BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U 338 E) for adoption of its Energy Efficiency Rolling Portfolio Business Plan and related relief.

And Related Matters

Application 17-01-013 (Filed January 17, 2017)

Application 17-01-014 Application 17-01-015 Application 17-01-016 Application 17-01-017 (CONSOLIDATED)

COMPLIANCE FILING OF ATTACHMENT A METRICS OF THE COUNTY OF VENTURA ON BEHALF OF 3C-REN

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For the 3C-REN

Date: August 6, 2018

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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Company (U	338	E) for add	option of i	ts Energy
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Pursuant to the May 31, 2018 California Public Utilities Commission's (CPUC or Commission) decision D.08.05.041, the County of Ventura for itself and on behalf of the 3C-REN, respectfully submits the requested sector-level data for the Attachment A - Adopted Common Metrics for Energy Efficiency Business Plans.

I. 3C-REN Business Plan Metrics

3C-REN appreciates the opportunity to submit this updated set of metrics, targets, and indicators, included herein as Attachment A. 3C-REN endeavored to develop targets that are accurate and reflective of available data. 3C-REN Plan Metrics provides information on how the targets were developed and what assumptions were used. 3C-REN sees this filing as a non-static document, that all PAs, and Commission staff will continually strive to improve over the long-term course of the rolling portfolio.

II. Conclusion

3C-REN appreciates the opportunity to provide its Metrics, as required by the Decision.

Dated: August 6, 2018

Respectfully submitted,

/s/ Alejandra Tellez

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Tri-County Regional Energy Network (3C-REN) - Energy Efficiency Sector Metrics with Targets

Attachment A

Tri-County Regional Energy Network (3C-REN) - Energy Efficiency Sector Metrics with Targets

Attachment A - Table of Contents

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C. Definitions	30

Energy Division Template

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nroadch	AttA AttA Metho	od Units of		Metric/			Pacalina	Pacalina	Pacalina	Pacalina	_		ı	Mid Torm Torgot	l ong Torm Torgot				
et Index <u>PA</u>	Atta Atta Metho A Page Order Code	Measurement	Metric Type	Indicator	Business Plan Att A Description Metric	Sector	Year	Numerator	Denominat _	Number	<u>2018</u>	hort Term Targe 2019	et <u>2020</u>	Mid Term Target (2021-2023)	(2024-2025)	· 	Methodology	Key Definitions	Proxy Explanatio
3C- REN	A03 PL1 G	MT CO2eq GH	G	Metric	RSF2-G••Greenhouse gasses (MT CO2eq) Net kWh CO2-equivalent of net annual kWh savings savings, reported on an annual basis••	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	22	231	422	588	Per CEDARS		None	
3C- REN	A02 PL1 S1	annual kW	Energy Savings	Metric	PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net).	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	157,514	201,312	436,572	652,340	Per CEDARS		None	
3C- REN		gross First year S1: annual kW net	Energy Savings	Metric	PL1-S1- First year annual and lifecycle ex-ante First year annual kW net (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	141,762	181,181	392,915	587,106	Per CEDARS		None	
3C- REN	A02 PL1 S1	First year S1: annual kWh	Energy Savings	Metric	and net) • • PL1-S1- First year annual and lifecycle ex-ante	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	522,080	709,420	1,442,144	2,116,750	Per CEDARS		None	
3C- REN		gross First year S1: annual kWh net	Energy Savings	Metric	and net)•• PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	611,247	819,137	1,689,721	2,490,460	Per CEDARS		None	
3C- REN		First year S1:	Energy Savings	Metric	and net)•• PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	54,732	73,672	158,529	242,923	Per CEDARS		None	
3C-	A02 PL1 S1	gross First year S1:	Energy Savings	Metric	and net)•• PL1-S1- First year annual and lifecycle ex-ante First year annual Therm net	Portfolio Level (PL)– All	2019	N/A	N/A	N/A	N/A	49,259	66,305	142,676	218,630	Per CEDARS		None	
3C- REN	A02 PL1 S1	annual Therm net Lifecycle ex- S1: ante kW gross	Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) • • PL1-S1- First year annual and lifecycle ex-ante	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	5,826	7,847	17,015	33,479	Per CEDARS		None	
3C- REN	A02 PL1 S1		Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) • • PL1-S1- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric and demand savings (gross)	Portfolio Level (PL)– All	2019	N/A	N/A	N/A	N/A	4,952	6,670	14,463	28,457	Per CEDARS		None	
3C-	A02 PL1 S1	Lifecycle ex- S1:	Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) • • PL1-S1- First year annual and lifecycle ex-ante Lifecycle ex-ante kWh gross	Portfolio Level (PL)– All	2019	N/A	N/A	N/A	N/A	8,609,169	11,544,408	23,965,392	35,535,316	Per CEDARS		None	
REN O 3C-	A02 PL1 S1	•	Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) • • PL1-S1- First year annual and lifecycle ex-ante Lifecycle ex-ante kWh net	Portfolio Level (PL)— All	2019	N/A	N/A	N/A	N/A	7,748,252	10,389,967	21,568,852	31,981,784	Per CEDARS		None	
REN 3C-	A02 PL1 S1	•	Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) • • PL1-S1- First year annual and lifecycle ex-ante Lifecycle ex-ante Therm gross	Portfolio Level (PL)— All	2019	N/A	N/A	N/A	N/A	740,527	997,592	2,164,168	3,339,803	Per CEDARS		None	
REN 3C-	A02 PL1 S1	•	Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) • • PL1-S1- First year annual and lifecycle ex-ante	Sectors Portfolio Level (PL)— All	2019	N/A	N/A	N/A	N/A	666,474	897,832	1,947,751	3,005,823	Per CEDARS		None	
REN 3C-		ante Therm net First year S3:	DAC Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) • • PL2-S3- First year annual and lifecycle ex-ante First year annual kW gross in Disadvantaged	Sectors Portfolio Level (PL)— All	2019	N/A	N/A	N/A	N/A	24,645	31,495	68,303	102,055	Data pull from PA d	atabases; DAC zipcodes per CallnviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding	
REN 3C-	A02 PL2 S3	annual kW gross	DAC Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities PL2-S3- First year annual and lifecycle ex-ante	Sectors Portfolio Level (PL)– All	2019	N/A	N/A	N/A	N/A	22,181	28,346	61,473	91,850	Scores	atabases; DAC zipcodes per CalInviroScreen 3.0	to census tracts in the top quartile of CalEnviroScreen 3.0 scores. D.18-05-041: DAC = Service accounts in zip codes corresponding	
REN 3C-	A02 PL2 S3	annual kW net	DAC Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities ••	Sectors	2019	NI/A	NI/A	NI/A	N/A	,	39,594	80,489	118,141	Scores	atabases; DAC zipcodes per CalliviroScreen 3.0	to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
REN		annual kWh gross			(pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities • •	Sectors		IN/A	IN/A	IN/A	IN/A	29,139				Scores		D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN		annual kWh net	DAC Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities • •	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	48,378	63,944	133,834	198,057	Scores	atabases; DAC zipcodes per CalInviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL2 S3	First year S3: annual Therm gross	DAC Savings	Metric	PL2-S3- First year annual and lifecycle ex-ante First year annual Therm gross in (pre-evaluation) gas, electric, and demand savings (gross Disadvantaged Communities and net) in disadvantaged communities.	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	3,845	5,121	11,037	16,828	Data pull from PA d Scores	atabases; DAC zipcodes per CalInviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL2 S3	First year S3: annual Therm net	DAC Savings	Metric	PL2-S3- First year annual and lifecycle ex-ante First year annual Therm net in Disadvantaged (pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities.	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	3,461	4,609	9,933	15,145	Data pull from PA d Scores	atabases; DAC zipcodes per CallnviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL2 S3	Lifecycle ex- S3: ante kW gross	DAC Savings	Metric	PL2-S3- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities ••	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	402	537	1,164	2,188	Data pull from PA d Scores	atabases; DAC zipcodes per CalInviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL2 S3	Lifecycle ex- S3: ante kW net	DAC Savings	Metric	PL2-S3- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities ••	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	342	456	989	1,860	Data pull from PA d Scores	atabases; DAC zipcodes per CallnviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL2 S3	Lifecycle ex- S3: ante kWh gross	DAC Savings	Metric	PL2-S3- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities ••	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	670,665	887,323	1,864,574	2,770,730	Data pull from PA d Scores	atabases; DAC zipcodes per CallnviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL2 S3	Lifecycle ex- S3: ante kWh net	DAC Savings	Metric	PL2-S3- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Communities and net) in disadvantaged communities ••	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	603,598	798,591	1,678,117	2,493,657	Data pull from PA d Scores	atabases; DAC zipcodes per CalInviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL2 S3	Lifecycle ex- S3: ante Therm	DAC Savings	Metric	PL2-S3- First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Disadvantaged Communities and net) in disadvantaged communities.	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	50,815	67,793	147,055	225,633	Data pull from PA d Scores	atabases; DAC zipcodes per CallnviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL2 S3	Lifecycle ex- S3: ante Therm net	DAC Savings	Metric	PL2-S3- First year annual and lifecycle ex-ante Lifecycle ex-ante Therm net in Disadvantaged (pre-evaluation) gas, electric, and demand savings (gross Communities	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	45,734	61,013	132,350	203,069	Data pull from PA d Scores	atabases; DAC zipcodes per CalInviroScreen 3.0	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.	
3C- REN	A02 PL3 S4	annual kW mai	Hard to reach rkets	Metric	(pre-evaluation) gas, electric, and demand savings (gross Markets	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	132,868	169,817	368,270	550,284	Data pull from PA d Census data	atabases; HTR zipcodes from CALEPA and 2016	D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated by CalERA) in the geographic criteria for hard to reach	
3C- REN	A02 PL3 S4	gross First year S4: annual kW net mai	Hard to reach rkets	Metric	and net) in hard-to-reach markets • PL3-S4 - First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Markets	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	119,582	152,835	331,443	495,256	Data pull from PA d Census data	atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated	
3C- REN	A02 PL3 S4	annual kWh mai	Hard to reach	Metric	and net) in hard-to-reach markets • • PL3-S4 - First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Markets	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	492,942	669,826	1,361,654	1,998,608	Data pull from PA d	atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated	
3C- REN	A02 PL3 S4	gross First year S4: annual kWh net mai	Hard to reach	Metric	and net) in hard-to-reach markets PL3-S4 - First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	562,869	755,193	1,555,887	2,292,403	Data pull from PA d	atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated	
3C- REN	A02 PL3 S4	First year S4: annual Therm mai	Hard to reach	Metric	and net) in hard-to-reach markets • • PL3-S4 - First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	50,887	68,550	147,492	226,095	Data pull from PA d	atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated	
3C- REN	A02 PL3 S4	gross First year S4: annual Therm mai	Hard to reach	Metric	and net) in hard-to-reach markets • • PL3-S4 - First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	45,798	61,695	132,743	203,485	Data pull from PA d Census data	atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated	
3C- REN	A02 PL3 S4	net	Hard to reach	Metric	and net) in hard-to-reach markets • • PL3-S4 - First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	5,423	7,310	15,851	31,290		atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated	
3C- REN	A02 PL3 S4		Hard to reach	Metric	and net) in hard-to-reach markets • • PL3-S4 - First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	4,610	6,213	13,473	26,597		atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated	
3C- REN	A02 PL3 S4		Hard to reach	Metric	and net) in hard-to-reach markets • • PL3-S4 - First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Portfolio Level (PL)— All Sectors	2019	N/A	N/A	N/A	N/A	7,938,504	10,657,084	22,100,818	32,764,586		atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated	
3C- REN	A02 PL3 S4		Hard to reach	Metric	and net) in hard-to-reach markets•• PL3-S4 - First year annual and lifecycle ex-ante Lifecycle ex-ante kWh net	Portfolio Level (PL)– All Sectors	2019	N/A	N/A	N/A	N/A	7,144,654	9,591,376	19,890,736	29,488,128		atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497,	
3C-	A02 PL3 S4	Lifecycle ex- S4:	Hard to reach	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) in hard-to-reach markets ● PL3-S4 - First year annual and lifecycle ex-ante	Portfolio Level (PL)– All	2019	N/A	N/A	N/A	N/A	689,712	929,799	2,017,112	3,114,171	Data pull from PA d	atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497,	
REN 3C-	A02 PL3 S4	gross Lifecycle ex- S4:	Hard to reach	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) in hard-to-reach markets PL3-S4 - First year annual and lifecycle ex-ante Lifecycle ex-ante Therm net	Portfolio Level (PL)– All	2019	N/A	N/A	N/A	N/A	620,740	836,819	1,815,401	2,802,754	•	atabases; HTR zipcodes from CALEPA and 2016	by CalEPA) in the geographic criteria for hard to reach D.18-05-041 p. 43 - HTR as defined in Resolution G-3497,	
REN 3C-	A02 PL4 LC		rkets st per unit saved	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) in hard-to-reach markets•• PL4-LC - Levelized cost of energy efficiency per kWh, PAC Levelized Cost (\$/kW)	Sectors Portfolio Level (PL)— All	2019	N/A	N/A	N/A	N/A	\$23.58	\$23.27	\$24.43	\$23.43	Census data Per CEDARS		modified to "include disadvantaged communities (as designated by CalEPA) in the geographic criteria for hard to reach None	
REN	A02 PL4 LC	Cost (\$/kW) PAC Levelized Cos	st per unit saved	Metric	therm and kW (use both TRC and PAC)•• PL4-LC - Levelized cost of energy efficiency per kWh, PAC Levelized Cost (\$/kWh)	Sectors Portfolio Level (PL)— All	2019	N/A	N/A	N/A	N/A	\$0.23	\$0.17	\$0.09	\$0.05	Per CEDARS		None	

3C- A02 REN 3C- A03 REN A03	PL4 LC PL4 LC PL4 LC RSF1 S1	PAC Levelized Cost (\$/therm) TRC Levelized Cost (\$/kW) TRC Levelized Cost (\$/kWh) TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kW net First year annual kWh gross First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kW net Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq	Cost per unit saved Cost per unit saved Cost per unit saved Cost per unit saved S1: Energy Savings	Metric	therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-	TRC Levelized Cost (\$/kWh) TRC Levelized Cost (\$/kWh) TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kW net First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net	Portfolio Level (PL)— All Sectors Residential (RSF) Residential (RSF)	Year 2019 2019 2019 2019 2019 2019 2019 2019	N/A	N/A	N/A N/A N/A N/A N/A N/A N/A N/A	2018 N/A	2019 \$2.18 \$30.55 \$0.27 \$1.28 367 331 522,016 469,815 46,891 42,202 5,059 4,300 6,723,410	2020 \$1.64 \$32.10 \$0.20 \$1.04 499 449 709,338 638,404 63,656 57,290 6,867 5,837	\$0.92 \$40.68 \$0.12 \$0.72 1,071 964 1,441,967 1,297,770 136,812 123,131 14,890	\$0.59 \$44.27 \$0.08 \$0.55 1,647 1,482 2,116,485 1,904,836 210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS	None None None None None None None None
REN 3C- A02 REN 3C- A03 REN	PL4 LC PL4 LC PL4 LC RSF1 S1 RSF2 G RSF3 D1-D	Cost (\$/therm) TRC Levelized Cost (\$/kW) TRC Levelized Cost (\$/kWh) TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kWh gross First year annual kWh gross First year annual Therm gross First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kW net Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm net Lifecycle ex- ante Therm net MT CO2eq	Cost per unit saved Cost per unit saved Sost p	Metric	therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-	TRC Levelized Cost (\$/kW) TRC Levelized Cost (\$/kWh) TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kW net First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Sectors Portfolio Level (PL)— All Sectors Portfolio Level (PL)— All Sectors Portfolio Level (PL)— All Sectors Residential (RSF)	2019 2019 2019 2019 2019 2019 2019 2019	N/A	N/A N/A	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A	\$30.55 \$0.27 \$1.28 367 331 522,016 469,815 46,891 42,202 5,059 4,300 6,723,410	\$32.10 \$0.20 \$1.04 499 709,338 638,404 63,656 57,290 6,867	\$40.68 \$0.12 \$0.72 1,071 964 1,441,967 1,297,770 136,812 123,131 14,890 12,656	\$44.27 \$0.08 \$0.55 1,647 1,482 2,116,485 1,904,836 210,488 189,439 30,304 25,758	Per CEDARS	None None None None None None None None
REN 3C- A02 REN 3C- A02 REN 3C- A03	PL4 LC PL4 LC RSF1 S1 RSF2 G RSF3 D1-D	Cost (\$/kW) TRC Levelized Cost (\$/kWh) TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kWh gross First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kW net Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm net MT CO2eq Lifecycle NET kW	Cost per unit saved Cost per unit saved S1: Energy Savings	Metric	therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings	TRC Levelized Cost (\$/kWh) TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kW net First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh net Lifecycle ex-ante kWh net Lifecycle ex-ante kWh net	Sectors Portfolio Level (PL)— All Sectors Portfolio Level (PL)— All Sectors Residential (RSF)	2019 2019 2019 2019 2019 2019 2019 2019	N/A	N/A N/A	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A	\$0.27 \$1.28 367 331 522,016 469,815 46,891 42,202 5,059 4,300 6,723,410	\$0.20 \$1.04 499 449 709,338 638,404 63,656 57,290 6,867	\$0.12 \$0.72 1,071 964 1,441,967 1,297,770 136,812 123,131 14,890	\$0.08 \$0.55 1,647 1,482 2,116,485 1,904,836 210,488 189,439 30,304	Per CEDARS	None None None None None None None None
REN 3C- A02 REN 3C- ROSS REN 3C	PL4 LC RSF1 S1 RSF2 G RSF3 D1-D	Cost (\$/kWh) TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kWh gross First year annual kWh gross First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	Cost per unit saved S1: Energy Savings G1: Energy Savings S1: Energy Savings S1: Energy Savings	Metric	therm and kW (use both TRC and PAC) PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ant	TRC Levelized Cost (\$/kWh) TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kWh gross First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Portfolio Level (PL)— All Sectors Portfolio Level (PL)— All Sectors Residential (RSF)	2019 2019 2019 2019 2019 2019 2019 2019	N/A N/A N/A N/A N/A N/A	N/A N/A	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A	\$1.28 367 331 522,016 469,815 46,891 42,202 5,059 4,300 6,723,410	\$1.04 499 449 709,338 638,404 63,656 57,290 6,867	\$0.72 1,071 964 1,441,967 1,297,770 136,812 123,131 14,890 12,656	\$0.55 1,647 1,482 2,116,485 1,904,836 210,488 189,439 30,304 25,758	Per CEDARS	None None None None None None None None
3C- A02 REN	RSF1 S1 RSF2 G RSF3 D1-D	TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kWh gross First year annual kWh gross First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kW net Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm net Lifecycle ex- ante Therm net MT CO2eq Lifecycle NET kW	S1: Energy Savings G1: Energy Savings S1: Energy Savings S1: Energy Savings	Metric	PL4-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers •	TRC Levelized Cost (\$/therm) First year annual kW gross First year annual kWh gross First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Portfolio Level (PL)— All Sectors Residential (RSF)	2019 2019 2019 2019 2019 2019 2019 2019	N/A N/A N/A N/A N/A N/A	N/A N/A	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A	367 331 522,016 469,815 46,891 42,202 5,059 4,300 6,723,410	499 449 709,338 638,404 63,656 57,290 6,867 5,837	1,071 964 1,441,967 1,297,770 136,812 123,131 14,890 12,656	1,647 1,482 2,116,485 1,904,836 210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS Per CEDARS Per CEDARS Per CEDARS Per CEDARS	None None None None None None None
3C- A02 REN	RSF1 S1	First year annual kW gross First year annual kW net First year annual kWh gross First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm net MT CO2eq	S1: Energy Savings G1: Energy Savings S1: Energy Savings S1: Energy Savings S1: Energy Savings	Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•	First year annual kW net First year annual kW net First year annual kWh gross First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh net Lifecycle ex-ante kWh gross	Residential (RSF)	2019 2019 2019 2019 2019 2019 2019 2019	N/A N/A N/A N/A N/A N/A	N/A N/A	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A	331 522,016 469,815 46,891 42,202 5,059 4,300 6,723,410	449 709,338 638,404 63,656 57,290 6,867 5,837	964 1,441,967 1,297,770 136,812 123,131 14,890 12,656	1,482 2,116,485 1,904,836 210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS Per CEDARS Per CEDARS Per CEDARS	None None None None None None
REN 3C- A02 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN	RSF1 S1	annual kW gross First year annual kW net First year annual kWh gross First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kW net Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante herm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm net MT CO2eq Lifecycle NET kW	S1: Energy Savings G1: Energy Savings S1: Energy Savings S1: Energy Savings S1: Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • •	First year annual kWh gross First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kWh net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Residential (RSF)	2019 2019 2019 2019 2019 2019 2019 2019	N/A N/A N/A N/A N/A N/A	N/A N/A	N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A	331 522,016 469,815 46,891 42,202 5,059 4,300 6,723,410	449 709,338 638,404 63,656 57,290 6,867 5,837	964 1,441,967 1,297,770 136,812 123,131 14,890 12,656	1,482 2,116,485 1,904,836 210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS Per CEDARS Per CEDARS Per CEDARS	None None None None None None
REN 3C- A02 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN	RSF1 S1	First year annual kW net First year annual kWh gross First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings G1: Energy Savings S1: Energy Savings S1: Energy Savings	Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers••	First year annual kWh gross First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019 2019 2019 2019	N/A N/A N/A N/A	N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A	469,815 46,891 42,202 5,059 4,300 6,723,410	709,338 638,404 63,656 57,290 6,867	1,441,967 1,297,770 136,812 123,131 14,890 12,656	2,116,485 1,904,836 210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS Per CEDARS Per CEDARS	None None None None None
REN 3C- A02 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN	RSF1 S1	annual kW net First year annual kWh gross First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kW net Lifecycle ex- ante kWh net Lifecycle ex- ante kWh met Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne	S1: Energy Savings G1: Energy Savings S1: Energy Savings S1: Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • •	First year annual kWh gross First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019 2019 2019 2019	N/A N/A N/A N/A	N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A	469,815 46,891 42,202 5,059 4,300 6,723,410	709,338 638,404 63,656 57,290 6,867	1,441,967 1,297,770 136,812 123,131 14,890 12,656	2,116,485 1,904,836 210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS Per CEDARS Per CEDARS	None None None None None
REN 3C- A02 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN	RSF1 S1	annual kWh gross First year annual kWh ne First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh gros Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings G1: Energy Savings S1: Energy Savings S1: Energy Savings	Metric Metric Metric Metric Metric Metric Metric Metric Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante	First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019 2019 2019	N/A N/A N/A N/A	N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A	469,815 46,891 42,202 5,059 4,300 6,723,410	638,404 63,656 57,290 6,867	1,297,770 136,812 123,131 14,890	1,904,836 210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS Per CEDARS	None None None None
REN 3C- A02 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN	RSF1 S1	annual kWh gross First year annual kWh ne First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh gros Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings G1: Energy Savings S1: Energy Savings S1: Energy Savings	Metric Metric Metric Metric Metric Metric Metric Metric Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante	First year annual kWh net First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019 2019 2019	N/A N/A N/A N/A	N/A N/A	N/A N/A N/A N/A	N/A N/A N/A N/A	469,815 46,891 42,202 5,059 4,300 6,723,410	638,404 63,656 57,290 6,867	1,297,770 136,812 123,131 14,890	1,904,836 210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS Per CEDARS	None None None None
REN 3C- A02 REN 3C- A03 REN	RSF1 S1	First year annual kWh ne First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings G1: Energy Savings S1: Energy Savings	Metric Metric Metric Metric Metric Metric Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers••	First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019 2019	N/A N/A N/A	N/A N/A	N/A N/A N/A N/A	N/A N/A N/A	46,891 42,202 5,059 4,300 6,723,410	63,656 57,290 6,867 5,837	136,812 123,131 14,890 12,656	210,488 189,439 30,304 25,758	Per CEDARS Per CEDARS Per CEDARS	None None None
3C- A02 REN	RSF1 S1	annual kWh nee First year annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante herm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm nee MT CO2eq Lifecycle NET kW	S1: Energy Savings G1: Energy Savings S1: Energy Savings	Metric Metric Metric Metric Metric Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • •	First year annual Therm gross First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross	Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	46,891 42,202 5,059 4,300 6,723,410	57,290 6,867 5,837	136,812 123,131 14,890 12,656	189,439 30,304 25,758	Per CEDARS Per CEDARS	None None None
REN 3C- A02 REN 3C- A03 REN	RSF1 S1	annual Therm gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante herm gross Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings GHG D1: Depth of	Metric Metric Metric Metric Metric Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers••	First year annual Therm net Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh net	Residential (RSF) Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	42,202 5,059 4,300 6,723,410	57,290 6,867 5,837	123,131 14,890 12,656	189,439 30,304 25,758	Per CEDARS Per CEDARS	None None
3C- A02 REN	RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	gross First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kW net Lifecycle ex- ante kWh gross Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings GHG D1: Depth of	Metric Metric Metric Metric Metric	and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers	Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh net Lifecycle ex-ante hwh net	Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	5,059 4,300 6,723,410	6,867 5,837	14,890 12,656	30,304 25,758	Per CEDARS	None
REN 3C- A02 REN 3C- A03 REN	RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	First year annual Therm net Lifecycle ex- ante kW gross Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings GHG D1: Depth of	Metric Metric Metric Metric Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers••	Lifecycle ex-ante kW gross Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh net Lifecycle ex-ante hwh net	Residential (RSF) Residential (RSF) Residential (RSF)	2019 2019 2019 2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	5,059 4,300 6,723,410	6,867 5,837	14,890 12,656	30,304 25,758	Per CEDARS	None
3C- A02 REN	RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	net Lifecycle exante kW gross Lifecycle exante kW net Lifecycle exante kWh gros Lifecycle exante kWh net Lifecycle exante Therm gross Lifecycle exante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings GHG D1: Depth of	Metric Metric Metric Metric	and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers	Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh net Lifecycle ex-ante Therm gross	Residential (RSF) Residential (RSF) Residential (RSF)	2019	N/A	N/A N/A N/A	N/A	N/A	6,723,410	5,837	12,656	25,758		
REN 3C- A02 REN 3C- A02 REN 3C- A02 REN 3C- A02 REN 3C- A03 REN	RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	ante kW gross Lifecycle exante kW net Lifecycle exante kWh gross Lifecycle exante kWh net Lifecycle exante Therm gross Lifecycle exante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings GHG D1: Depth of	Metric Metric Metric Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers••	Lifecycle ex-ante kW net Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh net Lifecycle ex-ante Therm gross	Residential (RSF) Residential (RSF) Residential (RSF)	2019	N/A	N/A N/A N/A	N/A	N/A	6,723,410	5,837	12,656	25,758		
3C- A02 REN	RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	Lifecycle exante kW net Lifecycle exante kWh gros Lifecycle exante kWh net Lifecycle exante Therm gross Lifecycle exante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings S1: Energy Savings S1: Energy Savings S1: Energy Savings GHG D1: Depth of	Metric Metric Metric	and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers	Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh net Lifecycle ex-ante Therm gross	Residential (RSF) Residential (RSF)	2019	N/A	N/A N/A	N/A	N/A	6,723,410				Per CEDARS	None
REN 3C- A02 REN 3C- A02 REN 3C- A02 REN 3C- A03 REN	RSF1 S1 RSF1 S1 RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	Lifecycle exante kWh gros Lifecycle exante kWh net Lifecycle exante Therm gross Lifecycle exante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings S1: Energy Savings S1: Energy Savings S1: Energy Savings GHG D1: Depth of	Metric Metric Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers	Lifecycle ex-ante kWh gross Lifecycle ex-ante kWh net Lifecycle ex-ante Therm gross	Residential (RSF) Residential (RSF)	2019	N/A	N/A N/A	N/A	N/A	6,723,410				Per CEDARS	None
3C- A02 REN	RSF1 S1 RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	Lifecycle exante kWh gross Lifecycle exante kWh net Lifecycle exante Therm gross Lifecycle exante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings S1: Energy Savings S1: Energy Savings GHG D1: Depth of	Metric Metric Metric	and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • •	Lifecycle ex-ante kWh net Lifecycle ex-ante Therm gross	Residential (RSF)	2019	,	N/A N/A		,		9,134,642	18,739,375	27.727.001		
REN 3C- A02 REN 3C- A02 REN 3C- A02 REN 3C- A03 REN	RSF1 S1 RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	ante kWh gros Lifecycle ex- ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET	S1: Energy Savings S1: Energy Savings S1: Energy Savings GHG D1: Depth of	Metric Metric Metric	RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers	Lifecycle ex-ante kWh net Lifecycle ex-ante Therm gross	Residential (RSF)	2019	,	N/A		,		9,134,642	18,739,375	27.727.001		
3C- A02 REN 3C- A02 REN 3C- A02 REN 3C- A03 REN	RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	Lifecycle exante kWh net Lifecycle exante Therm gross Lifecycle exante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings S1: Energy Savings S1: Energy Savings GHG D1: Depth of	Metric Metric	and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • •	Lifecycle ex-ante Therm gross			N/A	N/A	N/Λ	N/A	6.051.069			, ,	Per CEDARS	None
3C- A03 REN	RSF1 S1 RSF1 S1 RSF2 G RSF3 D1-D	ante kWh net Lifecycle ex- ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings S1: Energy Savings GHG D1: Depth of	Metric Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers•• RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers••	Lifecycle ex-ante Therm gross			N/A	N/A	NI/A	N/A	6 051 069					
3C- A02 REN 3C- A02 REN 3C- A03 REN	RSF1 S1 RSF2 G RSF3 D1-D	Lifecycle exante Therm gross Lifecycle exante Therm ne MT CO2eq Lifecycle NET	S1: Energy Savings GHG D1: Depth of	Metric	and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • •		Residential (RSF)			,	IV/ A	,	0,031,003	8,221,178	16,865,438	24,954,301	Per CEDARS	None
3C- A03 REN	RSF1 S1 RSF2 G RSF3 D1-D	ante Therm gross Lifecycle ex- ante Therm ne MT CO2eq Lifecycle NET kW	S1: Energy Savings GHG D1: Depth of	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers •		Residential (RSF)											
3C- A03 REN	RSF2 G RSF3 D1-D	gross Lifecycle exante Therm ne MT CO2eq Lifecycle NET	GHG D1: Depth of		and net) for Single Family Customers • • RSF1-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers • •	Lifecycle ex-ante Therm net		2019	N/A	N/A	N/A	N/A	646,434	877,403	1,903,564	2,950,591	Per CEDARS	None
3C- A03 REN	RSF2 G RSF3 D1-D	ante Therm ne MT CO2eq Lifecycle NET kW	GHG D1: Depth of		(pre-evaluation) gas, electric, and demand savings (gross and net) for Single Family Customers••	Lifecycle ex-ante Therm net												
3C- A03 REN	RSF3 D1-D	MT CO2eq Lifecycle NET kW	GHG D1: Depth of	Metric	and net) for Single Family Customers • •		Residential (RSF)	2019	N/A	N/A	N/A	N/A	581,791	789,663	1,713,208	2,655,532	Per CEDARS	None
3C- A03 REN	RSF3 D1-D	Lifecycle NET kW	D1: Depth of	Metric	RSF2-G • Greenhouse gasses (MT CO200) No+ 1/Mb													
3C- A03 REN 3C- A03 REN 3C- A03 REN 3C- A03 REN 3C- A03		kW	•		RSF2-G••Greenhouse gasses (MT CO2eq) Net kWh savings, reported on an annual basis••	CO2-equivalent of net annual kWh savings	Residential (RSF)	2019	N/A	N/A	N/A	N/A	17	180	324	450	Per CEDARS	Definition: Single family are defined as Service account on residential rates, with dwelling code of single family home or
3C- A03 REN 3C- A03 REN 3C- A03 REN 3C- A03		kW	•															single family dwelling.
REN 3C- A03 REN 3C- A03 REN 3C- A03	RSF3 D1-D	Life and NET		Metric		Average lifecycle ex-ante kW net savings per participant - Opt-in - Downstream	Residential (RSF)	2019	N/A	N/A	N/A	N/A	6.91	6.90	7.79	11.30	D1D: Downstream methodology- ••Numerator: Total downstream savings claimed••Denominator: Total number of downstream	Per ED: "Energy savings" = lifecycle NET savings.
REN 3C- A03 REN 3C- A03 REN 3C- A03	KSF3 D1-D		downstream participan	t	downstream, midstream and upstream, as feasible) • •		D : 1 :: 1 (DCE)	2010	/	21/2	21/2	21/2	0.720.44	0.747.70	10 201 12	44.044.75	participants	
3C- A03 REN 3C- A03		Lifecycle NET kWh	D1: Depth of interventions • • Per	Metric		Average lifecycle ex-ante kWh net savings per participant - Opt-in - Downstream	Residential (RSF)	2019	N/A	N/A	N/A	N/A	9,728.41	9,717.70	10,381.13	11,041.75	D1D: Downstream methodology- ••Numerator: Total downstream savings claimed••Denominator: Total number of downstream	Per ED: "Energy savings" = lifecycle NET savings.
3C- A03 REN 3C- A03	DCE2 D4 D	Life and NET	downstream participan		downstream, midstream and upstream, as feasible) • •	A	Davidantial (DCE)	2010	N1 / A	N1/A	N1 / A	N1 / A	025.25	022.44	4.054.54	1 175 02	participants	Day FD. "Francisco" life and a NET conicae
REN 3C- A03	RSF3 D1-D	Lifecycle NET Therms	D1: Depth of interventions • • Per	Metric		Average lifecycle ex-ante Therm net savings per participant - Opt-in - Downstream	Residential (RSF)	2019	N/A	N/A	N/A	N/A	935.35	933.41	1,054.54	1,175.02	D1D: Downstream methodology- ••Numerator: Total downstream savings claimed••Denominator: Total number of downstream	Per ED: "Energy savings" = lifecycle NET savings.
REN 3C- A03	DCE2 D1 M	1 Life avela NET	downstream participan		downstream, midstream and upstream, as feasible) • •		Decidential (DCF)	2010	NI/A	N1/A	N1 / A	N/A	NI/A	NI / A	NI/A	NI/A	participants D1M1 Midstroom mothedology NOT FFASIBLE accellumorates Tatal	Downline weeking with ED meeting not foreither. DAs instead will
	RSF3 D1-M	1 Lifecycle NET kW	D1: Depth of interventions • • Per	Metric		Average lifecycle ex-ante kW net savings per participant - Opt-in - Midstream	Residential (RSF)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	D1M: Midstream methodology –NOT FEASIBLE ••••Numerator: Total midstream savings claimed ••Denominator: (not available) number or	
	RSF3 D1-M	1 Lifecycle NET	midstream participant D1: Depth of	Metric	downstream, midstream and upstream, as feasible) • • RSF3-D1M - Average savings per participant in both	Average lifecycle ex-ante kWh net savings	Residential (RSF)	2019	N/A	NI/A	N/A	N/A	N/A	N/A	N/A	N/A	sector of midstream participants D1M: Midstream methodology –NOT FEASIBLE••••Numerator: Total	savings" = lifecycle NET savings. I Per discussion with ED, metric not feasible; PAs instead will
	K2L2 DT-INI	kWh	interventions••Per	Metric		per participant - Opt-in - Midstream	Residential (NSF)	2019	IN/A	N/A	N/A	IN/A	N/A	IN/A	N/A	N/A	midstream savings claimed ••Denominator: (not available) number or	report total upstream and midstream savings. Per ED: "Energy
3C- V03	RSF3 D1-M	1 Lifecycle NET	midstream participant D1: Depth of	Metric	downstream, midstream and upstream, as feasible) • • RSF3-D1M - Average savings per participant in both	Average lifecycle ex-ante Therm net savings	Residential (RSF)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	sector of midstream participants D1M: Midstream methodology –NOT FEASIBLE••••Numerator: Total	savings" = lifecycle NET savings. I Per discussion with ED, metric not feasible; PAs instead will
REN	K3I3 DI-W	Therms	interventions••Per	Metric		per participant - Opt-in - Midstream	Residential (NSI)	2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	midstream savings claimed ••Denominator: (not available) number or	report total upstream and midstream savings. Per ED: "Energy
3C- 403	RSF3 D1-O	Lifecycle NET	midstream participant D1: Depth of	Metric	downstream, midstream and upstream, as feasible) • • RSF3-D1O - Average savings per participant in both	Average lifecycle ex-ante kW net savings per	Residential (RSF)	2019	N/A	Ν/Δ	Ν/Δ	N/A	N/Δ	N/A	N/A	N/A	sector of midstream participants D10 Methodology: Only ex post savings can be claimed. Per participal	savings" = lifecycle NET savings.
REN	1.0.0 210	kW	interventions••Per opt			participant - Opt-out	nesidential (ner)	2023	,,,,	.,,,,	,,,	,,,	,,,	,,,	,,,	.,,,,	savings will be calculated in the EM&V study.	Energy Report using social norming through neighborhood
3C- A03	RSF3 D1-O	Lifecycle NET	out participant D1: Depth of	Metric	downstream, midstream and upstream, as feasible) • • RSF3-D1O - Average savings per participant in both	Average lifecycle ex-ante kWh net savings	Residential (RSF)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	D10 Methodology: Only ex post savings can be claimed. Per participal	comparisons 2) Per ED: "Energy savings" = lifecycle NET savings. ant D10 Key Definitions: 1) The only opt-out program is the Home
REN		kWh	interventions••Per opt		opt-in and opt-out programs (broken down by	per participant - Opt-out	(100.7)		,	.,	,	,	.,	,	.,	.,	savings will be calculated in the EM&V study.	Energy Report using social norming through neighborhood
3C- A03	RSF3 D1-O	Lifecycle NET	out participant D1: Depth of	Metric	downstream, midstream and upstream, as feasible) • • RSF3-D1O - Average savings per participant in both	Average lifecycle ex-ante Therm net savings	Residential (RSF)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	D10 Methodology: Only ex post savings can be claimed. Per participal	comparisons 2) Per ED: "Energy savings" = lifecycle NET savings. ant D10 Key Definitions: 1) The only opt-out program is the Home
REN		Therms	interventions••Per opt		opt-in and opt-out programs (broken down by	per participant - Opt-out	V /	-	•	•	•	•	•	•	•	•	savings will be calculated in the EM&V study.	Energy Report using social norming through neighborhood
3C- A03	RSF3 D1-U	Lifecycle NET	out participant D1: Depth of	Metric	downstream, midstream and upstream, as feasible) • • RSF3-D1U- Average savings per participant in both	Average lifecycle ex-ante kW net savings per	Residential (RSF)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	D1U: Upstream methodology— NOT FEASIBLE • • Numerator: Total	comparisons 2) Per ED: "Energy savings" = lifecycle NET savings. Per discussion with ED, metric not feasible; PAs instead will
REN	-	kW	interventions••Per		opt-in and opt-out programs (broken down by	participant - Opt-in - Upstream	, ,			•	-	-	•	-	•	•	upstream savings claimed • • Denominator: (not available) number or	report total upstream and midstream savings. Per ED: "Energy
3C- A03	RSF3 D1-U	Lifecycle NET	upstream participant D1: Depth of	Metric	downstream, midstream and upstream , as feasible) • • RSF3-D1U- Average savings per participant in both	Average lifecycle ex-ante kWh net savings	Residential (RSF)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	sector of of upstream participants D1U: Upstream methodology— NOT FEASIBLE • Numerator: Total	savings" = lifecycle NET savings. Per discussion with ED, metric not feasible; PAs instead will
REN		kWh	interventions••Per		opt-in and opt-out programs (broken down by	per participant - Opt-in - Upstream											upstream savings claimed • • Denominator: (not available) number or	report total upstream and midstream savings. Per ED: "Energy
3C- A03	RSF3 D1-U	Lifecycle NET	upstream participant D1: Depth of	Metric	downstream, midstream and upstream , as feasible) • • RSF3-D1U- Average savings per participant in both	Average lifecycle ex-ante Therm net savings	Residential (RSF)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	sector of of upstream participants D1U: Upstream methodology− NOT FEASIBLE • • Numerator: Total	savings" = lifecycle NET savings. Per discussion with ED, metric not feasible; PAs instead will
REN		Therms	interventions••Per		opt-in and opt-out programs (broken down by	per participant - Opt-in - Upstream											upstream savings claimed • • Denominator: (not available) number or	report total upstream and midstream savings. Per ED: "Energy
3C- A03	RSF4 P1	Percent	upstream participant P1: Penetration of	Metric	downstream, midstream and upstream , as feasible) • • RSF-P1 • Percent of participation relative to eligible	Percent of participation relative to eligible	Residential (RSF)	2019	N/A	N/A	N/A	N/A	0.16%	0.21%	0.41%	0.57%	sector of of upstream participants P1 Methodology: ••Numerator: Number of downstream participants)	savings" = lifecycle NET savings. Definition: "Eligible population" refers to Total number of service
REN			energy efficiency programs in the eligible		population•• p	population											••Denominator: total number of service accounts in the sector	accounts in sector/segment, excluding CARE. "Participation" is defined as the first instance of participation, should a customer
			market ••Percent of															participate more than once or participate in multiple programs in
			Participation															the calendar year. PAs also need to have enough information about a customer to determine if the customer is in the eligible
																		population and service territory. • •
3C- A03 REN	RSF4 P3	Percent	P3: Penetration of energy efficiency	Metric		Percent of participation in disadvantaged communities	Residential (RSF)	2019	N/A	N/A	N/A	N/A	0.49%	0.53%	2.27%	2.05%	Numerator: Number of participants in disadvantaged communities. • • • • Denominator: Total number of customers in	D.18-05-041: DAC = Service accounts in zip codes corresponding to census tracts in the top quartile of CalEnviroScreen 3.0 scores.
			programs in the eligible							<u>.</u>							disadvantaged communities.	
3C- A03 REN	RSF4 P4	Percent	P4: Penetration of energy efficiency	Metric	, , ,	Percent of participation by customers defined as "hard-to-reach"	Residential (RSF)	2019	N/A	N/A	N/A	N/A	0.26%	0.37%	0.76%	1.05%	P4 Methodology: • • Numerator: number of participants in HTR geographic area • • Denominator: Total number of service accounts in	D.18-05-041 p. 43 - HTR as defined in Resolution G-3497, modified to "include disadvantaged communities (as designated
			programs in the HTR				B						A- -	A0 ·	Acc	*	HTR geographic area	by CalEPA) in the geographic criteria for hard to reach
3C- A03 REN	RSF5 LC	PAC Levelized Cost (\$/kW)	Cost per unit saved	Metric	RSF-LC - Levelized cost of energy efficiency per kWh, Ftherm and kW (use both TRC and PAC)••	PAC Levelized Cost (\$/kW)	Residential (RSF)	2019	N/A	N/A	N/A	N/A	\$31.45	\$32.00	\$33.75	\$32.34	Per CEDARS	None
3C- A03	RSF5 LC	PAC Levelized	Cost per unit saved	Metric	RSF-LC - Levelized cost of energy efficiency per kWh,	PAC Levelized Cost (\$/kWh)	Residential (RSF)	2019	N/A	N/A	N/A	N/A	\$0.17	\$0.12	\$0.07	\$0.04	Per CEDARS	None
REN 3C- A03	RSF5 LC	Cost (\$/kWh) PAC Levelized	Cost per unit saved	Metric	therm and kW (use both TRC and PAC) • • RSF-LC - Levelized cost of energy efficiency per kWh, F	PAC Levelized Cost (\$/therm)	Residential (RSF)	2019	N/A	N/A	N/A	N/A	\$1.57	\$1.20	\$0.69	\$0.45	Per CEDARS	None
REN		Cost (\$/therm)	·		therm and kW (use both TRC and PAC)••					,	·					·		
3C- A03 REN	RSF5 LC		Cost per unit saved	Metric	RSF-LC - Levelized cost of energy efficiency per kWh, Therm and kW (use both TRC and PAC)••	TRC Levelized Cost (\$/kW)	Residential (RSF)	2019	N/A	N/A	N/A	N/A	\$45.22	\$49.45	\$65.87	\$73.54	Per CEDARS	None
3C- A03		Cost (\$/kW)			RSF-LC - Levelized cost of energy efficiency per kWh,	TRC Levelized Cost (\$/kWh)	Residential (RSF)	2019	N/A	N/A	N/A	N/A	\$0.24	\$0.19	\$0.13	\$0.09	Per CEDARS	None
REN 3C- A03	RSF5 LC	TRC Levelized	Cost per unit saved	Metric	therm and kW (use both TRC and PAC)••	TRC Levelized Cost (\$/therm)	Residential (RSF)	2019	N/A									
REN	RSF5 LC	TRC Levelized Cost (\$/kWh)	Cost per unit saved Cost per unit saved	Metric Metric	· · · · · · · · · · · · · · · · · · ·		· /		-	N/A	N/A	N/A	\$2.25	\$1.86	\$1.32	\$1.02	Per CEDARS	None
3C- A03		TRC Levelized Cost (\$/kWh)	Cost per unit saved	Metric	RSF-LC - Levelized cost of energy efficiency per kWh, Therm and kW (use both TRC and PAC) • •		Residential (RSF)	2019	N/A -	N/A N/A -	N/A		\$2.25 N/A - Indicator N				Per CEDARS Numerator: Total energy used in sector••Denominator: number of	None

eet Index					Metric/			Baseline	Baseline	Baseline	Baseline		Short Term Tar	get	Mid Term Target	Long Term Targe	t e e e e e e e e e e e e e e e e e e e		
			Measurement	Metric Type	Indicator	r Business Plan Att A Description Metric	Sector	Year	Numerator	Denominat	Number	2018	2019	<u>2020</u>	(2021-2023)	(2024-2025)	Methodology		roxy Explanation
78 3C		RMF1 S1-IU	First year annual kW gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante First year annual kW gross - In Unit (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	157,147	200,814	435,501	650,693	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
79 3C		RMF1 S1-IU	First year annual kW net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante First year annual kW net - In Unit (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	141,432	180,732	391,951	585,624	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
80 30 R	C- A03 R EN	RMF1 S1-IU	First year annual kWh	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	64	82	177	265	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
81 3C	C- AO3 R EN	RMF1 S1-IU	gross First year annual kWh net	S1: Energy Savings	Metric	and net) for multifamily customers (in-unit, common area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante First year annual kWh net - In Unit (pre-evaluation) gas, electric, and demand savings (gross	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	141,432	180,732	391,951	585,624	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
82 30		RMF1 S1-IU		S1: Energy Savings	Metric	and net) for multifamily customers (in-unit, common area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante First year annual Therm gross - In Unit	Residential Sector –	2019	N/A	N/A	N/A	N/A	7,841	10,016	21,717	32,434	Savings calculated using CET; MF designation depends on PA database		
83 3C		RMF1 S1-IU	annual Therm gross First year	S1: Energy Savings	Metric	(pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts). RMF-S1-First year annual and lifecycle ex-ante First year annual Therm net - In Unit	Multi-family (RMF) Residential Sector –	2019	N/A	N/Λ	N/A	N/A	7,057	9,014	19,545	29,191	Savings calculated using CET; MF designation depends on PA database	least two residential housing units. Definition: Multi-family refers to any buliding or property with at	
	EN AUS IN	NWII 31-10	annual Therm net	JI. Liletgy Javiligs	Wethe	(pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts).	Multi-family (RMF)	2013	N/A	N/A	N/A	N/A	7,037	9,014	13,343	29,191	Savings calculated using CET, ivii designation depends on FA database	least two residential housing units.	
84 3C		RMF1 S1-IU	Lifecycle ex- ante kW gross	S1: Energy Savings	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	767	980	2,125	3,175	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
85 3C RE	C- AO3 R EN	RMF1 S1-IU	Lifecycle ex- ante kW net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante Lifecycle ex-ante kW net - In Unit (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	652	833	1,806	2,699	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
86 3C RE		RMF1 S1-IU	Lifecycle ex- ante kWh gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	1,885,758	2,409,766	5,226,016	7,808,315	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
87 3C		RMF1 S1-IU	Lifecycle ex- ante kWh net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante Lifecycle ex-ante kWh net - In Unit (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	1,697,183	2,168,789	4,703,415	7,027,483	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
88 3C RE	C- AO3 R EN	RMF1 S1-IU	Lifecycle ex- ante Therm gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante Lifecycle ex-ante Therm gross - In Unit (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	94,093	120,188	260,604	389,212	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
89 30 RI	C- AO3 R EN	RMF1 S1-IU	Lifecycle ex- ante Therm net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante Lifecycle ex-ante Therm net - In Unit (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	84,683	108,170	234,543	350,291	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
90 30 RI	C- AO3 R EN	RMF1 S1-MM	First year annual kW gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Metereed and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
91 3C		RMF1 S1-MM	First year annual kW net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	d Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
92 3C RI	C- AO3 R EN		First year annual kWh gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante First year annual kWh gross - Master (pre-evaluation) gas, electric, and demand savings (gross Metered and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
93 3C	C- AO3 R EN	RMF1 S1-MM	First year annual kWh net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	ed Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
94 3C RE		RMF1 S1-MM	First year annual Therm gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Metered and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
95 3C		RMF1 S1-MM	First year annual Therm net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Metered and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
96 3C		RMF1 S1-MM	Lifecycle ex- ante kW gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	red Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
97 3C		RMF1 S1-MM	Lifecycle ex- ante kW net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante Lifecycle ex-ante kW net - Master Metered (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	d Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
	C- AO3 R EN	RMF1 S1-MM	Lifecycle ex- ante kWh gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Metered and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
99 3C RE		RMF1 S1-MM	Lifecycle ex- ante kWh net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	ed Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
100 30 RI	C- AO3 R EN	RMF1 S1-MM	Lifecycle ex- ante Therm gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante Lifecycle ex-ante Therm gross - Master (pre-evaluation) gas, electric, and demand savings (gross Metered and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
101 3C		RMF1 S1-MM	Lifecycle ex- ante Therm net	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross Metered and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
102 3C RE		RMF1 SI-CA	First year annual kW gross	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	a Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
103 30 R	C- AO3 R EN	RMF1 SI-CA		S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
104 30 R	C- A03 R EN	RMF1 SI-CA	annual kWh	S1: Energy Savings	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	ea Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
105 3C		RMF1 SI-CA	First year annual kWh net	S1: Energy Savings	Metric	and net) for multifamily customers (in-unit, common area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	

readsh	At	ttA AttA Meth	nod Units o	т	Metric/				Baseline		Baseline	Baseline	<u> </u>	hort Term Targe	<u> </u>	Mid Term Target				
Index	PA Pa	age Order Cod	le Measurem	nent Metric Type	Indicator	Business Plan Att A Description	Metric	Sector	Year	Numerator	Denominat	Number	2018	<u>2019</u>	<u>2020</u>	(2021-2023)	(2024-2025)	Methodology	Key Definitions	Proxy Explanation
3C	C- A0	3 RMF1 SI-CA	•	S1: Energy Savings	Metric	·	First year annual Therm gross - Common	Residential Sector –	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at	
RE	ΕN		annual Thei gross	rm		(pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area , and master metered accounts) • •	Area	Multi-family (RMF)											least two residential housing units.	
3C RE	C- A0 EN	03 RMF1 SI-CA	First year annual Ther net	S1: Energy Savings rm	Metric		First year annual Therm net - Common Area	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
3C RE	C- A0 EN	03 RMF1 SI-CA	Lifecycle ex ante kW gro	σ, σ	Metric	(pre-evaluation) gas, electric, and demand savings (gross	Lifecycle ex-ante kW gross - Common Area	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
3C RE		03 RMF1 SI-CA	Lifecycle ex ante kW ne	0, 0	Metric	and net) for multifamily customers (in-unit, common area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross	Lifecycle ex-ante kW net - Common Area	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
30		03 RMF1 SI-CA			Metric	and net) for multifamily customers (in-unit, common area, and master metered accounts) • •	Lifecycle ex-ante kWh gross - Common Area		2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database		
RE			ante kWh g			(pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area , and master metered accounts) • •		Multi-family (RMF)											least two residential housing units.	
3C RE	C- A0 EN	03 RMF1 SI-CA	Lifecycle ex ante kWh n	0, 0	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common area, and master metered accounts).	Lifecycle ex-ante kWh net - Common Area	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
3C RE		03 RMF1 SI-CA	Lifecycle ex ante Therm gross	-, -	Metric	RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Lifecycle ex-ante Therm gross - Common Area	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
3C RE	C- A0 EN	03 RMF1 SI-CA	Lifecycle ex ante Therm	0, 0	Metric	area, and master metered accounts) • • RMF-S1-First year annual and lifecycle ex-ante (pre-evaluation) gas, electric, and demand savings (gross and net) for multifamily customers (in-unit, common	Lifecycle ex-ante Therm net - Common Area	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0	0	0	0	Savings calculated using CET; MF designation depends on PA database	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
3C RF	C- A0 EN	03 RMF2 G	MT CO2eq	GHG	Metric	area, and master metered accounts) • •	CO2-equivalent of net annual kWh savings	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	5.1	51.0	97.7	138.3	Per CEDARS	Definition: Multi-family refers to any buliding or property with at least two residential housing units.	
3C RE	C- A0	04 RMF3 D3a	Lifecycle NE kW	D3: Depth of interventions per building	Metric	RMF-D3 - Energy savings (kWh, kw, therms) per project	Lifecycle ex-ante kW net per project (building)	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	2.1	2.1	2.1		••D3 Methodology:••Numerator: Total Savings claimed for MF building retrofits••Denominator: Number of buildings that have been retrofitted, per application (assumed 7.4 units per building (CALMAC http://www.calmac.org/publications/MFEER_Process_Evaluation_FINAL 100.115 [18])	g D3 Key Definitions: Project applications are made at the property level (premise ID and service account number) not the building level; building information will be used as is available on project	
3C RE	C- A0 EN	04 RMF3 D3a	Lifecycle NE kWh	D3: Depth of interventions per building	Metric	RMF-D3 - Energy savings (kWh, kw, therms) per project (building) ••••	Lifecycle ex-ante kWh net per project (building)	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	5,474.8	5,476.7	5,477.2		130415.pdf)) ••D3 Methodology:••Numerator: Total Savings claimed for MF building retrofits••Denominator: Number of buildings that have been retrofitted, per application (assumed 7.4 units per building (CALMAC http://www.calmac.org/publications/MFEER_Process_Evaluation_FINAL	level (premise ID and service account number) not the building level; building information will be used as is available on project	
3C RE	C- A0 EN	04 RMF3 D3a	Lifecycle NE Therms	D3: Depth of interventions per building	Metric	RMF-D3 - Energy savings (kWh, kw, therms) per project (building) • • • •	Lifecycle ex-ante Therm net per project (building)	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	273.2	273.2	273.2		130415.pdf)) ••D3 Methodology:••Numerator: Total Savings claimed for MF building retrofits••Denominator: Number of buildings that have been retrofitted, per application (assumed 7.4 units per building (CALMAC http://www.calmac.org/publications/MFEER_Process_Evaluation_FINA 130415.pdf))	level (premise ID and service account number) not the building level; building information will be used as is available on project	
3C RE	C- A0 EN	04 RMF3 D4	Lifecycle NE kW	D4: Depth of interventions per property	Metric		Lifecycle ex-ante kW net per project (property)	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	2.1	2.1	2.1		••D4 Methodology:••Numerator - Total downstream savings ••••Denominator - number of participating properties (i.e., premise ID service account)••	D4 Definition: "Project (property)" is defined by a unique project x ID. "Energy savings" = Lifecycle NET savings	
3C RE	-	04 RMF3 D4	Lifecycle NE kWh		Metric		Lifecycle ex-ante kWh net per project (property)	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	5,474.8	5,476.7	5,477.2		••D4 Methodology:••Numerator - Total downstream savings ••••Denominator - number of participating properties (i.e., premise ID service account)••	D4 Definition: "Project (property)" is defined by a unique project x ID. "Energy savings" = Lifecycle NET savings	
	EN	04 RMF3 D4	Lifecycle NE Therms	interventions per property	Metric	project (property)••	Lifecycle ex-ante Therm net per project (property)	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	273.2	273.2	273.2		••D4 Methodology:••Numerator - Total downstream savings ••••Denominator - number of participating properties (i.e., premise ID service account)••		
3C RE	C- A0 EN	04 RMF3 D5	Lifecycle NE kW		Metric	RMF-D5•• Energy savings (kWh, kw, therms) per square foot••	Lifecycle ex-ante kW net per square foot	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0.003	0.003	0.003		D5 Methodology: ••[Numerator] Total downstream savings •••••[Denominator] Total MF square foot per Assessor data	Per ED: "Energy savings" = lifecycle NET savings.	C-REN does not have a values for Avg. Square Feet of multifamily un and are using the value developed by BayREN proxy (800 sqft/unit). After 3C-REN is approxo to administer the multifamily program, is collect square footage all participants and up the value for the 2019 Annual report based our datatbase and/or will can CoStar data to determine the average square footage of unit our service territory.
3C RE		04 RMF3 D5	Lifecycle NE kWh	D5: Depth of interventions••Per square foot	Metric	RMF-D5•• Energy savings (kWh, kw, therms) per square foot••	Lifecycle ex-ante kWh net per square foot	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	6.843	6.846	6.846		D5 Methodology: ••[Numerator] Total downstream savings •••••[Denominator] Total MF square foot per Assessor data	Per ED: "Energy savings" = lifecycle NET savings.	C-REN does not have a values for Avg. Square Feet of multifamily unit and are using the value developed by BayREN proxy (800 sqft/unit). After 3C-REN is approx to administer the multifamily program, it collect square footage all participants and upon the value for the 2019 Annual report based of our datatbase and/or will can CoStar data to determine the average square footage of units

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Spreadsh	•	attA AttA	· ·····································		t Matric Tura	Metric/	Business Plan Att A Description	Motric	Sector	Baseline Year	Baseline	Baseline or Denominat	Baseline t Number		Short Term Tar		Mid Term Targe (2021-2023)	et Long Term Targe (2024-2025)	t Methodology	Key Definitions	Provy Evolopotion
et Index 23		age Orde		Measurement Lifecycle NET Therms	D5: Depth of interventions • • Per square foot	Metric	RMF-D5•• Energy savings (kWh, kw, therms) per square foot••	,	Sector Residential Sector – Multi-family (RMF)	2019	N/A	<u>Denominat</u> N/A	<u>Number</u> N/A	<u>2018</u> N/A	2019 0.341	<u>2020</u> 0.341	(2021-2023) 0.341		D5 Methodology: ••[Numerator] Total downstream savings ••••[Denominator] Total MF square foot per Assessor data	Per ED: "Energy savings" = lifecycle NET savings.	C-REN does not have ar values for Avg. Square Feet of multifamily unit and are using the value developed by BayREN a proxy (800 sqft/unit). After 3C-REN is approve to administer the
																					multifamily program, it collect square footage all participants and upon the value for the 2019. Annual report based or our datatbase and/or will can CoStar data to determine the average square footage of units our service territory.
24	3C- A REN	04 RMF4	4 P1-P	Percent	P1: Penetration of energy efficiency programs in the eligible market ••Percent of	Metric	RMF-P1P ••Percent of participation relative to eligible population (by unit, and property)••		Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0.28%	0.36%	0.72%	1.21%	P1 Methodology: ••Numerator: Number of downstream participating properties (unique project ID) ••Denominator: total number of properties (unique service account) in the sector.	Participation is defined as the first instance of participation, should a customer participate more than once or participate in multiple programs in the calendar year. PAs also need to have enough information about a customer to determine if the	
25	3C- A REN	04 RMF4	4 P1-U	Percent	Participation P1: Penetration of energy efficiency programs in the eligib market ••Percent of	Metric	RMF-P1U ••Percent of participation relative to eligible population (by unit , and property)••		Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0.28%	0.36%	0.72%	1.21%	P1 Methodology: ••Numerator: Number of downstream participating MF units (unique service account = "unit") ••Denominator: total number of units (service accounts) in the sector.	should a customer participate more than once or participate in multiple programs in the calendar year. PAs also need to have enough information about a customer to determine if the	
26	3C- A REN	.04 RMF4	4 P2	Percent	Participation P2: Penetration of energy efficiency programs in terms of square feet of eligible		RMF-P2 - Percent of square feet of eligible population participating (by property) • •	Percent of square feet of eligible population participating (by property)	Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0.24%	0.30%	0.66%	0.99%	P2 Methodology: ••••Numerator: # service accounts participating X average sqft/service account)••••Denominator: Square footage of all eligible accounts (per Assessor)	customer is in the eligible population and service territory. • •	
7	REN		4 P3: DAC 4 P4: HTR		P3: Penetration of energy efficiency programs in the eligib	Metric	RMF-P3 - Percent of participation in disadvantaged communities • • RMF-P4 • Percent of participation by customers	communities	Residential Sector – Multi-family (RMF) Residential Sector –	2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	2.08%	2.29% 0.86%	3.15% 2.10%	4.21% 3.84%	Numerator: Number of participants (service accounts) in disadvantage communities. • • • • Denominator: Total number of customers (service accounts) in disadvantaged communities. P4 Methodology: • • Numerator: number of participants in HTR	·	
29	REN	04 RMF5		Percent	energy efficiency programs in the HTR B1: MF Benchmarking Penetration		defined as "hard-to-reach" RMF-B1 - Percent of benchmarked multi-family properties relative to the eligible population •••	defined as "hard-to-reach" Percent of benchmarked multi-family	Multi-family (RMF) Residential Sector – Multi-family (RMF)	2019	N/A	N/A	N/A	N/A	0.0%	0.0%	0.0%	0.0%	geographic area • • Denominator: Total number of service accounts in HTR geographic area Total benchmarked units in RMF sector • • Total number of service account in RMF sector • • • • Benchmarked via Portfolio	modified to "include disadvantaged communities (as designated by CalEPA) in the geographic criteria for hard to reach	
30	REN	.04 RMF5		Percent PAC Levelized Cost (\$/kW)	B6: Benchmarking of Properties Cost per unit saved	HTR Metric	B6(RMF) - Percent of benchmarking by properties defined as "hard-to-reach" • • • • • RMF-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC) • •	defined as "hard-to-reach" PAC Levelized Cost (\$/kW)	Residential Sector – Multi-family (RMF) Residential Sector – Multi-family (RMF)	2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	0.0% \$15.70	0.0% \$14.53	0.0% \$15.11	0.0% \$14.53	Manager •••• 2019 MF with 17 or units MUST Benchmark •••• Benchmarking per Portfolio Manager. Service accounts in HTR market Per CEDARS	None	
3	3C- A REN	.04 RMF6		PAC Levelized Cost (\$/kWh) PAC Levelized Cost (\$/therm)	Cost per unit saved	Metric Metric	RMF-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)•• RMF-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)••	PAC Levelized Cost (\$/kWh) PAC Levelized Cost (\$/therm)	Residential Sector – Multi-family (RMF) Residential Sector – Multi-family (RMF)	2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	\$0.30 \$2.80	\$0.21 \$2.08	\$0.11 \$1.16	\$0.07 \$0.73	Per CEDARS Per CEDARS	None	
5	REN 3C- A REN	.04 RMF6	6 LC	TRC Levelized Cost (\$/kW) TRC Levelized Cost (\$/kWh)	Cost per unit saved Cost per unit saved	Metric Metric	RMF-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)•• RMF-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)••	TRC Levelized Cost (\$/kW) TRC Levelized Cost (\$/kWh)	Residential Sector – Multi-family (RMF) Residential Sector – Multi-family (RMF)	2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	\$15.87 \$0.30	\$14.74 \$0.22	\$15.49 \$0.12	\$14.99 \$0.07	Per CEDARS Per CEDARS	None	
3	REN 3C- A REN	.04 RMF6 .04 RMF7 .04 RMF7	7i EI2	TRC Levelized Cost (\$/therm) BTU/unit BTU/sqft	•		RMF-LC - Levelized cost of energy efficiency per kWh, therm and kW (use both TRC and PAC)•• RMF-E12[Indicator] - and Average energy use intensity of multifamily units. including in-unit accounts) RMF-E13[Indicator] Average energy use intensity of multifamily buildings (average usage per square foot –	Average first year ex-ante kWh gross per unit Average first year ex-ante kWh gross per	Residential Sector – Multi-family (RMF) Residential Sector – Multi-family (RMF) Residential Sector – Multi-family (RMF)	2019 2019 2019	N/A - Indicator N/A - Indicator	N/A -	N/A -	N/A	\$0.30 N/A - Indicator N/A - Indicator	•	\$0.12 or N/A - Indicator or N/A - Indicator	•	Per CEDARS Numerator: Total usage of Res MF sector ••• Denominator: total unit (service accounts) in Res MF sector Numerator: Total usage of Res MF sector ••• Denominator: average number of units in MF building times average square footage of MF	None	
<u>)</u>		.10 CS1	S1	Net GWh	S1: Energy Savings	Metric	not adjusted •• Net Energy Savings: GWH, M Therms and MW (demand)		Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	units EM&V study	2018-2025 consistent with adopted goals from D.17-09-025, Tables 1, 2, and 3, p. 37-39; 2016 from CEDARS (spillover not included). Values summed across all four IOUs. "Savings" is	
	3C- A REN	10 CS1	S1	Net MMTherm	s S1: Energy Savings	Metric	Net Energy Savings: GWH, M Therms and MW (demand	Net MMTherms savings	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	EM&V study	defined as Net First year savings. 2018-2025 consistent with adopted goals from D.17-09-025, Tables 1, 2, and 3, p. 37-39; 2016 from CEDARS (spillover not included). Values summed across all four IOUs. "Savings" is defined as Net First year savings.	
	3C- A REN	10 CS1	S1	Net MW	S1: Energy Savings	Metric	Net Energy Savings: GWH, M Therms and MW (demand	Net MW savings	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	EM&V study	2018-2025 consistent with adopted goals from D.17-09-025, Tables 1, 2, and 3, p. 37-39; 2016 from CEDARS (spillover not included). Values summed across all four IOUs. "Savings" is defined as Net First year savings.	
	3C- A REN	.10 CS2	1	Count	Advocacy-Building	Metric	Number of measures supported by CASE studies in rulemaking cycle (current work)	Number of measures supported by CASE studies in rulemaking cycle (current work)	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	12 total	12 total	TBD	TBD	Measures supported by CASE	Baseline and targets for measures supported are for 3 year cycle rather than annual.	
	REN	10 CS2 10 CS3		Count	Advocacy-Building Advocacy-Appliance	Metric Metric	Number of measures adopted by CEC in rulemaking cycle (indicator of past work) Number of T-20 measures supported by CASE studies in	rulemaking cycle (indicator of past work)	Codes & Standards (CS) Codes & Standards (CS)	2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	12 total 10 total	12 total 10 total	TBD	TBD	Measures adopted by CEC T-20 measures supported by CASE	Baseline and targets for measures supported are for 3 year cycle rather than annual. Baseline is annual. Targets for measures supported are for 3	
	REN 3C- A	.10 CS3	2	Count	Advocacy-Appliance	Metric	rulemaking cycle (current work) Number of measures adopted by CEC in current year	CASE studies in rulemaking cycle (current work) Number of measures adopted by CEC in	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	10 total	10 total	TBD	TBD	Measures adopted by CEC	year cycle rather than annual. 2017 chosen as baseline since 2016 was zero. Baseline is annual. Targets for measures adopted are for 3 year	
)	REN 3C- A REN	.10 CS4	1	Count	Advocacy-Federal	Metric	Number of federal standards adopted for which a utility advocated (IOUs to list advocated activites)	current year Number of federal standards adopted for which a utility advocated (IOUs to list advocated activites)	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	100%	100%	TBD	TBD	Standards adopted	cycle rather than annual. Baselines and targets are annual. Any federal standards based upon Title 20 that were adopted will still be included in the federal count.	
)	REN	10 CS4	2	Count	Advocacy-Federal Reach Codes	Metric Metric	Percent of federal standards adopted for which a utility advocated (#IOU supported / # DOE adopted) The number of local government Reach Codes	which a utility advocated (#IOU supported / #DOE adopted)	Codes & Standards (CS) Codes & Standards (CS)	2019	N/A N/A	N/A N/A	N/A N/A	N/A N/A	100%	100% 25 total	TBD	TBD	# IOUs supported ÷ # DOE adopted Reach Code ordinances implemented	Baselines and targets are annual. Targets are total for a three-year Title 24 code cycle.	
	REN			Count			implemented (this is a joint IOU and REN effort)	Codes implemented (this is a joint IOU and REN effort)	· , ,		IV/A	NA	IV/A	NA	25 total			.55		Jurisdictions having multiple reach codes will be counted by reach code rather than by jurisdiction. Accomplishments will be reported from the CEC Reach Codes website (http://www.energy.ca.gov/title24/2013standards/ordinances/).	
	3C- A REN	11 CS6	1	Count	Compliance Improvement	Metric	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the the total size (number of the target audience) by sector. (M) Number of training activities	webinars) held, number of market actors participants by segment (e.g. building	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	138	138	TBD	TBD	Number of training activities	118 live training sessions and 20 webinars in 2017; short, mid, and long-term targets are annual	
3	3C- A REN	11 CS6	2	Count	Compliance Improvement	Metric	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the the total size (number of the target audience) by sector. (M) Number of participants	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the the total size (number of the target audience) by	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	3,600	3,600	TBD	TBD	Number of participants	3000 attendees for live training and 600 attendees for webinars in 2017; short, mid, and long-term targets are annual. Attendees will be shown by major segment (i.e., building officials, builders, architects, HERS raters) and target size of each segment will be provided during first metrics reporting.	
	3C- A REN	11 CS6	3	Score	Compliance Improvement	Metric	Increase in code compliance knowledge pre/post training	sector. (M) Number of participants Increase in code compliance knowledge pre/post training	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	20%	20%	TBD	TBD	Knowledge score	Code compliance knowledge increase will be tested via pre and post training questionaires. Surveys will be conducted for training that lasts longer than three hours (in order to preserve time for instruction in shorter training sessions). Questionaires	
;	3C- A REN	.11 CS6R	1	Percent	Compliance Improvement	Metric	The percentage increase in closed permits for building projects triggering energy code compliance within participating jurisdictions	The percentage increase in closed permits for building projects triggering energy code compliance within participating jurisdictions	Codes & Standards (CS)	2019	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD		will be made available during the first metrics reporting.	

dsh	AttA Att	ttA Method	Units of		Metric/				Baseline	Baseline	Baseline	Baseline		Short Term Targ	et N	/lid Term Target	Long Term Target			
dex PA	Page Ord	der Code	Measurement	Metric Type	Indicator	Business Plan Att A Description	Metric	Sector	Year	Numerator	Denominat	Number	<u>2018</u>	<u>2019</u>		(2021-2023)	(2024-2025)	Methodology	Key Definitions	Proxy Expla
3C-	A11 CS6F	5Ri 1	Count	Compliance	Indicator	Number and percent of jurisdictions with staff	Number and percent of jurisdictions with	Codes & Standards (CS)	N/A -	N/A -	N/A -	N/A -	N/A -	N/A - Indicator	N/A - Indicator I	N/A - Indicator	N/A - Indicator			
REN				Improvement			staff participating in an Energy Policy Forum		Indicator	Indicator	Indicator		Indicator							
3C-	A11 CS6F	5Ri 1	Percent	Compliance	Indicator	•	Number and percent of jurisdictions with	Codes & Standards (CS)	N/A -	N/A -	N/A -	N/A -	•	N/A - Indicator	N/A - Indicator I	N/A - Indicator	N/A - Indicator			
REN			•	Improvement			staff participating in an Energy Policy Forum		Indicator	Indicator			Indicator							
3C-	A11 CS6F	oRi 2	Count	Compliance	Indicator		Number and percent of jurisdictions	Codes & Standards (CS)	N/A -	N/A -	N/A -	N/A -	•	N/A - Indicator	N/A - Indicator I	N/A - Indicator	N/A - Indicator			
REN		`n: 2	Davaont	Improvement	la dianta a	•	receiving Energy Policy technical assistance.	Cadas Q Ctandards (CC)		Indicator	Indicator N/A -		Indicator	NI/A Indiantor	NI/A Indiantan I	NI/A Indiantar	NI/A Indicator			
3C-	A11 CS6F	oKI Z	Percent	Compliance	Indicator		Number and percent of jurisdictions	Codes & Standards (CS)	N/A -	N/A -	, , .	N/A -	-	N/A - Indicator	N/A - Indicator I	N/A - Indicator	N/A - Indicator			
REN 3C-	A11 CS6F	SD: 2	Count	Improvement Compliance	Indicator	•	receiving Energy Policy technical assistance. Buildings receiving enhanced code	Codes & Standards (CS)	Indicator N/A -	Indicator	Indicator N/A -	Indicator N/A -	Indicator N/A -	NI/A Indicator	N/A - Indicator I	N/A Indicator	N/A - Indicator			
REN	AII CSOF	כ ואכ	Count	·	iliuicatoi			codes & Standards (CS)	Indicator	Indicator	•	,	Indicator	N/A - IIIulcatoi	N/A - IIIulcator I	IN/A - IIIUICALOI	N/A - IIIulcatoi			
KEN				Improvement			compliance support and delivering compliance data to program evaluators		indicator	mulcator	mulcator	maicator	mulcator							
3C-	A12 WET	T-1 1	Count	Collaborations	Metric		Number of collaborations by Business Plan	Workforce Education	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	Collaboration agreements are not required.	"Collaborations" mean sharing mutually-beneficial resources	
REN	712 1121		Count	Condorations	Wictie	•	-	and Training (WET)	14,71	14//	14//	14,71	14//	155	155	100	155	comporation agreements are not required.	such as training materials, expertise, and marketing/outreach	
						-	materials or resources.	aa a											tactics that help achieve WE&T goals and outcomes and that	
																			support the collaborating organizations' goals and objectives.	
3C-	A12 WET	T-2 1	Count	Penetration	Metric	Number of participants by sector	Number of participants by sector	Workforce Education	N/A	N/A	N/A	N/A	N/A	110	120	160	230	Report from class registration database.	"Sector" refers to:	
REN								and Training (WET)											a. Residential versus non-residential	
																			b. Energy efficiency training topic area (e.g., Lighting, HVAC,	
																			Agriculture)	
																			"Participants" means aggregate class attendance, meaning that	
																			one person attending two classes throughout the year would	
																			qualify as two participants. This is an accurate measurement of	
																			audience interest per topic / sector.	
																			Please note that the IOUs will begin using a standard	
																			categorization of training topic areas in 2018.	
20		T 2 1	Dorgontogo	Donotration	Motrio	Descent of participation relative to eligible target	Descent of participation relative to eligible	Workforce Education	NI/A	NI/A	NI/A	NI / A	NI / A	2.00/	2 10/	2.00/	4.10/	Numerator, Depart from class registration database	"Darticination" magne unique participants magning that and	
3C-	A12 WET	:1-2 1	Percentage	Penetration	Metric		Percent of participation relative to eligible	Workforce Education	N/A	N/A	N/A	N/A	N/A	2.0%	2.1%	2.9%	4.1%	Numerator: Report from class registration database.	"Participation" means unique participants, meaning that one	
REN						population for curriculum	target population for curriculum	and Training (WET)										Denominator: Advanced Energy Economy Institute (AEEI) report finding	•	
																			counted as one participant.	
																		jobs in California. About six in 10 advanced energy workers are	"Consideration to the postfolio of tweining programs and	
																		employed in the Energy Efficiency sector; these firms support over	"Curriculum" refers to the portfolio of training programs and	
																		321,000 jobs." Assume advanced Energy Efficiency jobs are	training materials offered by WE&T	
																		commiserate with population for each PA territory. PG&E's share of	"Flicible toward and lating" and one to the consum officient alleles.	
																		321,000 jobs is approximately 132,380.	"Eligible target population" refers to the energy efficiency labor	
																			workforce within each PA's service territory based on the	
																			proportion of the IOU's territory population compared to that of	
																			California's population.	
3C-	A12 WET	T-3 1	Percentage	Diversity	Metric	Percent of total WE&T training program participants that	Percent of total WE&T training program	Workforce Education	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	Report of provided zip codes from class registration database cross-	"Disadvantaged Worker" means a worker that (1) has a referral	
REN			_	·			participants that meet the definition of	and Training (WET)											from a collaborating community-based organization (CBO), state	
						•	disadvantaged worker.											note that these zip codes are a mixture of home and work addresses. By		
							-											the end of 2018, IOUs will specifically request participants' home zip	that is in the top 25% in one or more of the five socioeconomic	
																		codes.	indicators as defined in the California Office of Environmental	
																			Health Hazard Assessment's CalEnviroScreen Tool. These	
																			socioeconomic indicators are educational attainment, housing	
																			burden, linguistic isolation, poverty, and unemployment.	
																			"Participant" means a unique participant, meaning that one	
																			person attending two classes throughout the year would be	
			_																counted as one attendee	
	A12 WET	T-3 1	Percentage	Diversity		Percent of incentive dollars spent on contracts* with a	·	Workforce Education	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	Disadvantaged worker tracking is currently not required by PA contract	*Applies only to programs that install, modify, repair, or maintain	
REN						demonstrated commitment to provide career pathways		- · · · · · · · · · · · · · · · · · · ·										terms and conditions.	EE equipment where the incentive is paid to an entity other than	
						to disadvantaged workers	to provide career pathways to disadvantage	d											a manufacturer, distributor, or retailer of equipment. This	
							workers												applicability standard is adopted from the language the July 9th	
																			ruling on workforce standards. It excludes contracts such as	
																			those for upstream incentives, Codes and Standards, and mid-	
																			stream distributor programs.	
																			"Demonstrated commitment" means that the vendor submits a	
																			plan describing how the program will provide disadvantaged	
																			workers with improved access to career opportunities in the	
																			energy efficiency industry, that they regularly report the	
																			percentage of their workforce qualifying as "disadvantaged", and	
																			that they have long-term targets for the percentage of their	
																			workforce qualifying as "disadvantaged".	
20	A12 WET	:T_ 1	Count	Diversity	Indicate:	Number Caroon & Workforce Boodings (CM/D)	Number Caroor 9: Workforce Boodings	Workforce Education	NI/A	NI/A	NI / A	NI/A	NI/A	TPD	TDD	TPD	TDD	CWP program does not yet evict	N/A	
C- EN	A12 WET	T- 1	Count	Diversity	Indicator	• • •	Number Career & Workforce Readiness (CWR) participants who have been employed	Workforce Education	N/A	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	CWR program does not yet exist.	N/A	

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Column Index

3C-REN

EE Sector Metrics with Targets - ED Template Column Index

Each metric in this workbook can be mapped to the Final Business Plan Decision Attachment A metric using page number (AttA Page) and the order of the metric within the table of sector-level metrics (AttA Order). Because there are some collinear metrics in Attachment A and some multi-part metrics, we have further coded the metric with Metric Type (Method Code is a shorthand for Metric Type) to make distinctions between the multiple parts of the metric. Note that (net vs gross), (kW vs kWh vs Therm) and (PAC vs TRC) have not been coded separately, but instead can be distinguished by looking at the "Units of Measurement" column.

Each unique metric, including each part of a multi-part metric, is a separate row. Baselines, 2018, 2019, 2020, Mid-, and Long-Term targets for each metric is reported on the same row.

Column Name	Column Description
PA	Program Administrator
AttA Page	Attachment A Page
AttA Order	Attachment A order of metric in the sector metrics table in Attachment A
Method Code	(PA use) Code indicating a unique metric calculation methodology or definition was used
Metric Type	(PA Use) Metric type
Metric Language	Language of the metric from D.18-05-041 Attachment A
Sector	Sector
Baseline Year	Baseline year is 2016, unless there was no activity in 2016, in which case the baseline was set for a year in which there was activity
Baseline Number	Data from PA
2018 Target	Data from PA
2019 Target	Data from PA
2020 Target	Data from PA
Mid Term Target (2021-2023)	Data from PA
Long Term Target (2024-2025)	Data from PA
Units of Measurement	Units of measurement
Methodology	Short description of metric calculation
Key Definitions	Key definitions for metric
Was Proxy Used? Y/N	Flag for use of proxy in calculation of metric
Proxy Explanation	Explanation of how proxy was calculated, what secondary data sources were used, and when PA plans to be able to use primary
	data for metric.

Definitions

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Tri-County Regional Energy Network (3C-REN)

EE Sector Metrics with Targets - Definitions

Term	Definition
Service Account	A service account is a system generated number that uniquely identifies a billable entity
Eligible Population	Total number of service accounts in sector/segment
Disadvantaged Communities	Service account address located in zip codes that contain CalEnviroScreen 3.0 census tracts.
Hard-to-Reach	D p. 43 - Resolution G-3497, modified to "include disadvantaged communities (as designated by CalEPA) in the geographic criteria for hard to reach customers." Hard-to-reach zipcodes determined by 2014 Aspen Research study.
MT CO2eq	Conversion of kWh and Therms to MTCO2eq as reported by CEDARS
Levelized Cost	PAC and TRC cost (excluding C&S), as output from the CET Tool
Residential Single Family	Service account on residential rates, with dwelling code of single family home or single family dwelling.
Participant	A unique person or entity identified through a combination of service account and premise ID and who participants in a ratepayer funded energy efficiency intervention
Household	Residential serivce account
Opt-In/Opt-Out Program	Opt-in programs are voluntary and participation is at the discretion of the individual and/or entity. Opt-out programs are those where individuals and/or entities are defaulted into with their option to opt-out. Opower/HER is the only Opt-Out program.
Residential Multifamily	MF/SF designation based on dwelling codes in service accounts. Number of units = 2 or more.
Project	Energy efficiency efforts where the customer financial incentives and energy savings are determined using a site-specific analysis of the customer's existing and proposed equipment and/or building components
Building	Any structure used or intended to support or shelter any use or occupancy, that receives energy from a utility
Property	A property is a collection of buildings and/or structures within a defined proximity and is intended to support or shelter any use or occupancy, that receives energy from a utility
Energy Savings per Square Foot (depth of intervention)	Sq footage of EE-addressed space, as defined by individual implementation plans
Square feet of eligible population participating (by property)	Sq footage of participating properties captured when provided.
In Unit	Living space as designated by a unique service account and/or dwelling codes.
Common Area	Shared space within a property, designated by dwelling codes, a "common area" flag, and/or by use of a commercial meter.
Master Metered	Define using rate class, or rate class and/or by dwelling code. Non-overlapping with in-unit
Unit	Service accounts within MF property. Non-overlapping with Master Metered.
Square Feet of Eligible Population	Sq footage of defined space per metric definition.
	Service Account Eligible Population Disadvantaged Communities Hard-to-Reach MT CO2eq Levelized Cost Residential Single Family Participant Household Opt-In/Opt-Out Program Residential Multifamily Project Building Property Energy Savings per Square Foot (depth of intervention) Square feet of eligible population

22	Public Sector	Per SDG&E BP application (p. 102), "the public sector came to be defined as the group of customers that are tax-payer funded, have
	T done sector	political mandates, and that must go through a public budgeting and decision-making process."
		Local Gov't: Cities, Counties, Special Districts, Solid Waste Facilities, Water / Wastewater Facilities, Hospitals, Correctional Facilities.
		State: State Buildings, State Park Facilities, Hospitals, Correctional Facilities.
		Federal: Federal Buildings, US Postal Service, Hospitals, Ports, Military Bases. Native American Tribes
		Public Education (double check): K-12 Schools (Schools, Admin Buildings), Higher Education (e.g., UC/CSU), community colleges
		Special exceptions on a case by case basis, determined by PAs based on customer of record.
23	Facility	A structure or collection of structures, covered or uncovered, that typically encompass processing or production capabilities
24	Project Building Floor Plan Area	Sq footage of EE-addressed space, as defined by individual implementation plans
25	Program-Backed Financing	Loan amount
26	Water/Waste Water Facility	A structure or collection of structures, covered or uncovered, that encompass water/waste water treatment processes. EE savings are
		intended to be captured at the facility level.
27	Annual Flow	Flow (in millions of gallons per day) of water/wastewater as reported by the water/waste water facility
28	Current Benchmark	Benchmarked via Portfolio Manager in the calendar year
29	Investments made by ratepayers and	Project incentive vs project cost
	private capital	
30	Customer Satisifaction	Per consistent survey, to be developed
31	Trade Ally Satisfaction	Per consistent survey, to be developed
32	Customer Size - Small	A service account with <50 kW demand
33	Customer Size - Medium	A service account with 50 - 250 kW demand
34	Customer Size - Large	A service account with >250 kW demand

Tri-County Regional Energy Network (3C-REN) - Energy Efficiency Sector Metrics with Targets

Attachment B

Tri-County Regional Energy Network (3C-REN) - Energy Efficiency Sector Metrics with Targets

Attachment B - Table of Contents

	Page #
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B. Sector-Level Metrics	
1. Residential - Single Family	39
2. Residential - Multi-Family	42
7. Codes and Standards	47
8. Workforce, Education, and Training	50

					Portfolio-l	Level Metrics 3C	-REN					
Common Problem	Common	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
i Emissions	Greenhouse gasses (MT CO2eq) Net kWh savings, reported on annual basis	MT CO2eq Net kWh Savings	N/A			N/A	22	231	127	422	588	CEDARS CET Output

3C-REN Notes/Methodology: • 3C-REN baseline year will be 2019 for all programs.

					Portfolio-L	evel Metrics 3C-	REN					
Common Problem	Common	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
		First Year Gross kW Savings	N/A			N/A	157,514	201,312	179,413	436,572	652,340	CEDARS CET Outputs
		First Year Net kW Savings	N/A			N/A	141,762	181,181	161,472	392,915	587,106	CEDARS CET Outputs
		First Year Gross kWh Savings	N/A			N/A	522,080	709,420	615,750	1,442,144	2,116,750	CEDARS CET Outputs
		First Year Net kWh Savings	N/A			N/A	611,247	819,137	715,192	1,689,721	2,490,460	CEDARS CET Outputs
	First year annual and	First Year Gross Therms Savings	N/A			N/A	54,732	73,672	64,202	158,529	242,923	CEDARS CET Outputs
Capturing Energy	lifecycle ex-ante (pre- eval) gas, electric and	First Year Net Therms Savings	N/A			N/A	49,259	66,305	57,782	142,676	218,630	CEDARS CET Outputs
Savings	demand savings (gross	Lifecycle Gross kW Savings	N/A			N/A	5,826	7,847	6,836	17,015	33,479	Calculated from CEDARS CET Inputs
	and net)	Lifecycle Net kW Savings	N/A			N/A	4,952	6,670	5,811	14,463	28,457	Calculated from CEDARS CET Inputs
	and nety	Lifecycle Gross kWh Savings	N/A			N/A	8,609,169	11,544,408	10,076,788	23,965,392	35,535,316	CEDARS CET Outputs
		Lifecycle Net kWh Savings	N/A			N/A	7,748,252	10,389,967	9,069,109	21,568,852	31,981,784	CEDARS CET Outputs
		Lifecycle Gross Therms Savings	N/A			N/A	740,527	997,592	869,059	2,164,168	3,339,803	CEDARS CET Outputs
		Lifecycle Net Therms Savings	N/A			N/A	666,474	897,832	782,153	1,947,751	3,005,823	CEDARS CET Outputs

3C-REN Notes/Methodology: • 3C-REN baseline year will be 2019 for all programs.

					Portfolio-L	evel Metrics 3C	-REN					
Common Problem	Common M	letric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
		First Year Gross kW Savings	N/A			N/A	24,645	31,495	28,070	68,303	102,055	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		First Year Net kW Savings	N/A			N/A	22,181	28,346	25,263	61,473	91,850	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		First Year Gross kWh Savings	N/A			N/A	29,139	39,594	34,366	80,489	118,141	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets

						•			
First Year Net kWh Savings	N/A		N/A	48,378	63,944	56,161	133,834	•	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
First Year Gross Therms Savings	N/A		N/A	3,845	5,121	4,483	11,037		CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
te (pre- First Year Net Therms Savings	N/A		N/A	3,461	4,609	4,035	9,933	,	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
gs (gross	N/A		N/A	402	537	470	1,164	2,188	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
Lifecycle Net kW Savings	N/A		N/A	342	456	399	989	-	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
Lifecycle Gross kWh Savings	N/A		N/A	670,665	887,323	778,994	1,864,574	2,770,730	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
Lifecycle Net kWh Savings	N/A		N/A	603,598	798,591	701,095	1,678,117		CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
Lifecycle Gross Therms Savings	N/A		N/A	50,815	67,793	59,304	147,055	,	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
Lifecycle Net Therms Savings	N/A		N/A	45,734	61,013	53,374	132,350	203,069	CalEnviroScreen 3.0, US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
	First Year Gross Therms Savings First Year Net Therms Savings Lifecycle Gross kW Savings Lifecycle Net kW Savings Lifecycle Gross kWh Savings Lifecycle Gross kWh Savings Lifecycle Gross KWh Savings Lifecycle Gross Therms Savings	First Year Net kWh Savings N/A First Year Gross Therms Savings First Year Net Therms Savings N/A First Year Net Therms Savings N/A Lifecycle Gross kW Savings N/A Lifecycle Net kW Savings N/A Lifecycle Gross kWh Savings N/A Lifecycle Gross kWh Savings N/A Lifecycle Gross KWh Savings N/A Lifecycle Gross Therms Savings N/A Lifecycle Gross Therms Savings	First Year Net kWh Savings N/A First Year Gross Therms Savings N/A First Year Net Therms Savings N/A Lifecycle Gross kW Savings N/A Lifecycle Net kW Savings N/A Lifecycle Gross kWh Savings N/A Lifecycle Gross KWh Savings N/A Lifecycle Gross KWh Savings N/A Lifecycle Gross Therms Savings N/A Lifecycle Gross Therms Savings	First Year Net kWh Savings N/A First Year Gross Therms Savings N/A First Year Net Therms Savings N/A First Year Net Therms Savings N/A Lifecycle Gross kW Savings N/A Lifecycle Net kW Savings N/A N/A N/A N/A Lifecycle Gross kWh Savings N/A N/A N/A N/A N/A Lifecycle Net kWh Savings N/A N/A N/A N/A N/A N/A N/A N/	First Year Net kWh Savings N/A First Year Gross Therms Savings N/A First Year Net Therms Savings N/A Lifecycle Gross kW Savings N/A Lifecycle Net kW Savings N/A N/A N/A N/A N/A N/A N/A N/	First Year Net kWh Savings	First Year Net kWh Savings N/A N/A N/A N/A N/A N/A N/A N/	First Year Net kWh Savings N/A N/A N/A N/A N/A N/A N/A N/	First Year Net kWh Savings N/A N/A N/A N/A N/A N/A N/A N/

					Portfolio-l	Level Metrics 3C	-REN					
Common Problem	Common	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
		First Year Gross kW Savings	N/A			N/A	132,868	169,817	151,343	368,270	1	US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		First Year Net kW Savings	N/A			N/A	119,582	152,835	136,208	331,443	,	US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		First Year Gross kWh Savings	N/A			N/A	492,942	669,826	581,384	1,361,654		US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		First Year Net kWh Savings	N/A			N/A	562,869	755,193	659,031	1,555,887		US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		First Year Gross Therms Savings	N/A			N/A	50,887	68,550	59,719	147,492		US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets

Hard-to-Reach	First year annual and lifecycle ex-ante (pre-eval) gas, electric and	First Year Net Therms Savings	N/A	N/A	45,798	61,695	53,747	132,743	203,485	US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
naiu-to-Neacii	demand savings (gross and net)	Lifecycle Gross kW Savings	N/A	N/A	5,423	7,310	6,367	15,851		US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		Lifecycle Net kW Savings	N/A	N/A	4,610	6,213	5,412	13,473		US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		Lifecycle Gross kWh Savings	N/A	N/A	7,938,504	10,657,084	9,297,794	22,100,818	32,764,586	US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		Lifecycle Net kWh Savings	N/A	N/A	7,144,654	9,591,376	8,368,015	19,890,736		US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		Lifecycle Gross Therms Savings	N/A	N/A	689,712	929,799	809,755	2,017,112	, ,	US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets
		Lifecycle Net Therms Savings	N/A	N/A	620,740	836,819	728,780	1,815,401	2,802,754	US Census Bureau American Community Survey, CEDARS CET Outputs & 3C-REN Targets

3C-REN Notes/Methodology: 3C-REN baseline year will be 2019 for all programs.

	Portfolio-Level Metrics 3C-REN														
Common Problem	Common I	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	20	19	20)20	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source	
		PAC Levelized Cost (\$/kW)	N/A			N/A	\$	23.58	\$	23.27	\$ 23.42	\$ 24.43	\$ 23.43	CEDARS CET Outputs	
	Levelized cost of energy	PAC Levelized Cost (\$/kWh)	N/A			N/A	\$	0.23	\$	0.17	\$ 0.20	\$ 0.09	\$ 0.05	CEDARS CET Outputs	
Cook was Hait Cook	efficiency per kWh	PAC Levelized Cost (\$/therms)	N/A			N/A	\$	2.18	\$	1.64	\$ 1.91	\$ 0.92	\$ 0.59	CEDARS CET Outputs	
Cost per Unit Saved	therms and kW (use both	TRC Levelized Cost (\$/kW)	N/A			N/A	\$	30.55	\$	32.10	\$ 31.32	\$ 40.68	\$ 44.27	CEDARS CET Outputs	
	TRC and PAC)	TRC Levelized Cost (\$/kWh)	N/A			N/A	\$	0.27	\$	0.20	\$ 0.24	\$ 0.12	\$ 0.08	CEDARS CET Outputs	
		TRC Levelized Cost (\$/therm)	N/A			N/A	\$	1.28	\$	1.04	\$ 1.16	\$ 0.72	\$ 0.55	CEDARS CET Outputs	

3C-REN Notes/Methodology: • 3C-REN baseline year will be 2019 for all programs.

					Single Fan	nily Metrics 3C-I	REN					
Common Problem	Common N	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
		First Year Gross kW Savings	N/A			N/A	367	499	433	1,071	1,647	CEDARS CET Outputs
		First Year Net kW Savings	N/A			N/A	331	449	390	964	1,482	CEDARS CET Outputs
		First Year Gross kWh Savings	N/A			N/A	522,016	709,338	615,677	1,441,967	2,116,485	CEDARS CET Outputs
		First Year Net kWh Savings	N/A			N/A	469,815	638,404	554,109	1,297,770	1,904,836	CEDARS CET Outputs
	First year annual and	First Year Gross Therms Savings	N/A			N/A	46,891	63,656	55,274	136,812	210,488	CEDARS CET Outputs
Capturing Energy	lifecycle ex-ante (pre-eval)	First Year Net Therms Savings	N/A			N/A	42,202	57,290	49,746	123,131	189,439	CEDARS CET Outputs
Savings	gas, electric and demand	Lifecycle Gross kW Savings	N/A			N/A	5,059	6,867	5,963	14,890	30,304	Calculated from CEDARS CET Inputs
	savings (gross and net)	Lifecycle Net kW Savings	N/A			N/A	4,300	5,837	5,068	12,656	25,758	Calculated from CEDARS CET Inputs
		Lifecycle Gross kWh Savings	N/A			N/A	6,723,410	9,134,642	7,929,026	18,739,375	27,727,001	CEDARS CET Outputs
		Lifecycle Net kWh Savings	N/A			N/A	6,051,069	8,221,178	7,136,124	16,865,438	24,954,301	CEDARS CET Outputs
		Lifecycle Gross Therms Savings	N/A			N/A	646,434	877,403	761,919	1,903,564	2,950,591	CEDARS CET Outputs
		Lifecycle Net Therms Savings	N/A			N/A	581,791	789,663	685,727	1,713,208	2,655,532	CEDARS CET Outputs

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • All values are subject to change pending CPUC approval of 3C-REN's 2019 ABAL as directed in D.18.05.041. 3C-REN does not currently administer any programs with ratepayer funding.

	Single Family Metrics 3C-REN														
Common Problem	Common N	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020			Long-term average (2024-	Data Source			
									2020)	2023)	2025)				
Greenhouse Gas Emissions	Greenhouse gasses (MT CO2eq) Net kWh savings, reported on annual basis	MT CO2eq Net kWh Savings	N/A			N/A	17	180	99	324	450	CEDARS CET Output			

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • All values are subject to change pending CPUC approval of 3C-REN's 2019 ABAL as directed in D.18.05.041. 3C-REN does not currently administer any programs with ratepayer funding.

					Single Fan	nily Metrics 3C-	REN					
Common Problem	Common N	Common Metric/Indicator		Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
		Lifecycle New kW	N/A			N/A	6.91	6.90	6.91	7.79	11.30	3C-REN CET Output File & 3C-REN Targets
	Average Savings per Participant (Downstream)	Lifecycle Net kWh	N/A			N/A	9,728.41	9,717.70	9,723.06	10,381.13	11,041.75	3C-REN CET Output File & 3C-REN Targets
	Tarticipant (Bownstream)	Lifecycle Net Therms	N/A			N/A	935.35	933.41	934.38	1,054.54	1,175.02	3C-REN CET Output File & 3C-REN Targets
	Average Savings per Participant (Midstream)	Lifecycle New kW	N/A			N/A	N/A	N/A	N/A	N/A	N/A	
		Lifecycle Net kWh	N/A			N/A	N/A	N/A	N/A	N/A	N/A	
	· a. d. pane (mass sam)	Lifecycle Net Therms	N/A			N/A	N/A	N/A	N/A	N/A	N/A	
Depth of Interventions		Lifecycle New kW	N/A			N/A	N/A	N/A	N/A	N/A	N/A	
	Average Savings per Participant (Opt-out)	Lifecycle Net kWh	N/A			N/A	N/A	N/A	N/A	N/A	N/A	

, , , ,	Lifecycle Net Therms	N/A		N/A	N/A	N/A	N/A	N/A	N/A	
	Lifecycle New kW	N/A		N/A	N/A	N/A	N/A	N/A	N/A	
Average Savings per Participant (Upstream)	Lifecycle Net kWh	N/A		N/A	N/A	N/A	N/A	N/A	N/A	
(0)	Lifecycle Net Therms	N/A		N/A	N/A	N/A	N/A	N/A	N/A	

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • All values are subject to change pending CPUC approval of 3C-REN's 2019 ABAL as directed in D.18.05.041. 3C-REN does not currently administer any programs with ratepayer funding. • N/A for midstream, opt-out and upstream interventions since 3C-REN is not planning to operate any of these types of programs.

				Single Fa	mily Metrics 3C-	REN					
Common Problem	Common Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
Program in the Control Eligible Market	Percent of participation relative to eligible population Percent	N/A	N/A	N/A	N/A	0.16%	0.21%	0.18%	0.41%	1 () 5 /%	US Census Bureau American Community Survey, 2016 & 3C-REN Targets
	Percent of participation in disadvantaged communities Percent	N/A	N/A	N/A	N/A	0.49%	0.53%	0.51%	2.27%	2.05%	CalEnviroScreen 3.0, US Census Bureau American Community Survey, 2016 & 3C- REN Targets
	Percent of participation by customers defined as "hard-to-reach"	N/A	N/A	N/A	N/A	0.26%	0.37%	0.32%	0.76%	1 105%	US Census Bureau American Community Survey, 2016 & 3C-REN Targets

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • All values are subject to change pending CPUC approval of 3C-REN's 2019 ABAL as directed in D.18.05.041. 3C-REN does not currently administer any programs with ratepayer funding. • 3C-REN's residential programs are limited to hard-to-reach (HTR) and disadvantaged communities (DAC). Targets were developed using 2015 Census data for the number of eligible HTR and DAC multifamily units in 3C-REN's territory (Ventura, Santa Barbara, San Luis Obispo). Ventura County is the only area which is using DAC criteria to meet the direction provided in the Decision (D.18-05-041) that REN can duplicate IOU service if they are in HTR and/or DAC areas. Estimated targets by year were used for Ventura as the numerator and total eligible units in DAC (per CalEnviroScreen 3.0) per the Census data as the denominator. For HTR, we used the total number of targets by year for Santa Barbara and San Luis Obispo as the numerator and total eligible units in HTR per the Census data as the denominator.

					Single Far	mily Metrics 3C-	REN					
Common Problem	Common N	letric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
		PAC Levelized Cost (\$/kW)	N/A			N/A	31.45	32.00	31.73	33.75	32.34	CEDARS CET Outputs
	Levelized cost of energy	PAC Levelized Cost (\$/kWh)	N/A			N/A	0.17	0.12	0.15	0.07	0.04	CEDARS CET Outputs
Cost per Unit	efficiency per kWh, therms	PAC Levelized Cost (\$/therm)	N/A			N/A	1.57	1.20	1.38	0.69	0.45	CEDARS CET Outputs
Saved	and kW (use both TRC and	TRC Levelized Cost (\$/kW)	N/A			N/A	45.22	49.45	47.34	65.87	73.54	CEDARS CET Outputs
	PAC)	TRC Levelized Cost (\$/kWh)	N/A			N/A	0.24	0.19	0.22	0.13	0.09	CEDARS CET Outputs
		TRC Levelized Cost (\$/therm)	N/A			N/A	2.25	1.86	2.06	1.32	1.02	CEDARS CET Outputs

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • All values are subject to change pending CPUC approval of 3C-REN's 2019 ABAL as directed in D.18.05.041. 3C-REN does not currently administer any programs with ratepayer funding. • The current version of the CEDARS Cost-effectiveness tool (CET) only has avoided costs for 2019, so all future values are estimates. Additionally the current tool does not provide levelized cost per kW or per Therm. These values were calculated using the following equations: TRC cost per kWh or per therm or per kW is (TRC Cost x Electric Benefits/Total Benefits)/Lifecycle Net kWh or (TRC Cost x Gas Benefits/Total Benefits)/Lifecycle Net kW respectively. . • PAC cost per kWh or per therm or per kW is (PAC Cost x Electric Benefits/Total Benefits)/Lifecycle Net kW respectively.

	Single Family Metrics 3C-REN														
Common Problem	Common N	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source			
Energy Intensity	Average energy use intensity of single family homes (average usage per household - not adjusted)	Energy intensity per SF household	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				

3C-REN Notes/Methodology: Indicator, so no data needed

					Multifam	ly Metrics 3C-RE	N					
Common Problem	Common	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
		First Year Gross kW Savings	N/A			N/A	157,147	200,814	178,980	435,501	650,693	CEDARS CET Outputs
		First Year Net kW Savings	N/A			N/A	141,432	180,732	161,082	391,951	585,624	CEDARS CET Outputs
		First Year Gross kWh Savings	N/A			N/A	64	82	73	177	265	CEDARS CET Outputs
		First Year Net kWh Savings	N/A			N/A	141,432	180,732	161,082	391,951	585,624	CEDARS CET Outputs
	First year annual and	First Year Gross Therms Savings	N/A			N/A	7,841	10,016	8,928	21,717	32,434	CEDARS CET Outputs
Capturing Energy	lifecycle ex-ante (pre-eval)	First Year Net Therms Savings	N/A			N/A	7,057	9,014	8,036	19,545	29,191	CEDARS CET Outputs
Savings	gas, electric and demand	Lifecycle Gross kW Savings	N/A			N/A	767	980	873	2,125	3,175	Calculated from CEDARS CET Inputs
_	savings (gross and net) In-unit	Lifecycle Net kW Savings	N/A			N/A	652	833	742	1,806	2,699	Calculated from CEDARS CET Inputs
	in-unit	Lifecycle Gross kWh Savings	N/A			N/A	1,885,758	2,409,766	2,147,762	5,226,016	7,808,315	CEDARS CET Outputs
	ľ	Lifecycle Net kWh Savings	N/A			N/A	1,697,183	2,168,789	1,932,986	4,703,415		CEDARS CET Outputs
		Lifecycle Gross Therms Savings	N/A			N/A	94,093	120,188	107,141	260,604		CEDARS CET Outputs
		Lifecycle Net Therms Savings	N/A			N/A	84,683	108,170	96,426	234,543	350,291	CEDARS CET Outputs
		First Year Gross kW Savings	N/A			N/A	-	-	-	-	-	·
		First Year Net kW Savings	N/A			N/A	-	-	-	-	-	
		First Year Gross kWh Savings	N/A			N/A	-	-	-	-	-	
	First year annual and	First Year Net kWh Savings	N/A			N/A	-	-	-	-	-	
	lifecycle ex-ante (pre-eval)	First Year Gross Therms Savings	N/A			N/A	-	-	-	-	-	
Capturing Energy	gas, electric and demand	First Year Net Therms Savings	N/A			N/A	-	-	-	-	-	
Savings	savings (gross and net)	Lifecycle Gross kW Savings	N/A			N/A	-	-	-	-	-	
	Common Area	Lifecycle Net kW Savings	N/A			N/A	-	-	-	-	-	
	common Arca	Lifecycle Gross kWh Savings	N/A			N/A	-	-	-	-	-	
		Lifecycle Net kWh Savings	N/A			N/A	-	-	-	-	-	
	_	Lifecycle Gross Therms Savings	N/A			N/A	-	-	-	-	-	
		Lifecycle Net Therms Savings	N/A			N/A	-	-	-	-	-	
	<u> </u>	First Year Gross kW Savings	N/A			N/A	-	-	-	-	-	
		First Year Net kW Savings	N/A			N/A	-	-	-	-	-	
		First Year Gross kWh Savings	N/A			N/A	-	-	-	-	-	
		First Year Net kWh Savings	N/A			N/A	-	-	-	-	-	
	First year annual and	First Year Gross Therms Savings	N/A			N/A	-	-	-	-	-	
Capturing Energy	lifecycle ex-ante (pre-eval)	First Year Net Therms Savings	N/A			N/A	-	-	-	-	-	
Savings	gas, electric and demand savings (gross and net)	Lifecycle Gross kW Savings	N/A			N/A	-	-		-	-	
	Master Metered	Lifecycle Net kW Savings	N/A			N/A	-	-	-	-	-	
	IVIASCEI IVIECEICA	Lifecycle Gross kWh Savings	N/A			N/A	-	-	-	-	-	
		Lifecycle Net kWh Savings	N/A			N/A	-	-	-	-	-	
		Lifecycle Gross Therms Savings	N/A			N/A	-	-	-	-	-	
		Lifecycle Net Therms Savings	N/A			N/A	-	-	-	-	-	

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • All of 3C-REN's savings are in-unit since the program is targeting renters and not property owners or managers. We don't anticipate installing any common area measures or claiming any common area savings. 3C-REN does not have access to master metered accounts or data, and therefore assumes all savings will be in-unit. After 3C-REN is approved for funding in 2019, we can work with tenants to determine if their unit is master metered vs individually metered and report on that for future years.

				Multifamily	y Metrics 3C	-REN					
Common Problem	Common Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source

Greenhouse Gas Emissions	Greenhouse gasses (MT CO2eq) Net kWh savings, reported on annual basis	MT CO2eq Net kWh Savings	N/A			N/A	5.1	51.0	28.1	97.7	138.3	CEDARS CET Output
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3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding.•

					Multifan	nily Metrics 3C-	REN					
Common Problem	Common	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
	Energy Savings (kW, kWh,	Lifecycle Net kW	N/A			N/A	2.10	2.10	2.10	2.10	2.10	CEDARS CET Output and 3C-REN targets
	Therms) per Project	Lifecycle Net kWh	N/A			N/A	5,475	5,477	5,476	5,477	5,480	CEDARS CET Output and 3C-REN targets
	(Building)	Lifecycle Net Therms	N/A			N/A	273	273	273	273	273	CEDARS CET Output and 3C-REN targets
	Average Savings per	Lifecycle Net kW	N/A			N/A	2.10	2.10	2.10	2.10	2.10	CEDARS CET Output and 3C-REN targets
Depth of Interventions	Participant Savings per	Lifecycle Net kWh	N/A			N/A	5,475	5,477	5,476	5,477	5,480	CEDARS CET Output and 3C-REN targets
interventions	Project (Property)	Lifecycle Net Therms	N/A			N/A	273	273	273	273	273	CEDARS CET Output and 3C-REN targets
		Lifecycle Net kW	N/A			N/A	0.003	0.003	0.003	0.003	0.003	CEDARS and BayREN data for avg. sqft.
	Energy Savings (kWh, kW, therms) per square foot	Lifecycle Net kWh	N/A			N/A	6.84	6.85	6.84	6.85	6.85	CEDARS and BayREN data for avg. sqft.
		Lifecycle Net Therms	N/A	_	_	N/A	0.34	0.34	0.34	0.34	0.34	CEDARS and BayREN data for avg. sqft.

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • N/A for midstream, opt-out and upstream interventions. • 3C-REN's multifamily program plans to target renters and not property managers or owners. Our targets are based on individual multifamily units and we consider each unit that receives services to be a project. Energy Savings per project/property is equal the total energy savings per participant, where a participant is the same as a multifamily housing unit. • For numbers of buildings 3C-REN is using 1 building per project since we are targeting individual units and those would be located in a single building. • 3C-REN does not have any values for Avg. Square Feet of multifamily units and are using the value developed by BayREN as a proxy (800 sqft/unit). After 3C-REN is approved to administer the multifamily program, it will collect square footage for all participants and update the value for the 2019 Annual report based on our database and/or we will can CoStar data to determine the average square footage of units in our service territory.

					Multifam	ily Metrics 3C-RI	EN					
Common Problem	Common	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	average (2021-	Long-term average (2024- 2025)	Data Source
	Percent of participation relative to eligible population by property	Percent	N/A	N/A	N/A	N/A	0.28%	0.36%	0.32%	0.72%	1.21%	2015 US Census data
Penetration of	Percent of participation relative to eligible population by unit	Percent	N/A	N/A	N/A	N/A	0.28%	0.36%	0.32%	0.72%	1.21%	2015 US Census data
Energy Efficiency Program in the Eligible Market	Percent of participation in disadvantaged communities	Percent	N/A	N/A	N/A	N/A	2.08%	2.29%	2.19%	3.15%	4.21%	2015 US Census data
	Percent of participation by customers defined as "hard-to-reach"	Percent	N/A	N/A	N/A	N/A	0.60%	0.86%	0.73%	2.10%	3.84%	2015 US Census data

Penetration of energy												
efficiency programs in	Percent	N/A	N/A	N/A	N/A	0.24%	0.30%	0.27%	0.66%	0.99%	2015 US Census data	
terms of square feet												

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding.• 3C-REN targets individual units and not properties, therefore property and unit are the same • 3C-REN's residential programs are limited to hard-to-reach (HTR) and disadvantaged communities (DAC). Our targets (number of multifamily units) were developed using 2015 Census data for the number of eligible HTR and DAC multifamily units in 3C-REN's territory (Ventura, Santa Barbara, San Luis Obispo). Ventura County is the only area which is using DAC criteria to meet the direction provided in the Decision (D.18-05-041) that REN can duplicate IOU service if they are in HTR and/or DAC areas. We used the estimated targets by year for Ventura as the numerator and total eligible units in DAC per the Census data as the denominator. For HTR, we used the total number of targets by year for Santa Barbara and San Luis Obispo as the numerator and total eligible units in HTR per the Census data as the denominator. • 3C-REN defines eligible population as all multifamily housing units with 2 or more units located in Ventura, Santa Barbara or San Luis Obispo. Since 3C-REN is limited to only targeting HTR and DAC participants, a better representation of percent of participation would be to only look at the HTR and DAC population. • To determine the total square footage of eligible population, 3C-REN used 800 sqft/unit as a proxy (provided by BayREN) and multiplied that number times the eligible population per 2016 Census Data.

					Multifam	ily Metrics 3C-RE	N					
Common Problem	Common	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
		PAC Levelized Cost (\$/kW)	N/A			N/A	15.70	14.53	15.11	15.11	14.53	CEDARS CET Outputs
	Levelized cost of energy	PAC Levelized Cost (\$/kWh)	N/A			N/A	0.30	0.21	0.25	0.11	0.07	CEDARS CET Outputs
Cook now Unit Coverd	efficiency per kWh, therms	PAC Levelized Cost (\$/therms)	N/A			N/A	2.80	2.08	2.44	1.16	0.73	CEDARS CET Outputs
Cost per Unit Saved	and kW (use both TRC and	TRC Levelized Cost (\$/kW)	N/A			N/A	15.87	14.74	15.31	15.49	14.99	CEDARS CET Outputs
	PAC)	TRC Levelized Cost (\$/kWh)	N/A			N/A	0.30	0.22	0.26	0.12	0.07	CEDARS CET Outputs
		TRC Levelized Cost (\$/therms)	N/A			N/A	0.30	0.22	0.26	0.12	0.07	CEDARS CET Outputs

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • The current version of the CEDARS Cost-effectiveness tool (CET) only has avoided costs for 2019, so all future values are estimates. Additionally the current tool does not provide levelized cost per kW or per Therm. These values were calculated using the following equations: TRC cost per kWh or per therm or per kW is (TRC Cost x Electric Benefits/Total Benefits)/Lifecycle Net kWh or (TRC Cost x Gas Benefits)/Lifecycle Net therm or (TRC Cost x Electric Benefits)/Lifecycle Net kW respectively PAC cost x Electric Benefits/Total Benefits)/Lifecycle Net kWh or (PAC Cost x Gas Benefits/Total Benefits)/Lifecycle Net kWh or (PAC Cost x Electric Benefits)/Lifecycle Net kWh respectively

					Multifam	ily Metrics 3C-RE	N					Multifamily Metrics 3C-REN														
Common Problem	Common	Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source														
Energy Intensity	Average energy use intensity of single family	Energy Intensity per MF unit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A															
	homes (average usage per household - not adjusted)	Energy Intensity per MF unit square foot	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A															

3C-REN Notes/Methodology: These are Indicators and not metrics. Per the Decision (D.18-05-041) on the Business Plans, Program Administrators do not have to provide data on Indicators only definitions and methodologies, which can be found in the ED Template.

					Multifam	ily Metrics 3C-RE	N					
Common Problem	Common	n Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
Penetration of Benchmarking in the	Percent of benchmarked multifamily properties	Percent of benchmarked multi-family properties relative to the eligible population	N/A	N/A	N/A	N/A	0%	0%	0%	0%	0%	
Eligible Population	relative to the eligible population	Percent of benchmarking by properties defined as "hard-to-reach"	N/A	N/A	N/A	N/A	0%	0%	0%	0%	0%	

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have any energy efficiency programs using CPUC funding. • Per the Decision (D.18-05-041) on the Business Plans, 3C-REN will target hard-to-reach and disadvantaged communities, and thus will be targeting renters and not property owners or managers. If 3C-REN is able to provide energy efficiency services and upgrades to more than 75% of the units in a property, we will consider benchmarking the property. These numbers are approximate and pending approval of our 2019 Annual Budget and Advice Letter.

					C&S Metrics 3C-R	EN						
									Short-term	Mid-term	Long-term	
Common Problem	Com	Common Metric/Indicator		Numerator	Denominator	2018	2019	2020	average (2018-	average (2021-	average (2024-	Data Source
									2020)	2023)	2025)	
Canturing Energy	Net Energy Savings:	Net GWH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
l antiiring Energy i	GWH, M Therms and	Net M Therms	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Saviligs	MW (demand)	Net MW (demand)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

3C-REN Notes/Methodology: 3C-REN does not plan to claim savings for Codes and Standards Program.

	C&S Metrics 3C-REN													
Common Problem	Common Metric/Indicator		2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source		
Building Codes (T- 24) Advocacy	Activity in advocating for building codes (T-24) tied to adoption in CA	Number of measures supported by CASE studies in rulemaking cycle (current work)	N/A	N/A	N/A	N/A	12 total	12 total	12	TBD	IRD	Statewide codes metrics from IOUS		
		Number of measures adopted by CEC in rulemaking cycle (indicator of past work)	N/A	N/A	N/A	N/A	12 total	12 total	12	TBD	TRD	Statewide codes metrics from IOUS		

3C-REN Notes/Methodology: Future targets are TBD since the updates to Title 24 occur on a three year cycle.

	C&S Metrics 3C-REN													
Common Problem	Com	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source			
Appliance Advocacy		Number of T-20 measures supported by CASE studies in rulemaking cycle (current work)		N/A	N/A	N/A	10 total	10 total	10	ТВО	I TRD	Statewide codes metrics from IOUS		
	standards tied to adoption in CA	Number of measures adopted by CEC in current year	N/A	N/A	N/A	N/A	10 total	10 total	10	TBD	I TRD	Statewide codes metrics from IOUS		

3C-REN Notes/Methodology: Future targets are TBD since the updates to Title 24 occur on a three year cycle.

Common Problem	Common Metric/Indicator		2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
	Activity in advocating for codes and standards tied to the adoption at	advocated activities)	N/A	N/A	N/A	N/A	100%	100%	100%	ТВО	I IRD	Statewide codes metrics from IOUS
		Percent of federal standards adopted for which a utility advocated (#IOU supported / # DOE adopted)	N/A	N/A	N/A	N/A	100%	100%	100%	ТВО	TRD	Statewide codes metrics from IOUS

3C-REN Notes/Methodology: Future targets are TBD since the updates to Title 24 occur on a three year cycle.

C&S Metrics 3C-REN													
Common Problem			2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source	
Reach Code	The number of local government Reach Codes implemented	The number of local government Reach Codes implemented (this is a joint IOU and REN effort)	N/A	N/A	N/A	N/A	25 total	25 total	25 total	ТВО	I TRD	Statewide codes metrics from IOUS	

	C&S Metrics 3C-REN													
Common Problem	Common Metric/Indicator	2016 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source			
	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the total size (number of the target audience) by sector. (M) Number of training activities	N/A	N/A	N/A	N/A	138	138	138	TBD	TBD				
	Number of training activities (classes, webinars) held, number of market actors participants by segment (e.g. building officials, builders, architects, etc.) and the total size (number of the target audience) by sector. (M) Number of participants	N/A	N/A	N/A	N/A	3,600	3,600	3,600	TBD	TBD				

		Increase in code compliance knowledge pre/post training	N/A	N/A	N/A	N/A	20%	20%	20%	TBD	TBD	
Compliance Improvements	The percentage increase in closed permits for building projects triggering energy code compliance within participating jurisdictions	The percentage increase in closed permits for building projects triggering energy code compliance within participating jurisdictions	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	TBD	Program strategy is to work with regional jurisdictions' permit tracking. 3C-REN will establish tracking mechanisms for residential energy efficiency and new construction, Title 24 Part 6 and Part 11, built into permitting processes to allow for queries for compliance and permits for specific energy code measures.
		Number and percent of jurisdictions with staff participating in an Energy Policy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Forum	, , , ,	,,,,		14,71	, / .			.,,,,	, / .	
		Number and percent of jurisdictions										
		receiving Energy Policy technical assistance.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		Number and percent of jurisdictions										
		receiving Energy Policy technical	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		assistance.										
		Buildings receiving enhanced code	N1/A	N1 / A	N1 / A	N1 / A	N1 / A	N1/A	N1/A	N1 / A	N1 / A	
		compliance support and delivering compliance data to program evaluators	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

3C-REN Notes/Methodology: Future targets are TBD since the updates to Title 24 occur on a three year cycle. • N/A for Indicators. Per the Decision (D.18-05-041) on the Business Plans, Program Administrators do not have to provide data on Indicators only definitions and methodologies, which can be found in the ED Template.

			Workf	orce Educatior	& Training M	etrics 3C-REN						
Common Problem	Common Metric/Indicator		2019 Baseline	Numerator	Denominator	2018	2019	2020	Short-term average (2018- 2020)	Mid-term average (2021- 2023)	Long-term average (2024- 2025)	Data Source
Expanding WE&T Reach via Collaborations	Number of collaborations by Business Plan sector to jointly develop or share training materials or resources.	Count	N/A			N/A	TBD	TBD	TBD	TBD	TBD	JCM filed 8/1/2018 indicated that collaboration agreements would be filed if needed.
Penetration of training	Number of participants by sector	Count	N/A			N/A	110	120	115	160	230	2014 CSLB Contractor Database
	Percent of participation relative to eligible target population for curriculum	Percentage	N/A	N/A	N/A	N/A	2.0%	2.1%	2.1%	2.9%	4.1%	2014 CSLB Contractor Database
Diversity of participants	Percent of total WE&T training program participants that meet the definition of disadvantaged worker.	Percentage	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	TBD	Identified DAC zip codes in 3C-REN territory compared to contractor address in CSLB database at cslb.ca.gov.
	Percent of applicable incentive contract spend by vendors with a demonstrated commitment to provide career pathways to disadvantaged workers.	Percentage	N/A	N/A	N/A	N/A	TBD	TBD	TBD	TBD	TBD	Commitments by direct installer vendors/partners
	Number Career & Workforce Readiness (CWR) participants who have been employed for 12 months after receiving the training	Count	N/A			N/A	TBD	TBD	TBD	TBD	TBD	CWR program does not exist yet this will be filed as a statewide program

3C-REN Notes/Methodology: • N/A for 2016 and 2018 since 3C-REN is not currently an approved Program Administrator and does not currently have WE&T programs using CPUC funding. • To determine the eligible target population the sum of Class B, C-2, C-6, C-10, C-17, C-20, C-36 and C-46 licenses in San Luis Obispo, Santa Barbara and Ventura Counties was multiplied by a factor of 0.67 to account for contractors holding multiple licenses. • Participants by sector is 75% residential and 25% commercial contractors. • The average number of attendees per training is based on emPower and LGP trainings coordinated in the past.