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November 13, 2019

Nova Scotia Utility & Review Board
PO Box 1692, Unit "M"
Halifax, Nova Scotia
B3J 3S3

Attention: Doreen Friis, Regulatory Affairs Officer / Clerk

Dear Ms. Friis:

Re: M09096 - EfficiencyOne Application for Approval of Supply Agreement for Electricity Efficiency and Conservation Activities between E1 and Nova Scotia Power (NS Power), the establishment of a final agreement between the parties, and approval of a 2020 – 2022 Demand Side Management Resource (DSM) Plan

Executed Supply Agreement between Nova Scotia Power Incorporated and EfficiencyOne Effective January 1, 2020

Further to the above noted matter, EfficiencyOne and Nova Scotia Power Inc. are pleased to provide the fully executed Supply Agreement for Electricity Efficiency and Conservation Services, effective January 1, 2020, for the period January 1, 2020 through December 31, 2022.

We trust you will find all in order and confirm hard copies will be filed with the Board.

NOVA SCOTIA POWER INC.

Brian Curry

THE BRETON LAW GROUP

James R. Gogan

cc. S. Bruce Outhouse, Board Counsel

Supply Agreement for
Electricity Efficiency and Conservation Activities

Between

Nova Scotia Power Incorporated

and

EfficiencyOne

Effective Date – January 1, 2020

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List of Schedules

THIS AGREEMENT made as of the 1 day of January, 2019 and effective as of the 1st day of January, 2020 (the "**Effective Date**").

BETWEEN:

NOVA SCOTIA POWER INCORPORATED,
a body corporate, organized under the laws
of the Province of Nova Scotia

(hereinafter called "**NSPI**")

- and -

EFFICIENCYONE,
a body corporate, organized under the laws of
Canada

(hereinafter called "**EfficiencyOne**")

WHEREAS:

A. EfficiencyOne and NSPI are both public utilities pursuant to the Act; and

B. Pursuant to the Act, EfficiencyOne has the exclusive right to supply NSPI with reasonably available, cost-effective Electricity Efficiency and Conservation Activities as the Franchise Holder; and

C. Pursuant to the Act, NSPI is obligated to undertake cost-effective Electricity Efficiency and Conservation Activities that are reasonably available in an effort to reduce costs for its customers; and

D. Pursuant to the Act, NSPI shall meet its obligations by entering into an agreement with the Franchise Holder for the supply of cost-effective Electricity Efficiency and Conservation Activities.

NOW THEREFORE witnesses that in consideration of the premises and the mutual covenants and obligations herein and other good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, the parties agree as follows:

1. INTERPRETATION

1.1 The following terms shall be interpreted as follows in this Agreement:

(a) "**Act**" shall mean the *Public Utilities Act*, R.S.N.S. 1989, c.380, as amended from time to time.

(b) "**Agreement**" means this agreement between NSPI and EfficiencyOne including all Schedules attached hereto.

(c) "**Business Day**" means Monday to Friday, except federal, provincial, and civic holidays within the Province of Nova Scotia.

(d) "**Consequential Losses**" means consequential, special, incidental, multiple, exemplary or punitive damages including lost profits, whether such claim of lost profits is categorized as indirect, direct or consequential damages or under any alternative theory of recovery.

(e) "**Contract Documents**" means without limitation, the following documents, including any amendments thereto agreed in writing by the parties:

(i) this Agreement; and

(ii) all Schedules to the Agreement.

(f) "**Contract Price**" has the meaning ascribed to it in Section 4.1.

(g) "**EECA Plan**" means the plan prepared by EfficiencyOne and approved by the UARB and attached hereto as Schedule "E".

(h) "**Electricity Efficiency and Conservation Activities**" or "**EECA**" means the electricity efficiency and conservation activities as identified in Schedule "A" attached hereto.

(i) "**Event of Default**" has the meaning ascribed to it in Section 20.4.

(j) "**Environmental Laws**" means all applicable federal, provincial, regional, municipal or local laws with respect to environmental matters contained in the statutes, regulations, rules, standards, requirements, ordinances, policies, guidelines, orders, approvals, notices, permits or directives having the force of law, in effect as at the date hereof and as may be brought into effect at future date.

(k) "**Force Majeure Event**" means any event or circumstance not reasonably within the control of the Party affected which wholly or partly prevents the performance by that Party of its obligations under this Agreement, provided that such Party is in good faith unable to perform such obligations by any commercially reasonable substitute. A Force Majeure Event includes acts of God, war, riot, fire, explosion, flood, hurricane, epidemics, acts of governmental authorities, acts of terrorism. Notwithstanding anything else contained herein, a Force Majeure Event excludes (a) any event or circumstance causing direct or indirect delay in, or failure to perform any of a Party's obligations under this Agreement, attributable to a lack of reasonable diligence on the part of a Party or on the part of any vendor or subcontractor of a Party, including any event or circumstance which a Party or any vendor or subcontractor, acting diligently, could reasonably have been expected to foresee, avoid or overcome in the performance of its obligations; and (b) any event or circumstance caused by the breach of a Party's obligations or the fault or negligence of a Party or the fault or negligence of any vendor or subcontractor, or by violation of applicable laws or regulations by a Party or any of a Party's vendors or subcontractors. For certainty, adverse weather of any kind other than events specified above shall not be considered a Force Majeure Event.

(l) "**Franchise**" has the meaning ascribed to it in the Act.

(m) "**Franchise Holder**" has the meaning ascribed to it in the Act.

(n) **"Governmental Authority"** means any federal, provincial, regional, municipal or local government or authority or other political subdivision thereof and entity or person exercising executive, legislative, judicial, regulatory or administrative functions of, or pertaining to, government.

(o) **"Hazardous Substances"** means any substance or material that is prohibited, controlled or regulated by any Governmental Authority pursuant to Environmental Laws, including any contaminants, pollutants, petroleum or other hydrocarbons and their derivatives and by-products, dangerous substances or goods, including asbestos, liquid wastes, special wastes, toxic substances, hazardous or toxic chemicals, hazardous wastes, hazardous materials or hazardous substances as defined in or pursuant to any Environmental Law, or any substance or material not inherently hazardous but which would, in sufficient quantities, be hazardous.

(p) **"Indemnified Costs"** means all liabilities, claims, actions, causes of action, judgments, orders, damages, costs (including those incurred in connection with any investigation of site conditions or any clean-up, environmental remediation, removal or restoration work), expenses (including all reasonable consultant, expert and legal fees and expenses), fines, penalties, losses, or any resulting damages, harm or injuries to the person or property of any third parties or to any natural resources and for which the indemnified party is liable and has incurred losses. Without limiting the foregoing, Indemnified Costs shall include:

(i) the costs of defending and/or counterclaiming or claiming over and against third parties in such manner as the indemnified party in its sole discretion may determine;

(ii) the costs relating to any governmental investigation, proceeding or claim; and

(iii) any costs, liabilities or damages arising out of a settlement of a claim by the indemnified party, with or without the consent of the indemnifying party.

(q) **"Law"** means the common law, the law of equity and all federal or provincial statutes or municipal by-laws and all regulations, orders, directives, permits and licenses thereunder, which apply to or otherwise affect NSPI or EfficiencyOne with respect to the supply of the EECA, or the property of NSPI or EfficiencyOne, real or personal, or any part thereof, including the Act and all environmental, occupational, health and safety laws.

(r) **"Liens Indemnities"** has the meaning ascribed to it in Section 18.1.

(s) **"Liens and Claims"** has the meaning ascribed to it in Section 18.1.

(t) **"Minister"** has the meaning ascribed to it in the Act.

(u) **"Party"** means either EfficiencyOne or NSPI. **"Parties"** means EfficiencyOne and NSPI.

(v) **"Personal Information"** shall mean the information provided by NSPI to EfficiencyOne pursuant to Section 79K of the Act.

(w) "**Release**" or "**Released**" means a releasing, adding, spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, migrating, dispersing, dispensing, disposing or dumping.

(x) "**Significant Changes**" means any proposed change to the EECA Plan for which the UARB orders or directs EfficiencyOne to obtain the approval of the UARB prior to the implementation of such proposed change.

(y) "**Subcontractor**" means any contractor, supplier or consultant hired by EfficiencyOne in accordance with this Agreement to perform any portion of the EECA.

(z) "**Term**" has the meaning ascribed to it in Section 2.1.

(aa) "**UARB**" means the Nova Scotia Utility and Review Board.

(bb) "**CASL**" means An Act to promote the efficiency and adaptability of the Canadian economy by regulating certain activities that discourage reliance on electronic means of carrying out commercial activities, and to amend the Canadian Radio-television and Telecommunications Commission Act, the Competition Act, the Personal Information Protection and Electronic Documents Act and the Telecommunications Act, S.C. 2010, c. 23, as amended from time to time.

1.2 Unless otherwise specified in this Agreement or unless the context otherwise requires:

(a) words of any gender include each other gender;

(b) using the singular or plural number also include the plural or singular number, respectively;

(c) the insertion of headings in this Agreement is for convenience only and shall not be construed so as to affect the interpretation or construction of this Agreement;

(d) the terms "hereof," "herein," "hereto," "hereunder" and words of similar or like import refer to this entire Agreement and not to any particular Section, Schedule or other subdivision of this Agreement;

(e) references to a particular "Section" or "Schedule" are, unless otherwise noted, references to that Section of, or Schedule to this Agreement;

(f) the words "include," "includes" and "including" shall be deemed to be followed by "without limitation" or "but not limited to";

(g) references to any applicable law, legislation or regulation shall be construed as a reference to such law, legislation or regulation as each may be in effect from time to time;

(h) references to any agreement or document (including this Agreement) shall (i) include all Schedules, appendices, and other attachments thereto, and (ii) be construed at the particular time as a reference to such agreement or document as amended, modified or supplemented and in effect from time to time and shall include a reference to any document which amends, modifies or supplements it, or is entered into, made or given pursuant to or in accordance with its terms;

(i) references to (i) days shall refer to calendar days unless Business Day is specified, (ii) weeks and months shall refer to calendar weeks and months, respectively, and (iii) years shall refer to calendar years;

(j) in computing any period of time prescribed or allowed under this Agreement, the day of the act, event or default from which the designated period of time begins to run shall be included. If the last day of the period so computed is not a Business Day, then the period shall run until the close of business on the next Business Day;

(k) the Contract Documents are complementary, and what is required by any one shall be as binding as if required by all;

(l) words and abbreviations which have well known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings; and

(m) as both Parties were actively involved in preparing the terms and conditions of this Agreement and as they both had access to and relied upon counsel in this process, there shall be no presumption that any one or the other Party prepared this Agreement and no provision of this Agreement shall be construed against either Party based upon the process of preparation of proposals and drafts of the Agreement.

1.3 If there is a conflict within the Agreement, the order of precedence of documents, from highest to lowest, shall be:

(a) Sections 1 to 27;

(b) Schedule "A" – Electricity Efficiency and Conservation Activities; and

(c) all other Schedules.

2. TERM & RESERVATION OF RIGHTS

2.1 The term of this Agreement shall be three (3) years from the Effective Date and shall automatically terminate on December 31, 2022 unless terminated earlier in accordance with the terms of this Agreement and the Act (the "**Term**").

2.2 During the Term, NSPI shall purchase from EfficiencyOne and EfficiencyOne shall supply to NSPI, the EECA in accordance with the terms and conditions of this Agreement and the Act.

2.3 Notwithstanding anything contained herein, and subject to any requirement for review or approval by the UARB, nothing contained in this Agreement shall in any way effect the rights of NSPI pursuant to Section 79I(3) of the Act.

3. ELECTRICITY EFFICIENCY and CONSERVATION ACTIVITIES

3.1 For the Term of this Agreement, EfficiencyOne will,

(a) provide the EECA in accordance with this Agreement;

(b) provide sufficient resources to enable EfficiencyOne to perform its obligations on time and in accordance with this Agreement;

(c) carry out the EECA in a professional, expeditious and economical manner, in accordance with the Act;

(d) manage the EECA in an efficient manner; and

(e) perform and supply the EECA in a safe and environmentally sound manner and in compliance with applicable Law.

3.2 The Parties acknowledge and agree that EfficiencyOne shall be solely responsible for the delivery of the EECA Plan. For greater certainty and notwithstanding the attachment of the EECA Plan as Schedule "E" – Approved EECA Plan, NSPI shall have no liability with respect to the EECA Plan saving and excepting any liability which may arise as a result of NSPI's failure to comply with the Act.

4. PRICE & PAYMENT

4.1 NSPI agrees to pay EfficiencyOne for EECA as set out in Schedule "B" – Compensation (the "**Contract Price**").

4.2 The Contract Price shall constitute full compensation for the EECA, and no additional compensation shall be payable to EfficiencyOne arising out or resulting from any productivity losses, overhead or indirect costs or other costs and expenses of any kind whatsoever.

4.3 NSPI shall make monthly payments on the first Business Day of each month in accordance with Schedule "B" to EfficiencyOne on account of the Contract Price when due, together with applicable HST. EfficiencyOne will submit an invoice to NSPI in advance of the payment date referenced in Schedule "B".

4.4 Unless otherwise indicated all dollar amounts referred to in this Agreement are in lawful money of Canada.

4.5 If applicable, payments shall be subject to harmonized sales tax (as defined in the *Excise Tax Act* (Canada)) ("**HST**"). No additional taxes (foreign or domestic), customs, duties or brokerage fees shall apply.

4.6 If applicable, NSPI will withhold from payments to EfficiencyOne any amounts required to be withheld under applicable Laws and treaties in respect of services rendered in Canada by a non-resident and may remit them to the relevant authority. Where available, statutory withholding may be waived if EfficiencyOne delivers to NSPI a formal waiver of the withholding requirement issued and signed by Canada Revenue Agency. The Parties shall cooperate at all times to ensure that all proper withholdings are deducted from payments and if any withholdings are overlooked then such withholdings may be deducted from later payments.

5. NOTIFICATION OF SIGNIFICANT CHANGES

5.1 EfficiencyOne shall provide notice of Significant Changes to NSPI at the same time as EfficiencyOne makes application to the UARB for the approval of the Significant Changes. Subject to the terms of the Act and the general discretion of the UARB under the Act, NSPI shall, have the right to make written submissions to the UARB on any such Significant Changes to the EECA Plan.

6. SAFETY

6.1 EfficiencyOne shall at all times be responsible for safety and loss management in the supply or performance of the EECA.

6.2 EfficiencyOne shall ensure that all employees, Subcontractors, agents and representatives of EfficiencyOne comply with all federal, provincial and municipal health, safety and environmental statutes, regulations, policies and guidelines and all health, safety and environmental rules as prescribed by EfficiencyOne.

7. PROTECTION OF PROPERTY

7.1 EfficiencyOne shall take all commercially reasonable steps to protect the property of NSPI's customers and other third parties from damage which may occur as the result of the performance of the EECA.

7.2 Should EfficiencyOne damage the property of NSPI's customers or property of other third parties while performing the EECA, EfficiencyOne shall make good such damage at EfficiencyOne's expense and shall indemnify NSPI from and against all liabilities, claims, damages, settlements, awards, costs, expenses and proceedings incurred by NSPI or its servants, employees and/or agents in respect of such damage, except to the extent such damage occurs as a result of the negligent acts of NSPI or those for which NSPI is responsible at Law.

8. ENVIRONMENT

8.1 EfficiencyOne and its Subcontractors shall at all times comply with all Environmental Laws that apply in any way to the supply or performance of the EECA. EfficiencyOne and its Subcontractors shall not cause, permit or suffer the Release of a Hazardous Substance in contravention of any Environmental Laws.

8.2 Notwithstanding any other provision in this Agreement (and in addition to any other right to indemnity held by NSPI under the terms of the Agreement) EfficiencyOne shall indemnify NSPI, NSPI's parent, their respective subsidiaries, affiliates and related companies, and their respective officers, directors, employees, agents and shareholders, and agrees to hold each of them harmless from and against any and all Indemnified Costs resulting from any Release of any Hazardous Substance which is caused or contributed to by EfficiencyOne or its Subcontractors or any breach of any Environmental Law by EfficiencyOne or its Subcontractors.

9. EFFICIENCYONE'S COVENANTS

9.1 EfficiencyOne warrants, covenants and agrees with NSPI that:

(a) it has all requisite capacity and authority to execute, deliver and perform its obligations under this Agreement;

(b) this Agreement has been duly and validly executed and delivered by EfficiencyOne and constitutes a legal, valid and binding obligation of EfficiencyOne enforceable against EfficiencyOne in accordance with its terms;

(c) to its knowledge, there is no matter, thing or event, including without limitation, any litigation, proceeding, breach, default or financial circumstance that would adversely affect EfficiencyOne's ability to perform its obligations under this Agreement;

(d) it will furnish all labour, materials, products, tools, and other necessary components necessary to perform and provide the EECA, unless otherwise provided herein;

(e) it shall diligently perform or cause to be performed the EECA in a proper and workmanlike manner;

(f) it has the skills, expertise and resources to carry out the EECA and to comply, observe and perform the obligations to which it is subject in accordance with the terms of this Agreement;

(g) prior to commencing any work hereunder, it shall obtain and maintain all permits, licenses and notices that a prudent supplier acting in accordance with industry standards would be required to obtain, maintain and provide in comparable circumstances and shall comply with all applicable Laws, ordinances, rules, regulations, codes and orders of any and all authorities having jurisdiction which are or become in force during the Term in respect of the EECA;

(h) it will comply with applicable federal, provincial and municipal statutes, regulations and bylaws pertaining to the EECA performed by or on behalf of EfficiencyOne under this Agreement. EfficiencyOne shall be responsible for ensuring similar compliance by any suppliers and Subcontractors;

(i) it is the Franchise Holder pursuant to the Act;

(j) it is not a non-resident of Canada for the purposes of the *Income Tax Act*;

(k) it will execute or cause to be made, done and executed all further acts, deeds, assurances, agreements, instruments or other documents as may be reasonably required to ensure fulfillment of the terms of this Agreement;

(l) the EECA shall be delivered and performed by individuals duly licensed and authorized by Law, if applicable, to perform said undertakings;

(m) the EECA shall be delivered and performed solely by EfficiencyOne or its Subcontractors and EfficiencyOne acknowledges that EfficiencyOne shall at all times remain responsible for the proper completion of this Agreement; and

(n) upon becoming aware of a potential disruption having a material impact in the supply of the EECA, EfficiencyOne shall provide notification to the UARB and NSPI.

10. SUBCONTRACTORS

10.1 EfficiencyOne shall be permitted to subcontract the performance of any part of the EECA without the prior written approval of NSPI.

10.2 Where EfficiencyOne subcontracts any part of the EECA, EfficiencyOne shall preserve and protect the rights of the Parties under this Agreement with respect to the EECA to be supplied or performed under subcontract, and shall be as fully responsible to NSPI for the acts and omissions of Subcontractors and of persons directly or indirectly employed by them, as if they were acts and omissions of persons directly employed by EfficiencyOne.

10.3 Nothing contained in the Contract Documents shall create a contractual relationship between a Subcontractor and NSPI.

11. CONFIDENTIAL AND PERSONAL INFORMATION

11.1 The Parties have executed or agree to execute the confidentiality agreement attached hereto as Schedule "D" - Confidentiality ("**Confidentiality Agreement**").

11.2 EfficiencyOne shall be responsible for all physical and electronic security required to ensure the security of the Personal Information which has been provided by NSPI to EfficiencyOne.

11.3 EfficiencyOne shall indemnify and hold harmless NSPI for any liabilities, claims, damages, settlements, awards, costs, expenses and proceedings incurred by NSPI or its servants, employees and/or agents in consequence of EfficiencyOne's misuse of the Personal Information or any disclosure, whether intentional, inadvertent, negligent or otherwise of any of the Personal Information by EfficiencyOne contrary to the terms of this Agreement or the Act, or in consequence of EfficiencyOne's contravention of CASL.

12. PERFORMANCE REQUIREMENTS AND EVALUATIONS

12.1 EfficiencyOne's performance under the terms of this Agreement shall be measured in accordance with the performance requirements established by the UARB pursuant to Section 79M of the Act as set out in Schedule "C" – Performance Requirements.

13. FORCE MAJEURE

13.1 Neither Party shall be in breach of its obligations under this Agreement where failure to perform or delay in performance of any obligation is due, wholly or in part, to a Force Majeure Event.

13.2 Each Party shall notify the other Party promptly of any Force Majeure Event and shall take reasonable steps to minimize the impact of the failure or the delay and to resolve the event or occurrence that has given rise to the Force Majeure Event in order to resume performance. The time for performing an obligation as a result of Force Majeure Event shall be extended for the period lost, subject to the condition that the Term of this Agreement shall not be extended as a result of any Force Majeure Event.

13.3 Each Party suffering a Force Majeure Event shall take, or cause to be taken, such action as may be necessary to void, or nullify, or otherwise to mitigate, in all material respects, the effects of such Force Majeure Event. The Parties shall take all reasonable steps to ensure normal performance under this Agreement, including the resumption of any disrupted obligations.

13.4 For certainty, in no case shall the failure or omission of EfficiencyOne to carry out or observe any of the terms, provisions, or conditions of this Agreement or any negligent

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act or omission of EfficiencyOne, or others for whom EfficiencyOne is responsible constitute an event of Force Majeure or result in an extension of the time to perform the EECA.

14. INDEMNITY

14.1 EfficiencyOne shall assume all risk of loss, damage or injury, including death, to person or property, caused by its directors, officers, employees, Subcontractors, agents or representatives, and agrees not to make or bring any claim, action or demand against NSPI or its directors, officers, servants, agents, or employees in respect of such loss, damage or injury excepting such loss, damage or injury caused by the negligence or wilful misconduct of NSPI or NSPI's directors, officers, servants, agents or employees.

14.2 EfficiencyOne agrees to indemnify and save harmless NSPI, its directors, officers, servants, agents, or employees, and their heirs, executors, administrators, successors and assigns, or any of them, from and against any liabilities, losses, expenses (including legal costs on a solicitor-client basis), claims, demands, actions, and causes of action, whatsoever suffered by NSPI by reason of, or in any way arising out of or in connection with a breach of this Agreement by EfficiencyOne excepting only to the extent caused by the negligence or wilful misconduct of NSPI or NSPI's directors, officers, servants, agents or employees.

14.3 NSPI agrees to indemnify and save harmless EfficiencyOne, its directors, officers, servants, agents, or employees, and their heirs, executors, administrators, successors and assigns, or any of them, from and against any liabilities, losses, expenses (including legal costs on a solicitor-client basis), claims, demands, actions, and causes of action, whatsoever suffered by EfficiencyOne by reason of, or in any way arising out of or in connection with a breach of this Agreement by NSPI excepting only to the extent caused by the negligence or wilful misconduct of EfficiencyOne or EfficiencyOne's directors, officers, servants, agents or employees.

14.4 The provisions set forth in this Section shall apply and be effective with respect to any claim, cause of action, or legal theory whatsoever including without limitation, claims based upon breach of contract, failure to meet performance guarantees, tort (including negligence) and strict liability.

14.5 EfficiencyOne shall defend, indemnify and hold harmless NSPI from any claim, suit, cause of action, judgment, cost or expense (including legal fees) based on a claim by a third party that any intellectual property which is part of the EECA or supply or performance of EfficiencyOne's obligations under this Agreement infringes any patent, copyright, trade secret or other intellectual property right, provided the EfficiencyOne is promptly notified of such claim and is given complete authority for defense of same. EfficiencyOne shall pay all damages, costs and expenses resulting from such a claim, including legal fees and settlement costs, but shall not be responsible for any cost, expense or compromise incurred by NSPI without EfficiencyOne's prior consent.

15. LIMIT OF LIABILITY

15.1 Neither Party shall be liable to the other Party for any Consequential Losses with respect to the performance or non-performance under this Agreement or for any actions undertaken in connection with or related to this Agreement.

15.2 EfficiencyOne's total liability to NSPI with respect to the performance or non-performance under this Agreement or for any actions undertaken in connection with or related to this Agreement shall be limited to the greater of the sum of two million dollars ($2,000,000) or the proceeds of the applicable insurance policies taken out by EfficiencyOne under this Agreement (**"EfficiencyOne Limit of Liability"**) provided that the EfficiencyOne Limit of Liability shall not apply to:

(a) indemnification of NSPI by EfficiencyOne under the terms of this Agreement for any third party claims (including but not limited to EfficiencyOne's obligations pursuant to Sections 7.2, 8.2, 11.3, 14.5 and 18.1);

(b) any wilful misconduct or fraud of EfficiencyOne or its employees, agents or representatives; and

(c) any obligation on the part of EfficiencyOne to refund in whole or in part the Contract Price pursuant to this Agreement or the Act.

15.3 NSPI's total liability to EfficiencyOne with respect to the performance or non-performance under this Agreement or for any actions undertaken in connection with or related to this Agreement shall be limited to the sum of two million dollars ($2,000,000) (**"NSPI Limit of Liability"**) provided that the NSPI Limit of Liability shall not apply to:

(a) any wilful misconduct or fraud of NSPI or its employees, agents or representatives; and

(b) NSPI's liability for payment of the Contract Price pursuant to the Agreement or the Act.

16. INSURANCE

16.1 EfficiencyOne shall obtain, maintain and pay for, during the entire Term of this Agreement, the following minimum insurance coverage as follows, such insurance as it relates to this Agreement shall be in a form and from an insurer acceptable to NSPI:

(a) General liability insurance shall be in the name of EfficiencyOne and shall name NSPI as an additional insured and shall have limits of not less than five million dollars ($5,000,000) inclusive per occurrence for bodily injury, death, and damage to property including loss of use thereof. Such insurance shall be primary and non-contributing with, and not in excess of, any other insurance available to NSPI. This policy shall also contain cross liability and severability of interest and blanket contractual liability.

(b) Environmental impairment insurance with limits of not less than five million dollars ($5,000,000);

(c) Automobile liability insurance in respect of licensed vehicles shall have limits of not less than two million dollars ($2,000,000) inclusive per occurrence for bodily injury, death, and damage to property. For automobiles not owned or operated by or on behalf of EfficiencyOne the insurance shall be in the form of a standard non-owned automobile policy and shall include standard contractual liability endorsement. For automobiles owned or operated by or on behalf of EfficiencyOne the insurance shall be in the form of a standard owner's form automobile policy and shall provide third party liability and accident benefits

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insurance covering licensed vehicles owned or operated by or on behalf of EfficiencyOne.

(d) Property Insurance covering all loss of or damage to EfficiencyOne's property and equipment of EfficiencyOne or for which EfficiencyOne is legally liable or responsible used in performance of the EECA for the full replacement value, which insurance shall not allow subrogation claims by the insurer against NSPI.

(e) To the extent that the EECA includes the provision of professional services, professional liability errors and omissions insurance covering all claims arising out of errors and omissions of EfficiencyOne in the performance of professional services as part of the EECA with a limit of two million dollars ($2,000,000). In the event other claims erode EfficiencyOne's professional errors and omissions insurance below two million dollars ($2,000,000), in the annual aggregate, EfficiencyOne agrees to reinstate the limit.

(f) Workers' compensation to the full extent required in Nova Scotia and wherever EfficiencyOne's personnel contracts of employment are made or are expressed to be made.

16.2 If EfficiencyOne fails to effect or keep in force any of the foregoing insurances, NSPI may, without prejudice to any other right or remedy, effect such insurance and pay the premiums due and recover the same as a deduction from any other monies due to EfficiencyOne under this Agreement.

16.3 EfficiencyOne shall be responsible to pay deductible amounts and for determining the deductible amount in respect of each policy. EfficiencyOne shall not violate, nor knowingly permit to be violated, any conditions of the policies maintained according to the provisions of this Section, and it shall be EfficiencyOne's duty and responsibility to impose upon each Subcontractor the same responsibilities and obligations imposed upon EfficiencyOne under such provisions.

16.4 EfficiencyOne agrees to provide proof of insurance to NSPI on an annual basis. Such proof shall be in the form of a certificate of insurance signed by EfficiencyOne's insurance broker.

17. INTELLECTUAL PROPERTY

17.1 NSPI acknowledges that all branding, trade and business marks of EfficiencyOne used in the course of provision of EECA pursuant to this Agreement, (the "**EfficiencyOne Brands**") are, and shall remain, the sole and exclusive property of EfficiencyOne and shall not be used by NSPI without EfficiencyOne's express consent. Upon termination of this Agreement, NSPI shall immediately upon instruction from EfficiencyOne return or destroy, as instructed by EfficiencyOne, the EfficiencyOne Brands.

17.2 Any trademarks, brands, logos or other branding or trade or business marks used in NSPI's business ("**NSPI Brands**") shall remain the sole and exclusive property of NSPI and shall not be used by EfficiencyOne for any purpose except in connection and as necessary for the provision of the EECA. Upon termination of this Agreement, EfficiencyOne shall immediately upon instruction from NSPI return or destroy, as instructed by NSPI, the NSPI Brands.

18. LIENS AND CLAIMS

18.1 EfficiencyOne shall indemnify and hold harmless NSPI, NSPI's parent and their subsidiaries and affiliates (collectively the "**Lien Indemnitees**" or singularly "**Lien Indemnitee**") and defend each of them from and against any and all losses and costs arising out of any and all claims for payment, liens, attachment or any other process, filed against any property of the Lien Indemnitees by or in respect of a Subcontractor of any tier or any other party providing work, materials in respect of the EECA or any part thereof (referred to in this Section as "**Liens or Claims**"), including solicitor and client fees and expenses incurred by NSPI in discharging any such Liens or Claims or similar encumbrances.

18.2 EfficiencyOne shall discharge promptly any Liens or Claims. If EfficiencyOne does not promptly satisfactorily discharge such Liens or Claims, NSPI at its sole option may (i) require EfficiencyOne to pay, within five (5) Business Days after request by NSPI, or (ii) subject to any requirements of the *Builders' Lien Act* of Nova Scotia, offset against any holdback or other amounts due or to become due to EfficiencyOne, all costs and expenses incurred by NSPI or other Lien Indemnitee in causing the release of, paying or settling such Liens or Claims. EfficiencyOne shall have the right to contest any such Liens or Claims, provided it first provides to NSPI a bond or other assurance of payment reasonably satisfactory to NSPI in the amount of such Liens or Claims and in form and substance reasonably satisfactory to NSPI. In no circumstance whatsoever shall NSPI be liable for a greater amount than the amount payable by NSPI to EfficiencyOne.

19. DISPUTE RESOLUTION

19.1 In the event of a dispute in connection with this Agreement, a senior representative of EfficiencyOne and a senior representative of NSPI shall promptly meet to discuss and resolve the dispute and the Parties shall have thirty (30) days to resolve the dispute (or ten (10) days if either Party notifies the other Party that the matter requires urgent resolution).

19.2 Unless the parties agree otherwise, in the event resolution cannot be achieved in accordance with Section 19.1 of this Agreement, then such dispute or difference shall be referred to the UARB in accordance with Section 79P of the Act.

19.3 Notwithstanding any dispute, EfficiencyOne shall diligently carry out the EECA, and shall not suspend, impair, interfere with, restrict or discourage the prompt completion of any portion of the EECA, unless specifically authorized to do so by the UARB. .

20. DEFAULT AND TERMINATION

20.1 This Agreement may be terminated immediately by either Party, in whole or in part, upon the happening of one or more of the following events:

(a) EfficiencyOne's Franchise is terminated and the Agreement has not been assigned by the Minister; or

(b) The UARB approves the termination of the Agreement.

In the event of a termination pursuant to this Section 20.1, neither Party shall be entitled to any compensation or damages for any Consequential Losses as a result of such termination. Immediately upon receipt of such termination notice, EfficiencyOne will discontinue all EECA under this Agreement and will only finish such portions of the EECA as may be necessary to preserve and protect the EECA already in progress. Such termination does not relieve either Party from any of their respective obligations under this Agreement for EECA provided up to the date of termination. Any claim for payment by EfficiencyOne must be asserted within thirty (30) days from the date of such termination.

20.2 Notwithstanding any other provision in this Agreement, in the event this Agreement is terminated in accordance with Section 20.1(a), EfficiencyOne shall:

(a) Immediately return all monies paid on account of the Contract Price which amounts have not been legitimately incurred or subject to contractual commitments for expenditure which cannot otherwise be mitigated to NSPI; and

(b) Provide to NSPI all reasonable required termination assistance to allow the EECA provided under this Agreement to continue and to facilitate the orderly transition of the EECA to NSPI or any third party as directed by NSPI, provided that EfficiencyOne shall be entitled to commercially reasonable payment for such transition services on a time and material basis.

20.3 The Parties acknowledge that this Agreement is subject to the general supervision of the UARB.

20.4 A Party shall be determined to be in default of its obligations under this Agreement if (each a "**Event of Default**"):

(a) it is in breach of any material term or condition of this Agreement, which breach is not cured by the Party within thirty (30) days after written notice from the other Party;

(b) it assigns this Agreement other than as permitted by the Act and/or the UARB;

(c) any representation or warranty made by either Party shall prove to be untrue when made in any material respect;

(d) there is a sale, transfer or relinquishment, voluntary or involuntary, by operation of law or otherwise, of legal control of the business of either Party except for a transfer to a related corporation or a transfer resulting from a merger, acquisition, amalgamation or reorganization, or, in the case of EfficiencyOne, a change in the Membership of the corporation;

(e) Either Party sells, transfers or assigns all or substantially all of its assets;

(f) a petition in bankruptcy is filed with respect to either Party; or

(g) any proceeding is commenced under any bankruptcy or insolvency legislation or under any other federal, state or provincial law relating to insolvency or bankruptcy, the adjudication of either Party as a bankrupt, the appointment by any competent court having jurisdiction of a temporary or permanent receiver, trustee or other officer having similar powers over either Party its business or assets, or the making of any assignment by either Party for the benefit of its creditors.

20.5 If a breach notified pursuant to Sections 20.4(a) cannot be corrected within the period required therein, the defaulting Party shall not be in breach or violation if it:

(a) commences and diligently and continuously carries out the correction of the breach or violation within the specified time;

(b) provides to the non-defaulting Party, and the UARB an acceptable plan for such correction; and

(c) corrects the breach or violation in accordance with such plan.

20.6 Upon the occurrence of an Event of Default, the non-defaulting Party may apply to the UARB to terminate this Agreement in whole or in part.

21. NOTIFICATIONS

21.1 All notices to be given to either Party under this Agreement shall be written and addressed to the NSPI and to EfficiencyOne as follows:

<u>To NSPI</u>:

Nova Scotia Power Incorporated
1223 Lower Water Street
PO Box 910
Halifax, NS B3J 3S8
Attention: Corporate Secretary
Facsimile: (902) 428-6171

<u>To EfficiencyOne</u>:

EfficiencyOne
230 Brownlow Avenue
Suite 300
Dartmouth, NS B3B 0G5
Attention: CEO
Facsimile: (902) 470-3599

21.2 All notices may be sent by facsimile, a nationally recognized overnight courier service, first class mail or hand delivered. Notice shall be given when received by the addressee on a Business Day. In the absence of proof of the actual receipt date, the following presumptions will apply:

(a) Notices sent by facsimile shall be presumed to have been received upon the sending Party's receipt of its facsimile machine's confirmation of successful transmission. If the day on which such facsimile is received is not a Business Day or is after five p.m. (local time for the recipient) on a Business Day, then such facsimile shall be deemed to have been received on the next following Business Day.

(b) Notice by overnight courier shall be presumed to have been received on the next Business Day after it was sent.

(c) Notice by first class mail shall be presumed delivered five (5) Business Days after mailing.

21.3 Either Party may modify its address for notices by advance written notice to the other Party.

22. AUDIT AND INSPECTION

22.1 EfficiencyOne shall, during the Term and for a period of thirty-six (36) months thereafter, keep accurate records of all EECA supplied to NSPI, as necessary to determine that the EECA was provided in accordance with the terms and conditions of this Agreement.

22.2 NSPI shall have the right to apply to the UARB to request access to any of the records referred to in 22.1.

22.3 NSPI shall have the right to apply to the UARB to inspect or observe the EECA at all times, whether using its own forces or those of a designated third party. EfficiencyOne shall facilitate such inspections and provide sufficient, safe and proper facilities at all times for inspection of the EECA.

23. ASSIGNMENT

23.1 Neither Party shall assign all or any portion of this Agreement without the prior written approval of the UARB and/or the Minister as the situation requires.

24. SHARING OF DATA AND INFORMATION

24.1 EfficiencyOne shall work co-operatively with NSPI to provide NSPI with information and data from time to time in order to assist NSPI with planning and load forecasting as may be reasonably required by NSPI. For greater certainty, such information and data shall be consistent with the past practices of the Parties.

24.2 In the event of a dispute regarding any request for information by NSPI, NSPI shall have the right to apply to the UARB to request access to the information and data referred to in 24.1.

25. COORDINATION MEETINGS AND REPORTS

25.1 During the Term of this Agreement, EfficiencyOne shall prepare and deliver to the UARB and NSPI a quarterly report (the "**Quarterly Report**") in a form acceptable to the UARB.

25.2 EfficiencyOne shall prepare and deliver to the UARB and NSPI an annual report (the "**Report**") in a form acceptable to the UARB. For greater certainty, the Report shall summarize and provide details as to the EECA and milestones achieved in the prior year, contain a discussion and analysis of major discrepancies relative to the EECA Plan's intent and forecasts, EfficiencyOne's financial statement for the previous year with respect to the EECA, evaluation reports and a summary of planned versus actual savings and costs for each metric.

25.3 The Parties agree that ongoing coordination and regular communication between NSPI and EfficiencyOne is important in order to ensure effective planning. To that end, the Parties shall meet quarterly or as otherwise agreed upon to discuss the provision of the EECA.

26. GENERAL

26.1 This Agreement shall only be renewed in accordance with the provisions of the Act.

26.2 This Agreement shall extend to, be binding upon and enure to the benefit of the respective successors and permitted assigns of the Parties hereto.

26.3 EfficiencyOne will be an independent contractor. EfficiencyOne shall not act as an agent for NSPI, bind NSPI to any obligation with a third party, nor hold itself out as having authority to bind or obligate NSPI. None of the persons engaged by EfficiencyOne or any of its Subcontractors in the performance of the EECA will be considered employees of NSPI.

26.4 This Agreement shall be deemed to have been made in and shall be governed by, construed and interpreted in accordance with the laws of the Province of Nova Scotia and the laws of Canada, as applicable therein. Where the provisions of this Agreement or the Act permit or require a matter to be referred to or proceeded with before a court, or in any other case where the Parties bring a matter in respect of this Agreement before a court, the Parties irrevocably attorn to the jurisdiction of the Supreme Court of Nova Scotia.

26.5 No consent or waiver, express or implied, by any Party to this Agreement of any breach or default by any other Party in the performance of its obligations under this Agreement or of any of the terms, covenants or conditions of this Agreement shall be deemed or construed to be a consent or waiver of any subsequent or continuing breach or default in such Party's performance.

26.6 Time shall be of the essence for purposes of this Agreement.

26.7 This Agreement, upon approval by the UARB, shall represent the entire Agreement between the Parties with respect to the subject matter hereto and shall not be modified, varied or amended except by an instrument in writing signed by the Parties and approved by the UARB or as ordered or directed, by the UARB at any time.

26.8 Should any provision of the Agreement be declared by a judicial or other competent authority to be unenforceable, the remaining provisions of the Agreement shall remain in full force and effect.

26.9 The Parties acknowledge that this Agreement and all related documents shall be in English.

26.10 This Agreement may be executed by the Parties in counterparts, each of which when so executed and delivered shall be deemed to be an original and when taken together shall be deemed to be one and the same instrument. The electronic delivery, including, without limitation, by email or facsimile transmission, of any signed original of this Agreement shall be the same as the delivery of an original.

27. SURVIVAL

27.1 Subject to the provisions of the Act, all provisions of this Agreement which by their express terms or nature are continuing shall survive the expiration or termination of this Agreement, including, without limitation, this provision, and the provisions relating to the EECA Plan (s. 3.2), EfficiencyOne's covenants (s.9), confidentiality (s. 11), indemnity (s.14), intellectual property (s. 17), notification (s. 21) and general provisions (s. 26) as well as any provisions which are required to determine, or which exclude or limit, any liability or which are otherwise required to give effect to or interpret any such provisions which are continuing.

[Remainder of page intentionally left blank]

IN WITNESS THEREOF, the Parties have duly executed this Agreement, in duplicate, as of the date set forth above.

NOVA SCOTIA POWER INCORPORATED

Per: ______________________

Name: Karen Hutt

Title: President & CEO

Per: ______________________

Name: Mark Sidebottom

Title: Chief Operating Officer

Witness

Witness

EFFICIENCYONE

Per: ______________________

Name: CEO

Title: STEPHEN MACDONALD

Per: ______________________

Name:

Title:

Witness

Witness

SCHEDULE A

ELECTRICITY EFFICIENCY AND CONSERVATION ACTIVITIES

Schedule A

Electricity Efficiency and Conservation Activities

The figure below identifies the scope of savings (3 year Cumulative Annual Energy Savings and Cumulative Annual Peak Demand Savings) associated with carrying out EECAs over the Term.

	Cumulative Annual Net Energy Savings at Generator over the Term (GWh)	Cumulative Annual Net Peak Demand Savings at Generator over the Term (MW)	
Performance Targets*	367.8	98.3	

The Performance Targets will be achieved in accordance with the EECA Plan as set out in Schedule E.

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* For certainty, in accordance with the performance requirements set out in Schedule "C" attached hereto, EfficiencyOne shall be deemed to be in substantial compliance with the approved Performance Targets if the stipulated 90 percent level of achievement is reached on each Performance Targets. If less than the stipulated 90 percent level any of the Performance Targets is achieved, a regulatory process will be triggered.

**

SCHEDULE B

COMPENSATION

Schedule B (Page 1 of 2)

Compensation

I. Net Contract Price

The figure below identifies the Contract Price to be paid by NSPI allocated for each year of the Term.

	2020	2021	2022	Total
UARB Approved Investment Amount	34,400,000	36,600,000	39,000,000	110,000,000
2016 – 2018 DSM Plan Underspend	(7,261,586)	0	0	(7,261,586)
Net Contract Amount to be Paid by NSPI	27,138,414	36,600,000	39,000,000	102,738,414

The Parties acknowledge that any surplus realized by EfficiencyOne in delivering the Performance Targets at the end of the Term shall be reported to the UARB and refunded to NSPI[1] unless EfficiencyOne is directed to do otherwise by the UARB.

EfficiencyOne has returned the bank interest earned of $246,630 (included in the 2016-2018 DSM Supply Agreement underspend of $7,508,216) in 2018 ($45,440) and in 2019 ($201,190). Therefore, the underspend applied to 2020 will be $7,261,586.

[1] Together with all accumulated interest earned by EfficiencyOne on such surplus.

Schedule B (Page 2 of 2)

Compensation

II. Payments

In accordance with Section 4.3 of the Agreement, the monthly payments to be made by NSPI to EfficiencyOne over the Term shall be as set out below. The monthly payment amounts referred to following are exclusive of required HST. HST shall be remitted to EfficiencyOne in addition to these monthly amounts.

On the First Business Day of:	2020	2021	2022
January	2,261,535	3,050,000	3,250,000
February	2,261,535	3,050,000	3,250,000
March	2,261,535	3,050,000	3,250,000
April	2,261,535	3,050,000	3,250,000
May	2,261,535	3,050,000	3,250,000
June	2,261,535	3,050,000	3,250,000
July	2,261,535	3,050,000	3,250,000
August	2,261,535	3,050,000	3,250,000
September	2,261,535	3,050,000	3,250,000
October	2,261,535	3,050,000	3,250,000
November	2,261,535	3,050,000	3,250,000
December	2,261,529	3,050,000	3,250,000
Total	27,138,414	36,600,000	39,000,000

SCHEDULE C

Performance Requirements

I. <u>UARB-APPROVED PERFORMANCE TARGETS, THRESHOLDS, AND INDICATORS</u>

a) Performance Targets and Thresholds:

i. Performance Targets are set over the three year contract period, rather than annually.

ii. EfficiencyOne is deemed to be in substantial compliance with the UARB-approved Plan Performance Targets if ninety percent (90%) or greater achievement is reached on the cumulativeannual net energy savings at generator and cumulative net peak demand savings at generator Performance Targets listed at b) i and ii below. If less than ninety percent (90%) of either Performance Target at b) i and ii below is achieved, a regulatory process will be triggered.

b) Performance Targets consist of:

i. Cumulative annual net energy savings at generator
ii. Cumulative annual net peak demand savings at generator

c) Performance Indicators (for UARB reporting) consist of:

i. Annual incremental energy savings (reported by program and rate class);
ii. Cumulative annual energy savings (reported by program and rate class);
iii. Annual lifetime energy savings (reported by program and rate class);
iv. Cumulative lifetime energy savings (reported by program and rate class);
iv. Annual incremental system-peak demand savings (reported by program and rate class);
v. Cumulative annual system-peak demand savings (reported by program and rate class);
vi. Total ratepayer benefits;
vii. Total spending (reported by program and rate class);
viii. Customer satisfaction;
ix. An analysis of the impact on rates through the implementation of the programs will be included as part of EfficiencyOne's historical-looking rate and bill impact analysis, filed by October 31st of each year; and

x. Reporting on low-income program participation, expenditures, and savings through a variety of methods, including estimation based on geographic census information.

SCHEDULE D

CONFIDENTIALITY AND NONDISCLOSURE AGREEMENT

THIS CONFIDENTIALITY AGREEMENT made effective this 1st day of January, 2020

Between:

EfficiencyOne, hereinafter "EfficiencyOne"

Party of the First Part

And

Nova Scotia Power Incorporated, hereinafter "NSPI"

Party of the Second Part

Whereas the Parties have entered into a Supply Agreement for Electricity Efficiency and Conservation Activities made effective as of January 1, 2020 ("Supply Agreement") whereby Efficiency One is to provide EECA (as that term is defined in the Supply Agreement) to NSPI;

And whereas in accordance with the Supply Agreement, and the Electricity Efficiency and Conservation Act (Nova Scotia) and the Public Utilities Act (Nova Scotia) (together hereinafter referred to as the "Legislation"), and as may be directed by the Nova Scotia Utility and Review Board, and as may be further agreed between the Parties, the Parties will be receiving, reviewing, and analyzing Confidential Information from each other;

And whereas the Parties wish to clarify the manner in which any Confidential Information disclosed by one Party ("Disclosing Party") to the other is to be treated by the recipient of the Confidential Information ("Recipient");

In consideration of the agreements of the Parties set forth below, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

Confidential Information

1. The Parties agree that for the purpose of this Agreement "Confidential Information" means all information, regardless of the form in which it is communicated or maintained and prepared by the Disclosing Party, and is disclosed directly or indirectly to the Recipient, pursuant to the Supply Agreement, the Legislation, as directed by the Nova Scotia Utility and Review Board or as otherwise agreed between the Parties. Confidential Information includes, but is not limited to the following: all reports analyses, notes, memoranda, correspondence, spreadsheets, drawings, survey plans, maps, contracts, commercial arrangements, intellectual property, trade secrets, corporate strategies, business plans or other information that is based on, contain or reflect any Confidential Information, material, whether printed or electronic, which has been designated by the Disclosing Party as confidential information, including proprietary information and other commercially sensitive information. This includes but is not limited to information which has been or may be filed with the Nova Scotia Utility and Review Board ("the Board") in confidence in answer to Information Requests and any further material that may be filed with the Board in confidence whether in response to future Information Requests or otherwise, and whether printed or electronic. Confidential Information shall also include any explanation or other information provided by either Party to the Recipient concerning the foregoing and which has been identified by the Party providing the information as confidential at the time it is initially provided, whether printed or electronic. Confidential Information may also include any password or other information necessary to access electronic copies of Confidential Information.

Permitted Scope of Use

2. The Recipient may use the Confidential Information solely for the purposes of providing or receiving EECA, as the case may be, in accordance with the Legislation and the Supply Agreement and for no other reason or purpose.

No Obligation to Disclose

3. This Agreement does not obligate either Party to disclose any Confidential Information to the other.

Protection of Confidential Information

4. The Recipient shall hold the Confidential Information in strict confidence and shall strictly protect the Confidential Information from all harm, loss, theft, reproduction and unauthorized access, employing at least the same degree of care that the Recipient employs to protect its own confidential information of a similar nature, but in any event, not less than reasonable care. The Recipient shall ensure that such Confidential Information is not disclosed, published,

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released, transferred or otherwise made available in any form to, for the use or benefit of, any person except as provided in this Agreement.

Acknowledgements

5. The Recipient acknowledges that the Confidential Information is confidential and a trade secret and is owned by the Disclosing Party and is highly valuable and material to the interests, business and affairs of the Disclosing Party and that any unauthorized disclosure thereof by the Recipient would be detrimental to the Disclosing Party.

Permitted Disclosures

6. The Recipient shall be permitted to disclose relevant aspects of the Confidential Information to its employees and professional advisors to the extent that such disclosure is reasonably necessary for the performance of its duties and obligations; provided, however, that prior to such disclosure the Recipient shall inform such persons and parties of the confidential nature of the Confidential Information and each such person or party signs the undertaking attached to this Confidentiality Agreement. The Recipient shall inform the Disclosing Party of the name of each person to whom it has disclosed the Confidential Information in accordance with this provision and shall provide to the Disclosing Party the signed undertaking. The Recipient shall be fully responsible for ensuring that any such persons to whom it discloses the Confidential Information complies with the confidentiality obligations contained in this Agreement and shall be liable for any breach of this Agreement by such persons.

7. The non-disclosure obligations in this Agreement shall not restrict any disclosure by the Recipient pursuant to any applicable law or an order of any court of competent jurisdiction or regulatory body with regulatory responsibilities over the Recipient, provided that the Recipient shall provide the Disclosing Party with prompt prior written notice of its obligation to disclose so that the Disclosing Party may seek a protective order or other appropriate remedy concerning the disclosure of its Confidential Information and/or waive compliance with the confidentiality provisions of this Agreement. In addition, the Recipient shall take reasonable steps, to the extent permitted by law, to remove from the Confidential Information that is required to be disclosed, any information that is commercially sensitive to the Disclosing Party. In the event of an order for disclosure by a court of competent jurisdiction or regulatory body with regulatory responsibilities over the Recipient, the Recipient shall first notify the Disclosing Party of such order and allow the Disclosing Party not less than ten (10) days to remove any such information that is commercially sensitive.

Term

8. The term of this Agreement shall commence on the effective date of the Supply Agreement unless superceded by another form of writing, and notwithstanding the return of any Confidential Information or any other event, shall continue in full

force and effect for a period of FIVE (5) years from the effective date of this Agreement.

Equitable Remedy

9. The Recipient acknowledges that any unauthorized use of the Confidential Information or any breach of its obligations under this Agreement will result in irreparable harm to the Disclosing Party which cannot be adequately compensated for by damages. Neither the Recipient, nor any term in this Agreement, shall interfere with, delay, or prevent the Disclosing Party from seeking an interim and interlocutory equitable remedy to enforce any provision of this Agreement. The Recipient agrees not to oppose an application for equitable relief by the Disclosing Party in such circumstances. Any such relief or remedy shall not be exclusive, but shall be in addition to all other available legal or equitable remedies. The Recipient agrees that the provisions of this Section are fair and reasonable in the commercial circumstances of this Agreement. This Article shall survive the termination of this Agreement.

Return of Information

10. On the earlier of either thirty (30) days following the termination of the Supply Agreement or at the written request of the Disclosing Party (and unless superceded by another form of writing), the Recipient shall return or destroy (at the Disclosing Party's direction) and delete from all electronic devices all Confidential Information provided to it, including all copies (and all notes and documents prepared by the Recipient that may incorporate same) and still in the Recipient's possession (and otherwise under its control or in the possession of other persons to whom it has been provided as permitted hereunder) and, if requested by the Disclosing Party, shall provide written confirmation to the Disclosing Party to that effect. Notwithstanding the forgoing, the Recipient shall be entitled to retain the Confidential Information in one legal file copy that may be retained solely for the determination of its legal obligations under this Agreement.

Residual Information

11. The Recipient or its designate or any other person having access to the Confidential Information pursuant to this Agreement shall not, during and after the termination of this Agreement, use in its business any Residual Information. "Residual Information" means the ideas, know-how and techniques that would be retained in the unaided memory of an ordinary person skilled in the art, not intent on appropriating the proprietary information of the disclosing party, as a result of such person's access to, use, review, evaluation, or testing of the Confidential Information of the disclosing party for the purposes described herein. An employee's memory is unaided if the employee has not intentionally memorized the Confidential Information for the purpose of retaining and subsequently using or disclosing it.

Limited Rights

12. The Recipient agrees that no rights are granted to Recipient other than the limited rights to use the Confidential Information on the terms of this Agreement. For certainty, no license is granted under this Agreement (directly or indirectly) under any patent, discovery, copyright, or other intellectual or industrial property right now or in the future.

Indemnity

13. The Recipient shall indemnify and hold the Disclosing Party harmless from any and all loss, liability, cost or expense (including, without limitation, solicitor's costs on a solicitor and client basis and all other costs of defence) caused in whole or in part by the Recipient's breach of any provision of this Agreement. This Article shall survive the termination of this Agreement.

Governing Law

14. This Agreement is governed and shall be construed in accordance with the laws of the Province of Nova Scotia.

General Provisions

15. This Agreement is binding on the Parties, their administrators, successors, executors and assigns.

Executed and delivered this 1st day of JANUARY 2020.

EfficiencyOne	Nova Scotia Power Incorporated
By: [signature]	By: [signature]
Name: STEPHEN MACDONALD	Name: Mark Sidebottom
Title: CEO	Title: Chief Operating Officer

SCHEDULE "A" to CONFIDENTIALITY AGREEMENT

UNDERTAKING

I ____, HAVE READ AND AGREE TO ABIDE AND AM BOUND BY THE TERMS AND CONDITIONS SET OUT IN THE CONFIDENTIALITY AGREEMENT DATED THE ____DAY OF ______________ BETWEEN EFFICIENCYONE AND NOVA SCOTIA POWER INCORPORATED.

Dated the day of 201__.

______________________ ______________________________

Witness Name:

Recipient Designate

SCHEDULE E

EECA PLAN

[Subject to approval by the UARB]

SCHEDULE E

2020-2022 DSM Resource Plan

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1. INTRODUCTION

EfficiencyOne developed the 2020-2022 Demand Side Management (DSM) Resource Plan (DSM Resource Plan) to acquire cost-effective energy efficiency and system coincidence peak demand reduction resources that provide maximum benefits to ratepayers.

This document outlines new initiatives and enhanced service offerings to achieve significant energy and system-peak demand savings over the next three years and builds on the historic success of the energy efficiency programs delivered by Efficiency Nova Scotia since 2010.

The 2020-2022 DSM Resource Plan has been developed based on ENS's experience and history in delivering successful DSM programs and services to Nova Scotians. The success of energy efficiency programs in Nova Scotia has resulted from strong partnerships, stakeholder engagement and Nova Scotians' system-peak demand for assistance to make energy efficiency choices. Today, residents and businesses are collectively saving $188 million in annual electricity costs and over 800,000 tonnes of greenhouse gas emissions through a variety of programs and services.[1]

In the DSM Resource Plan, EfficiencyOne is proposing an investment of $110.0 million – an investment that saves customers money, reduces greenhouse gas emissions and supports a robust energy efficiency industry in Nova Scotia.

Over the past decade demand side management in Nova Scotia has provided benefits (avoided cost to ratepayers) that far outweigh the total utility investment by a magnitude

[1] M08946, EfficiencyOne *2018 Rate and Bill Impact Analysis* (31 October 2018), Electronically filed model version, Microsoft Excel file).

of 4 to 1 on average. The same is true of the DSM Resource Plan which will deliver lifetime benefits of $530.4 million to Nova Scotians.

The DSM Resource Plan addresses the continued maturation of Nova Scotia's electricity efficiency market. Since 2010, the energy efficiency landscape has evolved for both EfficiencyOne and Nova Scotians. Success in DSM program delivery has driven accelerated market penetration for some energy efficiency products, particularly in the residential lighting market. As high lighting market penetration continues to diminish some of these opportunities and EfficiencyOne evolves the DSM portfolio to increase focus on more complex markets and projects, the historically low unit costs of DSM cannot be maintained. Despite the resulting increasing unit costs, the 2020-2022 DSM Resource Plan remains cost effective and energy efficiency continues to be a smart investment that helps customers lower their energy bills, with a Total Resource Cost ratio of 2.0 and a Program Administrator Cost ratio of 4.8.

Consistent with previous DSM Resource Plans, EfficiencyOne has taken a balanced approach in the design of its program portfolio. The DSM Resource Plan focuses on program enhancements that improve the customer experience, increase accessibility of programs for underserved markets, remove barriers to participation, and achieve deeper[2] savings from non-lighting measures.

The DSM Resource Plan outlines EfficiencyOne's proposed programs and strategies for achieving energy and system-peak demand saving targets for 2020-2022. The purpose of the DSM Resource Plan is to:

- outline DSM targets, objectives, performance metrics, strategies, and budgets for 2020-2022;

[2] Deeper energy savings is defined as providing ENS support to enable customers to complete a wide range of energy efficiency upgrades / efforts, in order to help them maximize cost-effective energy savings per building / facility. In many cases, these efforts will take place over several years

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- provide a detailed description to stakeholders, customers, partners and industries in the marketplace of the direction that EfficiencyOne is taking electricity efficiency programs for the next three years; and
- form the basis of a DSM Supply Agreement made pursuant to S79 of the *Public Utilities Act*.[3]

[3] *Public Utilities Act*, RSNS 1989, c 380, s.79.

2. DEVELOPMENT APPROACH AND DETAILS

2.1 Cost-Effectiveness

To assess the cost-effectiveness of the 2020-2022 DSM Resource Plan, EfficiencyOne used two industry standard screening tests: the TRC test and the Program Administrator Cost (PAC) test. The TRC was used as the primary test of EfficiencyOne's DSM investments per the NSUARB decision[4] that all programs included in the DSM Plan must have a TRC of 1 or greater.

EfficiencyOne has presented PAC test results on an information-only basis. The PAC test provides information relating to the ratepayer and utility costs and benefits associated with the 2020-2022 DSM Resource Plan, and notably excludes voluntary participant contributions which are included in the TRC. EfficiencyOne believes the PAC test provides another valuable cost-effectiveness perspective. Cost effectiveness results for each sector by program are provided in Table 1.

[4] M03669, NSUARB Order, *In the Matter of the Efficiency Nova Scotia Corporation Act and In the Matter of an Application by Efficiency Nova Scotia Corporation for Approval of its Electricity Demand Side Management Plan for 2012 (30 June, 2011)* and M03669, NSUARB Decision, *In the Matter of the Efficiency Nova Scotia Corporation Act and In the Matter of an Application by Efficiency Nova Scotia Corporation for Approval of its Electricity Demand Side Management Plan for 2012,* (30 June, 2011), at para 82.

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Table 1: 2020-2022 DSM Resource Plan Cost Effectiveness Results by Program

2020-2022	Total Resource Cost Test (TRC)[a]	Program Administrator Cost Test (PAC)[b]
Residential DSM Programs		
Efficient Product Rebates	1.1	2.2
Existing Residential	1.9	6.0
New Residential	1.5	4.6
Business, Not-for-profit and Institutional Programs		
Efficient Product Rebates	2.3	7.4
Custom Incentives	2.2	5.3
Direct Installation	2.1	3.0
Enabling Strategies		
Education and Outreach Development and Research Other Enabling Strategies		
Total	**2.0**	**4.8**

Portfolio total cost-effectiveness tests are calculated using the sum of each year's present value of benefits and costs
[a] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs
[b] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.

The 2020-2022 DSM Resource Plan programs are cost-effective for both the Residential and Business, Non-profit and Institutional sectors with passing benefit/cost ratios across all programs. This information is presented above in Table 1.

3. 2020-2022 DSM RESOURCE PLAN

The 2020-2022 DSM Resource Plan represents a comprehensive suite of programs and service offerings for Nova Scotia electricity customers. The main goal of each program is to help reduce electricity costs for consumers. Further objectives include:

- reduce the long-term cost of electricity to ratepayers;
- increase consumer awareness of cost-effective options for reducing electricity consumption and/or consumption at peak periods; and
- create favorable market conditions for the increased adoption of energy efficient and system-peak demand reduction equipment and upgrades.

Highlights of the 2020-2022 DSM Resource Plan include:

- Incremental Annual Energy savings = 1.1 percent of electricity generation;
- Cumulative net lifetime CO_2 reductions = 2.772 MT.[5]
- Lifetime cost of saved energy = $0.021/kWh;
- Weighted average measure life = 14.2 years;
- Net system benefits = $420.4 million[6]; and
- Percentage of non-lighting energy savings over historical levels (i.e. 2016-2019) = +56 percent

3.1 2020-2022 DSM Resource Plan Savings and Investment

In 2020-2022, EfficiencyOne will invest $110.0 million (in nominal dollars) to achieve 367.8 GWh of incremental cumulative net energy savings, 98.3 MW of cumulative system-peak demand savings, and 5,233.0 GWh of cumulative net lifetime energy savings at the generator.

[5] Estimates are based on current electricity emissions intensity and reductions in emissions intensity in accordance with Nova Scotia Greenhouse Gas Emissions Regulations emissions caps, §4 (1)
[6] $530.4 million of lifetime benefits - $110.0 million of DSM investment = $420.4 million of net benefit

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Table 2 presents program investment budgets and targets for the planned 2020-2022 portfolio.

Table 2: 2020-2022 DSM Resource Plan Investment and Savings

Year	Investment ($ million)	Lifetime Benefits ($ million)[a]	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Weighted-Average Measure Life (years)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[b]	Program Administrator Cost Test (PAC)[c]
2020	34.4	158.7	119.2	1,679.3	14.1	29.2	1.9	4.6
2021	36.6	176.4	121.5	1,730.3	14.2	33.2	1.9	4.8
2022	39.0	195.4	127.1	1,823.4	14.3	35.9	2.0	5.0
Total	110.0	530.4	367.8	5,233.0	14.2	98.3	2.0	4.8

Currency is expressed in nominal dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM.
Avoided costs of transmission and distribution were provided by NS Power in 2018.
Portfolio total cost-effectiveness tests are calculated using the sum of each year's present value of benefits and costs
[a] Lifetime benefits are expressed as the net present value of the avoided costs, including energy, capacity, transmission and distribution, over the life of the program measures, using utility WACC.
[b] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[c] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.

EfficiencyOne estimates that the 2020-2022 DSM Resource Plan will produce annual incremental CO_2 reductions of 75 kT and cumulative net lifetime CO_2 reductions of 2.772 MT.[7]

Tables 3, 4, and 5 provide the program investment budgets and targets for 2020, 2021 and 2022, respectively.

[7] Estimates are based on current electricity emissions intensity and reductions in emissions intensity in accordance with Nova Scotia Greenhouse Gas Emissions Regulations emissions caps, §4 (1)

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Table 3: 2020 DSM Resource Plan Investment and Savings

2020	Investment ($ million)	Lifetime Benefits ($ million)[a]	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[b]	Program Administrator Cost Test (PAC)[c]
Residential DSM Programs							
Efficient Product Rebates	3.1	7.4	13.5	96.3	1.5	1.3	2.4
Existing Residential	8.7	47.9	27.1	387.4	11.6	1.9	5.5
New Residential	2.4	10.9	4.7	141.3	1.3	1.5	4.5
Low Income Participation[d]	*3.1*		*7.3*	*70.9*	*1.0*		
Residential Total	14.2	66.2	45.2	624.9	14.3	1.7	4.7
Business, Not-for-profit and Institutional Programs							
Efficient Product Rebates	6.8	48.6	37.6	555.7	7.5	2.1	7.1
Custom Incentives	6.6	33.7	28.3	389.8	5.5	2.1	5.1
Direct Installation	3.7	10.2	8.1	108.8	1.8	2.1	2.8
Low Income Participation[d]	*0.6*		*4.9*	*71.3*	*1.1*		
BNI total	17.2	92.5	74.0	1,054.4	14.8	2.1	5.4
Enabling Strategies							
Education and Outreach	0.8						
Development and Research	0.8						
Other Enabling Strategies	1.5						
Total	34.4	158.7	119.2	1,679.3	29.2	1.9	4.6

Currency is expressed in 2020 dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM. Avoided costs of transmission and distribution were provided by NS Power in 2018.
[a] Lifetime benefits are expressed as the net present value of the avoided costs, including energy, capacity, transmission and distribution, over the life of the program measures, using utility WACC.
[b] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[c] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
[d] Reflects EfficiencyOne's planned participation by low-income customers. Numbers are a subset of Residential Efficient Products Rebates, Existing Residential, Efficient Product Rebates (BNI), Custom Incentives, and Direct Installation.

Table 4: 2021 DSM Resource Plan Investment and Savings

2021	Investment ($ million)	Lifetime Benefits ($ million)[a]	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[b]	Program Administrator Cost Test (PAC)[c]
Residential DSM Programs							
Efficient Product Rebates	3.0	6.4	11.9	80.2	1.3	1.1	2.1
Existing Residential	10.4	63.4	31.8	484.5	15.1	1.9	6.1
New Residential	2.6	11.7	4.9	147.0	1.4	1.5	4.5
Low Income Participation[d]	*3.7*		*7.6*	*79.7*	*1.1*		
Residential Total	15.9	81.4	48.5	711.7	17.7	1.8	4.7
Business, Not-for-profit and Institutional Programs							
Efficient Product Rebates	6.4	46.8	35.0	498.1	7.6	2.3	7.3
Custom Incentives	7.0	36.8	29.3	404.9	5.8	2.2	5.3
Direct Installation	3.8	11.4	8.6	115.7	2.0	2.1	3.0
Low Income Participation[d]	*0.5*		*4.7*	*67.5*	*1.2*		
BNI total	17.2	95.0	73.0	1,018.6	15.5	2.2	5.5
Enabling Strategies							
Education and Outreach	0.9						
Development and Research	0.9						
Other Enabling Strategies	1.8						
Total	**36.6**	**176.4**	**121.5**	**1,730.3**	**33.2**	**1.9**	**4.8**

Currency is expressed in 2021 dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM.
Avoided costs of transmission and distribution were provided by NS Power in 2018.
a Lifetime benefits are expressed as the net present value of the avoided costs, including energy, capacity, transmission and distribution, over the life of the program measures, using utility WACC.
b TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
c PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
d Reflects EfficiencyOne's planned participation by low-income customers. Numbers are a subset of Residential Efficient Products Rebates, Existing Residential, Efficient Product Rebates (BNI), Custom Incentives, and Direct Installation.

Table 5: 2022 DSM Resource Plan Investment and Savings

2022	Investment ($ million)	Lifetime Benefits ($ million)[a]	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[b]	Program Administrator Cost Test (PAC)[c]
Residential DSM Programs							
Efficient Product Rebates	3.0	6.0	10.7	73.4	1.0	1.0	2.0
Existing Residential	11.3	69.7	33.1	504.7	16.4	1.9	6.2
New Residential	2.9	13.1	5.3	159.6	1.5	1.6	4.6
Low Income Participation[d]	*4.4*		*8.0*	*86.4*	*1.2*		
Residential Total	17.1	88.8	49.1	737.7	18.9	1.8	5.2
Business, Not-for-profit and Institutional Programs							
Efficient Product Rebates	6.6	51.4	36.8	519.0	8.3	2.5	7.8
Custom Incentives	7.6	42.0	31.7	438.5	6.4	2.3	5.5
Direct Installation	4.2	13.2	9.6	128.1	2.3	2.1	3.1
Low Income Participation[d]	*0.6*		*5.0*	*71.4*	*1.3*		
BNI total	18.4	106.6	78.0	1,085.6	17.0	2.4	5.8
Enabling Strategies							
Education and Outreach	0.9						
Development and Research	0.9						
Other Enabling Strategies	1.8						
Total	**39.0**	**195.4**	**127.1**	**1,823.4**	**35.9**	**2.0**	**5.0**

Currency is expressed in 2022 dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM. Avoided costs of transmission and distribution were provided by NS Power in 2018.
[a] Lifetime benefits are expressed as the net present value of the avoided costs, including energy, capacity, transmission and distribution, over the life of the program measures, using utility WACC.
[b] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[c] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
[d] Reflects EfficiencyOne's planned participation by low-income customers. Numbers are a subset of Residential Efficient Products Rebates, Existing Residential, Efficient Product Rebates (BNI), Custom Incentives, and Direct Installation.

As with prior DSM Plans, this DSM Resource Plan has been developed for planning and cost-effectiveness testing purposes and is not an implementation Plan. EfficiencyOne is committed to adapting the activities and services outlined in the DSM Resource Plan as needed to respond to changing technological and market conditions, and to ensure Performance Targets are met cost-effectively and within the approved investment amount.

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4. RESIDENTIAL PROGRAMS AND SERVICES

The DSM Resource Plan will allow EfficiencyOne to continue delivering cost-effective energy savings benefits for Nova Scotia's residential customers. The DSM Resource Plan pursues enhanced approaches to the delivery of programs and activities to better help customers navigate the complex upgrade choices available in today's energy market.

Over the past three years, EfficiencyOne has further refined its focus on understanding customers, their values, and how best to work with them to support the adoption of energy efficient measures in their homes.

In Nova Scotia, household perception of the importance of reducing energy use is at an all-time high. In the fourth quarter of 2018, 87 percent of Nova Scotians placed a high level of importance on reducing household energy use.[8] This is an indication of the desire to reduce energy use at home, as shown in Figure 1.

[8] Corporate Research Associates. *Autumn 2018 Atlantic Quarterly*

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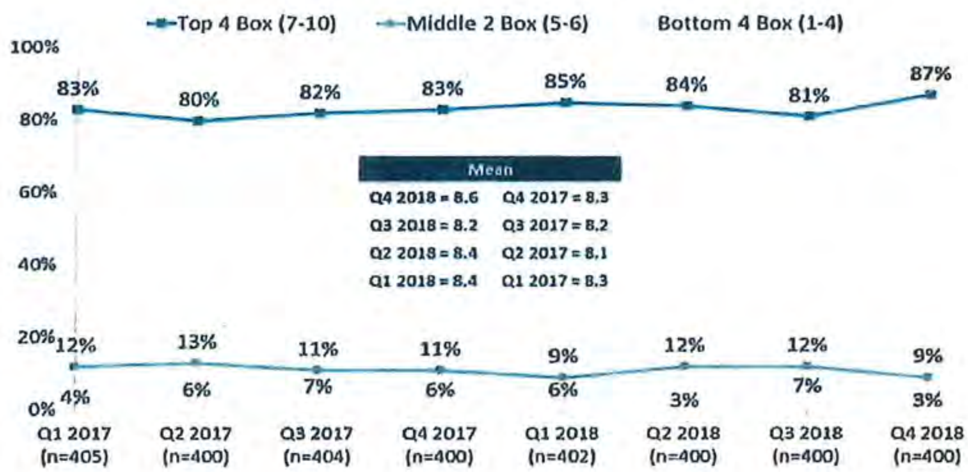
Figure 1: Household Perception of Importance of Reducing Energy Use

Rating on 10-pt Scale: 1=Not at all Important, 10=Critically Important



As the Nova Scotia electricity efficiency market continues to mature, some opportunities become increasingly saturated. EfficiencyOne will evolve program and service offerings by taking advantage of new technologies and customer data to achieve energy savings from larger, more complex projects that are often more expensive to implement but produce high energy savings.

This evolution is reflected in the DSM Resource Plan, which supports the adoption of a variety of energy efficient products and services in areas such as the building envelope, space heating equipment and domestic water heating. The DSM Resource Plan demonstrates an increased shift towards non-lighting measures and builds on steps being taken in 2019. Enhancements for the Residential sector in the DSM Resource Plan, described in the next section, focus on the following key areas:

- decreasing reliance on energy savings from lighting;
- increasing accessibility to programs and services; and
- increasing types of benefits delivered by DSM (i.e. including system-peak demand reduction).

The DSM Resource Plan offers three Residential sector programs and eight program components, as presented in Table 6 below.

Table 6: DSM Resource Plan: Residential Sector Offerings

Program	Program Component	Target Market Segment	Delivery Approach	Enhancements in 2020-2022 Plan
Residential Efficient Product Rebates	Appliance Retirement	Residential (renters, homeowners, landlords)	Turn-key service	• New Appliance Replacement service
	Instant Savings	Residential (renters, homeowners)	Point of sale discounts	• New clothes dryer measures
Existing Residential	Efficient Product Installation	Residential (renters, homeowners, landlords)	Turn-key service	• Continued support
	Mi'kmaw Home Energy Efficiency[9]	Residential (band-owned homes)	Turn-key service	• This is a new program component
	Green Heat	Residential (renters, homeowners, landlords)	After purchase mail-in rebates & mid-stream incentives	• New domestic water heating measures • New mid-stream delivery approach for heat pumps • New system-peak demand reduction measures

[9]In 2019, E1 updated the name of the First Nations Home Energy Efficiency program component to Mi'kmaw Home Energy Efficiency. The Assembly of Nova Scotia Mi'kmaq Chiefs and the Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) recommended an update to the name during the regulatory process for E1's 2020-2022 DSM Resource Plan Application (M09096).

Program	Program Component	Target Market Segment	Delivery Approach	Enhancements in 2020-2022 Plan
	Home Energy Assessment	Residential (homeowners, landlords)	Facilitated* and financial incentives	• New project management support service • Adjustments to incentives to encourage deeper energy savings • New system-peak demand reduction measures
	Affordable Multifamily Housing and Non-profit Organizations	Residential (landlords)	Facilitated and financial incentives	• This is a new program component
New Residential	New Home Construction	Residential (homeowners, builders)	Facilitated and financial incentives	• Continued support

** Facilitated is defined as providing customers with assistance in identifying energy efficiency opportunities and guidance on implementation to satisfy program requirements.*

4.1 Residential Efficient Product Rebates: Program Description

4.1.1 Overview

The Residential Efficient Product Rebates program provides residential customers access to financial incentives for consumer products through retail channels and to retire and/or replace old inefficient appliances. The Residential Efficient Product Rebates program is comprised of two program components:

- Appliance Retirement; and
- Instant Savings.

The Appliance Retirement program component helps residential customers retire old, inefficient appliances through a turn-key service approach. This service will pick up and responsibly recycle working, but less-efficient, home appliances such as refrigerators, freezers, and air conditioners from customers across the province. Customers receive a financial incentive for each retired appliance. Appliance Retirement also currently includes a free replacement service for low-income qualified customers participating in the HomeWarming program. As part of the replacement service, the older appliance is removed and retired, and a new energy efficient appliance is delivered and installed.

The Instant Savings program component focuses on purchases made through participating retail stores across Nova Scotia by offering customers point-of-sale rebates on eligible energy efficient products. Products typically include Light Emitting Diode (LED) lighting products, thermostats, appliances, controls and other consumer goods. EfficiencyOne partners with national and independent retailers to deliver rebates. Historically, incentives have been made available to approximately 200 retail locations throughout Nova Scotia. In addition to point-of-sale rebates, Instant Savings also collaborates with retailers to increase customer engagement with in-store events where trained energy ambassadors demonstrate products, educate consumers on their use and talk about the benefits of energy efficiency.

4.1.2 Enhancements in 2020-2022

Two enhancements to the Residential Efficient Product Rebate program are being introduced in the DSM Resource Plan to help Nova Scotians make energy efficient choices about large residential appliances.

Appliance Replacements

Appliance Retirement will place an increased focus on appliance replacements by offering a new turn-key service. Currently, Appliance Retirement replaces fridges, freezers and dehumidifiers for low-income qualified Nova Scotians participating in the HomeWarming program. In addition to the appliances listed above, the Mi'kmaw Home Energy Efficiency program component will also offer replacements for clothes washers and clothes dryers. Enhancements for the DSM Resource Plan will include ENS offering an appliance replacement package to Nova Scotians at a cost to participants. The full service will provide removal and recycling of old, inefficient appliances, and the installation of new efficient replacement appliances.

Efficient Clothes Dryers

Instant Savings will offer a point-of-sale rebate on energy efficient clothes dryers. This proposed enhancement aligns with other jurisdictions that have recently introduced incentives for efficient dryers including BC Hydro, Fortis BC, Efficiency Vermont, and MassSave.

4.1.3 Objectives

Objectives of the Residential Efficient Product Rebates program include:

- make energy-efficient products more accessible to Nova Scotians across all income levels and geographic locations;
- increase customer and retailer awareness of energy efficiency opportunities;
- increase system-peak demand for energy efficient products;
- increase the availability of energy-efficient products at retailers;
- increase customer and retailer awareness of the benefits of energy efficient products, particularly the lesser known non-lighting products;
- remove old, inefficient appliances from the Nova Scotia electricity system; and
- help customers achieve energy savings and power bill reductions.

4.1.4 Opportunity

Target Market

The target market for the Efficient Products Rebates program is comprised of residential customers including low-income and renter customer groups.

Market Barriers

Barriers to participating in the Efficient Product Rebates program includes:

- Affordability: The cost difference between efficient products and less efficient products can create a participation barrier.
- Awareness: Some potential participants may not be aware of the benefits of energy-efficient products.
- Short decision period: Replacement of failing equipment can occur quickly resulting in lost opportunities if the efficient product is not purchased.
- Lack of trust: Some potential participants do not trust a free service.
- Lack of information: Lack of familiarity with energy efficient products and appliances.

Program History

Residential Efficient Product Rebates is a well-established program in Nova Scotia and has been operating as part of the ENS portfolio since 2010. Instant Savings on energy-efficient products has been operating since 2009[10] and Appliance Retirement has been operating since 2010.

Instant Savings was previously known by the following names: Efficient Lighting Products (2009), Power Down (2010), Plug into Savings (2011), and Retail Markdown

[10] In 2009, NS Power offered a DSM program offering instant rebates program on energy efficient products. The responsibility and accountability for DSM administration transferred to Efficiency Nova Scotia effective October 1, 2010.

(2012). Since 2012, the program has been known as Instant Savings.

The Instant Savings program component offers instant rebates on efficient products in retail stores across Nova Scotia and the program has maintained a consistent delivery model since inception. Eligible products under Instant Savings have shifted as a result of gradual market evolution. For example, the program component began with a strong focus on Compact Fluorescent Lamps (CFLs), and then shifted toward LEDs with their introduction in 2011. Complete removal of the CFL product from Instant Savings occurred in 2014. Beginning in 2019, the program component is discontinuing rebates on all A-series lamps.

Since 2011, Instant Savings rebates have primarily been offered during two annual campaigns: spring and fall. Beginning in 2014, the program component offered year-round rebates on eligible refrigerators and clothes washers, and in 2018, year-round rebates were expanded to include other products such as smart thermostats and dehumidifiers. EfficiencyOne continues to monitor the market and pilot new products to ensure its instant rebates pro-actively drive energy efficiency purchases.

Appliance Retirement has been operating since 2010 and is available throughout Nova Scotia. Initially only available in Halifax Regional Municipality and Cape Breton Regional Municipality in 2010, it expanded to the entire province in 2011. The program offers rebates to all Nova Scotians wanting to retire their old less-efficient refrigerators and freezers.

Starting in 2012, Appliance Retirement operated a pilot project to offer incentives for large scale appliance replacements. The pilot project offered participants custom incentives for replacing old appliances with new ENERGY STAR® qualified appliances. The service included the purchase and delivery of the new appliances along with the removal, decommissioning and recycling of the old appliances.

EfficiencyOne integrated appliance replacements for HomeWarming participants into its operations beginning in 2015. Appliance Retirement has been, and continues to be, responsible for the pick-up of eligible full-sized refrigerators, freezers and dehumidifiers from clients referred by HomeWarming and replaces these units with comparably sized, new, energy-efficient models. The removed appliances are responsibly recycled as part of the standard appliance retirement process.

Since the inception of Appliance Retirement, the program component removed incentives for dehumidifiers and later introduced incentives for room air conditioner units, small refrigerators, and small freezers as add-on appliances that can be retired with a primary appliance. The rebate structure has remained relatively consistent, temporarily offering participants the option of Air Miles rewards instead of cash rebates from 2012-2014.

4.1.5 Program Design

Measures Promoted

Assistance will be provided to retire the following old, inefficient products:

- refrigerators;
- freezers; and
- window air conditioning.

Assistance will be provided to replace the following old, inefficient products:

- refrigerators;
- freezers;
- dehumidifiers;
- clothes washers;
- clothes dryers;

- dishwashers; and
- stoves / ranges.

Assistance is planned to be provided to purchase the following high efficiency consumer products:

- non-A-Series LED lighting;
- LED recessed downlight fixtures;
- LED integrated fixtures – with and without motion sensors;
- dimmer switches;
- indoor and outdoor motion sensors;
- programmable thermostats;
- smart power bars;
- power bars with built in timers;
- outdoor heavy-duty timer;
- clotheslines;
- room air purifier;
- clothes washers;
- clothes dryers;
- refrigerators;
- smart thermostats for electric heating;
- dehumidifiers;
- energy efficient showerheads;
- variable speed pool pumps; and
- air source heat pump hot water heaters.

4.1.6 Implementation Strategy

Program Delivery

The Residential Efficient Product Rebates program uses both a self-serve and turn-key delivery approach to help residential customers make smart energy choices through the retirement and/or replacement of inefficient appliances and the purchase of high-efficiency consumer goods.

The Appliance Retirement program component uses a delivery agent approach for service delivery. The service to customers provided by the delivery agent includes the management of all aspects of appointment booking, pick-ups, transportation and delivery/decommissioning of the appliances.

The Instant Savings program component engages a delivery agent for encouraging and recruiting retailers to participate, managing relationships with participating retailers, delivering in-store customer engagement events and providing retailer training on energy-efficient products and additional ENS services.

Marketing Strategy

The marketing strategy for Appliance Retirement will focus on enhancing a customer's quality of life through non-energy benefits (convenient, hassle-free pick up and recycling) with the rebate promoted as a secondary message (through online targeted advertising). The objective to increase the number of appliances retired is achieved through integrated marketing campaigns including digital and social media, out-of-home (billboard, truck wraps), radio, and direct mail. To increase program participation across Nova Scotia, the marketing strategy is to reach out to potential participants through various platforms to encourage appliance retirement and upgrading to a more energy-efficient model via a new appliance replacement option.

The marketing strategy for Instant Savings is to increase awareness and drive customers to retail locations to realize the benefits of energy efficient products. The marketing plan is designed to encourage customers to purchase a range of energy efficient products during campaign periods (which may be all-year for some products) to make their homes more efficient and comfortable; to incent customers to purchase energy efficient products by removing the price barrier; and to ensure customers can easily recognize eligible products in-stores. It includes the following tactics: development of point-of-purchase materials and in-store signage; customer engagement events and materials; training for efficiency ambassadors; and ENS website updates. Media promotion may include radio remotes, radio and television commercials, digital advertising; electronic billboard advertising; cross promotion with other ENS programs (e.g. postcards delivered to customers in Appliance Retirement & Efficient Products Installation service); and social media.

Quality Assurance

The Residential Efficient Product Rebates program has a quality assurance framework which includes retailer site visits (during both campaign and non-campaign periods), random customer record review, appliance metering, appliance internal temperature testing and customer satisfaction surveys.

4.1.7 Performance Indicators

Performance indicators for the Residential Efficient Product Rebates program are provided in Table 7 below.

Table 7: 2020-2022 Residential Efficient Product Rebates Performance Indicators

Year	Investment ($ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[a]	Program Administrator Cost Test (PAC)[b]	Participation (products)[c]	Levelized Cost of Saved Energy ($/kWh)[d]	Nominal cost of saved energy ($/kWh)[e]
2020	3.1	13.5	96.3	1.5	1.3	2.4	234,780	$ 0.040	$ 0.033
2021	3.0	11.9	80.2	1.3	1.1	2.1	189,705	$ 0.045	$ 0.037
2022	3.0	10.7	73.4	1.0	1.0	2.0	142,218	$ 0.049	$ 0.041
Total	9.1	36.0	249.8	3.8	1.1	2.2	566,703	$ 0.044	$ 0.036

Currency is expressed in nominal dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM.
Avoided costs of transmission and distribution were provided by NS Power in 2018.
Total cost-effectiveness tests are calculated using the sum of each year's present value of benefits and costs
[a] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[b] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
[c] The number of individual products rebated through Appliance Retirement and Instant Savings.
[d] The levelized cost of saved energy represents the cost of lifetime energy savings, with savings discounted using Nova Scotia Power's weighted average cost of capital (WACC).
[e] The nominal cost of saved energy is the quotient of lifetime energy savings and investment.

4.1.8 Low-Income Performance Indicators

Low-Income performance indicators for the Residential Efficient Product Rebates program are provided in Table 8 below.

Table 8: 2020-2022 Residential Efficient Product Rebates Low Income Performance Indicators

Year	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Participation (units)[a]
2020	0.4	2.3	0.03	1,700
2021	0.3	2.0	0.03	1,374
2022	0.3	1.8	0.02	1,030
Total	1.0	6.1	0.09	4,104

[a] The number of individual products rebated through Instant Savings and appliance retirement.

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4.2 Existing Residential: Program Description

4.2.1 Overview

The Existing Residential program provides residential customers with access to technical and financial assistance to identify, assess and implement energy efficiency and system-peak demand reduction upgrades. The Existing Residential program is comprised of the following five components:

- Affordable Multi-Family Housing and Non-Profit Organizations;
- Efficient Product Installation;
- Mi'kmaw Home Energy Efficiency;
- Green Heat; and
- Home Energy Assessment.

The Affordable Multi-Family Housing and Non-Profit Organizations program component was developed specifically to help low-income renters and non-profits that provide shelter, access the benefits of energy efficiency through reduced utility bills and stable rents. This program component offers project management support to participants combined with technical and financial assistance to help building owners make energy efficient upgrades.

The Efficient Product Installation program component offers low-cost energy efficient upgrades to homeowners and renters at no cost to participants. During a home visit, qualified installers provide free installation of energy efficient products such as lighting, domestic hot water measures, and other electricity-saving equipment. Efficient Product Installation offers the opportunity to engage directly with customers during the home visit. Installers demonstrate the energy efficient products, talk about their benefits and promote the value of more comprehensive assessments and upgrades for the dwelling.

The Mi'kmaw Home Energy Efficiency program component is a whole home service offered to customers at no cost. An initial energy assessment is conducted on the home by a Natural Resources Canada (NRCan) Registered Energy Advisor to identify energy efficiency upgrade recommendations specific to that residence. Following the implementation of upgrades, a final energy assessment is performed. Complete project management is provided by the Delivery Agent and, where possible, EfficiencyOne's delivery agent hires qualified First Nation-preferred contractors to complete the work. Upgrades delivered through this program component include draft proofing, insulation, and energy efficient space heating and water heating equipment.

Green Heat currently provides incentives through an after-purchase mail-in rebate offer delivery approach. In the DSM Resource Plan a mid-stream delivery approach for heat pumps is being introduced. Rebates will be offered on products such as heat pumps, biomass space heating equipment, solar thermal products for space and water heating, and electric thermal storage (ETS) units.

Home Energy Assessment was developed specifically to help homeowners make energy efficient upgrade choices and implement deep savings measures such as building envelope improvements and the installation of efficient heating systems, which can deliver significant energy savings to customers. The home energy evaluation, coupled with the interaction with a NRCan Registered Energy Advisor and prioritized, tailored recommendations, help to educate and inform homeowners who otherwise may not be aware of their home's upgrade potential. Financial incentives in the form of rebates or low interest financing are offered to help homeowners overcome the financial barrier to implementing otherwise costly retrofits.

4.2.2 Enhancements in 2020-2022

Several new initiatives are introduced in 2020-2022 to enhance the Existing Residential

Program. These are detailed in the following section.

Domestic Hot Water Support

In Nova Scotia, energy used to heat potable water accounts for approximately 16 percent of household energy use.[11] EfficiencyOne estimates that of the approximately 400,000 households in Nova Scotia, 55 percent use electricity for domestic water heating (DWH). Historically, EfficiencyOne's portfolio has achieved 8 percent to 10 percent of its residential energy savings from measures that target water heating.

Reducing electricity used for water heating is achieved by using less hot water, reducing thermal losses and/or heating the water more efficiently. Several enhancements to the Existing Residential program in the DSM Resource Plan focus on helping customers reduce the amount of electricity used for domestic water heating.

Additional Measures

Green Heat will expand its measure mix to include drain water heat recovery (DWHR) systems and domestic water heater timers.

Additional Support

Increased financial support will be provided for heat pump water heaters and DWHR in both the Green Heat and Home Energy Assessment program components. Additional engagement with plumbers and plumbing contractors will be leveraged to support the implementation of these upgrades in the residential sector.

[11] Natural Resources Canada National Energy Use Database, 2016. *Residential Sector, Nova Scotia, Table 2: Secondary Energy Use and GHG Emissions by End-Use*

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Mid-stream[12] Delivery Approach for Cold Climate Ductless Heat Pumps

Currently, incentives for ductless heat pumps are delivered through a downstream mail-in rebate via Green Heat or as part of whole home upgrades in Home Energy Assessment. Enhancements for the DSM Resource Plan include transitioning the delivery approach to the provision of instant rebates for qualifying heat pump products. This enhancement is expected to drive participation by helping overcome barriers relating to: perceived administrative burden of mail-in applications, understanding the benefits of the equipment, and the upfront costs of purchasing the equipment.

EfficiencyOne will work directly with participating residential home heating distributors to help promote and market the offer to customers.

Deeper Energy Savings Support for Home Energy Assessment Participants

Home upgrades such as increasing insulation and, energy efficient space and water heating systems are an important part of the residential sector portfolio. Achieving deeper energy savings that are long lasting is a key objective of the Home Energy Assessment program component. It is estimated that at the end of 2018, the market penetration for Home Energy Assessment was 17 percent, indicating there is room to grow the Home Energy Assessment program component. Two enhancements will support increased participation in Home Energy Assessment.

<u>Project Management Support</u>

Existing Residential will begin offering project management support to participants who wish to complete significant home upgrades in Home Energy Assessment. This project management support will build on assistance already offered in Home Energy Assessment, and will likely include increased efforts to:

[12] Mid-stream delivery approach refers here to the supply distribution chain where incentives are reimbursed back to the distributor (or retailer) with the net after-rebate price made available to the contractor or end-use customer at time of purchase.

- answer more detailed questions about the Home Energy Assessment report;
- facilitate participation;
- connect the homeowner with Efficiency Trade Network (ETN) contractors to complete the recommended upgrades; and
- facilitate participation in other ENS programs relevant to the customer.

Additional Support

Increased financial support will be provided to encourage Home Energy Assessment participants to implement deeper energy savings projects. Coupled with program management support, it is anticipated that more Home Energy Assessment customers will implement upgrades recommended through the program, and a subset of those customers will be encouraged to achieve more significant energy savings than they would have without these additional support elements. The intention of this effort is to further increase the level of efficiency upgrades occurring in homes, helping customers get their homes closer to net-zero energy use.

Demand Response Measures

Demand response initiatives will be introduced as part of the broader DSM portfolio in the DSM Resource Plan. EfficiencyOne and NS Power will be working closely on the development, assessment and evaluation of demand response measures. These initiatives are meant to build on the demand reduction pilot beginning in 2019 and expand offerings to customers. Initial demand response focused measures (ETS units and electric storage hot water heater timers) are included in the Green Heat and Home Energy Assessment program components.

Mi'kmaw Home Energy Efficiency

This program component will continue the efforts of the pilot initiatives in both 2018 and 2019. Additional upgrades in Mi'kmaw homes will occur under the Existing Residential Program in the DSM Resource Plan.

Affordable Multi-Family Housing & Non-Profit Organizations

This is a new program component being introduced under the Existing Residential Program in the DSM Resource Plan. This effort will build on ENS experience delivering a similar program funded by the Province of Nova Scotia (to reduce non-electrical energy use), and through past ENS efforts to improve the energy efficiency in affordable rental units.

4.2.3 Objectives

Objectives of the Existing Residential program include:

- increase customer awareness of cost-effective energy efficient options;
- improve the energy performance of residential dwellings within Nova Scotia;
- improve homeowners understanding of energy efficiency in their home and how their house functions as a system;
- improve energy efficiency in affordable housing to help reduce energy poverty and maintain affordable housing in Nova Scotia;
- significantly reduce energy use in homes across all 13 Mi'kmaw communities in Nova Scotia;
- achieve long lasting energy and system-peak demand savings;
- provide customer engagement to support the broader transition to wide-scale adoption of energy efficiency products and behaviours across Nova Scotia; and
- encourage the adoption of equipment that reduces utility peak demand.

4.2.4 Opportunity

Target Market

The Existing Residential program serves all types of residential dwellings in Nova Scotia. These include single detached homes, semi-detached homes/duplexes, townhouses, mobile/mini homes, rental housing, and other multi-family residences such as apartments and condominiums.

Market Barriers

Barriers to participating in the Existing Residential program include:

- Affordability – lack of financial resources to cover upfront costs (product/equipment, installation, energy assessments).
- Awareness – lack of information/knowledge about energy efficient technologies, upgrades, energy savings and benefits.
- Resources – lack of time/human resources for project management, contractor management, upgrade implementation.
- Split incentive – when landlords are not paying for utilities (specifically heating), they are often not motivated to implement energy efficiency upgrades to the building and/or equipment.

Program History

The Existing Residential program has been operating in various forms since Efficiency Nova Scotia Corporation became Nova Scotia's DSM Administrator. The oldest component, Home Energy Assessment, was inherited from Conserve Nova Scotia and NS Power (acting as interim DSM Administrator). Prior to this, HEA incentives were offered by the federal government in the early 2000's. The other components, Green Heat, Efficient Product Installation, Mi'kmaw Home Energy Efficiency, and Affordable Multi-family Housing and Non-Profit Organizations have each evolved from pilots.

DSM funds have consistently incentivized homeowners to make energy efficient choices through its Home Energy Assessment program component with additional support from the federal and provincial governments at various times over the last ten years. The component underwent a significant change in 2012 where its name was updated to Home Energy Assessment (from "EnerGuide for Existing Houses") and its eligible measures were scaled back to focus solely on building envelope upgrades. A financing option was added in 2013, giving participants the choice of low-interest financing instead of rebates to support their home upgrades. The program component underwent additional revisions in October 2015 where it reduced the cost to participants for energy assessments, began offering rebates for heating systems and water heating equipment, and re-structured its rebates to encourage participants to achieve deeper energy savings (e.g. higher rebates for bundled upgrades). The rebate structure was again re-structured in July 2018 in response to customer feedback that the previous design was confusing and difficult to navigate. In September 2017, Home Energy Assessment began using a new EnerGuide Rating System to convey a home's performance to participants; rather than assigning a rating of 0-100, the new system calculates a rating in gigajoules that reflects the modelled consumption of a home where 0 gigajoules is the best a home can achieve.

Green Heat was initially launched as a Fuel Substitution pilot in 2011 and was established as a full program component the following year. While it initially included incentives for switching to natural gas heating systems, the program component was modified in 2013 to focus on switching to fuel derived from renewable sources. At that time, the program component was re-launched under the name Green Heat. In 2015, it incorporated solar thermal rebates that were formerly offered under a separate program component and began rebating ductless mini-split heat pumps, which significantly increased program participation. The most recent set of notable changes took place in 2017, when Green Heat revised its delivery model to reflect an after-purchase mail-in rebate program to remove barriers to participation.

Efficient Product Installation was piloted in 2011 as an extra service under several other program components. Because of its success and potential for energy savings, it launched as a stand-alone program component in 2012. Initially focusing on communities with a high percentage of low-income residents and participants in other

ENS programs, the service became available to all Nova Scotians in 2014. At its outset, the service replaced incandescent bulbs with CFL bulbs, and by 2014, it was primarily replacing incandescent bulbs with LEDs. In 2017, the program component merged with the former "Rental Properties and Condominiums" program component to offer a complete, consistent service to residents living in all sizes of homes or buildings. The program component continues to monitor the efficient product market and test new equipment and approaches in order to respond to changes in the market. Recent promotions tested in 2018 have included LED holiday lights (exchanged with incandescent lights), thermostatic shower valves, and clotheslines.

In 2018, EfficiencyOne launched the Mi'kmaw Home Energy Efficiency pilot with funding from both the Province of Nova Scotia and DSM, supporting non-electric and electric upgrades, respectively. The first phase of the pilot is scheduled to end in the spring of 2019 and reach a total of 100 participants across all 13 Mi'kmaw communities in Nova Scotia. It is also anticipated that a second phase of this pilot will continue for the remainder of 2019.

4.2.5 Program Design

Measures Promoted

The Existing Residential program offers financial and technical assistance in the following areas:

- installation of low-cost energy efficiency products at no cost to customer;
- direct engagement and education;
- home energy assessments to identify energy efficiency upgrade recommendations tailored to the home;
- energy audits for affordable multi-family housing buildings and non-profit organizations who provide shelter;
- financial incentives in the form of rebates and financing for major upgrades such

building envelope, space heating equipment, domestic water heating equipment and system-peak demand reduction measures (i.e. ETS units and electric storage hot water heater timers); and

- project management.

4.2.6 Implementation Strategy

Program Delivery

The Existing Residential Program leverages a variety of delivery approaches to help customers implement energy efficiency improvements in their home. These strategies include:

- turn-key direct installation service;
- after purchase mail-in rebates;
- mid-stream instant rebates;
- project management support; and
- whole building energy modelling and upgrade incentives.

The Affordable Multi-Family Housing and Non-Profit Organizations program component is delivered in partnership with contracted energy auditors. An energy audit is performed on the building to identify energy efficiency opportunities specific to the building. Following the completion of upgrades, which could include increased insulation, energy efficient space and water heating equipment, appliances and lighting, participants receive rebates based on the implemented upgrades.

Efficient Product Installation is delivered in partnership with external delivery agents who are responsible for booking installation appointments with customers, installing the energy efficient products, demonstrating the products to participants, engaging with customers about energy efficiency, installer training and education, reporting and data collection, and marketing efforts.

The Mi'kmaw Home Energy Efficiency program component is delivered in partnership with Nova Scotia Mi'kmaw Communities and a delivery agent. Housing Managers in each community select their participants based on need. Where possible, EfficiencyOne's delivery agent hires qualified Mi'kmaw-preferred contractors to complete the work. EfficiencyOne's delivery agent is responsible for:

- conducting the initial home energy assessment;
- proposing upgrades that are reviewed and approved by both EfficiencyOne and the Housing Managers;
- hiring and managing contractors to implement the approved upgrades;
- conducting quality assurance site visits on all completed upgrades;
- conducting final home energy assessment; and
- providing documentation to EfficiencyOne.

Green Heat will be delivered through an after-purchase mail-in rebate approach and will expand to offer a mid-stream instant rebate path for heat pumps. Customers can choose to receive rebates at the time of purchase from any participating distributors/retailers, or to submit a mail-in rebate at their convenience after installation of the equipment is complete. This will provide flexibility for customers, and also offer an opportunity for EfficiencyOne to engage more directly with equipment providers to supply further information/training on relevant rebates.

The Home Energy Assessment program component is delivered with the support of NRCan licensed Service Organizations. Registered Energy Advisors complete an initial home energy assessment and provide the homeowner with a report containing tailored upgrade recommendations. Homeowners select and complete energy efficient upgrades. Participants who wish to implement significant upgrades can choose to help implement upgrades through additional project management support. After completing upgrades, the Energy Advisor performs a final home energy assessment. Received rebates are based on the implemented upgrades.

Marketing Strategy

The Existing Residential program marketing strategy will use integrated marketing campaigns by program component, focus on cross promotion between program components and have key messages focusing on non-energy benefits to enhance customer's lifestyles while making their homes more comfortable and energy efficient. EfficiencyOne will collaborate closely with its design agency, the Efficiency Trade Network and its program delivery agents to reach markets and deliver effective messaging. Specific tactics will include:

- contractor education and training;
- Delivery Agent education and training;
- industry event promotion;
- integrated media plan;
- engagement with permit offices;
- in-store promotion;
- leveraging strategic partnerships; and
- community outreach.

Quality Assurance

The Existing Residential program has an established quality assurance framework inclusive of random and targeted site visits, energy model file reviews and rebuilds, documentation review, and customer surveys.

4.2.7 Performance Indicators

Performance indicators for the Existing Residential program are provided in Table 9

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below.

Table 9: 2020-2022 Existing Residential Performance Indicators

Year	Investment ($ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[a]	Program Administrator Cost Test (PAC)[b]	Participation (products)[c]	Participation (homes)[d]	Participation (projects)[e]	Levelized Cost of Saved Energy ($/kWh)[f]	Nominal cost of saved energy ($/kWh)[g]
2020	8.7	27.1	387.4	11.6	1.9	5.5	213,150	833	27	$ 0.034	$ 0.022
2021	10.4	31.8	484.5	15.1	1.9	6.1	194,088	970	34	$ 0.033	$ 0.021
2022	11.3	33.1	504.7	16.4	1.9	6.2	187,675	953	41	$ 0.034	$ 0.022
Total	30.3	92.0	1,376.6	43.0	1.9	6.0	594,913	2,756	102	$ 0.034	$ 0.022

Currency is expressed in nominal dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM.
Avoided costs of transmission and distribution were provided by NS Power in 2018.
Total cost-effectiveness tests are calculated using the sum of each year's present value of benefits and costs
[a] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[b] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
[c] The number of individual products rebated through Efficient Product Installation, Green Heat, Home Energy Assessment, and First Nations Home Retrofits.
[d] The number of households completing upgrades through Home Energy Assessment and First Nations Home Retrofits.
[e] The number of projects completing upgrades through the Affordable Multifamily Renter Program component.
[f] The levelized cost of saved energy represents the cost of lifetime energy savings, with savings discounted using Nova Scotia Power's weighted average cost of capital (WACC).
[g] The nominal cost of saved energy is the quotient of lifetime energy savings and investment.

4.2.8 Low-Income Performance Indicators

Low-income performance indicators for the Existing Residential program are provided in Table 10 below.

Table 10: 2020-2022 Existing Residential Low Income Performance Indicators

Year	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Participation (products)[a]	Participation (homes)[b]	Participation (projects)[c]
2020	7.0	68.6	1.01	88,345	74	27
2021	7.2	77.8	1.12	79,424	113	34
2022	7.7	84.7	1.22	76,340	152	41
Total	21.9	231.0	3.34	244,109	339	102

[a] The number of individual products rebated through Efficient Product Installation and First Nations Home Retrofits.
[b] The number of households completing upgrades through First Nations Home Retrofits.
[c] The number of projects completing upgrades through the Affordable Multifamily Renter Program component.

4.3 New Residential: Program Description

4.3.1 Overview

The New Residential program, marketed as New Home Construction, provides customers who are building a new home access to technical expertise and financial incentives for the installation of energy efficiency upgrades during the design and early construction phases.

Working with a NRCan Registered Energy Advisor, participants have their house plans modelled to estimate the energy consumption of the initial design. Based on the results, tailored upgrade recommendations are provided to help customers make informed decisions and achieve energy efficiency targets for their home. Upon completion the home is modelled to estimate energy consumption as-built and receives its home rating label.

4.3.2 Objectives

Objectives of the New Residential program include:

- deliver significant and long-lasting energy savings for homeowners;
- increase homeowner and builder awareness of cost-effective options for improving the energy efficiency of new homes;
- reduce lost opportunities for energy savings;
- introduce best practices and improvements upon current home design, construction techniques, and systems commissioning; and
- improve the energy efficiency of new Nova Scotia housing stock comprising single detached, semi-detached, and row homes.

4.3.3 Opportunity

Target Market

The target market is comprised of Nova Scotia residents and builders who are building a new home in Nova Scotia.

Market Barriers

Barriers to participation in the New Residential program include:

- Upfront costs: for both modelling and energy efficient upgrades.
- Lack of information: lack of familiarity with energy efficient upgrades and equipment.
- Competing interests: builders who are building on specifications may not prioritize energy efficiency in trying to keep purchase costs low for prospective buyers.

Program History

DSM funds began supporting the New Residential program in 2009, two years before Efficiency Nova Scotia Corporation began administering the program. Marketed as "Performance Plus" beginning in late 2010, and then re-launched as "New Home Construction" in 2014, the program has maintained a simple incentive structure with slight modifications over the years to reflect available funding and a continuously evolving market. In 2017, New Home Construction and Home Energy Assessment simultaneously adopted the new EnerGuide Rating System.

With the aim of continuing to push the new residential building market toward highly energy efficient homes, New Home Construction initiated a Passive House pilot in 2016 which provided incentives for homes reaching Passive House requirements. Building on the pilot experience a top tier incentive was added to the New Residential program in December 2018 to encourage builders and homeowners to build top performance homes such as Passive Homes, net zero ready homes, and net zero homes.

4.3.4 Program Design

Measures Promoted

The New Residential program provides financial incentives to participants based on whole home modelling. Typical energy efficiency upgrades recommended and implemented by program participants are: increased insulation levels; energy efficient space heating and water heating equipment; and, efficient ventilation systems.

Incentives are provided to both reduce the upfront costs of pre- and post- construction modelling, as well as for the implementation of comprehensive energy efficiency upgrades. Upgrade incentives are performance based (corresponding to the size of the home) and are aligned with the achievement of consumption targets as compared to a home built to the Nova Scotia building code. Incentives are tiered and increase with increased energy savings to encourage homeowners and builders to build top performance homes such as Passive Homes, net-zero ready and net zero homes.

4.3.5 Implementation Strategy

Program Delivery

The New Residential program is delivered in partnership with contracted Service Organizations who are licensed by NRCan.

Customers work directly with ENS and NRCan Registered Energy Advisors for detailed home design advice and program guidance. The customer works with the Energy Advisor to model their new home before it is built using building code and house plan inputs to assess the projected energy consumption of the home under different scenarios of energy efficiency upgrades. The Energy Advisor provides tailored recommendations for a variety of upgrade options, helping the customer assess how to achieve high efficiency targets.

Upon completion of the new home, a final onsite evaluation is completed by the Energy Advisor and the home (as built) is modelled. The modelled results provide an energy rating for the completed new home.

Marketing Strategy

The marketing strategy for the New Residential program will continue to focus on building strong relationships and value for both homebuilders and contractors and communicating long-term benefits of the program. This will be achieved by raising awareness of program benefits with key audiences. The marketing strategy for New Residential will focus on builder and permit office engagement through outreach, home shows and events, sponsorships, educational outreach, inbound marketing, digital marketing, content strategy, marketing communications (e.g. case studies) and training opportunities. Media tactics may include radio, out of home (e.g. billboard), print, digital, and potentially earned media.

Quality Assurance

The New Residential program has an established quality assurance framework, which includes random and targeted site visits, model file review and rebuild, and customer surveys.

4.3.6 Performance Indicators

Performance indicators for the New Residential program are provided in Table 11 below.

Table 11: 2020-2022 New Residential Performance Indicators

Year	Investment ($ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[a]	Program Administrator Cost Test (PAC)[b]	Participation (homes)[c]	Levelized Cost of Saved Energy ($/kWh)[d]	Nominal cost of saved energy ($/kWh)[e]
2020	2.4	4.7	141.3	1.3	1.5	4.5	669	$ 0.038	$ 0.017
2021	2.6	4.9	147.0	1.4	1.5	4.5	693	$ 0.039	$ 0.017
2022	2.9	5.3	159.6	1.5	1.6	4.6	747	$ 0.040	$ 0.018
Total	7.8	14.8	447.9	4.2	1.5	4.6	2,109	$ 0.039	$ 0.017

Currency is expressed in nominal dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM.
Avoided costs of transmission and distribution were provided by NS Power in 2018.
Total cost-effectiveness tests are calculated using the sum of each year's present value of benefits and costs
[a] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[b] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
[c] The number of households completing upgrades through New Home Construction.
[d] The levelized cost of saved energy represents the cost of lifetime energy savings, with savings discounted using Nova Scotia Power's weighted average cost of capital (WACC).
[e] The nominal cost of saved energy is the quotient of lifetime energy savings and investment.

4.3.7 Low-Income Performance Indicators

Low-income participation in the New Residential program is assumed to be zero.

5. BUSINESS, NON-PROFIT AND INSTITUTIONAL PROGRAMS AND SERVICES

The DSM Resource Plan maintains a focus on delivering energy savings benefits to Nova Scotia business customers through a variety of effective programs. Over the 2016-2018 period, market penetration in the commercial sector, particularly in the lighting market increased. This was accomplished in part through strong distributor engagement that EfficiencyOne plans to leverage in 2020-2022 as part of a transition towards increasing the proportion of savings from non-lighting upgrades. Implementing more comprehensive upgrades comes with barriers, such as increased cost, complexity and required expertise. The DSM Resource Plan will help more business customers overcome these barriers by making it easier for them to participate in programs, connecting them with expertise specific to their needs, and building on efforts to further reach business customers.

The DSM Resource Plan supports the adoption of a variety of energy-efficient products and services in areas such as capital retrofit projects, process-focused energy management and new building construction. The DSM Resource Plan demonstrates an increased shift towards helping customers achieve savings that are more challenging and builds on related steps taken in 2019 that have eliminated incentives for some lighting measures. Enhancements for this plan period, described in the next section, focus on the following key areas:

- decreasing reliance on energy savings from lighting;
- increasing accessibility to programs; and
- increasing the types of benefits delivered by DSM (i.e. including system-peak demand reduction).

The DSM Resource Plan offers three Business, Non-Profit and Institutional (BNI) sector programs comprised of five program components, as presented in Table 12 below.

Table 12: DSM Resource Plan: BNI Sector Offerings

Program	Program Component	Target Market Segment	Delivery Approach	Enhancements in 2020-2022
Custom Incentives	Custom	Existing and new construction BNI facilities	Facilitated* and financial incentives	• New system-peak demand reduction support • New small new construction incentives
	Energy Management Information Systems	Industrial, institutional	Facilitated and financial incentives	
	Strategic Energy Management	Industrial	Facilitated and financial incentives	
Direct Installation	Small Business Energy Solutions	Small businesses	Facilitated and financial incentives	• New system-peak demand reduction measure (ETS)
BNI Efficient Product Rebates	Business Energy Rebates	Existing and new construction BNI facilities	Point of sale rebates and mail in rebates	• New system-peak demand reduction measure (ETS)

****Facilitated is defined as providing customers with assistance in identifying energy efficiency opportunities and guidance on implementation to satisfy program requirements.***

5.1 Efficient Product Rebates: Program Description

5.1.1 Overview

The Efficient Product Rebates program provides BNI customers with financial incentives for the installation of energy efficient and system-peak demand-reducing equipment. The program focuses primarily on equipment that has applicability across a variety of commercial, industrial and institutional customers and equipment that has predictable energy and system-peak demand savings. The program offers customers two participation pathways, instant rebates and mail-in rebates:

- Instant rebates: customers have access to prescriptive rebates on a variety of energy efficiency equipment through point-of-purchase discounts through a province-wide network of distribution partners; and
- Mail-in rebates: customers have access to prescriptive rebates on a variety of energy efficiency equipment through mail-in applications. Through the mail-in pathway customers can have their rebate adjusted in some cases to reflect the energy savings resulting from the specific conditions of the project.

5.1.2 Enhancements in 2020-2022

Demand Response

Demand response initiatives will be introduced as part of the broader DSM portfolio in the DSM Resource Plan. EfficiencyOne and NS Power will be working closely on the development, assessment and evaluation of demand response measures. These initiatives are meant to build on the demand reduction pilot beginning in 2019 and expand offerings to customers Initial demand response focused measures are included in the BNI Efficient Product Rebates program, in the form of the availability of rebates for a wide range of ETS options suitable to a wide range of business customers.

5.1.3 Objectives

Objectives of the BNI Efficient Product Rebates program include:

- encourage the use of efficient products in a variety of facilities;
- increase the market penetration of the supported technologies; and
- promote the adoption of high-efficiency equipment.

5.1.4 Opportunity

Target Market

The target market includes all Nova Scotia business, non-profit and institutional facilities, including multi-unit residential buildings.

Market Barriers

Barriers to the BNI Efficient Product Rebates program include:

- Upfront costs: the higher priced energy efficient equipment is a barrier for many customers.
- Project Return: Competing priorities for capital investments.
- Lack of knowledge and technical expertise means many customers are not familiar with high efficiency options.
- Lack of internal capacity to include energy efficiency considerations (e.g. identify, evaluate) during purchase decisions.

Program History

The BNI Efficient Product Rebates program launched in 2010 and was initially modelled closely after successful prescriptive programs offered in other markets, specifically Vermont. Since the core program was developed, new measure categories have been added and/or removed, as determined by market need and technological evolution.

The success of the program has led to an increase in the adoption of LED products in existing buildings and new construction projects throughout Nova Scotia. Along with ENS incentives, decreasing prices and widespread availability have removed some of the barriers for businesses to be able to access and incorporate some of these LED products. In response to these changes in the market, EfficiencyOne removed several lighting products from its Efficient Product Rebates program in 2019 and adjusted the available rebates on others. This has allowed the program to place greater focus on other areas of energy efficient technology.

5.1.5 Program Design

Measures Promoted

All measures listed under the BNI Efficient Product Rebates program are prescriptive. As the program develops and expands in scope, the list of eligible measures will change as required.

- agriculture;
- compressed Air;
- heating;
- IT & datacenters;
- kitchen;
- laundry;
- lighting;
- refrigeration;
- solar thermal;
- pool equipment;
- pumping;
- variable frequency drives; and
- water heating.

5.1.6 Implementation Strategy

Program Delivery

BNI Efficient Product Rebates uses a self-directed approach for both the instant savings and mail-in incentive pathway. Through instant savings, point-of-purchase discounts are available on a variety of high efficiency equipment. The mail-in path provides an avenue for pre-approval and after purchase incentives.

Program partners are crucial to the success of the BNI Efficient Product Rebates program. In particular, electrical and pumping distributors within the province play a key role in promoting instant rebates through the program. These distributors also provide assistance to customers in the form of product expertise, as well as assistance in completing mail-in applications. Electrical distributors involved with the BNI Efficient Product Rebates program are active participants in the ETN, which provides marketing support and training to distributors.

Marketing Strategy

The strategic marketing focus is to enhance relationships with the distributor network. The marketing strategy will be aligned by customer segment or vertical. Key messages will focus on non-energy benefits as well as ways to enhance business operations through rebates. EfficiencyOne will collaborate closely with its partners, business development team and the ETN to reach markets and deliver messaging effectively. Specific tactics used will include:

- business development engagement;
- presentations to relevant industry associations;
- preparation of marketing materials for specific verticals;
- marketing materials placed in distributor branches;
- attendance at trade shows;
- inclusion of articles in trade association newsletters;
- province wide mail-outs and e-blasts to businesses targeting customers and leveraging program participation through data analytics;
- distributor training and instore promotion; and
- partner recognition.

Quality Assurance

The BNI Efficient Product Rebates program has an established quality assurance framework that includes random and targeted site visits, documentation review, and customer surveys.

5.1.7 Performance Indicators

Performance indicators for the BNI Efficient Product Rebate program are provided in Table 13 below.

Table 13: 2020-2022 BNI Efficient Product Rebates Performance Indicators

Year	Investment ($ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[a]	Program Administrator Cost Test (PAC)[b]	Participation (products)[c]	Levelized Cost of Saved Energy ($/kWh)[d]	Nominal cost of saved energy ($/kWh)[e]
2020	6.8	37.6	555.7	7.5	2.1	7.1	339,141	$ 0.019	$ 0.012
2021	6.4	35.0	498.1	7.6	2.3	7.3	316,440	$ 0.019	$ 0.013
2022	6.6	36.8	519.0	8.3	2.5	7.8	302,449	$ 0.019	$ 0.013
Total	19.9	109.4	1,572.8	23.5	2.3	7.4	958,030	$ 0.019	$ 0.013

Currency is expressed in nominal dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM.
Avoided costs of transmission and distribution were provided by NS Power in 2018.
Total cost-effectiveness tests are calculated using the sum of each year's present value of benefits and costs
[a] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[b] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
[c] The number of individual products rebated through the Mail-In and Instant Rebates elements of Business Energy Rebates.
[d] The levelized cost of saved energy represents the cost of lifetime energy savings, with savings discounted using Nova Scotia Power's weighted average cost of capital (WACC).
[e] The nominal cost of saved energy is the quotient of lifetime energy savings and investment.

5.1.8 Low-Income Performance Indicators

Low-income performance indicators for the BNI Efficient Product Rebate program are provided in Table 14 below.

Table 14: 2020-2022 BNI Efficient Product Rebates Low Income Performance Indicators

Year	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Participation (products)[a]
2020	3.1	45.8	1.03	27,878
2021	2.9	41.0	1.05	26,012
2022	3.0	42.7	1.14	24,862
Total	9.0	129.5	3.22	78,752

[a] The number of individual products rebated through Business Energy Rebates.

5.2 Custom Incentives: Program Description

5.2.1 Overview

The Custom Incentives program provides financial incentives and technical assistance to help non-profit, institutional, commercial and industrial customers reduce their electrical energy consumption and system-peak demand. Support is customized based upon consideration of project-specific energy and system-peak demand savings.

The program is designed to accommodate a wide range of customer project types and works directly with customers to identify and implement energy efficiency and system-peak demand reduction projects that are not supported by other ENS programs.

The Custom Incentives program is comprised of the following three program components:

- Custom;
- Energy Management Information Systems (EMIS); and
- Strategic Energy Management (SEM).

5.2.2 Enhancements in 2020-2022

Demand Response

Demand response initiatives will be introduced as part of the broader DSM portfolio in the DSM Resource Plan. EfficiencyOne and NS Power will be working closely on the development, assessment and evaluation of demand response measures. These initiatives are meant to build on the demand reduction pilot beginning in 2019 and expand offerings to customers Support for demand response measures within the Custom Program is expected to maintain the broader proposed implementation structure of the Program but allow for incentives for projects that focus exclusively on system-peak demand savings. As with the broader program, these incentives are expected to be offered in the form of support for scoping and feasibility studies, as well as direct financial incentives and financing options.

Small New Construction Service

The Small New Construction service will offer financial and technical assistance to small commercial buildings. Historically these buildings have been underserved by ENS new construction offerings. This service will offer both a prescriptive and performance path to help small commercial customers improve the energy performance of their new construction projects.

5.2.3 Objectives

Objectives of the Custom Incentives program include:

- influence electrical energy efficiency and system-peak demand reduction projects within Nova Scotia;
- build awareness around the benefits of energy efficiency to program participants;
- increase awareness of cost-effective energy efficiency options for BNI customers;

- help BNI customers overcome the barriers to implementing complex, custom energy efficiency projects;
- increase developer and builder awareness of cost-effective options for improving the energy efficiency of new buildings;
- increase the number of new buildings adopting high efficiency design techniques;
- provide customers with the knowledge and tools required to enable energy management;
- promote long term relationships with customers to achieve energy sustainability, and cost reduction objectives; and
- further diversify the program offerings of ENS by developing new programs from technologies and methods successfully trialed in the Custom Incentives program.

5.2.4 Opportunity

Target Market

The Custom Incentives program is open to all Nova Scotia business, non-profit, institutional and industrial customers. Despite its broad customer eligibility criteria, the program typically targets larger energy users.

Market Barriers

Barriers to participation in the Custom Incentives program include:

- Financial constraints resulting from internal competition for capital.
- Upfront cost requirement for feasibility studies and audits before energy savings potential is known can be challenging for businesses to justify.
- Payback periods: businesses often require short paybacks on investments making it challenging for custom energy efficiency projects to compete against other capital investments.
- Time and internal capacity constraints.

- Lack of internal commitment to energy management.
- Lack of technical expertise can mean that in-house staff are unfamiliar with new efficient technologies or processes.

Program History

The Custom Incentives program began with a single component, Custom Retrofit, in May 2008. When Efficiency Nova Scotia began administering the program in 2010, it added a New Construction program component to help streamline services offered to large BNI participants. The Custom program component includes incentives for retrofits and new construction opportunities and continues to be a cornerstone of EfficiencyOne's portfolio.

The implementation of pilots and additional services since 2010 has broadened the Custom Incentives offering, providing opportunities for a wider range of BNI participants to carry out energy efficiency projects with assistance from Efficiency Nova Scotia. For example, the program initiated a compressed air optimization offering in 2013. The Building Optimization service within the Custom program component, formerly known as "Existing Building Commissioning", was introduced in 2014 and then re-vamped in 2016 to encourage higher participation with a revised structure and delivery process. Most recently, in 2018, a New Construction Commissioning Pilot was introduced to encourage participants to fully commission their building at the end of the construction process. EMIS, which began as a pilot in 2013, is now a stand-alone component. SEM began in 2014 and has since evolved from a cohort delivery approach to a continuous uptake approach to better accommodate individual customer timelines.

5.2.5 Program Design

Measures Promoted

A variety of technical and financial assistance is available through the program, which is designed to consider projects individually. This approach allows support to be customized based on case specific energy and system-peak demand savings. Some key areas of support provided through the program include:

- financial incentives for initial scoping and feasibility studies to evaluate energy and system-peak demand savings opportunities;
- financial incentives for energy modelling of new building designs to identify and evaluate energy efficiency upgrades;
- financial incentives (rebates and financing) for implementing cost-effective electrical energy efficiency and system-peak demand reduction projects;
- financial and/or technical assistance for improvements to compressed air systems;
- financial and/or technical assistance to optimize building performance; and
- financial and technical support for customers to assess and implement energy management opportunities, specifically in the areas of operations, maintenance and behavioural savings.

5.2.6 Implementation Strategy

Program Delivery

The Custom Incentives program structure is designed to overcome customer barriers associated with large upfront costs, lack of in-house capacity and business case requirements. The program is delivered through a combination of EfficiencyOne staff, contracted partners and third-parties to identify, define, assess, and implement energy saving opportunities. Involved external resources are often consulting engineering firms, efficiency contractors and service providers, and heating, ventilation and air conditioning automation companies.

Marketing Strategy

The marketing strategy for Custom Incentives is to segment, profile, and launch integrated marketing campaigns (e.g. mass media, print, direct mail, digital and social media, events, outreach) by vertical (e.g., large commercial, industrial, municipal, distributors). The marketing strategy for the BNI sector will continue to be aligned by customer vertical and key messages will focus on ways to improve operational efficiency and also promote non-energy benefits. EfficiencyOne will collaborate closely with our design agency, business development team and Efficiency Trade Network to reach markets and deliver messaging effectively. Specific tactics used will include:

- business development engagement;
- presentations to relevant industry associations;
- preparation of marketing materials and campaigns for specific verticals;
- case studies;
- attendance at trade shows;
- inclusion of articles in trade association newsletters;

- leverage strategic relationships with developers, architects, mechanical and electrical designers;
- service provider and contractor training; and
- partner recognition.

Quality Assurance

The Custom Incentives program has an established framework for quality assurance. Quality control of projects includes pre and post measurement of energy consumption (e.g. direct, modelled, expert review), random and targeted site visits, documentation review and customer surveys.

5.2.7 Performance Indicators

Performance indicators for the Custom Incentives program are provided in Table 15 below.

Table 15: 2020-2022 Custom Incentives Performance Indicators

Year	Investment ($ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[a]	Program Administrator Cost Test (PAC)[b]	Participation (projects)[c]	Participation (participants)[d]	Levelized Cost of Saved Energy ($/kWh)[e]	Nominal cost of saved energy ($/kWh)[f]
2020	6.6	28.3	389.8	5.5	2.1	5.1	95	12	$ 0.025	$ 0.017
2021	7.0	29.3	404.9	5.8	2.2	5.3	99	12	$ 0.025	$ 0.017
2022	7.6	31.7	438.5	6.4	2.3	5.5	108	12	$ 0.026	$ 0.017
Total	21.2	89.3	1,233.2	17.7	2.2	5.3	302	36	$ 0.025	$ 0.017

Currency is expressed in nominal dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM.
Avoided costs of transmission and distribution were provided by NS Power in 2018.
Total cost-effectiveness tests are calculated using the sum of each year's present value of benefits and costs
[a] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[b] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
[c] The number of projects supported through the Custom program component (includes Custom Retrofit, BNI New Construction, and Building Optimization).
[d] The number of companies participating in EMIS and SEM.
[e] The levelized cost of saved energy represents the cost of lifetime energy savings, with savings discounted using Nova Scotia Power's weighted average cost of capital (WACC).
[f] The nominal cost of saved energy is the quotient of lifetime energy savings and investment.

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5.2.8 Low-Income Performance Indicators

Low-Income performance indicators for the Custom Incentives program are provided in Table 16 below.

Table 16: 2020-2022 Custom Incentives Low Income Performance Indicators

Year	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Participation (projects)[a]
2020	1.8	25.4	0.10	13
2021	1.8	26.4	0.10	14
2022	2.0	28.6	0.11	15
Total	5.5	80.4	0.31	42

[a] The number of projects completing upgrades through Custom.

5.3 Direct Installation: Program Description

5.3.1 Overview

The Direct Installation program (marketed as Small Business Energy Solutions 'SBES') provides small business customers access to technical assistance and financial incentives for the installation of energy efficient and system-peak demand reduction equipment. There are two pathways available for customers: self-directed and facilitated. These pathways are described as follows:

- Self-directed: this pathway allows customers who have already identified and selected those energy efficiency opportunities they plan to pursue to select a contractor of their choosing to complete the upgrades, or EfficiencyOne can direct them to seek out contractors using the Efficiency Trade Network.
- Facilitated: this pathway provides customers with assistance in identifying

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energy efficiency opportunities with an energy audit performed by a Small Business Energy Auditor. The customer then selects the opportunities they plan to pursue and select a contractor themselves or by using the Efficiency Trade Network.

Financial assistance is provided for a variety of prescriptive energy efficiency products; however, customized incentives are an option for customers when energy savings are identified and estimated by a Small Business Energy Auditor.

5.3.2 Enhancements in 2020-2022

Demand Response

Demand response initiatives will be introduced as part of the broader DSM portfolio in the DSM Resource Plan. EfficiencyOne and NS Power will be working closely on the development, assessment and evaluation of demand response measures. These initiatives are meant to build on the demand reduction pilot beginning in 2019 and expand offerings to customers Initial demand response focused measures are included in the Direct Installation program through incentive support for a range of ETS units suitable for small to medium sized businesses.

5.3.3 Objectives

Objectives of the Direct Installation program include:

- increase customer awareness of cost-effective energy efficiency and system-peak demand reduction options;
- help small business make smart energy upgrades;
- help small business be more profitable and more comfortable; and
- remove/eliminate barriers for the adoption of energy efficient and system-peak demand reduction products by Nova Scotia's small businesses.

5.3.4 Opportunity

Target Market

The target market is primarily small commercial businesses, and can also include not-for-profits, multi-unit residential buildings and small industrials. The program is targeted to those small businesses with annual electrical energy consumption of 350,000 kWh or less.

Market Barriers

Barriers to participation in the Direct Installation program include:

- Affordability: the cost of equipment/upgrades and lack of access to affordable capital can be a barrier to program participation.
- Awareness: some potential participants may not understand the costs, benefits, and appropriateness of various projects for their business.
- Resources: some participants may not have the resources, such as time, human capital for project management, and capacity to hire contractors to implement upgrades.

Program History

The Direct Installation program began in 2008 in Dartmouth and Pictou County with incentives available for energy efficient lighting upgrades. A recycling component was incorporated into this program in 2009. In 2010, Efficiency Nova Scotia Corporation expanded the Direct Installation program to include small businesses across the entire province. Since its inception, the program's offering has broadened to include non-lighting measures and encourage installation of a wider range of energy efficiency products. In 2015, the program underwent its most significant change to increase industry participation. EfficiencyOne modified the program from a delivery agent model (responsible for all aspects of program delivery including marketing, administration, ordering, delivery, and installation) to a program design that allows participants to select their own contractors and install approved energy efficiency products. This change coincided with the development of the Efficiency Trade Network, where participants could find qualified contractors for their projects. No-cost energy audits were made available for certain qualifying small businesses where a Small Business Energy Auditor would perform a complete energy audit and develop a list of energy efficiency opportunities for the participant. EfficiencyOne has implemented several changes to improve the participant experience since its re-launch in 2015 and plans to continue delivering the program under this general program design into 2020. This includes an increased focus on growing awareness and participation in the energy audit path where the participant receives additional support from the Small Business Energy Auditor.

The Affordable Multi-Family Housing pilot launched in 2016 using a similar framework as SBES. Eligible measures were similar to those offered in SBES; however, the pilot specifically targeted landlords renting affordable housing units. Initial efforts did not generate strong participation results and few upgrades were implemented. In 2017, the Province of Nova Scotia provided support to build on the DSM pilot to help overcome barriers in this target market. Initial feedback suggested a need for higher incentives, more time to complete projects, and additional project management support were needed to help participants. In the DSM Resource Plan a new program component has been included in the Existing Residential program which aims to help low-income renters and non-profit organizations providing shelter specifically.

5.3.5 Program Design

Measures Promoted

The Direct Installation Program provides financial and technical support to small business customers through both a self-directed and facilitated pathway. This support includes:

- no-cost energy audits to assess upgrade opportunities;
- customized measure incentives through the energy audit path; and
- prescriptive rebates through the self-serve path for energy efficient upgrades in the areas of lighting and heating, ventilation and air conditioning primarily and system-peak demand reduction upgrades, specifically through ETS units.

5.3.6 Implementation Strategy

Program Delivery

The Direct Installation program is designed to overcome barriers faced by small Nova Scotia businesses, including lack of capital for implementing energy efficient upgrades, lack of time and expertise to identify and assess efficiency opportunities.

The self-directed path approach is designed for those business that already know what energy options they wish to pursue. The facilitated pathway is delivered in partnership with contracted Small Business Energy Auditors. The Energy Auditors provide technical support to small business customers. They conduct an energy audit of the business to identify energy upgrade opportunities, provide recommendations to the customer and help them understand the options that have been assessed. Financial incentives are provided for both the cost of the energy audit as well as the implementation of energy efficiency upgrades.

Marketing Strategy

The marketing strategy is to segment, profile, and launch integrated marketing campaigns (e.g. media, print, direct mail, digital and social media, events, outreach) to effectively reach small businesses. This will involve leveraging brand messaging specifically for the small business vertical, refining messaging around non-energy benefits, and collaborating closely with the Efficiency Trade Network to reach markets and deliver messaging effectively. Specific tactics used may include:

- targeted marketing campaigns and messaging to drive program participation;
- presentations to relevant industry and economic development associations;
- preparation of marketing materials to highlight customer success stories;
- attendance at trade shows;
- inclusion of articles in trade association newsletters;
- targeted mail-outs and e-blasts to small businesses to leverage program participation; and
- contractor training.

Quality Assurance

Direct Installation has an established quality assurance framework, which includes random and targeted site inspections, documentation review, and customer surveys.

5.3.7 Performance Indicators

Performance indicators for the Direct Installation program are provided in Table 17 below.

Table 17: 2020-2022 Direct Installation Performance Indicators

Year	Investment ($ million)	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Total Resource Cost Test (TRC)[a]	Program Administrator Cost Test (PAC)[b]	Participation (products)[c]	Levelized Cost of Saved Energy ($/kWh)[d]	Nominal cost of saved energy ($/kWh)[e]
2020	3.7	8.1	108.8	1.8	2.1	2.8	112,672	$ 0.049	$ 0.034
2021	3.8	8.6	115.7	2.0	2.1	3.0	118,470	$ 0.048	$ 0.033
2022	4.2	9.6	128.1	2.3	2.1	3.1	130,170	$ 0.048	$ 0.033
Total	11.7	26.3	352.6	6.1	2.1	3.0	361,312	$ 0.049	$ 0.033

Currency is expressed in nominal dollars. Columns may not add correctly, due to rounding.
Annual avoided costs of energy and capacity were provided by NS Power, from the 2014 IRP using the Base level of DSM.
Avoided costs of transmission and distribution were provided by NS Power in 2018.
Total cost-effectiveness tests are calculated using the sum of each year's present value of benefits and costs
[a] TRC is a benefit/cost ratio comparing lifetime benefits to the sum of EfficiencyOne's and participants' costs.
[b] PAC is a benefit/cost ratio comparing lifetime benefits to EfficiencyOne's costs.
[c] The number of individual products rebated through Small Business Energy Solutions.
[d] The levelized cost of saved energy represents the cost of lifetime energy savings, with savings discounted using Nova Scotia Power's weighted average cost of capital (WACC).
[e] The nominal cost of saved energy is the quotient of lifetime energy savings and investment.

5.3.8 Low-Income Performance Indicators

Low-income performance indicators for the Direct Installation program are provided in Table 18 below.

Table 18: 2020-2022 Direct Installation Low Income Performance Indicators

Year	First-Year Energy Savings (GWh)	Lifetime Energy Savings (GWh)	Peak Demand Savings (MW)	Participation (products)[a]
2020	0.01	0.1	0.00	270
2021	0.01	0.1	0.00	284
2022	0.01	0.1	0.00	312
Total	0.02	0.3	0.00	866

[a] The number of individual products rebated through Small Business Energy Solutions.

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6. ENABLING STRATEGIES

Enabling Strategies are an essential component of this DSM Plan and are required for EfficiencyOne to meet energy and system-peak demand savings targets now and in the future. As in previous plans, EfficiencyOne will continue to use Enabling Strategies to invest in research and development, among other strategies, that provide information and tools to help inform energy and cost savings to Nova Scotians.

EfficiencyOne's 2020-2022 Enabling Strategies will include:

- Education and Outreach;
- Development and Research; and
- Other Enabling Strategies (Efficiency Trade Network, Codes and Standards and Regulatory Affairs).

Enabling Strategies have the following objectives:

- increase awareness of, and education about, DSM programs and services, driving long term participation;
- evolve DSM programs and services through innovation and improving delivery of these services; and
- drive market transformation.

6.1 Education and Outreach

The objective of Education and Outreach activities is to increase program participation by effectively communicating what energy efficiency is and how it positively affects the lives of Nova Scotians. Education and Outreach activities also help, over time, to establish energy efficiency as a cultural norm in Nova Scotia.

A high proportion of Nova Scotians express a high level of agreement that adopting a more energy efficient lifestyle adds to their quality of life (71 percent in Q3 2018)[13], which suggests that Enabling Strategies activities have positively influenced public perception of energy efficiency over time. However, the influence EfficiencyOne has on leading households to reduce their energy consumption (30 percent in Q3 2018) [14] demonstrates that opportunities remain to help more Nova Scotians turn this perception into action.

Education and Outreach strategies in 2020 through 2022 will build on EfficiencyOne's activities and experience to date and take into account the ongoing feedback collected from Nova Scotians through surveys, interviews, and one-on-one interactions.

Areas of focus will include:

- continuing to inspire Nova Scotians to adopt an energy efficient lifestyle with a branding platform that creates a strong emotional connection with customers, and with ENS partners and contractors, by demonstrating the value and benefits of participating in DSM programs (i.e. "Enjoy the good things efficiency brings.");
- improving the ENS digital experience for customers;
- continuing to evolve and optimize ENS content to ensure it is designed around customer needs and delivered at the right point along the customer decision journey;
- removing barriers that affect customer experience and hinder the customer's ability to find the information, support and programs they need;
- engaging students, teachers and other stakeholders in the education sector to build a culture of energy efficiency in Nova Scotia and foster the next generation of energy efficiency leaders; and
- continuing to build strategic partnerships in relevant sectors to share energy

[13] Corporate Research Associates. *Autumn 2018 Atlantic Quarterly*
[14] *Ibid*

efficiency information and support with more Nova Scotians.

The following components support this strategy:

- advertising to increase awareness and understanding of how energy efficiency, and participating in DSM programs, connects positively to the lives of Nova Scotians;
- engaging Nova Scotians on the ENS website, and through various social media channels, electronic newsletters and stories in the media, to promote participation in DSM programs and build a culture of energy efficiency through education;
- continuing a vertical marketing approach to ensure businesses understand the value of incorporating energy efficiency into their specific industry;
- gaining a better understanding of residential customer segments through research and profiling to increase engagement and grow participation in our residential programs;
- continuing to enhance the Green Schools program to engage and educate teachers, students and other key stakeholders in the education sector;
- working with post-secondary education institutions to promote and integrate energy efficiency into the curriculum;
- developing strategic partnerships with identified organizations in relevant sectors to reach more Nova Scotians;
- organizing events and presentations on energy efficiency; and
- additional activities as opportunities arise.

6.2 Development and Research

EfficiencyOne uses an evidence-based approach to achieve cost-effective incremental net energy and system-peak demand savings for its customers. Continuing to invest in research and development will ensure that programs evolve with changing technology and the market landscape. These activities will:

- support the evolution of DSM programs and future DSM Resource Plans via research and development initiatives; and
- improve customer service and engagement through customer relationship management via development activities.

6.2.1 Research

EfficiencyOne recognizes that the key to delivering cost-effective energy savings is to keep the customer front and center when making business decisions around program design and delivery. Reducing barriers to enrollment and offering compelling services and delivery approaches is critical. Specific development and research activities will focus on:

- Understanding customers and market conditions:
    - motivations and barriers research;
    - trends and preferences in consumer behaviour and energy consumption behavior; and
    - incentive-level research.

- Developing customer-centric approaches to engagement and service delivery:
    - testing alternative marketing approaches;
    - using predictive analytics to segment and target customers;
    - piloting new technologies and approaches to make delivery of savings easier for customers, and to improve customer engagement and interactions; and
    - examining and piloting new use cases using customer energy usage data.

- Evolving programs and developing future DSM Resource Plans:
    - researching opportunities from other jurisdictions and partnering with other DSM experts; and

- researching and piloting new measures and new approaches to service delivery.

6.2.2 Development: New initiatives

EfficiencyOne will undertake new initiatives to test appropriate ways to meet changing market conditions, reach under-served segments of customers, and take advantage of new information and technology. These initiatives include:

- researching and testing service delivery approaches to encourage dynamic energy management and control at commercial building sites;
- exploring opportunities to help businesses manage and reduce demand costs – for example, using interval data for large businesses to identify system-peak demand reduction opportunities, and promoting building optimization software;
- exploring net-zero (or near net-zero) options for existing residential;
- exploring new service delivery approaches for homes and business (e.g., a whole-home/business approach as opposed to a 'program-by-program' approach); and
- researching and testing the use of Advanced Metering Infrastructure data and associated technology, in combination with advanced analytics (e.g., machine-learning and artificial intelligence) to:
- develop more customized offerings and information to customers based on electricity usage patterns and load shape; and
- determine potential for costs reduction (e.g., test effectiveness of remote energy audits; more reliance on usage data for measurement and verification where appropriate).
- EfficiencyOne intends to continue to support the 2019 Locational-DSM Pilot until its planned conclusion in 2020.
- EfficiencyOne and NS Power will be working closely on the development, assessment and evaluation of demand response measures. These initiatives are

meant to build on the demand reduction pilot beginning in 2019 and expand offerings to customers.

6.3 Other Enabling Strategies

The Other Enabling Strategies for 2020-2022 include the following:

- Efficiency Trade Network;
- Codes and Standards; and
- Regulatory Affairs.

6.3.1 Efficiency Trade Network

EfficiencyOne has recruited over 200 members to the ETN since 2016 in locations across Nova Scotia. The ETN structure allows EfficiencyOne to effectively engage trade allies to build industry capacity in Nova Scotia and meet DSM savings targets. The ETN connects businesses and homeowners with trusted professionals including contractors, insulation installers, heating system installers, electricians, and more to complete their efficiency projects.

In 2020, and through 2022, EfficiencyOne will continue to enhance the ETN. Areas of focus will include:

- adding new members with specific expertise in under-represented markets;
- continuing to raise awareness and showcase all the benefits of ETN membership to existing and potential members;
- continuing to provide ETN members with marketing materials and support to help sell DSM programs to customers;
- continuing to offer training opportunities to ETN members;
- supporting events or industry conferences where customers, current ETN

members, and potential members can network and build relationships; and
- exploring the development of a system to recognize and/or reward ETN members to motivate them to bring more projects to DSM programs.

The following components will support this strategy:

- developing and distributing success stories through a variety of internal channels (e.g. the ETN newsletter, training sessions, ETN meetings) and external targeted channels (e.g. trade publications, conferences, professional meetings);
- advertising ENS sponsored events and training through email, ENS's website, newsletters, and word-of-mouth;
- coordinating with other industry associations to disseminate training opportunity information;
- sponsoring training that enables contractors to take on new types of projects or grow their businesses; and
- hosting Bright Business Conferences and other networking events to support the development of new relationships within the industry and work referrals.

6.3.2 Codes & Standards

In 2020-2022, EfficiencyOne will continue to work with government colleagues to promote and advance the development of evidence-based and meaningful changes to energy efficiency related codes and standards in collaboration with the provincial and federal government, as well as other stakeholders. In addition, EfficiencyOne will continue to advocate for and support the adoption of energy-efficiency standards within provincial and federal regulations.

EfficiencyOne anticipates continued participation in the Canadian Standards Association's Steering Committee on Performance, Energy Efficiency and Renewables and associated Strategic Resource Task Force, as well as other related committee participation as opportunities arise. In addition, EfficiencyOne will provide increased technical and policy support to both provincial and federal governments relating to strategic electrification, demand response, energy storage, and other forms of DSM.

6.3.3 Regulatory Affairs

Regulatory Affairs activities include NSUARB processes, DSM Advisory Group (DSMAG) initiatives and stakeholder consultation work, industry research, and legal work related to regulatory initiatives.

In 2020-2022, Regulatory Affairs initiatives will include:

- developing the 2023-2025 DSM Resource Plan;
- negotiating the 2023-2025 DSM Resource Plan with NS Power and gaining stakeholder and NSUARB-approval of the same;
- investigating historic underspending of planned budgets and historic exceeding of energy savings to determine the factors that lead to overestimation with terms of reference being filed by October 31, 2019 and final report filed by March 31, 2020;
- EfficiencyOne and NS Power will report back to the DSMAG by the end of June 2020 on any proposed demand response measures; and
- developing and/or filing regular report updates with the NSUARB on topics including:
    - 2020, 2021, 2022 Quarterly Reports;
    - 2019, 2020, 2021 Evaluation Reports;
    - 2019, 2020, 2021 Annual Progress Reports;
    - 2019, 2020, 2021 Audited Financial Statements;
    - 2020, 2021, 2022 Historical-looking Rate and Bill Impact Analysis;
    - 2019, 2020, 2021 Code of Conduct Compliance Report;

- evaluation and verification recommendation updates; and
- other studies, reports and updates, as appropriate.

Throughout 2020-2022, EfficiencyOne will continue to host DSMAG meetings and engage closely with stakeholders to discuss ongoing activities, as appropriate. In 2020, revised Terms of Reference for the DSMAG will be developed to enhance the development of future DSM applications. Other initiatives will include working with the Evaluation and Verification Consultants to facilitate their efforts and pursuing commitments arising from the 2020-2022 DSM Resource Plan regulatory process.

7. EVALUATION

EfficiencyOne proposes to take a similar approach to evaluation in 2020-2022 as in 2016-2019, where evaluation activities are conducted to ensure accurate determination of net electrical energy and net system-peak demand savings. Evaluation activities will be condensed where appropriate, in recognition of the maturity level that some Efficiency Nova Scotia program components have reached. Evaluation activities will include an annual impact evaluation for each program in each of the three years, with some modification to the evaluation reporting structure. In all cases, evaluation activities will be undertaken to ensure the accurate determination of net electrical energy and net system-peak demand savings, to maximize the value of the evaluation process, and to provide opportunities for continuous improvement.

7.1 Impact Evaluations

Annual impact evaluations will provide EfficiencyOne, stakeholders, and the NSUARB with up-to-date impacts on net electrical energy and net system-peak demand savings as progress indicators towards the overall approved 2020-2022 DSM Resource Plan energy and system-peak demand savings targets. EfficiencyOne will work with the Evaluator to determine if a program component requires a full impact evaluation or a condensed impact evaluation. Condensed impact evaluation reports are expected to consist of energy (annual and lifetime) and system-peak demand savings results and distortion effects. Methodology and related calculations would be referenced to prior evaluation reports. The condensed reports would also include any changes or updates to programs and measures that occurred following the filing of the 2019 evaluation reports. This means that for stable, mature program components, the Evaluator may use the previous year's unitary savings values, realization rates, and/or installation rates. Full impact evaluation reports are expected for newer program components and those with recent changes or more variable savings parameters. The Evaluator will design and conduct a full scope of evaluation activities for program components that require a full impact evaluation.

7.2 Process and Market Evaluations

Program process and market evaluations will remain consistent with what has occurred in the 2016-2018 DSM Resource Plan. EfficiencyOne will work with the Evaluator to determine what program components should be evaluated based on the following criteria:

- newly created program components that have not yet been evaluated;
- program components that have incurred major changes;
- program components that received many recommendations from the evaluator;
- program components that have a variance of energy savings larger than 25 percent of plan year target; and
- program components that have not received a process evaluation in the past two years.

8. REPORTING

EfficiencyOne proposes to report on the implementation of the 2020-2022 DSM Resource Plan through Quarterly Reports and Annual Progress Reports (APR) and other reporting requirements as outlined in the Standardized Filing Framework.[15]

8.1 Annual Progress Reports

In the first quarter of each calendar year, EfficiencyOne will file an APR with the NSUARB, which will include the following information:

- a summary of the context, activities and milestones achieved in the prior year, including the status of the annual performance indicators;
- a management discussion and analysis of any major discrepancies (25 percent or greater variance) relative to the original plan's intent and forecasts;
- a summary of expenditures, energy, and system-peak demand savings for each program or target market area. If the total reported results fall below 75 percent of the original plan's forecast cumulative annual net incremental energy savings up to that point, EfficiencyOne will also file a Corrective Action Plan designed to achieve the total approved energy savings target, within the NSUARB-approved multi-year budget.

In the event EfficiencyOne proposes significant changes to elements within an approved plan, advance notice will be provided to the NSUARB and Stakeholders within the APR. Significant changes include:

[15] In accordance with the Consensus Agreement to the 2016-2018 DSM Resource Plan, Parties agreed to establish a Standardized Filing Framework for future applications to approve a DSM Supply Agreement. The Standardized Filing Framework was approved by the NSUARB September 13, 2016 (M07543).

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- adding a new Program;
- terminating an existing Program;
- increasing the 3-year plan budget for the total Residential sector by more than 25 percent;
- decreasing the 3-year plan budget for the total Residential sector by more than 25 percent;
- increasing the 3-year plan budget for the total BNI sector by more than 25 percent;
- decreasing the 3-year plan budget for the total BNI sector by more than 25 percent;
- increasing the 3-year plan savings target for the total Residential sector by more than 25 percent;
- decreasing the 3-year plan savings target for the total Residential sector by more than 25 percent;
- increasing the 3-year plan savings target for the total BNI sector by more than 25 percent; and
- decreasing the 3-year plan savings target for the total BNI sector by more than 25 percent.

8.2 Quarterly Reports

EfficiencyOne will file quarterly reports with the NSUARB for quarters one through three of each year. The reports will provide quarterly status updates and service highlights, as well as communicate course adjustments within the current approved DSM Resource Plan.

In accordance with the NSUARB's Revised Filing Dates letter, issued January 9, 2018, EfficiencyOne will file its 2020-2022 DSM Resource Plan Quarterly Reports no later than:

- Q1 – May 25th
- Q2 – August 25th
- Q3 – November 25th

EfficiencyOne proposes to continue reporting quarterly to the NSUARB and stakeholders on the following metrics, including:

- quarterly and year-to-date (YTD) highlights (comparison of targets, mid-course adjustments, and results by program);
- YTD investment by rate class (compared to approved forecast);
- sector highlights (results, participation, and items of interest by program, as well as low-income results);
- other activities (organized by Enabling Strategies categories); and
- advance notice of significant changes if relevant.[16]

8.3 Mid-Course Adjustments and Flexibility

EfficiencyOne often makes limited adjustments to an approved DSM Resource Plan to reflect changes in market conditions and updated insights from program and organizational evaluations unknown at the time of DSM Resource Plan development. When setting 2020-2022 Mid-Course Adjustments (MCAs), EfficiencyOne will follow the same approach as was taken for the 2019 DSM Resource Plan and 2016-2018 DSM Resource Plan MCAs. This approach includes the following:

- EfficiencyOne will provide explanations of substantial changes, defined as variance in energy savings or investment of 25 percent or more at a program level.

[16] Significant changes are defined as a variance in energy savings or investment of 25 percent or more at a program level.

- Dependent on approved cost allocation methodology, EfficiencyOne will undertake reasonable efforts to avoid program changes that will result in substantial changes to any customer rate class on an annual basis.
- EfficiencyOne will provide written advance notice of its intent to implement mid-course adjustments by program and their customer rate class impacts. The written advance notice of intent to file Mid-Course Adjustments will be included in the APRs for the 2020-2022 DSM Resource Plan period and the MCAs for the 2020-2022 DSM Resource Plan will be filed with the Quarterly Report in Q1. It is EfficiencyOne's position that it is not able to provide advance notice of mid-course adjustments resulting from third-party evaluation reports, as these adjustments are made immediately after receipt of these reports.

8.4 Audited Financial Statements

EfficiencyOne will retain the services of an external financial auditor to prepare audited annual financial statements. These will be filed with the NSUARB in the second quarter of the following year, no later than April 28 in accordance with the NSUARB's Revised Filing Dates letter issued January 9, 2018.

8.5 Rate and Bill Impact Analyses

EfficiencyOne will file its historical Rate and Bill Impact Analysis (RBIA) by October 31st of each year. The historical RBIA estimates the high-level, long-term impact to rates and bills of all DSM activities up to and including those of the previous calendar year, as well as any future DSM investments that have been approved by the NSUARB. EfficiencyOne will file a forward-looking RBIA as part of each DSM Resource Plan. The forward-looking RBIA estimates the high-level, long-term impact to rates and bills of all DSM activities conducted as part of the proposed DSM Resource Plan.

8.6 Demand Side Management Advisory Group

The DSMAG is a forum to provide strategic or directional advice and stakeholder perspectives on current or emerging DSM issues including, but not limited to, issues identified in NSUARB Orders pertaining to Demand Side Management. Revised Terms of Reference for the DSMAG will be developed in 2020 and are intended to enhance the development of future DSM applications. The revised terms of reference will focus on a collaborative and facilitated process with representation of the NSUARB, intended to keep stakeholders engaged on key DSM issues and development of future DSM Plans. In the event DSMAG agreement on final revised terms of reference cannot be achieved by June 30, 2020, the finalization of the revised terms of reference will be referred to the NSUARB for determination.

8.7 Performance Metrics

EfficiencyOne proposes the following definitions and requirements for Performance Targets and Thresholds as consistent with requirements outlined in the Standardized Filing Framework.[17]

8.7.1 Definitions

To provide clarity, the following definitions are used:

Performance Metric: A quantifiable measure that is used to track and assess the status of a specific achievement.

[17] In accordance with the Consensus Agreement to the 2016-2018 DSM Resource Plan, Parties agreed to establish a Standardized Filing Framework for future applications to approve a DSM Supply Agreement. The Standardized Filing Framework was approved by the NSUARB September 13, 2016 (M07543).

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Performance Indicators: A set of particular performance metrics used to indicate or monitor progress toward performance targets. Performance Indicators are management tools that provide information to allow an organization to take action to help it deliver on performance targets.

Performance Target: A performance metric expressed as a specific quantified goal that identifies the desired outcome of an activity at a specific point in time. In this Application Performance Targets refer to NSUARB-approved targets.

Performance Threshold: A predefined quantity, percentage, or range which identifies the allowable deviation from a Performance Target within which the actual outcome is considered to have achieved success. In this Application, Performance Thresholds refer to NSUARB-approved thresholds.

8.8 Performance Targets and Thresholds

i. Performance Targets apply to the period of the NSUARB-approved Supply Agreement with NS Power, rather than annually;

ii. EfficiencyOne is deemed to be in substantial compliance with the NSUARB-approved Plan Performance Targets if 90 percent or greater achievement is reached on each of the cumulative annual energy savings and cumulative annual system-peak demand savings Performance Targets. If less than 90 percent of either cumulative annual energy savings or cumulative annual system-peak demand savings Performance Targets, EfficiencyOne understands that the NSUARB would use its discretion to determine appropriate action.

Performance Targets consist of:

i. Cumulative annual energy savings;
ii. Cumulative annual system-peak demand savings; and

Performance Indicators consist of:

i. Annual incremental energy savings (reported by program and rate class);
ii. Cumulative annual energy savings (reported by program and rate class);
iii. Annual lifetime energy savings (reported by program and rate class);
iv. Cumulative lifetime energy savings (reported by program and rate class);
v. Annual incremental system-peak demand savings (reported by program and rate class);
vi. Cumulative annual system-peak demand savings (reported by program and rate class);
vii. Total ratepayer benefits;
viii. Total spending (reported by program and rate class);
ix. Customer satisfaction;
x. An analysis of the impact on rates through the implementation of the programs will be included as part of EfficiencyOne's historical-looking rate and bill impact analysis, filed by October 31st of each year; and
xi. Reporting on low-income program participation, expenditures, and savings through a variety of methods, including estimation based on geographic census information.