

CASCADE NATURAL GAS CORPORATION

2018 Program Participant Cost Effectiveness Estimate Summary excluding NEEA Market Transformation Expenses

PROGRAM	Participants	TOTAL ANNUAL THERM SAVINGS	TOTAL INCREMENTAL COSTS	NON-ENERGY BENEFITS	WEIGHTED MEASURE LIFE	DISCOUNTED THERM SAVINGS	PROGRAM DELIVERY & ADMIN	TOTAL PROGRAM REBATE	PROGRAM UTILITY COST	UC W/DELIVERY & ADMIN	BENEFIT COST RATIO		PROGRAM TOTAL RESOURCE COST	TRC W/DELIVERY & ADMIN	BENEFIT COST RATIO
RESIDENTIAL (includes units of insulation)	3,397	420,639	\$ 4,042,846	\$ 1,226,717	24.31	5,810,889	\$ 727,238	\$ 2,509,800	\$ 0.432	\$ 0.557	2.367		\$ 0.485	\$ 0.610	1.880
COMMERCIAL	336	345,999	\$ 2,428,353	\$ 880,895	19.71	4,326,806	\$ 1,044,109	\$ 908,818	\$ 0.210	\$ 0.451	2.351		\$ 0.358	\$ 0.599	1.574
TOTAL	3,733	766,638	\$ 6,471,199	\$ 2,107,612	22.23	10,137,695	\$ 1,771,347	\$ 3,418,618	\$ 0.337	\$ 0.512	2.360		\$ 0.430	\$ 0.605	1.742

PROGRAM	MEASURES	TOTAL ANNUAL THERM SAVINGS	TOTAL INSTALLED COSTS	NON-ENERGY BENEFITS	WEIGHTED MEASURE LIFE	DISCOUNTED THERM SAVINGS	PROGRAM DELIVERY & ADMIN	TOTAL PROGRAM REBATE	PROGRAM UTILITY COST	UC W/DELIVERY & ADMIN	BENEFIT COST RATIO		PROGRAM TOTAL RESOURCE COST	TRC W/DELIVERY & ADMIN	BENEFIT COST RATIO
LOW INCOME	91	5,181	\$ 247,257	\$ 20,646	41.54	86,447	\$ 64,675	\$ 234,667	\$ 2.715	\$ 3.463	0.648		\$ 2.621	\$ 3.370	0.555

Nominal interest rate (post tax cost of cap.)	4.43%
Inflation rate	2.00%
Long term real discount rate	4.43%
NEEA Market Transformation Expenses 2016	\$452,211
Nexant Software Implementation	\$20,893

The Company devised an intuitive and focused approach to measuring non-energy benefits for our Commercial and Residential program measures. Note the Low Income program uses a blanket 10 percent adder for yearly achievements.

2018 Program Participant Cost Effectiveness Estimate Summary including NEEA Market Transformation and Nexant Software Implementation Expenditures

PROGRAM	UNITS	TOTAL ANNUAL THERM SAVINGS	TOTAL INCREMENTAL COSTS	NON-ENERGY BENEFITS	WEIGHTED MEASURE LIFE	DISCOUNTED THERM SAVINGS	PROGRAM DELIVERY & ADMIN W/ NEEA	TOTAL PROGRAM REBATE	PROGRAM UTILITY COST	UC W/DELIVERY & ADMIN	BENEFIT COST RATIO		PROGRAM TOTAL RESOURCE COST	TRC W/DELIVERY & ADMIN	BENEFIT COST RATIO
RESIDENTIAL (includes units of insulation)	3,397	420,639	\$ 4,042,846	\$ 1,226,717	24	5,810,889	\$ 748,131	\$ 2,509,800	\$ 0.432	\$ 0.561	2.352		\$ 0.485	\$ 0.613	1.869
COMMERCIAL	336	345,999	\$ 2,428,353	\$ 880,895	20	4,326,806	\$ 1,044,109	\$ 908,818	\$ 0.210	\$ 0.451	2.351		\$ 0.358	\$ 0.599	1.574
TOTAL	3,733	766,638	\$ 6,471,199	\$ 2,107,612	22	10,137,695	\$ 2,223,558	\$ 3,418,618	\$ 0.337	\$ 0.557	1.254		\$ 0.430	\$ 0.650	0.862