

**Appendix A**

**Draft 2019 CNGC**

**Conservation Plan**

## **Conservation Plan 2019 - Appendix A**

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<b>DBtC – Cascade Natural Gas 2018 Conservation Budget</b>			
	Direct Benefit to Customers	Other Costs	Total Utility Costs
Residential	\$1,583,459	\$506,500	\$2,089,959
Non-residential	\$1,021,089	\$1,250,000	\$2,271,089
Low income	\$190,000	\$6,000	\$196,000
NEEA	\$452,285		\$452,285
Total	\$2,794,548	\$1,762,500	\$4,557,048
Portfolio Ratio	61%	39%	

\*For gas programs, NEEA is excluded from the total budget at this time

<b>Program Budgets - Reflected in the 2018 CNGC Conservation Plan</b>			
Incentive Estimates			
	Plan	Details	Notes
Residential	\$1,523,459		
Commercial/Industrial	\$1,021,089		
Low Income	\$190,000		LI Based on 2017 achievements at \$7,600 average per home
<b>Total Incentives</b>	<b>\$2,734,548</b>		
<b>Non-Incentive/Admin Expenses</b>			
	Plan	Details	
Residential	\$566,500		Includes staffing, marketing of the program, partnership with other utilities for program outreach
Commercial/Industrial	\$1,250,000		Toward 3rd party program management inclusive of commercial marketing efforts, remainder toward internal management and program coordination. Note the increase in proposed third party delivery from 2017 budget is to accommodate an alternative Pay for Performance contract
Low Income	\$6,000		Allocated toward labor
<b>Program Portfolio Admin</b>	<b>\$1,822,500</b>		
<i>Non-Incentive Expenses include:</i>			
Labor	\$349,532		Company staff admin - 65% allocated to residential/ 35% to commercial + LI program admin
Trade Ally/ Program Outreach	\$160,800		\$110,000 (TA specific)
		\$43,250	TA outreach/materials/coop & training reimbursement/management
		\$60,000	Bonus coupons delivered by the contractors & increased allowance to accommodate additional Quality Control inspections (allocated as DBtC)
		\$44,107	Residential Program marketing/ad placement/LI messaging
Third Party Program Management	\$1,080,000		Includes 3rd party staffing/ and program outreach specific to the Commercial/industrial program for message placement (marketing), direct program outreach efforts and contractor coordination - increased from previous year, total dependent on vendor achieving goals
Annual Software fees	\$150,000		Includes management of the physical residential rebate processing and TA program delivery/ tracking/communicating/ etc. - added additional maintenance and update support for 2018 to general operating expenses category
Other	\$26,000		Organizational dues (Home builder's associations/ Built Green Associations/Industry associations like the Restaurant and or Lodging association/Food Processors, etc. / industry trade memberships)



# Washington Conservation Incentive Program New & Existing Home Incentives

## New & Existing Homes

Rebates effective for installs on or after **June 30th, 2017**. Incentives may be subject to change and are only applicable for tariff approved measures in place at the time of installation.

Energy-Saving Measure	Basic Specifications	Incentive
High-Efficiency Natural Gas Furnace <sup>1</sup>	95% + AFUE	\$400
High-Efficiency Natural Gas Hearth (Fireplace) <sup>2</sup>	70% + FE (Fireplace Efficiency) 80% + AFUE (Annual Fuel Utilization Efficiency)	\$250 \$300
High-Efficiency Combination Domestic Hot Water & Hydronic Space Heating System using pre-approved Tankless Water Heater <sup>1&amp;3</sup>	90% + AFUE	\$2,500
Condensing High-Efficiency Natural Gas Tankless Water Heater <sup>8</sup>	0.91 + EF	\$250
Conventional High-Efficiency Natural Gas Water Heater <sup>8</sup>	0.67 + EF	\$45
High-Efficiency Exterior Entry (not sliding) Door <sup>1</sup>	$U \leq 0.21$	\$100
High-Efficiency Condensing Boiler <sup>1</sup>	95% + AFUE	\$500
Programmable Thermostat <sup>1</sup>	7 day (flexibility)/5+2 (workweek/weekend)/5+1+1 day models	\$10

## Existing Homes Incentives

Energy-Saving Measure	Basic Specifications	Incentive
Floor Insulation <sup>1&amp;4</sup>	Equal to or greater than R-30 or to fill cavity <sup>5</sup> , prior condition must not exceed R-11	\$0.75/sq.ft.
Wall Insulation <sup>1&amp;4</sup>	Equal to or greater than R-11 or to fill cavity, prior condition must not exceed R-4	\$0.75/sq.ft.
Ceiling or Attic Insulation <sup>1&amp;4</sup>	Tier 1: Prior condition must not exceed R-18, Post R $\geq 38$ Tier 2: Prior condition must not exceed R-18, Post R $\geq 49$	\$0.75/sq.ft. \$1.00/sq.ft.
Whole House Residential Air Sealing <sup>1&amp;4</sup>	Minimum 400 CFM <sub>50</sub> reduction using pre and post blower door testing <sup>6</sup>	\$100
<b>Bundle A:</b> In addition to your standard incentives.	Any Two: Floor, Wall, Ceiling/Attic Insulation, or Air Sealing. Minimum of 1,000 sqft insulation total.	+\$250
<b>Bundle B:</b> In addition to your standard incentives.	Air Sealing and any two insulation measures. Minimum of 1,000 sqft insulation total.	+\$500

## Efficient New Home Packages

Energy-Saving Measure	Basic Specifications	Incentive
<b>ENERGY STAR® Certified Home</b> <sup>1&amp;7</sup>	National Program Requirements Version 3.1 (Rev. 08)	\$2,000
<b>Built Green Certified Home</b> <sup>1&amp;7</sup>	Requires Built Green Certification	\$2,000

- Home must be heated by natural gas and an electric heat pump cannot be present. Built Green measures require proof of a natural gas heating system, such as a photo or invoice.
- Must use intermittent ignition device.
- Water must be heated with a tankless system. Pre-approval from CNGC required.
- All insulation and air sealing must be performed by a CNGC qualified Trade Ally in order to be eligible for a rebate through the Conservation Incentive Program. Attic insulation cannot be filled to cavity.
- Minimum of R-19 or higher to fill cavity.
- Requires WA Department of Commerce Combustion Safety Test Report Exhibit 5.3.1A.
- These incentives are only applicable to new homes, not available to existing homes. They may not be combined with any other measure except Hearths (Fireplaces).
- Water-heating fuel must be provided by Cascade Natural Gas for all water-heating incentives.



# Washington Conservation Incentive Program New & Existing Home Incentives

## Eligibility Requirements

Rebates effective for installs on or after **June 30th, 2017**. Incentives may be subject to change and are only applicable for tariff approved measures in place at the time of installation.

- Applications must be received within 90 days of install date.
- Applicant must be a Washington State Cascade Natural Gas customer on residential rate schedules 502 or 503 (see bill).
- Fuel for the home's primary heat source must be provided by Cascade Natural Gas for all heating incentives.
- Customer **must not use a heat pump** for heating and/or cooling with a natural gas furnace back-up for the furnace, combo, door, boiler, thermostat, insulation and air sealing measures.
- All equipment installation and service measures must be performed by a Washington State licensed contractor.
- All insulation and air sealing measures must be performed by a CNGC qualified Trade Ally in order to be eligible for a rebate through the Conservation Incentive Program. Visit us online for a list of qualified Trade Allies in your area.
- Appliances and building materials specified by Washington state code are not eligible for Cascade Natural gas incentives.
- ENERGY STAR homes must be approved by an ENERGY STAR verifier.
- Built Green Homes must present Built Green Certification.
- Review all terms and conditions for the program at <http://www.cngconserve.com/homes-rebate-application>.

## How to qualify for Cascade Natural Gas incentives:

1. Establish your eligibility. Call 866.626.4479 or visit [www.cngc.com/conservation](http://www.cngc.com/conservation) for program requirements.
2. Install energy-efficient home improvements. Contact a participating Trade Ally contractor or Washington licensed contractor to install eligible measures. Please visit [www.cngc.com/conservation](http://www.cngc.com/conservation) for a list of qualified trade allies. Note: if installing insulation or air sealing you must use a CNGC qualified Trade Ally.
3. Get the incentive application online at [www.cngc.com/conservation](http://www.cngc.com/conservation) or call 866.626.4479.
4. Complete, sign and submit application along with a copy of your equipment or service's invoices to:



Mail: Cascade Natural Gas  
Energy Efficiency Admin  
1600 Iowa Street  
Bellingham, WA 98229



Fax: 360.788.2396

Upon receipt of completed applications, please allow up to twelve weeks for processing.



### Home Energy Savings Kit

Water-saving shower heads and faucet aerators available upon request. Please call 866.626.4479 for details or apply online at: [www.cngc.com/conservation](http://www.cngc.com/conservation).



For questions or more information, please visit us online at [www.cngc.com/conservation](http://www.cngc.com/conservation) or call 866.626.4479.



*In the Community to Serve*

# WA Standard Incentives Commercial/Industrial

Rebates effective on installs on or after June 30, 2017

<p><b>Warm Air Furnaces - \$3.00/kBtu/hr</b> High Efficiency Condensing Furnace—Min 91% AFUE</p>	<p><b>Motion Control Faucet<sup>3</sup> - \$105</b> Maximum flow rate of 1.8 gpm WaterSense<sup>®</sup> Certified and Below Deck Mixing Valve</p>
<p><b>HVAC Unit Heater - \$1.50/kBtu/hr</b> High Efficiency Non-Condensing Min—86% AFUE</p>	<p><b>Clothes Washer<sup>3</sup> - \$180</b> Commercial gas washer—1.8 MEF</p>
<p><b>HVAC Unit Heater - \$3.00/kBtu/hr</b> High Efficiency Condensing Min—92% AFUE</p>	<p><b>Gas Convection Oven - \$500</b> ENERGY STAR<sup>®</sup> ≥42% Cooking Eff/ ≤13,000 Btu/hr Idle Rate</p>
<p><b>Radiant Heating - \$10.00/kBtu/hr</b> Direct fired radiant heating</p>	<p><b>Gas Griddle - \$500</b> ENERGY STAR<sup>®</sup> ≥38% Cooking Eff/ ≤2650 Btu/hr sq ft Idle Rate</p>
<p><b>Boiler - \$4.00/kBtu/hr</b> High Efficiency Condensing Boiler Min 90% Thermal Eff &amp; 300 kBtu input</p>	<p><b>Gas Conveyor Oven - \$600</b> Greater than 42% tested baking efficiency</p>
<p><b>Boiler Vent Damper - \$1,000</b> Min 1,000 kBtu input</p>	<p><b>Connectionless 3 Pan Gas Steamer - \$850</b> ENERGY STAR<sup>®</sup> or CEE/FSTC Qualified ≥38% Cooking Eff / ≤2,083 Btu/hr/pan Idle Rate</p>
<p><b>Boiler Steam Trap<sup>1</sup> - \$125</b> Min 300 kBtu in; steam pressure at 7psig or &gt; Retrofit Only</p>	<p><b>Connectionless 6 Pan Gas Steamer - \$1,200</b> ENERGY STAR<sup>®</sup> or CEE/FSTC Qualified ≥38% Cooking Eff / ≤2,083 Btu/hr/pan Idle Rate</p>
<p><b>Domestic Hot Water Tanks<sup>3</sup> - \$2.50/kBtu/hr</b> Condensing tank, Min 91% Thermal Eff</p>	<p><b>Double Rack Oven - \$2,000</b> FSTC Qualified ≥50% Cooking Eff/ ≤3,500 Btu/hr/Idle Rate D Rack</p>
<p><b>Domestic Hot Water Tankless Water Heater<sup>3</sup> - \$60/gpm</b> ENERGY STAR<sup>®</sup> .82 EF</p>	<p><b>ENERGY STAR<sup>®</sup> Gas Fryer - \$600</b></p>
<p><b>Attic Insulation - (retrofit only)</b> <b>Tier 1: Min R-30 - \$1.10/sq ft</b> <b>Tier 2: Min R-45 - \$1.25/sq ft</b></p>	<p><b>Door Type Dishwasher Low Temp Gas<sup>3</sup> - \$800</b> ENERGY STAR<sup>®</sup> ≤.6 kw Idle Rate/ ≤1.18 gallon/rack</p>
<p><b>Roof Insulation - (retrofit only)</b> <b>Tier 1: Min R-21 - \$1.35/sq ft</b> <b>Tier 2: Min R-30 - \$1.60/sq ft</b></p>	<p><b>Multi-Tank Conveyor Low Temp Dishwasher<sup>3</sup> - \$2,000</b> Gas Main w/Electric Booster ENERGY STAR<sup>®</sup> ≤2.0 kw Idle Rate; ≤ 0.50 gallons/rack</p>
<p><b>Wall Insulation<sup>2</sup> - (retrofit only)</b> <b>Tier 1: Min R-11 - \$1.10/sq ft</b> <b>Tier 2: Min R-19 - \$1.25/sq ft</b></p>	<p><b>Recirculation Controls<sup>3</sup> - \$100</b> Continuous Operation DHW Pump. Retrofit Only. <b>Pre-Approval required.</b></p>
<p><b>Energy Savings Kits<sup>3</sup> - FREE</b> <b>A:</b> Kitchen Pre Rinse Spray Valve &amp; Bath Aerators <b>B:</b> Low Flow Showerhead</p>	<p><b>Demand Control Ventilation<sup>4</sup> - \$20/nominal ton</b> 5 tons ≤ Unit Cooling Capacity ≤ 20 tons. <b>Pre-Approval Required.</b></p>
<p><b>Ozone Injection Laundry<sup>3</sup> - \$2,500</b> Venturi injection or bubble diffusion - Min 125 lb. total washer/extractor capacity. <b>Pre-approval required.</b></p>	<p><b>Hot Fluid Pipe Insulation<sup>3</sup> - Retrofit Only.</b> &gt;140F, &lt;200F, 1.5" insulation - \$4.50 per linear foot ≥ 200F, 2.5" insulation- \$9.00 per linear foot</p>
<p><b>NEW! Bundle and save in addition to your standard incentive!</b> Two insulation measures, min. 1000 sqft +\$500 Two Kitchen Equipment<sup>5</sup> +\$150, Three Kitchen Equipment<sup>5</sup> +\$300</p>	

If you are planning equipment or building upgrades that do not fit within the standard incentives, but significantly reduce natural gas consumption, please call 866.450.0005 to learn about **custom project opportunities**.

Mixed purpose facilities that include buildings on both Residential Rate Schedule 503 **and** qualifying Rate Schedules 504, 505, 511, 570, and 577 as part of the same Cascade Natural Gas customer account are also eligible for custom conservation incentives.

1 This measure will only be allowed where the customer agrees to regular trap maintenance and replacement every seven (7) years.

2 Minimum value of R-11 applies only where existing walls have no internal insulation cavities.

3 Incentive eligibility contingent upon use of natural gas fired domestic hot water serving the specified measure equipment or fixture.

4 For Existing Packaged HVAC Units equipped with Gas Fired Furnace and Direct Expansion Cooling Sections DCV Unit; Controller must meet Joint Utility Advanced Rooftop Control Guidelines

5 Kitchen Equipment defined as dishwashers, steamers, ovens, fryers, and griddles.

Updated 06/17

## Who is eligible to participate?

- Must be a new or existing commercial or industrial customer of CNGC on one of five qualifying rate schedules: 504, 505, 511, 570 or 577.
- Incentives apply on qualified high-efficiency natural gas equipment such as heating, insulation, water heating systems, cooking equipment installed as replacement, retrofit as well as new installation in place of standard efficiency equipment. If the equipment installation, replacement, or retrofit provides significant increase over existing high-efficiency equipment, and is not listed here please contact program representative for potential custom incentive.
- Insulation must be installed in an existing building, heated by natural gas, without functional insulation.
- Eligible measures installed are subject to the available incentives coinciding with the date of the installation as outlined in CNGC's tariff.
- Customers requesting incentives for site-specific energy efficiency measures must submit estimated costs and natural gas savings associated with the project. Natural gas savings are to be calculated using standard engineering practices. CNGC will review the natural gas savings calculations, and reserves the right to modify energy savings estimates.

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## How to qualify for Cascade Natural Gas incentives

- 1 Establish your eligibility. Call 1.866.450.0005 or visit [www.cngc.com/conservation](http://www.cngc.com/conservation) for program requirements.
- 2 Install energy-efficient upgrades. Contact a participating Trade Ally contractor or licensed contractor to install eligible measures.
- 3 Get the application, available online at [www.cngc.com/conservation](http://www.cngc.com/conservation).
- 4 Sign and submit the following forms:

[C&I Standard Incentive application](#) • [W9 form](#) •  
[Invoice/Quote for equipment installation](#) • [Manufacturer's spec sheet](#)

Mail forms to:

Cascade Natural Gas Corporation, c/o Lockheed Martin Energy  
22121 20th Avenue SE, Bothell, WA 98021

Fax: 877.671.2998

Upon receipt of completed application, please allow six weeks for processing and payment.

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## Get started today!

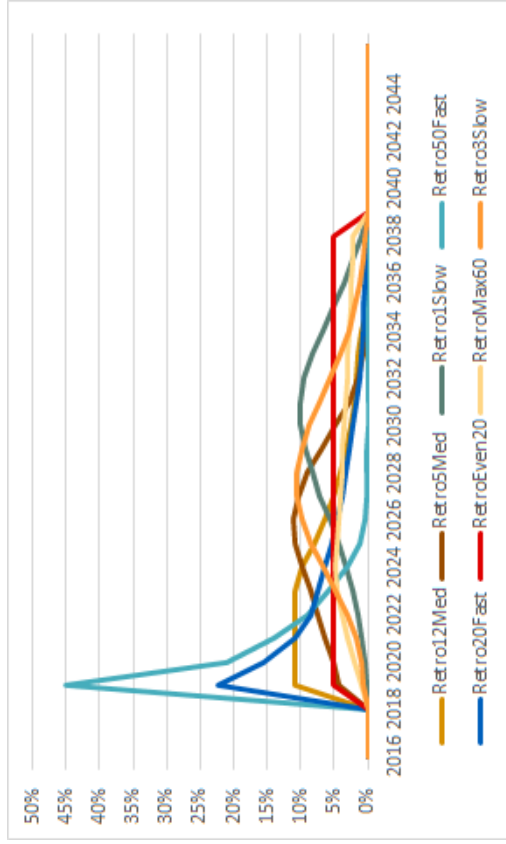
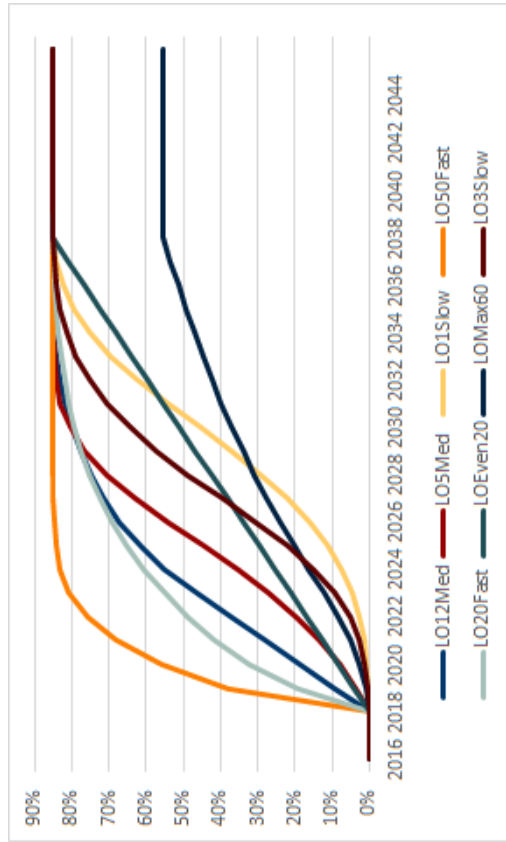
To apply for an incentive, apply online or download a PDF application at [www.cngc.com/conservation](http://www.cngc.com/conservation) and return it by fax or mail.



Questions on food service, lodging or health care projects? Call 866.450.0005

# Ramp Rates from the NWPCC's 7th Plan

Key	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045		
LO12Med	0%	0%	0%	9%	19%	28%	37%	47%	55%	62%	67%	71%	75%	78%	79%	80%	82%	83%	84%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	
LO5Med	0%	0%	0%	4%	8%	13%	20%	27%	35%	45%	54%	63%	71%	78%	81%	81%	83%	84%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	
LO35Fast	0%	0%	0%	30%	60%	88%	98%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
LO20Fast	0%	0%	0%	19%	32%	42%	49%	55%	61%	65%	69%	72%	75%	78%	79%	80%	81%	82%	83%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%	84%
LOEven20	0%	0%	0%	1%	3%	5%	8%	12%	16%	20%	24%	28%	31%	34%	37%	40%	42%	45%	47%	49%	51%	53%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	
LO3Slow	0%	0%	0%	0%	1%	3%	5%	8%	12%	16%	20%	24%	28%	31%	34%	37%	40%	42%	45%	47%	49%	51%	53%	55%	55%	55%	55%	55%	55%	55%	55%	55%	
Retro2Med	0%	0%	0%	4%	8%	13%	20%	27%	35%	45%	54%	63%	71%	78%	81%	81%	83%	84%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	85%	
Retro5Fast	0%	0%	0%	0%	0%	1%	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
Retro20Fast	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Retro5Med	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Retro12Med	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Retro20Med	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Retro3Slow	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%





## Residential DSM Highlights

### Summary of Energy Savings (therms), Selected Years

	2019	2020	2022	2028	2038
<b>Baseline Forecast (therms)</b>	123,231,862	124,383,448	125,348,545	133,277,265	147,015,422
<b>Potential Forecasts (therms)</b>					
UCT Achievable Economic Potential	122,702,298	123,482,919	122,833,755	121,145,865	117,278,046
TRC Achievable Economic Potential	122,241,647	122,832,284	121,847,269	121,390,173	125,753,607
Achievable Technical Potential	121,657,268	121,868,830	119,556,377	112,443,189	104,746,227
Technical Potential	119,993,583	119,572,379	116,038,828	107,647,590	98,623,601
<b>Cumulative Savings (therms)</b>					
UCT Achievable Economic Potential	529,565	900,529	2,514,790	12,131,400	29,737,376
TRC Achievable Economic Potential	990,215	1,551,164	3,501,276	11,887,092	21,261,815
Achievable Technical Potential	1,574,594	2,514,618	5,792,168	20,834,076	42,269,196
Technical Potential	3,238,280	4,811,069	9,309,717	25,629,675	48,391,821
<b>Energy Savings (% of Baseline)</b>					
UCT Achievable Economic Potential	0.4%	0.7%	2.0%	9.1%	20.2%
TRC Achievable Economic Potential	0.8%	1.2%	2.8%	8.9%	14.5%
Achievable Technical Potential	1.3%	2.0%	4.6%	15.6%	28.8%
Technical Potential	2.6%	3.9%	7.4%	19.2%	32.9%
<b>Incremental Savings (therms)</b>					
UCT Achievable Economic Potential	333,424	369,466	1,167,261	2,294,752	1,594,933
TRC Achievable Economic Potential	527,930	559,955	1,352,349	1,973,374	208,493
Achievable Technical Potential	875,986	939,400	2,262,626	3,360,892	1,967,650
Technical Potential	1,809,141	1,567,136	2,988,126	3,824,986	2,157,180

## Commercial DSM Highlights

### Summary of Energy Savings (therms), Selected Years

	2019	2020	2022	2028	2038
<b>Baseline Forecast (therms)</b>	94,398,445	95,540,156	98,107,808	107,060,779	122,968,382
<b>Potential Forecasts (therms)</b>					
UCT Achievable Economic Potential	93,811,369	94,576,969	95,920,877	99,147,639	107,561,211
TRC Achievable Economic Potential	93,947,284	94,812,733	96,446,677	100,944,282	111,241,993
Achievable Technical Potential	92,758,005	93,014,892	93,355,705	94,212,341	101,188,467
Technical Potential	91,515,329	91,171,727	90,368,413	89,081,949	96,803,024
<b>Cumulative Savings (therms)</b>					
UCT Achievable Economic Potential	587,075	963,187	2,186,931	7,913,141	15,407,171
TRC Achievable Economic Potential	451,161	727,423	1,661,131	6,116,498	11,726,388
Achievable Technical Potential	1,640,440	2,525,264	4,752,103	12,848,438	21,779,915
Technical Potential	2,883,115	4,368,429	7,739,395	17,978,831	26,165,358
<b>Energy Savings (% of Baseline)</b>					
UCT Achievable Economic Potential	0.6%	1.0%	2.2%	7.4%	12.5%
TRC Achievable Economic Potential	0.5%	0.8%	1.7%	5.7%	9.5%
Achievable Technical Potential	1.7%	2.6%	4.8%	12.0%	17.7%
Technical Potential	3.1%	4.6%	7.9%	16.8%	21.3%
<b>Incremental Savings (therms)</b>					
UCT Achievable Economic Potential	313,506	375,891	773,942	1,049,624	861,545
TRC Achievable Economic Potential	233,412	276,119	602,559	820,760	650,245
Achievable Technical Potential	833,615	893,323	1,287,975	1,442,143	986,088
Technical Potential	1,452,520	1,493,946	1,857,647	1,726,851	1,190,244

## Industrial DSM Highlights

### Summary of Energy Savings (therms), Selected Years

	2019	2020	2022	2028	2038
<b>Baseline Forecast (therms)</b>	24,778,429	24,988,671	25,279,998	27,322,555	28,202,435
<b>Potential Forecasts (therms)</b>					
UCT Achievable Economic Potential	24,663,998	24,814,702	24,940,709	26,339,005	26,649,309
TRC Achievable Economic Potential	24,658,719	24,809,504	24,921,352	26,342,909	26,706,942
RVT Achievable Economic Potential	24,676,331	24,835,082	24,966,153	26,444,224	26,829,901
Achievable Technical Potential	24,641,897	24,784,516	24,877,752	26,246,272	26,547,546
Technical Potential	24,591,345	24,711,152	24,751,606	25,991,355	26,252,340
<b>Cumulative Savings (therms)</b>					
UCT Achievable Economic Potential	114,431	173,969	339,289	983,551	1,553,126
TRC Achievable Economic Potential	119,710	179,167	358,646	979,647	1,495,493
RVT Achievable Economic Potential	102,098	153,589	313,845	878,332	1,372,534
Achievable Technical Potential	136,532	204,156	402,246	1,076,283	1,654,889
Technical Potential	187,084	277,519	528,392	1,331,200	1,950,095
<b>Energy Savings (% of Baseline)</b>					
UCT Achievable Economic Potential	0.5%	0.7%	1.3%	3.6%	5.5%
TRC Achievable Economic Potential	0.5%	0.7%	1.4%	3.6%	5.3%
RVT Achievable Economic Potential	0.4%	0.6%	1.2%	3.2%	4.9%
Achievable Technical Potential	0.6%	0.8%	1.6%	3.9%	5.9%
Technical Potential	0.8%	1.1%	2.1%	4.9%	6.9%
<b>Incremental Savings (therms)</b>					
UCT Achievable Economic Potential	57,081	61,380	100,644	107,763	23,006
TRC Achievable Economic Potential	59,600	61,407	113,693	99,569	19,153
RVT Achievable Economic Potential	50,922	53,128	102,153	89,266	22,944
Achievable Technical Potential	68,047	69,932	123,855	109,251	23,157
Technical Potential	92,815	93,626	153,801	128,805	27,487

Residential Cumulative Savings (mTherms)  
Achievable Economic UCT Potential

Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
ORIGINAL	199,856	529,565	900,529	1,358,618	2,514,790	3,971,553	4,494,103	6,085,454	7,915,828	9,990,652	12,131,400	14,337,529	16,580,699	18,783,285	20,727,722	22,529,619	24,157,655	25,773,217	27,095,797	28,373,916	29,757,376
BALLOT	220,663	563,800	947,561	1,413,129	2,617,510	4,046,061	4,535,479	6,078,736	7,876,345	9,896,468	11,954,911	14,052,052	16,199,250	18,203,608	19,990,301	21,641,549	23,162,657	24,681,920	25,943,630	27,181,194	28,519,732
INSLEE	220,653	563,784	947,467	1,412,921	2,616,313	4,044,784	4,534,096	6,076,629	7,873,521	9,892,962	11,950,919	14,047,832	16,135,116	18,199,859	19,987,596	21,639,516	23,161,250	24,681,210	25,943,085	27,180,466	28,518,881
MKT CHOICE	220,669	563,903	948,632	1,415,112	2,622,514	4,056,352	4,562,657	6,122,218	7,949,460	10,002,691	12,096,994	14,234,509	16,364,984	18,474,605	20,302,512	21,990,479	23,542,681	25,087,711	26,365,263	27,613,157	28,958,707
	9.43%	6.09%	5.07%	3.99%	4.11%	2.09%	1.50%	0.60%	0.42%	-0.28%	-0.72%	-1.20%	-1.67%	-2.09%	-2.45%	-2.61%	-2.73%	-2.77%	-2.76%	-2.69%	

Commercial Cumulative Savings (mTherms)  
Achievable Economic UCT Potential

Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
ORIGINAL	271,701	587,075	963,187	1,411,770	2,186,931	3,030,232	3,916,187	4,862,255	5,856,837	6,901,289	7,913,141	8,918,556	9,887,160	10,893,773	11,787,847	12,578,227	13,299,614	14,008,785	14,599,091	15,013,112	15,407,171
BALLOT	269,724	587,178	920,026	1,352,976	2,115,504	2,945,806	3,819,335	4,754,110	5,738,231	6,773,363	7,776,039	8,733,363	9,736,895	10,735,549	11,622,941	12,406,932	13,121,953	13,825,329	14,362,005	14,822,961	15,213,998
INSLEE	262,590	551,895	896,670	1,319,039	2,063,492	2,875,035	3,729,633	4,645,441	5,610,280	6,625,018	7,609,892	8,589,532	9,545,279	10,527,895	11,400,920	12,171,054	12,871,790	13,560,184	14,083,471	14,531,236	14,912,741
MKT CHOICE	279,843	589,930	958,694	1,400,101	2,170,429	3,008,992	3,890,506	4,833,303	5,824,812	6,865,270	7,873,533	8,875,558	9,840,804	10,844,145	11,735,392	12,523,072	13,241,812	13,949,177	14,488,151	14,949,942	15,336,948
	3.00%	0.49%	-0.47%	-0.83%	-0.75%	-0.70%	-0.66%	-0.60%	-0.55%	-0.52%	-0.48%	-0.47%	-0.46%	-0.44%	-0.44%	-0.43%	-0.43%	-0.42%	-0.42%	-0.42%	

Industrial Cumulative Savings (mTherms)  
Achievable Economic UCT Potential

Base Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
ORIGINAL	57,693	114,431	173,969	240,809	330,289	439,988	546,573	671,495	783,082	893,794	983,551	1,172,571	1,246,996	1,298,919	1,375,260	1,420,537	1,466,225	1,506,549	1,542,754	1,555,126
BALLOT	57,693	114,431	170,813	234,525	329,030	424,330	514,458	619,001	715,957	808,232	888,383	965,240	1,038,510	1,177,810	1,250,999	1,296,212	1,341,966	1,382,768	1,419,681	1,430,891
INSLEE	57,693	114,431	170,813	234,525	329,030	424,330	514,458	619,001	715,957	808,232	888,383	965,240	1,038,510	1,177,810	1,250,999	1,296,212	1,341,966	1,382,768	1,419,681	1,430,891
MKT CHOICE	57,693	114,431	170,813	234,525	329,030	424,330	514,458	619,001	715,957	808,232	888,383	965,240	1,038,510	1,177,810	1,250,999	1,296,212	1,341,966	1,382,768	1,419,681	1,430,891
	0.00%	0.00%	-1.81%	-2.61%	-3.02%	-3.56%	-4.22%	-4.83%	-5.37%	-5.68%	-5.78%	-5.78%	-5.68%	-5.31%	-5.04%	-4.75%	-4.47%	-4.22%	-3.98%	-3.87%



Residential Equipment

Segment	Vintage	End Use	Measure		Characteristics					Sources					Measure Assumptions in 2017							
			Measure	Efficient Definition	Replacement Type	Baseline Definition	Measure Description	Measure Range/Rate	Ramp Offset	Input Units of Measure	ADW Size	Units per Household	Line Loss	Utility Source	Cost Source	Source	Spreads Source	Measure (kWh/yr)	Incremental Measure Cost (\$)	Incremental Measure (\$/kWh)	Cost Saver @ Generator	Base Saturation
C23 - Multi Family - New		Appliances - Miscellaneous	SmartDown Pool Heater	EF 042 Conditioning (EF - 30)	Loss Opportunity Standard (EF - 82)	EF 042 Conditioning (EF - 30)	LOHw60	4 units	1.00	1.00	0.16%	STV Appliances-AEG17-58	STV Appliances-AEG17-58	STV Appliances-AEG17-58	STV Appliances-AEG17-58	10	50.00	5.00	104.2%	28.60	24.2%	100.0%
C23 - Multi Family - New		Appliances - Miscellaneous	Pool Heater	EF 042 Conditioning (EF - 30)	Loss Opportunity Standard (EF - 82)	EF 042 Conditioning (EF - 30)	LOHw60	3 units	1.00	1.00	0.16%	STV Appliances-AEG17-58	STV Appliances-AEG17-58	STV Appliances-AEG17-58	10	675.00	67.50	111.6%	28.60	1.0%	100.0%	



Residential Non-Equipment

Table with columns: Segment, Property, Habitat, Mitigation, Effort, Implementation, Impacts, Effects, Species/Invertebrates, Raptor/Big Game, Wetland, Aquatic, Forest, Grassland, Open Space, Wetland, Aquatic, Forest, Grassland, Open Space, Wetland, Aquatic, Forest, Grassland, Open Space, Wetland, Aquatic, Forest, Grassland, Open Space. Includes 250+ rows of project details.



Residential Non-Equipment

Table with 14 columns: Applicant, Project, Address, Applicant Type, Description, Measure ID, Measure Name, Measure Category, Measure Class, Measure Subclass, Measure Code, Measure Status, Measure Location, Measure Type, Measure Priority, Measure Value, Measure Cost, Measure Payback, Measure Availability. The table lists 73 residential non-equipment measures with detailed descriptions and associated values.



Commonwealth Equipment

Table with multiple columns: Species, Vendor, Equipment Name, Description, Unit, Location, Date Acquired, Condition, Remarks, Status, Quantity, Unit Price, Total Value, Agency, etc. The table lists various pieces of equipment across different species categories.



Commercial Non-Equipment

Table with 13 columns: Species, Vantage, Use Date, Measure, Objective, Replacement Type, Benefits Distribution (BMD O&A), Measure Description, Measure Category, Frequency, Risk/Pt, Life/Resource, Object Details, Measure Lifetime, Estimated Cost (\$), Outlay, Net Present Value (\$), Risk Reduction, and Applicability. The table lists various species including Golden Eagle, Bald Eagle, and various raptors, with detailed descriptions of conservation measures and their associated costs and benefits.









Industrial Equipment

Table with columns: Segment, Measure, Measure End Use, Measure, Efficient Definition in 2018, Measure Identifier, Measure Description, Efficient Definition / Measure Description, Base Line Definition, Replacement Type, Measure Bump Rate Name, Input Units of Measure, Input Square Foot, Units per Square Foot, Transmission Losses, Lifetime Source, Cost Source, Savings Source, Measure Assumptions in 2017 (Measure (Metric), Cost (\$/Metric), Incremental Measure (Metric)), Base Savings (\$/Metric), and Applicability. Rows 113-154 list various equipment like Turnover, Furnace, and Boilers with their respective metrics and savings.

Indirect Non-Employment

Table with columns: Report, Measure, Title, Measure Description, Impacts, Benefits (Economic, Environmental, Social), Costs, Employment, Value, and Applicability. The table lists various measures such as 'Habitat Management', 'Water Conservation', and 'Energy Efficiency' across different report categories.





Indiana Non-Employment

Table with columns: Department, Budget, Staff, Resource, Wildlife, Habitat, Beneficial Offsets (BNO/CO2e), Conservation, Employment, and Applicability. It lists various conservation activities across different departments and tracks their employment and applicability metrics.

