$0.19169
4.5	\$307.38	\$0.19550
4.6	\$313.34	\$0.19928
4.7	\$319.26	\$0.20305
4.8	\$325.14	\$0.20679
4.9	\$330.99	\$0.21051
5.1	\$342.59	\$0.21789
5.2	\$348.34	\$0.22155
5.3	\$354.06	\$0.22518
5.4	\$359.74	\$0.22879
5.5	\$365.39	\$0.23239
5.6	\$371.00	\$0.23596
5.7	\$376.59	\$0.23951
5.8	\$382.14	\$0.24304
5.9	\$387.66	\$0.24655
6.1	\$398.60	\$0.25351
6.2	\$404.02	\$0.25696
6.3	\$409.41	\$0.26039
6.4	\$414.77	\$0.26379
6.5	\$420.10	\$0.26718
6.6	\$425.40	\$0.27055
6.7	\$430.66	\$0.27390
6.8	\$435.90	\$0.27723
6.9	\$441.10	\$0.28054

Oncor's 2016 Energy Efficiency Measure Estimated Useful Life (EUL) NPV Calculation

YR	KW	KWh	YR	KW	KWh	YR	KW	KWh	YR	KW	KWh
7.1	\$451.42	\$0.28711	10.1	\$592.58	\$0.37688	13.1	\$711.03	\$0.45221	16.1	\$810.42	\$0.51543
7.2	\$456.54	\$0.29036	10.2	\$596.87	\$0.37961	13.2	\$714.63	\$0.45450	16.2	\$813.45	\$0.51735
7.3	\$461.62	\$0.29359	10.3	\$601.14	\$0.38232	13.3	\$718.21	\$0.45678	16.3	\$816.45	\$0.51926
7.4	\$466.68	\$0.29681	10.4	\$605.38	\$0.38502	13.4	\$721.77	\$0.45905	16.4	\$819.44	\$0.52116
7.5	\$471.71	\$0.30000	10.5	\$609.60	\$0.38770	13.5	\$725.31	\$0.46130	16.5	\$822.41	\$0.52305
7.6	\$476.70	\$0.30318	10.6	\$613.79	\$0.39037	13.6	\$728.83	\$0.46353	16.6	\$825.36	\$0.52493
7.7	\$481.67	\$0.30634	10.7	\$617.96	\$0.39302	13.7	\$732.32	\$0.46576	16.7	\$828.30	\$0.52680
7.8	\$486.61	\$0.30948	10.8	\$622.10	\$0.39566	13.8	\$735.80	\$0.46797	16.8	\$831.21	\$0.52865
7.9	\$491.52	\$0.31260	10.9	\$626.22	\$0.39828	13.9	\$739.26	\$0.47017	16.9	\$834.12	\$0.53050
8.1	\$501.25	\$0.31880	11.1	\$634.39	\$0.40347	14.1	\$746.11	\$0.47453	17.1	\$839.87	\$0.53416
8.2	\$506.08	\$0.32186	11.2	\$638.44	\$0.40605	14.2	\$749.51	\$0.47669	17.2	\$842.72	\$0.53597
8.3	\$510.87	\$0.32491	11.3	\$642.46	\$0.40861	14.3	\$752.89	\$0.47884	17.3	\$845.55	\$0.53777
8.4	\$515.64	\$0.32795	11.4	\$646.46	\$0.41115	14.4	\$756.25	\$0.48097	17.4	\$848.37	\$0.53956
8.5	\$520.38	\$0.33096	11.5	\$650.44	\$0.41368	14.5	\$759.58	\$0.48310	17.5	\$851.17	\$0.54134
8.6	\$525.09	\$0.33396	11.6	\$654.40	\$0.41620	14.6	\$762.90	\$0.48521	17.6	\$853.96	\$0.54312
8.7	\$529.78	\$0.33694	11.7	\$658.33	\$0.41870	14.7	\$766.20	\$0.48730	17.7	\$856.72	\$0.54488
8.8	\$534.44	\$0.33990	11.8	\$662.24	\$0.42118	14.8	\$769.48	\$0.48939	17.8	\$859.48	\$0.54663
8.9	\$539.07	\$0.34285	11.9	\$666.12	\$0.42365	14.9	\$772.74	\$0.49146	17.9	\$862.21	\$0.54837
9.1	\$548.25	\$0.34869	12.1	\$673.83	\$0.42855	15.1	\$779.21	\$0.49558	18.1	\$867.64	\$0.55182
9.2	\$552.80	\$0.35158	12.2	\$677.65	\$0.43098	15.2	\$782.41	\$0.49761	18.2	\$870.33	\$0.55353
9.3	\$557.32	\$0.35446	12.3	\$681.44	\$0.43340	15.3	\$785.60	\$0.49964	18.3	\$873.00	\$0.55523
9.4	\$561.82	\$0.35732	12.4	\$685.22	\$0.43580	15.4	\$788.77	\$0.50165	18.4	\$875.66	\$0.55692
9.5	\$566.29	\$0.36016	12.5	\$688.97	\$0.43818	15.5	\$791.91	\$0.50366	18.5	\$878.30	\$0.55860
9.6	\$570.74	\$0.36299	12.6	\$692.70	\$0.44056	15.6	\$795.04	\$0.50565	18.6	\$880.93	\$0.56027
9.7	\$575.16	\$0.36580	12.7	\$696.41	\$0.44292	15.7	\$798.16	\$0.50763	18.7	\$883.54	\$0.56193
9.8	\$579.55	\$0.36859	12.8	\$700.09	\$0.44526	15.8	\$801.25	\$0.50960	18.8	\$886.14	\$0.56358
9.9	\$583.92	\$0.37137	12.9	\$703.76	\$0.44759	15.9	\$804.33	\$0.51155	18.9	\$888.72	\$0.56522
									19.1	\$893.83	\$0.56848
									19.2	\$896.37	\$0.57009
									19.3	\$898.89	\$0.57169
									19.4	\$901.40	\$0.57329
									19.5	\$903.89	\$0.57487
									19.6	\$906.37	\$0.57645
									19.7	\$908.83	\$0.57802
									19.8	\$911.28	\$0.57957
									19.9	\$913.71	\$0.58112

Oncor's 2016 Energy Efficiency Program Costs

a	b	c	d	e	f	g
Program	Total Energy Efficiency Expenditures as shown in Table 10 of 2017 EEPR	Total Energy Efficiency Incentives (Direct) as shown in Table 10 of 2017 EEPR	Direct Administration Expenditures	Allocated Administration Expenditures Excluding Rate Case Expenses*	Allocated R & D	Total Program Costs c+d+e+f
Home Energy Efficiency SOP	\$15,956,835	\$14,435,266	\$643,964	\$875,890	\$15,522	\$15,970,642
Solar PV - Residential	\$5,247,678	\$4,757,415	\$201,031	\$288,667	\$5,116	\$5,252,229
Residential Demand Response MTP	\$213,259	\$184,424	\$17,623	\$11,191	\$198	\$213,436
Hard-to-Reach SOP	\$6,703,481	\$5,953,011	\$388,551	\$361,212	\$6,402	\$6,709,176
Targeted Weatherization Low-Income SOP (SB 712)	\$5,531,643	\$5,164,432	\$53,235	\$313,362	\$5,554	\$5,536,583
Commercial Load Management SOP	\$2,584,198	\$2,400,661	\$37,586	\$145,666	\$13,731	\$2,597,644
Commercial SOP (Basic)	\$6,766,963	\$5,664,897	\$757,683	\$343,730	\$32,400	\$6,798,710
Commercial SOP (Custom)	\$1,895,162	\$1,630,922	\$165,086	\$98,960	\$9,328	\$1,904,296
Solar PV - Commercial	\$6,524,967	\$6,027,919	\$130,595	\$365,757	\$34,477	\$6,558,748
Small Business Direct Install	\$585,155	\$544,189	\$17,881	\$33,020	\$3,113	\$598,203
Healthcare MTP	\$1,005,782	\$931,556	\$17,591	\$56,524	\$5,328	\$1,010,999
Research & Development	\$131,169					
Total Energy Efficiency	\$53,156,332	\$47,694,692	\$2,430,826	\$2,893,979	\$131,169	\$53,150,666

Commercial Incentives	\$17,200,144
Residential Incentives	\$30,494,548
Total Incentives	\$47,694,692

R & D % Commercial	75%
R & D % Residential	25%

* Rate Case expenses of \$5,666 paid in 2016 for recovery in 2017

Oncor's Energy Efficiency Research and Development and Evaluation Measurement and Verification Allocation for 2018 Program Year

a	b	c	d	e	f
Program	Total Energy Efficiency Expenditures as shown in Table 6 of 2017 EEPR	Total Energy Efficiency Incentives as shown in Table 6 of 2017 EEPR	R & D Allocation	Evaluation, Measurement & Verification Allocation*	Total Energy Efficiency Expenditures (b + d + e)
Home Energy Efficiency SOP	\$12,889,360	\$11,131,020	\$37,312	\$318,917	\$13,045,589
Solar PV SOP - Residential	\$1,671,700	\$1,479,380	\$4,959	\$102,667	\$1,779,326
Hard-to-Reach SOP	\$5,446,670	\$4,777,780	\$16,016	\$131,705	\$5,594,391
Targeted Weatherization Low-Income SOP (SB 712)	\$4,989,650	\$4,415,620	\$14,802	\$56,934	\$5,061,386
Residential Demand Response MTP	\$1,500,240	\$1,316,000	\$4,411	\$76,626	\$1,581,277
Commercial SOP (Basic)	\$9,669,440	\$8,499,900	\$98,540	\$259,864	\$10,027,844
Commercial SOP (Custom)	\$3,994,020	\$3,560,580	\$41,279	\$141,173	\$4,176,472
Commercial Load Management SOP	\$2,599,200	\$2,280,000	\$26,433	\$76,912	\$2,702,545
Solar PV SOP - Commercial	\$2,933,040	\$2,572,840	\$29,928	\$127,139	\$3,090,007
Small Business Direct Install MTP	\$3,581,260	\$3,141,460	\$38,420	\$43,022	\$3,660,702
Healthcare MTP	\$0	\$0	\$0	\$92,251	\$92,251
Total Energy Efficiency	\$49,074,580	\$43,174,580	\$310,000	\$1,427,210	\$50,811,790
				2016 Over Recovery	-\$6,097,607
Commercial Incentives	\$20,054,780			EECRF Municipal Rate Case Expenses for 2016	\$6,687
Residential Incentives	\$23,119,800			Requested Energy Efficiency Performance Bonus for 2016	\$11,741,562
Total Incentives	\$43,174,580			Total 2018 EECRF	\$55,462,432
EM&V Expenses for Evaluation of 2016 & 2017 Program Years as Provided by EM&V Evaluator and PUCT Staff	\$1,427,210				
R & D % Commercial	75%				
R & D % Residential	25%				
Total R & D	\$310,000				

*Total EM&V costs for the evaluation of Program Year 2016 and Program Year 2017. Details for the allocations can found WP/MRS/7.

Program Year 2015 EMV Cost Allocations By Rate Class

Program	2015 kW	2015 kWh	Priority	kWh %	Priority Weight	Priority %	Blended %	kWh Cost	Priority Cos	Blended Cost	CY2015	CY2016
Commercial SOP	17,482	80,267,291	Medium	41%	3	16%	28%	\$299,736	\$116,411	\$208,073	\$24,737	\$183,336
Commercial Load Management SOP	55,000	165,000	Low	0%	1	5%	3%	\$616	\$38,804	\$19,710	\$2,343	\$17,367
Solar PV SOP (COM)	3,250	6,265,600	Low	3%	1	5%	4%	\$23,397	\$38,804	\$31,100	\$3,697	\$27,403
Small Business Direct Install MTP	1,003	3,171,178	Low	2%	1	5%	3%	\$11,842	\$38,804	\$25,323	\$3,011	\$22,312
Home Energy Efficiency SOP	18,100	76,106,880	High	39%	5	26%	32%	\$284,200	\$194,018	\$239,109	\$28,427	\$210,682
Solar PV SOP (RES)	2,695	5,195,200	Low	3%	1	5%	4%	\$19,400	\$38,804	\$29,102	\$3,460	\$25,642
Hard-to-Reach SOP	5,719	23,045,282	High	12%	5	26%	19%	\$86,056	\$194,018	\$140,037	\$16,649	\$123,369
Targeted Weatherization LI SOP	1,050	3,219,300	Low	2%	1	5%	3%	\$12,022	\$38,804	\$25,413	\$3,021	\$22,391
Residential Demand Response Pilot MTI	6,000	-	Low	0%	1	5%	3%	\$0	\$38,804	\$19,402	\$2,307	\$17,095
Total	110,299	197,435,731		100%	19	100%	100%	\$737,269	\$737,269	\$737,269	\$87,652	\$649,617

Total EM&V costs for the Evaluation of PY 2015 was \$737,269, with \$87,652 incurred in 2015 and \$649,617 incurred in 2016.

Program Year 2015 EM&V Costs By Program and Rate Class	Sector	Residential	Secondary		Primary > 10 kW Distribution Line	Primary > 10 kW Substation	Transmission Service Non-Profit	Total
			≤ 10 kW	> 10 kW				
Commercial SOP**	Nonresidential	\$0	\$13,560	\$167,850	\$26,361	\$0	\$302	\$208,073
Commercial Load Management SOP	Nonresidential	\$0	\$0	\$10,810	\$8,900	\$0	\$0	\$19,710
Small Business Direct Install MTP	Nonresidential	\$0	\$0	\$25,323	\$0	\$0	\$0	\$25,323
Solar PV SOP	Nonresidential	\$0	\$0	\$31,100	\$0	\$0	\$0	\$31,100
Home Energy Efficiency SOP	Residential	\$239,109	\$0	\$0	\$0	\$0	\$0	\$239,109
Solar PV SOP	Residential	\$29,102	\$0	\$0	\$0	\$0	\$0	\$29,102
Hard-to-Reach SOP	Residential	\$140,037	\$0	\$0	\$0	\$0	\$0	\$140,037
Targeted Weatherization	Residential	\$25,413	\$0	\$0	\$0	\$0	\$0	\$25,413
Low-Income SOP	Residential	\$19,402	\$0	\$0	\$0	\$0	\$0	\$19,402
Residential Demand Response	Residential	\$453,063	\$13,560	\$235,083	\$35,261	\$0	\$302	\$737,269
Total								

Nonresidential Rate Class allocation based on incentive ratios by Program found in Workpapers WP/MRS/1 in Docket No. 46013

**2015 Custom and Basic SOP kWh from Exhibit MRS-1, Table 8 in Docket No. 46013

Basic	\$13,189	\$135,910	\$15,856	\$0	\$302	\$165,257
Custom	\$371	\$31,940	\$10,505	\$0	\$0	\$42,816
Total	\$13,560	\$167,850	\$26,361	\$0	\$302	\$208,073

Oncor's 2016 Energy Efficiency Performance Bonus and Cost-Effectiveness Costs

a	b	c	d	e	f	g	h	i	j
Program	Total Energy Efficiency Expenditures as shown in Table 10 of 2017 EEP	Total Energy Efficiency Incentives (Direct) as shown in Table 10 of 2017 EEP	Direct Administration Expenditures	Allocated Administration Expenditures	Allocated R & D	EM&V Cost Allocation as Provided by Evaluator	Allocated Performance Bonus	Total Costs for Bonus Calculation (c+d+e+f+g)	Total Costs for Cost-Effectiveness Calculation (c+d+e+f+g-h) Minus Municipal Rate Case Expenses
Solar PV - Residential	\$5,247,678	\$4,757,415	\$201,031	\$289,232	\$5,116	\$64,986	\$969,465	\$5,317,790	\$6,286,696
Hard-to-Reach SOP	\$6,703,481	\$5,959,011	\$368,551	\$351,919	\$6,402	\$51,655	\$1,232,669	\$6,761,538	\$7,993,496
Home Energy Efficiency SOP	\$19,958,835	\$14,438,286	\$643,984	\$877,805	\$15,822	\$148,971	\$2,939,014	\$16,121,328	\$19,058,546
Targated Weatherization Low-Income SOP (SB 712)	\$5,531,643	\$5,184,432	\$53,235	\$313,875	\$5,554	\$22,545	\$1,013,574	\$5,559,742	\$6,572,731
Residential Demand Response	\$213,259	\$184,424	\$17,823	\$11,212	\$198	\$48,589	\$47,408	\$280,048	\$307,427
Commercial Load Management SOP	\$2,584,198	\$2,400,661	\$37,886	\$146,951	\$13,731	\$46,875	\$482,164	\$2,644,804	\$3,126,680
Commercial SOP (Basic)	\$9,786,983	\$5,684,887	\$757,698	\$344,403	\$82,401	\$137,341	\$1,264,607	\$6,936,725	\$8,200,602
Commercial SOP (Custom)	\$1,865,162	\$1,630,922	\$165,086	\$99,154	\$9,328	\$75,199	\$360,909	\$1,979,689	\$2,340,390
Solar PV - Commercial	\$6,524,987	\$6,027,919	\$130,595	\$368,473	\$34,476	\$77,482	\$1,209,955	\$8,636,945	\$7,846,202
Small Business Direct Install	\$595,155	\$544,189	\$17,881	\$33,085	\$3,113	\$19,549	\$112,632	\$617,817	\$730,384
Healthcare MTP	\$1,005,782	\$821,556	\$17,591	\$56,635	\$6,328	\$22,403	\$189,416	\$1,039,513	\$1,221,820
Research & Development	\$131,169								
Total Energy Efficiency	\$59,156,332	\$47,694,692	\$2,430,826	\$2,899,645	\$131,189	\$713,605	\$9,820,813	\$53,869,937	\$53,885,084

Total Admin. Costs	\$5,330,471
Direct Admin. Costs	\$2,430,826
Allocated Admin.	\$2,899,645

Bonus Collected in 2016	\$9,820,813
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Municipal Rate Case Expenses Paid in 2016	\$5,666
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Commercial Incentives	\$17,200,144
Residential Incentives	\$30,494,548
Total Incentives	\$47,694,692

R & D % Commercial	75%
R & D % Residential	25%

2016 EM&V Cost Allocation	\$713,605
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Oncor's Evaluation, Measurement and Verification Costs for PY 2016 and PY 2017

Oncor's Program Year 2016 EM&V Costs (Provided by the PUCT Evaluator)

Sector	Program	kW	kWh	kW %	kWh %	Priority %	Blended %	kWh Cost	Priority Cost	Blended Cost	PY 2016 Cost
Com	Commercial Load Management SOP	60,016.5100	180,049.7	0.467	0.0009	0.1304	0.0657	642.1159	93035.4554	46874.4587	\$46,875.00
Com	Commercial SOP (Basic)	8,712.5875	50,595,032.1	0.068	0.2545	0.1304	0.1925	181576.0997	93035.4554	137341.4506	\$137,341.00
Com	Commercial SOP (Custom)	1,849.4990	15,975,618.2	0.014	0.0804	0.1304	0.1054	57362.3513	93035.4554	75198.9034	\$75,199.00
Com	Healthcare MTP	496.3000	3,809,469.8	0.004	0.0192	0.0435	0.0314	13698.472	31035.6005	22402.7093	\$22,403.00
Com	Small Business Direct Install MTP	382.2100	2,225,084.8	0.003	0.0112	0.0435	0.0274	7990.7753	31035.6005	19548.861	\$19,549.00
Com	Solar PV SOP	7,859.1900	17,253,019.3	0.061	0.0868	0.1304	0.1086	61928.5086	93035.4554	77481.982	\$77,482.00
HTR	Hard-to-Reach SOP	7,940.0905	20,135,626.6	0.059	0.1013	0.0435	0.0724	72273.7088	31035.6005	51654.6547	\$51,655.00
LI	Targeted Weatherization LI SOP	2,152.4875	3,915,583.6	0.017	0.0197	0.0435	0.0316	14065.203	31035.6005	22545.4018	\$22,545.00
Res	Home Energy Efficiency SOP	30,136.5887	74,366,439.8	0.234	0.3741	0.0435	0.2088	266906.1646	31035.6005	148970.8625	\$148,971.00
Res	Residential Demand Response Pilot MTP	4,610.5920	27,863.6	0.036	0.0001	0.1304	0.0553	71.3462	93035.4554	46589.0739	\$46,589.00
Res	Solar PV SOP	4,687.2900	10,286,965.5	0.037	0.0518	0.1304	0.0911	36967.3358	93035.4554	64996.3956	\$64,996.00
Total											\$713,605.00

Oncor's Program Year 2017 EM&V Costs (Provided by the PUCT Evaluator)

Sector	Program	kW	kWh	kW %	kWh %	Priority %	Blended %	kWh Cost	Priority Cost	Blended Cost	PY 2017 Cost
Com	Commercial Load Management SOP	55,000	165,000	0.3773	0.0008	0.0833	0.0421	570.7697	59431.3914	30036.7536	\$30,037.00
Com	Commercial SOP	15,301	81,185,419	0.1050	0.3894	0.1389	0.2642	277822.1344	99099.8831	189496.6818	\$188,497.00
Com	Healthcare MTP	1,404	11,868,596	0.0096	0.0569	0.1389	0.0979	40595.9924	99099.8831	69847.9377	\$69,848.00
Com	Small Business Direct Install MTP	1,934	7,917,695	0.0133	0.0380	0.0278	0.0329	27111.5591	19834.2459	23472.9025	\$23,473.00
Com	Solar PV SOP	2,840	11,632,080	0.0195	0.0558	0.0833	0.0696	39811.1841	59431.3914	49656.9608	\$49,657.00
HTR	Hard-to-Reach SOP	7,388	17,797,136	0.0507	0.0854	0.1389	0.1122	60929.6617	99099.8831	80050.4455	\$80,050.00
LI	Targeted Weatherization Low-Income SOP	1,518	2,737,531	0.0104	0.0131	0.0833	0.0482	9346.3533	59431.3914	34388.8723	\$34,389.00
Res	Home Energy Efficiency SOP	26,394	70,365,671	0.1811	0.3375	0.1389	0.2382	240793.4524	99099.8831	169946.6677	\$169,946.00
Res	Residential Demand Response Pilot SOP	32,900	197,400	0.2287	0.0000	0.0833	0.0421	642.1159	59431.3914	30036.7536	\$30,037.00
Res	Solar PV SOP	1,096	4,646,400	0.0075	0.0223	0.0833	0.0528	15910.2044	59431.3914	37670.7979	\$37,671.00
Total											\$713,605.00

Oncor's Program Year 2016 & 2017 Total EM&V Costs (Provided by the PUCT Evaluator)

Sector	Program	Total Cost
Com	Commercial Load Management SOP	\$76,912.00
Com	Commercial SOP (Basic)	\$259,864.00
Com	Commercial SOP (Custom)	\$141,173.00
Com	Healthcare MTP	\$92,251.00
Com	Small Business Direct Install MTP	\$43,022.00
Com	Solar PV SOP	\$127,139.00
HTR	Hard-to-Reach SOP	\$131,705.00
LI	Targeted Weatherization LI SOP	\$56,934.00
Res	Home Energy Efficiency SOP	\$318,917.00
Res	Residential Demand Response Pilot MTP	\$76,626.00
Res	Solar PV SOP	\$102,667.00
Total		\$1,427,210.00

**Testimony
Workpapers
Of
J. Michael Sherburne**

**Oncor Electric Delivery Company LLC
Energy Efficiency Revenues and Actual Billing Determinants
For the Year Ended December 31, 2016**

**Energy Efficiency Revenues Billed Through the
EECRF Factors as Approved in Docket Nos. 42559 and 44784¹ and
Actual Billing Determinants**

<u>Energy Efficiency Rate Class</u>	(a)	(b)
	2016 EECRF Billed Revenue	2016 Actual Billing Determinants (kWh)
Residential	\$ 41,239,009	41,234,983,251
Secondary Service < 10 kW	\$ 2,381,171	1,692,556,731
Secondary Service > 10 kW	\$ 19,723,583	44,682,591,959
Primary Service < 10 kW	\$ 6,223	23,297,572
Primary Service > 10 kW		
Distribution Line	\$ 1,307,393	11,448,494,160
Substation	\$ (70,567)	2,893,387,445
Transmission		
Non Profit	\$ 1,196,986	901,735,748
For Profit	\$ (137)	12,477,530,618
Lighting	\$ 54	436,801,490
Total	\$ 65,783,715	115,791,378,994

¹ Source: Company's Books and Records

Oncor Electric Delivery Company LLC
Application of 2016 Energy Efficiency Cost Recovery Factor
2016 (Over)/Under Collection of Energy Efficiency Costs

(a) Energy Efficiency Rate Class Residential Service	(b) 2016 Actual Energy Efficiency Program Costs, see Exhibit MRS-2 Column (b)	(c) 2016 EECRF Revenue, see WP/JMS/1 (a) Amount	(d) 2014 Performance Bonus Allocation ¹ Amount	(e) Municipal Rate Case Expense Incurred in 2015 ² Amount	(f) 2014 (Over)/Under Recovery of Energy Efficiency Costs ³ Amount	(g) 2016 (Over)/Under Recovery of Energy Efficiency Costs Amount	(h) = (c)-(d)-(e)-(f)-(g)
Secondary Service ≤ 10 kW	34,135,130	2,381,171	210,185	315	623,771	306,146	(871,956)
Secondary Service > 10 kW	16,530,258	19,723,583	3,232,185	4,837	(3,584,765)	(884,381)	(884,381)
Primary Service ≤ 10 kW	0	6,223	0	0	8,702	2,479	(3,541,070)
Primary Service > 10 kW Distribution Line	2,559,738	1,307,393	441,592	661	(2,964,230)	(1,269,632)	(1,269,632)
Substation	0	(70,567)	4,900	7	(98,545)	(23,071)	(23,071)
Transmission Service Non Profit	302	1,195,986	15,018	22	1,671,531	489,887	489,887
For Profit	0	(137)	0	0	(2,251)	0	0
Lighting Service	0	54	0	0	0	0	0
Total	53,887,935	65,783,715	9,820,813	14,696	(4,039,641)	(6,097,744)	(6,097,744)

¹ Allocation of performance bonus as approved in Oncor's 2016 EECRF Docket No. 44784, see FoF 23. See witness J. Michael Sherburne testimony, Exhibit JMS-3, p. 132 of Application.

² Allocation of Municipal Rate Case Expense as approved in Oncor's 2016 EECRF Docket No. 44784, see FoF 26. See witness J. Michael Sherburne testimony, Exhibit JMS-4, p. 133 of Application.

³ Allocation of over-recovery of 2014 energy efficiency costs as approved in Oncor's 2016 EECRF Docket No. 44784, see FoF 24. See witness J. Michael Sherburne testimony, Exhibit JMS-2, p. 131 of Application

* Oncor is authorized to write-off the \$2,251 over-recovery in 2014 for the transmission-of-profit energy-efficiency rate class as approved in Oncor's 2017 EECRF Docket No. 46013, see FoF 35. Oncor is proposing to write-off the \$137 under-recovery because the amount is so small that it cannot be recovered through the EECRF.

** Oncor is authorized to write-off the \$54 over-recovery in 2016 for the lighting service rate class as approved in Oncor's 2017 EECRF Docket No. 46013, see FoF 36.

Oncor Electric Delivery Company LLC
Application of 2018 Energy Efficiency Cost Recovery Factor

Calculation of Line Loss Factor

Oncor Annual Peak (2012-2016) Date/Time	Load Research (kW)			Load Research less Exempts (kW)*			Line Loss Factors from Docket No. 38926 (WPAJ-11-1.13)									
	(a) Secondary	(b) Primary	(c) Transmission	(d) Total	(e) Secondary	(f) Primary	(g) Transmission	(h) Total	(i) Secondary	(j) Primary	(k) Transmission	(l) Total	(m) Secondary	(n) Primary	(o) Transmission	(p) Total
8/1/2016 16:45 1	20,504,540	1,061,442	1,465,456	23,031,438	20,498,766	1,647,738	185,782	22,310,276	6.86634%	4.57929%	2.46947%	6.6656%	6.3082%	0.3302%	0.0183%	6.6656%
8/10/2016 16:30 2	20,711,149	1,879,301	1,564,769	23,949,219	20,700,308	1,656,943	157,708	22,514,959	6.86634%	4.57929%	2.46947%	6.6656%	6.3106%	0.3376%	0.0178%	6.6656%
8/25/2014 16:30 3	18,936,341	1,654,272	1,348,645	22,139,258	18,924,902	1,633,850	176,945	20,735,698	6.86634%	4.57929%	2.46947%	6.6656%	6.2967%	0.3449%	0.0188%	6.6656%
8/7/2013 16:45 4	19,890,531	1,808,672	1,276,669	22,974,072	19,880,531	1,806,672	180,869	21,878,072	6.86634%	4.57929%	2.46947%	6.6656%	6.2832%	0.3533%	0.0192%	6.6656%
8/1/2012 16:30 5	20,364,499	1,771,288	1,260,829	23,396,594	20,364,499	1,771,286	155,829	22,291,594	6.86634%	4.57929%	2.46947%	6.6656%	6.2810%	0.3554%	0.0186%	6.6656%

* The 1-yr average for Secondary is calculated using this equation: $((e1)/(h1))^{(f1)}$. The equation for the 2-yr average for Secondary is: $((e1)+(e2)/(h1)+(h2))^{(g2)}$. A similar equation progression is used for 3-yr, 4-yr, and 5-yr averages. Primary and Transmission follow the same methodology as described for Secondary.

* Calculation of Load Research less Exempts			
	Secondary	Primary	Transmission
2016	20,504,540	1,061,442	1,465,456
Exempt	7,784	213,704	1,259,674
Net	20,496,756	1,647,738	165,782
2015	20,711,149	1,979,301	1,364,769
Exempt	10,841	216,358	1,207,061
Net	20,700,308	1,656,943	157,708
2014	18,936,341	1,654,272	1,348,645
Exempt	11,439	220,422	1,172,000
Net	18,924,902	1,633,850	176,945
2013	19,890,531	1,808,672	1,276,669
Exempt	19,890,531	1,806,672	1,096,000
Net	20,364,499	1,771,266	155,829
2012	20,364,499	1,771,286	155,829
Exempt			
Net	20,364,499	1,771,286	155,829