

Table E-1
National Grid
Electric DSM Funding Sources in 2020 by Sector
\$(000)

	Income Eligible Residential	Projections by Sector Non-Income Eligible Residential	Commercial & Industrial	Total
(1) Projected Budget (from E-2):	\$16,913.93	\$48,265.02	\$49,310.33	\$114,489.27
Sources of Other Funding:				
(2) Projected DSM Commitments at Year-End 2019:	\$0.00	\$0.00	\$0.00	\$0.00
(3) Projected Year-End 2019 Fund Balance and Interest:	\$0.00	(\$12,605.20)	\$6,495.07	-\$6,110.13
(4) Projected FCM Payments from ISO-NE:	\$487.20	\$6,564.40	\$10,430.30	\$17,481.76
(5) Total Other Funding:	\$487.20	(\$6,040.80)	\$16,925.37	\$11,371.64
(6) Customer Funding Required:	\$16,426.73	\$54,305.81	\$32,384.96	\$103,117.6
(7) Forecasted kWh Sales:	198,930,685	2,680,571,736	4,259,222,596	7,138,725,018
(8) Energy Efficiency Program charge per kWh, excluding uncollectible recovery:				\$0.01444
(9) Proposed System Reliability Factor per kWh, excluding uncollectible recovery:				<u>-\$0.00013</u>
(10) Total Proposed Energy Efficiency Charge per kWh, excluding uncollectible recovery:				\$0.01431
(11) Currently Effective Uncollectible Rate				1.30%
(12) Energy Efficiency Program charge per kWh, including uncollectible recovery:				\$0.01449
(13) Currently Effective EE Charge				<u>\$0.01124</u>
(14) Proposed Adjustment to Reflect Fully Reconciling Funding Mechanism				\$0.00325

Notes:

- (1) Projected Budget from E-2 includes OER and EERMC costs allocated to each sector based on forecasted sales and RIIB costs allocated to C&I sector.
- (2) DSM Commitments are projects that are under construction with anticipated completion in 2019.
- (3) Fund balance projections include projected revenue and spend through year end with Low Income sector set to \$0 through projected subsidization from other sectors, minus commitments which are illustrated separately on line (2). The Company proposes to refile this table with updated Fund Balance projections on December 2, 2019 as proposed in Section 9(i) of the Plan's Main Text.
- (4) The total projection of FCM revenue is allocated by kWh sales to each sector.
- (5) Line (2) + Line (3) + Line (4)
- (6) Line (1) - Line (5)
- (7) Per Company Forecast
- (8) Line (6) ÷ Line (7), truncated to 5 decimal places
- (9) Truncated to 5 decimal places
- (11) Proposed System Reliability Factor is from the 2020 System Reliability Procurement Plan. Charge reflects projected year-end 2019 fund balance.
- (10) Line (8) + Line (9)
- (11) Uncollectible rate approved in Docket No 4770.
- (12) Line (10) ÷ (1-Line (11), truncated to 5 decimal places
- (13) Currently Effective EE Charge includes System Reliability Factor and uncollectible recovery.
- (14) Line (13) - Line (12)

**Table E-2
National Grid
2020 Electric Energy Efficiency Program Budget (\$000)**

	Program Planning & Administration	Marketing	Rebates and Other Customer Incentives	Sales, Technical Assistance & Training	Evaluation & Market Research	Shareholder Incentive	Grand Total
Non-Income Eligible Residential							
Residential New Construction	\$58.1	\$2.2	\$499.1	\$297.0	\$49.7		\$906.1
ENERGY STAR® HVAC	\$67.9	\$144.2	\$1,616.1	\$569.1	\$20.7		\$2,418.0
EnergyWise	\$358.5	\$390.9	\$13,879.7	\$1,578.7	\$142.0		\$16,349.8
EnergyWise Multifamily	\$82.2	\$43.2	\$2,190.0	\$405.1	\$101.8		\$2,822.3
ENERGY STAR® Lighting	\$365.8	\$579.8	\$14,571.6	\$759.7	\$117.5		\$16,394.5
Residential Consumer Products	\$59.6	\$521.2	\$772.9	\$715.8	\$3.1		\$2,072.7
Home Energy Reports	\$77.2	\$10.6	\$2,540.7	\$10.1	\$91.4		\$2,730.1
Residential ConnectedSolutions	\$13.8	\$0.2	\$317.7	\$124.1	\$0.0		\$455.7
Energy Efficiency Education Programs	\$0.0	\$40.0	\$0.0	\$0.0	\$0.0		\$40.0
Residential Pilots	\$11.7	\$26.0	\$190.0	\$44.0	\$17.0		\$288.7
Community Based Initiatives - Residential	\$23.0	\$61.9	\$67.5	\$0.0	\$0.0		\$152.3
Comprehensive Marketing - Residential	\$2.4	\$442.4	\$0.0	\$0.0	\$0.0		\$444.8
Residential Shareholder Incentive	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,438.2	\$2,438.2
Subtotal - Non-Income Eligible Residential	\$1,120.1	\$2,262.8	\$36,645.3	\$4,503.6	\$543.2	\$2,438.2	\$47,513.2
Income Eligible Residential							
Single Family - Income Eligible Services	\$296.8	\$144.0	\$9,792.2	\$2,080.3	\$109.6		\$12,422.9
Income Eligible Multifamily	\$95.9	\$9.2	\$2,928.0	\$403.8	\$119.5		\$3,556.4
Income Eligible Shareholder Incentive	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$878.9	\$878.9
Subtotal - Income Eligible Residential	\$392.7	\$153.2	\$12,720.2	\$2,484.1	\$229.1	\$878.9	\$16,858.1
Commercial & Industrial							
Large Commercial New Construction	\$188.5	\$316.9	\$3,115.9	\$1,195.0	\$438.9		\$5,255.3
Large Commercial Retrofit	\$731.6	\$242.1	\$17,865.57	\$4,099.42	\$727.5		\$23,666.1
Small Business Direct Install	\$242.9	\$276.5	\$6,300.0	\$416.7	\$98.5		\$7,334.7
Commercial ConnectedSolutions	\$37.9	\$1.9	\$1,960.0	\$329.1	\$0.0		\$2,329.0
Commercial Pilots	\$16.3	\$22.0	\$0.0	\$48.0	\$20.0		\$106.3
Community Based Initiatives - C&I	\$1.7	\$18.8	\$22.5	\$0.0	\$0.0		\$43.0
Finance Costs	\$0.0	\$0.0	\$7,000.0	\$0.0	\$0.0		\$7,000.0
Commercial & Industrial Shareholder Incentive	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,381.45	\$2,381.4
Subtotal - Commercial & Industrial	\$1,218.9	\$878.2	\$36,264.0	\$6,088.3	\$1,284.9	\$2,381.4	\$48,115.7
Regulatory							
OER	\$1,001.1	\$0.0	\$0.0	\$0.0	\$0.0		\$1,001.1
EERMC	\$1,001.1	\$0.0	\$0.0	\$0.0	\$0.0		\$1,001.1
Subtotal - Regulatory	\$2,002.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$2,002.2
Grand Total	\$4,734.0	\$3,294.2	\$85,629.5	\$13,075.9	\$2,057.2	\$5,698.5	\$114,489.3
System Reliability Procurement							

Notes:

- (1) 2019 Large Commercial Retrofit Commitments (\$000):
- (2) For more information on Finance Costs, please refer to the 2020 C&I Program Description, Attachment 2.
- (3) OER and EERMC total 2.0% of customers' EE Program Charge collected on Table E-1, minus 2%.
\$0 is included in 2020 OER budget for Evaluation and Market Research to comply with Senate Bill 2500, enacted in June 2018. The law requires the OER to hire an energy consulting company or firm to review and confirm reported energy savings.
- (4) Finance Costs include a \$5.0 million transfer to the Rhode Island Infrastructure Bank Efficient Buildings Fund and a \$2.0 million transfer to the Company's revolving loan funds. Finance Costs are detailed in Table E-10.
- (5) System Reliability funds are included for illustrative purposes. They are part of the 2020 System Reliability Procurement Report, filed as a separate docket.

**Table E-3
National Grid
Derivation of the 2020 Spending and Implementation Budgets (\$000)**

	Proposed 2018 Budget From E-2	Commitments	Regulatory Costs	Shareholder Incentive	Eligible Sector Spending Budget for Shareholder Incentive on E-9	Implementation Expenses for Cost-Effectiveness on E-5
Non-Income Eligible Residential						
Residential New Construction	\$906.1					\$906.1
ENERGY STAR@ HVAC	\$2,418.0					\$2,418.0
EnergyWise	\$16,349.8					\$16,349.8
EnergyWise Multifamily	\$2,822.3					\$2,822.3
ENERGY STAR@ Lighting	\$16,394.5					\$16,394.5
Residential Consumer Products	\$2,072.7					\$2,072.7
Home Energy Reports	\$2,730.1					\$2,730.1
Residential ConnectedSolutions	\$455.7					\$455.7
Energy Efficiency Education Programs	\$40.0					\$40.0
Residential Pilots	\$288.7					\$288.7
Community Based Initiatives - Residential	\$152.3					\$152.3
Comprehensive Marketing - Residential	\$444.8					\$444.8
Residential Shareholder Incentive	\$2,438.2			\$2,438.2		\$0.0
Subtotal - Non-Income Eligible Residential	\$47,513.2	\$0.0	\$0.0	\$2,438.2	\$44,330.5	\$45,075.0
Income Eligible Residential						
Single Family - Income Eligible Services	\$12,422.9					\$12,422.9
Income Eligible Multifamily	\$3,556.4					\$3,556.4
Income Eligible Shareholder Incentive	\$878.9			\$878.9		\$0.0
Subtotal - Income Eligible Residential	\$16,858.1	\$0.0	\$0.0	\$878.9	\$15,979.3	\$15,979.3
Commercial & Industrial						
Large Commercial New Construction	\$5,255.3	\$0.0				\$5,255.3
Large Commercial Retrofit	\$23,666.1	\$0.0				\$23,666.1
Small Business Direct Install	\$7,334.7	\$0.0				\$7,334.7
Commercial ConnectedSolutions	\$2,329.0					\$2,329.0
Commercial Pilots	\$106.3					\$106.3
Community Based Initiatives - C&I	\$43.0					\$43.0
Finance Costs	\$7,000.0					\$7,000.0
Commercial & Industrial Shareholder Incentive	\$2,381.4			\$2,381.4		\$0.0
Subtotal - Commercial & Industrial	\$48,115.7	\$0.0	\$0.0	\$2,381.4	\$43,299.0	\$45,734.3
Regulatory						
OER	\$1,001.1		\$1,001.1			\$1,001.1
EERMC	\$1,001.1		\$1,001.1			\$1,001.1
Subtotal - Regulatory	\$2,002.2	\$0.0	\$2,002.2	\$0.0	\$0.0	\$2,002.2
Grand Total	\$114,489.3	\$0.0	\$2,002.2	\$5,698.5	\$103,608.9	\$108,790.8

Notes:

- (1) Spending budget = Total Budget from E-2 minus commitments, regulatory costs, pilots, Demand Response, and shareholder incentive.
- (2) Implementation Expenses = Total Budget from E-2 minus commitments and shareholder incentive.
- (3) Finance Costs include a \$5.0 million transfer to the Rhode Island Infrastructure Bank Efficient Buildings Fund and a \$2.0 million transfer to the Company's revolving loan funds. Finance Costs are detailed in Table E-10.

Table E-4
National Grid
Proposed 2020 Budget Compared to Approved 2019 Budget (\$000)

	Proposed Implementation Budget 2020	Approved Implementation Budget 2019	Difference
Non-Income Eligible Residential			
Residential New Construction	\$906.1	\$858.6	\$47.5
ENERGY STAR® HVAC	\$2,418.0	\$2,724.0	-\$306.0
EnergyWise	\$16,349.8	\$15,777.5	\$572.3
EnergyWise Multifamily	\$2,822.3	\$3,064.9	-\$242.5
ENERGY STAR® Lighting	\$16,394.5	\$14,968.2	\$1,426.2
Residential Consumer Products	\$2,072.7	\$2,124.5	-\$51.8
Home Energy Reports	\$2,730.1	\$2,641.2	\$88.9
Residential ConnectedSolutions	\$455.7	\$283.1	N/A
Energy Efficiency Education Programs	\$40.0	\$40.0	\$0.0
Residential Pilots	\$288.7	\$222.7	\$66.0
Community Based Initiatives - Residential	\$152.3	\$121.5	\$30.8
Comprehensive Marketing - Residential	\$444.8	\$556.5	-\$111.7
Subtotal - Non-Income Eligible Residential	\$45,075.0	\$43,382.8	\$1,692.2
Income Eligible Residential			
Single Family - Income Eligible Services	\$12,422.9	\$11,694.7	\$728.2
Income Eligible Multifamily	\$3,556.4	\$3,382.9	\$173.5
Subtotal - Income Eligible Residential	\$15,979.3	\$15,077.6	\$901.6
Commercial & Industrial			
Large Commercial New Construction	\$5,255.3	\$5,036.1	\$219.1
Large Commercial Retrofit	\$23,666.1	\$21,356.5	\$2,309.6
Small Business Direct Install	\$7,334.7	\$8,712.8	-\$1,378.1
Commercial ConnectedSolutions	\$2,329.0	\$2,024.1	N/A
Community Based Initiatives - C&I	\$43.0	\$40.1	\$2.8
Commercial Pilots	\$106.3	\$197.9	-\$91.7
Finance Costs	\$7,000.0	\$5,000.0	\$2,000.0
Subtotal Commercial & Industrial	\$45,734.3	\$42,367.7	\$3,366.6
Regulatory			
EERMC	\$1,001.1	\$783.6	\$217.5
OER	\$1,001.1	\$989.8	\$11.3
Subtotal Regulatory	\$2,002.2	\$1,773.4	\$228.8
TOTAL IMPLEMENTATION BUDGET	\$108,790.8	\$102,601.5	\$6,189.3
OTHER EXPENSE ITEMS			
Commitments	\$0.0	\$0.0	\$0.0
Company Incentive	\$5,698.5	\$4,905.0	\$793.5
Subtotal - Other Expense Items	\$5,698.5	\$4,905.0	\$793.5
TOTAL BUDGET	\$114,489.3	\$107,506.5	\$6,982.8

Notes:

- (1) Program Implementation Budget excludes Commitments, Company Incentive; derived on Table E-3
- (2) Total Budget includes Implementation, Commitments; illustrated on Table E-3
- (3) The increase in Finance Costs from 2019 to 2020 is due to a \$2.0 million transfer to the revolving loan fund in the 2020 Plan. The \$5.0 million transfer to the Rhode Island Infrastructure Bank Efficient Buildings Fund is now included in the Finance Cost line.
- (5) The EnergyStar ENERGY STAR® Lighting budget increase is driven by an increase in incentives levels over the 2019 Annual Plan.
- (4) The Large Commercial Retrofit budget increase is due to a higher cost of savings from the 2019 Annual Plan.
- (5) The Small Business Direct Install budget decrease is due to a net decrease in MWh savings from the 2020 Annual Plan.

Table E-5
National Grid
Calculation of 2020 Program Year Cost-Effectiveness
All Dollar Values in (\$000)

	RI Test Benefit/ Cost ¹	Total Benefit	Program Implementation Expenses ²	Customer Contribution	Shareholder Incentive	¢/Lifetime kWh
Non-Income Eligible Residential						
Residential New Construction	2.71	\$ 4,452.3	\$ 906.1	\$ 738.0		10.6
ENERGY STAR® HVAC	2.97	\$ 11,313.9	\$ 2,418.0	\$ 1,388.0		22.3
EnergyWise	2.21	\$ 39,793.4	\$ 16,349.8	\$ 1,672.9		79.9
EnergyWise Multifamily	3.24	\$ 10,878.8	\$ 2,822.3	\$ 536.0		11.5
Home Energy Reports	2.93	\$ 7,998.0	\$ 2,730.1	\$ -		11.7
ENERGY STAR® Lighting	5.89	\$ 61,923.9	\$ 16,394.5	\$ (5,884.1)		5.4
Residential Consumer Products	3.21	\$ 9,125.8	\$ 2,072.7	\$ 770.6		10.2
Residential ConnectedSolutions	4.14	\$ 1,887.8	\$ 455.7	\$ -		N/A
Energy Efficiency Education Programs			\$ 40.0			
Residential Pilots			\$ 288.7			
Community Based Initiatives - Residential			\$ 152.3			
Comprehensive Marketing - Residential			\$ 444.8			
Non-Income Eligible Residential SUBTOTAL	3.17	\$ 147,374.0	\$ 45,075.0	\$ (778.6)	\$ 2,216.5	13.5
Income Eligible Residential						
Single Family - Income Eligible Services	2.86	\$ 35,553.7	\$ 12,422.9	\$ -		31.6
Income Eligible Multifamily	2.97	\$ 10,574.4	\$ 3,556.4	\$ -		12.4
Income Eligible Residential SUBTOTAL	2.75	\$ 46,128.0	\$ 15,979.3	\$ -	\$ 799.0	23.5
Commercial & Industrial						
Large Commercial New Construction	6.79	\$ 42,004.6	\$ 5,255.3	\$ 927.3		4.4
Large Commercial Retrofit	8.10	\$ 306,734.3	\$ 23,666.1	\$ 14,203.3		4.6
Small Business Direct Install	3.65	\$ 35,685.1	\$ 7,334.7	\$ 2,439.0		8.3
Commercial ConnectedSolutions	11.84	\$ 27,579.7	\$ 2,329.0	\$ -		N/A
Commercial Pilots			\$ 106.3			
Community Based Initiatives - C&I			\$ 43.0			
Finance Costs			\$ 7,000.0			
C&I SUBTOTAL	6.29	\$ 412,003.8	\$ 45,734.3	\$ 17,569.6	\$ 2,165.0	5.9
Regulatory						
OER			\$ 1,001.1			
EERMC			\$ 1,001.1			
Regulatory SUBTOTAL			\$ 2,002.2			
TOTAL	4.63	\$ 605,505.8	\$ 108,790.8	\$ 16,790.9	\$ 5,180.4	8.5

Notes:

(1) RI Test B/C Test = (Energy + Capacity + Resource Benefits + Economic Benefits + Carbon Benefits) / (Program Implementation + Customer Contribution + Shareholder Incentive)

Also includes effects of free-ridership and spillover.

(2) For Implementation Expenses derivation, see Table E-3.

(3) ENERGY STAR® Lighting customer cost is negative due to a high free-ridership rate. Any financial incentives paid to free-riders are counted as a cost because the Company incurred those costs as part of the overall cost of the Plan regardless of whether the participant is free-rider or not. Therefore the Company reduces benefits and the customer cost by the net-to-gross ratio but not the incentives.

Table E-5A
National Grid
Calculation of 2020 Program Year Cost-Effectiveness with TRC Test
All Dollar Values in (\$000)

	TRC Benefit/ Cost¹	Total Benefit	Program Implementation Expenses²	Customer Contribution	Shareholder Incentive	¢/Lifetime kWh
Non-Income Eligible Residential						
Residential New Construction	1.67	\$ 2,752.8	\$ 906.1	\$ 738.0		10.6
ENERGY STAR® HVAC	1.74	\$ 6,605.4	\$ 2,418.0	\$ 1,388.0		22.3
EnergyWise	1.12	\$ 20,138.9	\$ 16,349.8	\$ 1,672.9		79.9
EnergyWise Multifamily	1.82	\$ 6,104.5	\$ 2,822.3	\$ 536.0		11.5
Home Energy Reports	1.65	\$ 4,497.3	\$ 2,730.1	\$ -		11.7
ENERGY STAR® Lighting	2.97	\$ 31,183.0	\$ 16,394.5	\$ (5,884.1)		5.4
Residential Consumer Products	1.80	\$ 5,114.9	\$ 2,072.7	\$ 770.6		10.2
Residential ConnectedSolutions	4.14	\$ 1,887.8	\$ 455.7			
Energy Efficiency Education Programs			\$ 40.0			
Residential Pilots			\$ 288.7			
Community Based Initiatives - Residential			\$ 152.3			
Comprehensive Marketing - Residential			\$ 444.8			
Non-Income Eligible Residential SUBTOTAL	1.68	\$ 78,284.7	\$ 45,075.0	\$ (778.6)	\$ 2,216.5	13.5
Income Eligible Residential						
Single Family - Income Eligible Services	1.80	\$ 22,309.8	\$ 12,422.9	\$ -		31.6
Income Eligible Multifamily	1.41	\$ 5,028.1	\$ 3,556.4	\$ -		12.4
Income Eligible Residential SUBTOTAL	1.63	\$ 27,337.8	\$ 15,979.3	\$ -	\$ 799.0	23.5
Commercial & Industrial						
Large Commercial New Construction	3.48	\$ 21,505.4	\$ 5,255.3	\$ 927.3		4.4
Large Commercial Retrofit	3.93	\$ 148,875.5	\$ 23,666.1	\$ 14,203.3		4.6
Small Business Direct Install	1.86	\$ 18,206.1	\$ 7,334.7	\$ 2,439.0		8.3
Commercial ConnectedSolutions	11.84	\$ 27,579.7	\$ 2,329.0			
Commercial Pilots			\$ 106.3			
Community Based Initiatives - C&I			\$ 43.0			
Finance Costs			\$ 7,000.0			
C&I SUBTOTAL	3.30	\$ 216,166.7	\$ 45,734.3	\$ 17,569.6	\$ 2,165.0	5.9
Regulatory						
OER			\$ 1,001.1			
EERMC			\$ 1,001.1			
Regulatory SUBTOTAL			\$ 2,002.2			
TOTAL	2.46	\$ 321,789.2	\$ 108,790.8	\$ 16,790.9	\$ 5,180.4	8.5

Notes:

(1) TRC B/C Test = (Energy + Capacity + Resource Benefits) / (Program Implementation + Customer Contribution + Shareholder Incentive)

Also includes effects of free-ridership and spillover.

(2) For Implementation Expenses derivation, see Table E-3.

(3) ENERGY STAR® Lighting customer cost is negative due to a high free-ridership rate. Any financial incentives paid to free-riders are counted as a cost because the Company incurred those costs as part of the overall cost of the Plan regardless of whether the participant is free-rider or not. Therefore the Company reduces benefits and the customer cost by the net-to-gross ratio but not the incentives.

**Table E-6
 National Grid
 Summary of 2020 Benefits by Program (Energy Efficiency Measures)**

	Benefits (000's)																	
	Total	Capacity					Energy					Non Electric				Societal		
		Summer Generation	Capacity DRIPE	Trans	Dist	Reliability	Winter		Summer		Energy DRIPE	Natural Gas	Oil	Other Resource	Non Resource	Carbon	NOx	Economic
						Peak	Off Peak	Peak	Off Peak									
Non-Income Eligible Residential																		
Residential New Construction	\$4,452	\$100	\$85	\$125	\$109	\$0	\$117	\$148	\$381	\$241	\$321	\$0	\$70	\$1,011	\$44	\$411	\$20	\$1,269
ENERGY STAR® HVAC	\$11,314	\$436	\$347	\$561	\$488	\$2	\$491	\$468	\$58	\$41	\$502	\$517	\$1,997	\$620	\$78	\$1,156	\$119	\$3,433
EnergyWise	\$39,793	\$555	\$862	\$682	\$594	\$4	\$555	\$488	\$191	\$112	\$800	\$0	\$14,213	\$265	\$819	\$3,954	\$496	\$15,205
EnergyWise Multifamily	\$10,879	\$244	\$229	\$314	\$273	\$1	\$775	\$631	\$200	\$158	\$950	\$0	\$582	\$23	\$1,724	\$935	\$57	\$3,782
Home Energy Reports	\$7,998	\$406	\$1,248	\$393	\$342	\$10	\$557	\$453	\$167	\$148	\$773	\$0	\$0	\$0	\$0	\$739	\$32	\$2,730
ENERGY STAR® Lighting	\$61,924	\$2,049	\$4,880	\$2,822	\$2,458	\$24	\$5,647	\$2,809	\$2,144	\$1,007	\$10,540	-\$2,003	-\$2,551	-\$948	\$2,738	\$4,202	\$39	\$26,067
Residential Consumer Products	\$9,126	\$399	\$660	\$551	\$480	\$3	\$556	\$512	\$296	\$246	\$1,230	\$15	\$35	\$132	\$0	\$822	\$38	\$3,150
Non-Income Eligible Residential SUBTOTAL	\$145,486	\$4,189	\$8,310	\$5,448	\$4,746	\$45	\$8,697	\$5,508	\$3,437	\$1,953	\$15,115	-\$1,471	\$14,346	\$1,104	5,402	12,218	801	55,637
Income Eligible Residential																		
Single Family - Income Eligible Services	\$35,554	\$773	\$784	\$1,009	\$879	\$4	\$828	\$768	\$381	\$322	\$1,116	\$91	\$5,135	\$477	\$9,781	\$2,297	\$224	\$10,684
Income Eligible Multifamily	\$10,574	\$212	\$159	\$268	\$234	\$1	\$726	\$605	\$204	\$176	\$797	\$0	\$500	\$27	\$1,497	\$883	\$54	\$4,232
Income Eligible Residential SUBTOTAL	\$46,128	\$986	\$943	\$1,277	\$1,113	\$5	\$1,554	\$1,373	\$585	\$498	\$1,913	\$91	\$5,634	\$504	\$11,279	\$3,179	\$278	\$14,916
Commercial & Industrial																		
Large Commercial New Construction	\$42,005	\$1,299	\$1,027	\$1,666	\$1,451	\$5	\$2,963	\$1,948	\$2,099	\$1,148	\$3,554	\$355	\$0	\$0	\$3,991	\$3,955	\$200	\$16,344
Large Commercial Retrofit	\$306,734	\$13,405	\$14,218	\$17,702	\$15,422	\$72	\$16,280	\$11,456	\$12,295	\$6,973	\$25,860	-\$6,657	\$0	\$67	\$22,317	\$19,490	\$571	\$137,264
Small Business Direct Install	\$35,685	\$1,076	\$1,191	\$1,441	\$1,256	\$6	\$2,447	\$1,326	\$2,085	\$945	\$4,094	-\$834	\$0	\$0	\$3,173	\$2,939	\$91	\$14,449
C&I SUBTOTAL	\$384,424	\$15,779	\$16,436	\$20,809	\$18,128	\$84	\$21,690	\$14,730	\$16,479	\$9,066	\$33,508	-\$7,136	\$0	\$67	\$29,480	\$26,384	\$862	\$168,057
TOTAL	\$576,038	\$20,955	\$25,690	\$27,534	\$23,987	\$134	\$31,941	\$21,612	\$20,501	\$11,517	\$50,536	-\$8,516	\$19,981	\$1,676	\$46,161	\$41,781	\$1,941	\$238,610

Table E-6A
National Grid
Summary of 2020 Impacts by Program (Energy Efficiency Measures)

	Load Reduction in kW		Electric Energy Savings				Gas Saved		Oil Saved		Propane Saved		Total Net Adjusted Savings	
	Summer	Winter	MWh		MMBtu		MMBtu		MMBtu		MMBtu		MMBtu	
			Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime	Annual	Lifetime
Non-Income Eligible Residential														
Residential New Construction	90	253	966	15,546	3,297	53,042	-	-	122	3,061	1,275	31,882	4,695	87,985
ENERGY STAR® HVAC	368	507	1,286	17,072	4,388	58,251	3,682	55,333	5,037	88,316	1,151	19,868	14,258	221,768
EnergyWise	1,041	1,147	6,210	22,567	21,190	77,000	-	-	34,252	626,672	554	7,942	55,995	711,614
EnergyWise Multifamily	242	497	2,943	29,289	10,042	99,933	-	-	1,235	25,475	-	-	11,276	125,408
Home Energy Reports	3,625	4,966	23,239	23,239	79,292	79,292	-	-	-	-	-	-	79,292	79,292
ENERGY STAR® Lighting	5,177	5,188	37,627	193,291	128,384	659,508	(42,293)	(211,467)	(25,708)	(128,539)	(6,634)	(33,171)	53,748	286,331
Residential Consumer Products	700	596	3,934	27,857	13,423	95,047	87	1,598	76	1,520	461	3,226	14,047	101,392
Non-Income Eligible Residential SUBTOTAL	11,245	13,154	76,206	328,861	260,015	1,122,073	(38,524)	(154,536)	15,013	616,506	(3,193)	29,747	233,312	1,613,789
Income Eligible Residential														
Single Family - Income Eligible Services	832	477	3,343	39,327	11,405	134,185	938	11,317	11,921	225,945	290	3,579	24,554	375,026
Income Eligible Multifamily	169	333	2,451	28,636	8,364	97,706	-	-	1,113	21,923	-	-	9,477	119,629
Income Eligible Residential SUBTOTAL	1,001	810	5,794	67,963	19,769	231,891	938	11,317	13,034	247,868	290	3,579	34,031	494,656
Commercial & Industrial														
Large Commercial New Construction	1,090	737	9,403	141,540	32,084	482,934	2,613	41,712	-	-	-	-	34,697	524,646
Large Commercial Retrofit	15,107	17,238	71,116	815,711	254,431	3,018,898	(61,393)	(782,610)	-	-	-	-	193,038	2,236,288
Small Business Direct Install	1,264	1,081	10,803	118,399	36,858	403,979	(8,901)	(97,429)	-	-	-	-	27,957	306,550
C&I SUBTOTAL	17,461	19,057	91,321	1,075,650	323,374	3,905,811	(67,682)	(838,328)	-	-	-	-	255,692	3,067,483
TOTAL	29,707	33,021	173,322	1,472,474	603,158	5,259,775	(105,267)	(981,546)	28,047	864,374	(2,903)	33,326	523,035	5,175,928

Table E-6B
National Grid
Summary of 2020 Demand Response Benefits and Savings

	Benefits (000's)												Load Reduction (KW)	MWh Saved	
	Total	Capacity					Energy			Non Electric	Societal		Summer	Annual	Lifetime
		Summer Generation	Capacity DRIPE	Trans	Dist	Reliability	Summer		Energy DRIPE	Non Resource	Carbon	Economic			
							Peak	Off Peak							
Non-Income Eligible Residential															
Residential ConnectedSolu	\$1,888	\$50	\$1,082	\$189	\$165	\$23	\$0	\$0	\$0	\$0	\$0	\$378	1,746	8	8
Commercial & Industrial															
Commercial ConnectedSo	\$27,580	\$527	\$11,368	\$5,313	\$4,628	\$644	\$0	\$0	\$0	\$0	\$0	\$5,100	49,000	0	0
TOTAL	\$29,468	\$577	\$12,449	\$5,502	\$4,793	\$667	\$0	\$0	\$0	\$0	\$0	\$5,479	50,746	8	8

Table E-7
National Grid
Comparison of 2020 and 2019 Goals and Tracking

	Proposed 2020 Goal		Proposed 2020 Tracking			Approved 2019			Difference		
	Net Adjusted Lifetime Energy Savings (MMBtu)	Demand Response (kW)	Annual Summer Demand Savings (kW)	Annual Energy Savings (MWh)	Planned Unique Participants	Annual Summer Demand Savings (kW)	Annual Energy Savings (MWh)	Demand Response (kW)	Annual Summer Demand Savings (kW)	Annual Energy Savings (MWh)	Demand Response (kW)
Non-Income Eligible Residential											
Residential New Construction	87,985		90	966	550	112	756		-21	210	
ENERGY STAR® HVAC	221,768		368	1,286	2,187	590	2,710		-222	-1,424	
EnergyWise	711,614		1,041	6,210	10,250	1,287	8,182		-246	-1,971	
EnergyWise Multifamily	125,408		242	2,943	4,000	283	3,593		-40	-650	
Home Energy Reports	79,292		3,625	23,239	291,149	4,278	24,130		-652	-891	
ENERGY STAR® Lighting	286,331		5,177	37,627	236,810	6,681	48,381		-1,504	-10,754	
Residential Consumer Products	101,392		700	3,934	13,359	668	3,925		32	9	
Residential ConnectedSolutions		1,746						1,564			182
Non-Income Eligible Residential SUBTOTAL	1,613,789	1,746	11,245	76,206	558,305	13,898	91,677	1,564	-2,653	-15,471	182
Income Eligible Residential											
Single Family - Income Eligible Services	375,026		832	3,343	3,000	815	3,742		16	-399	
Income Eligible Multifamily	119,629		169	2,451	5,000	223	3,219		-54	-768	
Income Eligible Residential SUBTOTAL	494,656		1,001	5,794	8,000	1,039	6,961		-38	-1,167	
Commercial & Industrial											
Large Commercial New Construction	524,646		1,090	9,403	84	1,409	10,863		-319	-1,459	
Large Commercial Retrofit	2,236,288		15,107	71,116	2,610	12,558	73,013		2,549	-1,897	
Small Business Direct Install	306,550		1,264	10,803	617	1,213	12,163		51	-1,360	
Commercial ConnectedSolutions		49,000						34,300			14,700
C&I SUBTOTAL	3,067,483	49,000	17,461	91,321	3,311	15,180	96,038	34,300	2,281	-4,717	14,700
TOTAL	5,175,928	50,746	29,707	173,322	569,615	30,117	194,677	35,864	-411	-21,355	14,882

Notes:

- (1) Planned 2020 participation takes into account net-to-gross and estimates unique participation by taking into account 2018 unique customer accounts to savings ratios. Therefore the number of planned measures may be more than the estimated participants shown. For measure counts please view the widget tables in Attachments 1 and 2. Table E-7 no longer includes a comparison to the previous year's participation. Due to the way unique participation is calculated it is not possible to compare year-over-year results.
- (2) There are additional Low Income participants in Residential New Construction.
- (3) A customer can participate in more than one program, for example, ENERGY STAR® Lighting and Home Energy Reports, therefore the population reached can be more than 100%.

**Table E-8
National Grid
Avoided Costs Used in 2020 Benefit-Cost Model**

	Rhode Island					DRIPE for Installations in 2020				
	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Annual Market Capacity Value Weighted Avg	Winter Peak Energy	Winter Off-Peak Energy	Summer Peak Energy	Summer Off-Peak Energy	Annual Market Capacity Value Weighted Avg
Units:	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kW-yr	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kW-yr
Period:										
2020	0.063	0.059	0.048	0.042	63.81	0.06	0.05	0.05	0.03	332.17
2021	0.065	0.060	0.055	0.046	51.78	0.07	0.05	0.06	0.04	59.86
2022	0.061	0.055	0.051	0.041	49.75	0.07	0.05	0.06	0.04	45.25
2023	0.062	0.056	0.048	0.038	55.76	0.06	0.04	0.05	0.03	30.06
2024	0.066	0.062	0.047	0.043	61.53	0.05	0.04	0.04	0.03	7.96
2025	0.062	0.058	0.048	0.044	69.62	0.04	0.03	0.03	0.02	176.63
2026	0.062	0.058	0.052	0.046	79.39	0.03	0.02	0.02	0.02	240.53
2027	0.066	0.062	0.050	0.043	87.81	0.01	0.01	0.01	0.01	280.05
2028	0.068	0.060	0.054	0.044	93.94	0.01	0.01	0.01	0.00	275.09
2029	0.070	0.064	0.053	0.045	100.30					
2030	0.064	0.060	0.055	0.051	95.87					
2031	0.064	0.060	0.051	0.044	93.94					
2032	0.063	0.058	0.052	0.045	100.30					
2033	0.068	0.060	0.053	0.043	95.87					
2034	0.067	0.056	0.056	0.044	93.94					
2035	0.069	0.062	0.062	0.053	100.30					
2036	0.071	0.062	0.066	0.056	101.96					
2037	0.072	0.063	0.069	0.058	103.64					
2038	0.074	0.064	0.073	0.061	105.35					
2039	0.075	0.065	0.077	0.064	107.09					
2040	0.077	0.066	0.081	0.067	108.86					
2041	0.079	0.067	0.086	0.071	110.66					
2042	0.081	0.068	0.091	0.075	112.49					
2043	0.084	0.069	0.096	0.079	114.34					
2044	0.086	0.071	0.102	0.083	116.23					
2045	0.089	0.073	0.108	0.088	118.15					
2046	0.092	0.074	0.115	0.093	120.10					
2047	0.095	0.077	0.122	0.098	122.09					
2048	0.099	0.079	0.130	0.104	124.10					
2049	0.103	0.082	0.138	0.111	126.15					
2050	0.108	0.086	0.147	0.118	128.23					

Source:
AESC 2018 Study , Appendix B, in 2018 dollars

Table E-9
National Grid
2020 Targeted Shareholder Incentive

Energy Incentive Rate: 5.50%

Sector	(1) Spending Budget \$(000)	(2) Target Incentive \$(000)	(3) Lifetime Adjusted Net MMBtu Savings Goal	(4) Threshold Lifetime Adjusted Net MMBtu Savings	(5) Target Incentive Per Adjusted Lifetime Net MMBtu
Income Eligible Residential	\$15,979	\$879	494,656	370,992	\$1.777
Non-Income Eligible Residential	\$44,331	\$2,438	1,613,789	1,210,342	\$1.511
Commercial & Industrial	\$43,299	\$2,381	3,067,483	2,300,612	\$0.776
Total	\$103,609	\$5,698	5,175,928	3,881,946	\$1.101

Notes:

(1) Eligible Spending Budget excludes Commitments, Regulatory Costs, Pilots, and Shareholder Incentive. See Table E-3 for details.

(2) Equal to the incentive rate (5.5%) x Column (1).

(3) See Table E-7

(4) 75% of Column (3). No incentive is earned on Lifetime Adjusted Net MMBtu savings savings in the sector unless the Company achieves at least this threshold level of performance.

(5) Column (2)*1000/Column (3). This illustration is for achieved savings equal to the savings target. The incentive earned per adjusted net lifetime MMBtu will vary with the percent of the savings target achieved.

The shareholder incentive will be calculated as follow, where SB is the Spending Budget in the sector:

- From 75% of savings to 100% of savings: Shareholder Incentive = SB x (1.25% + (% of Savings Achieved - 75%) x 0.17)
- From 100% of savings to 125% of savings: Shareholder Incentive = SB x (5.50% + (% of Savings Achieved - 100%) x 0.05)
- At 125% of savings, Shareholder Incentive is capped at 6.75% of SB

**Table E-10
National Grid
Revolving Loan Fund Projections**

Large C&I Revolving Loan Fund		Small Business Revolving Loan Fund	
(1) Total Loan Fund Deposits Through 2019	\$ 18,866,990	(1) Total Loan Fund Deposits Through 2019	\$ 5,770,521
(2) Current Loan Fund Balance	\$ 9,250,283	(2) Current Loan Fund Balance	\$ 4,282,188
<i>Loans Paid Year-To-Date</i>	\$ 415,833	<i>Loans Paid Year-To-Date</i>	\$ 628,274
<i>Repayments Year-To-Date</i>	\$ 2,578,891	<i>Repayments Year-To-Date</i>	\$ 962,129
(3) Projected Additional Loans by Year End 2019	\$ 10,655,003	(3) Projected Additional Loans by Year End 2019	\$ 1,100,000
(4) Projected Additional Repayments by Year End 2019	\$ 3,610,448	(4) Projected Additional Repayments by Year End 2019	\$ 1,346,980
(5) Projected Year End Loan Fund Balance 2019	\$ 2,205,728	(5) Projected Year End Loan Fund Balance 2019	\$ 4,529,169
(6) 2020 Fund Injection	\$ 2,000,000	(6) 2020 Fund Injection	\$ -
(7) Projected Loan Fund Balance, January 2020	\$ 4,205,728	(7) Projected Loan Fund Balance, January 2020	\$ 4,529,169
(8) Projected Repayments throughout 2020	\$ 6,120,000	(8) Projected Repayments throughout 2020	\$ 2,400,000
(9) Estimated Loans in 2020	\$ 8,000,000	(9) Estimated Loans in 2020	\$ 3,000,000
(10) Projected Year End Loan Fund Balance 2020	\$ 2,325,728	(10) Projected Year End Loan Fund Balance 2020	\$ 3,929,169
Public Sector Revolving Loan Fund		Efficient Buildings Fund	
(1) Total Loan Fund Deposits Through 2019	\$ 516,471	(1) Energy Efficiency Funds allocated to EBF through 2018	\$ 11,870,447
(2) Current Loan Fund Balance	\$ 184,252	(2) Total EBF Loans Outstanding	\$ 15,587,000
<i>Funds returned to OER</i>	\$ -	<i>Loans Paid Year-To-Date</i>	\$ -
<i>Repayments Year-To-Date</i>	\$ 118,120	<i>Repayments Year-To-Date</i>	\$ 880,890
(3) Projected Additional Loans by Year End	\$ -	(3) Projected Additional Loans by Year End 2018	\$ 5,700,000
(4) Projected Additional Repayments by Year End	\$ 165,369	(4) Projected Additional Repayments by Year End 2018	\$ -
(5) Projected Year End Loan Fund Balance 2019	\$ 349,621	(5) Total EBF Loans Outstanding	\$ 20,406,110
(6) 2020 Fund Injection	\$ -	(6) 2019 Fund Injection	\$ 5,000,000
(7) Projected Loan Fund Balance, January 2020	\$ 349,621	(7) 2019 Beginning of Year EBF Loans Outstanding	\$ 20,406,110
(8) Projected Repayments throughout 2020	\$ 280,000	(8) Projected EBF Loan Repayments in 2019	\$ 1,183,360
(9) Estimated Loans in 2020	\$ -	(9) New EBF loans in 2019	\$ 15,000,000
(10) Projected Year End Loan Fund Balance 2020	\$ 629,621	(10) Projected Year End 2019 EBF Loans Outstanding	\$ 34,222,750
		(11) Energy Efficiency Funds allocated to EBF through 2019	\$ 16,870,447
		(12) Loans to Energy Efficiency Fund Contribution Ratio	2.0

Notes

- 1 Funding injections since loan funds began. Net of any adjustments.
- 2 Current Loan Fund Balance is through May 2019; it includes all loans and repayments made by May 2019. Public Sector Revolving Loan Fund reduced by transfers to RI PEP Incentives. EBF reports in terms of loans outstanding.
- 3 Projected Loans from May to Year-End 2019 is estimated based on projects currently under construction that are anticipated to be paid out by year-end. It is difficult to project this amount accurately due to the fact that projects could be delayed by a month or two resulting in payment occurring in 2020 instead of 2019.
- 4 Projected Repayments from May to Year-End 2019 is estimated based on the monthly average amount of repayments. EBF only receives repayments one time per year so the projected repayments for all of 2018 are included in line (2).
- 5 Equal to (2) - (3) + (4). EBF equal to (2) - (repayments YTD) + (3).
- 6 Proposed 2019 Fund Injection detailed on Table E-2
- 7 Equal to (5) + (6). EBF equal to line (5).
- 8 Assumption based on monthly average repayments in 2019 over 12 month period; repayments accumulate over time and may vary widely.
- 9 Amount projected to be lent to customers in 2020
- 10 Equal to (7) + (8) - (9). EBF equal to (7) - (8) + (9).
- 11 The proposed fund injections of \$2,000,000 to the Large C&I Revolving Loan Fund and \$5,000,000 to the Efficiency Buildings Fund are being reviewed and may be adjusted prior to final submission.
- 12 The Efficiency Buildings Fund Projection will be updated in a later draft.