

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1452

In the Matter of PUBLIC UTILITY
COMMISSION OF OREGON

Investigation into Pilot Programs to demonstrate
the use and effectiveness of Volumetric
Incentive Rates for Solar Photovoltaic Energy
Systems.

STAFF SUPPLEMENTAL COMMENTS

Pursuant to Administrative Law Judge Power's March 29, 2010 ruling in this case, the Staff of the Public Utility Commission of Oregon (Staff) submits additional rate tables for the Commission to consider when setting the initial volumetric incentive rates (VIR) for utility solar photovoltaic pilot programs. On April 9, 2010, the Energy Trust of Oregon (ETO) provided Staff with its database of solar PV projects receiving ETO incentives updated to include projects included in the last quarter of 2009 and the first quarter of 2010. Staff used the updated information to do additional calculations to inform the Commission's decision regarding the Pilot Program VIR.

Table 1 shows the VIR that Staff recommended in its Final Comments in this docket filed on February 17, 2010. These rates are based on the 25th percentile of the distribution of solar project VIR assuming loan financing at 7.5 percent interest.¹ Table 2 shows the VIR calculated with the same methodology and using the same cost and output assumptions, but applied only to the incremental solar projects included in the updated ETO database (those added in the last quarter of 2009 and first quarter of 2010).

A comparison of Table 1 and Table 2 indicates a reduction in VIR based on recent projects in the small-size category in rate classes 1 and 2. For small projects in rate class 1 the calculated VIR is \$0.10 per kilowatt-hour (kWh) lower. For small projects in rate class 2 the calculated VIR is \$0.05 per kWh lower.

¹ For further discussion of the underlying calculations and cost assumptions see Staff's Final Comments in AR 538 and UM 1452 at 20-24

Table 1. Staff's Recommended Volumetric Incentive Rates in Final Comments

Rate Class	IOU Service Counties	IOUs	Project Size Less Than or Equal to 100kW	Project Size Greater Than 100kW and Less Than or Equal to 1000kW
			\$/kWh	\$/kWh
1	Benton, Clackamas, Clatsop, Columbia, Lane, Lincoln, Linn, Marion*, Multnomah*, Polk*, Tillamook, Washington, Yamhill*	Pacific Power & PGE*	0.750	0.550
2	Coos, Douglas, Hood River	Pacific Power & PGE*	0.650	0.550
3	Gilliam, Jackson, Josephine, Klamath, Morrow, Sherman, Umatilla, Wallowa, Wasco	Pacific Power	0.600	0.550
4	Baker*, Crook, Deschutes, Jefferson, Lake, Malheur*, Harney*	Pacific Power & Idaho Power*	0.550	0.550

Table 2. Staff's Calculation of Volumetric Incentive Rates for "Recent" Projects

Rate Class	IOU Service Counties	IOUs	Project Size Less Than or Equal to 100kW	Project Size Greater Than 100kW and Less Than or Equal to 1000kW
			\$/kWh	\$/kWh
1	Benton, Clackamas, Clatsop, Columbia, Lane, Lincoln, Linn, Marion*, Multnomah*, Polk*, Tillamook, Washington, Yamhill*	Pacific Power & PGE*	0.650	0.550
2	Coos, Douglas, Hood River	Pacific Power & PGE*	0.600	0.550
3	Gilliam, Jackson, Josephine, Klamath, Morrow, Sherman, Umatilla, Wallowa, Wasco	Pacific Power	0.600	0.550
4	Baker*, Crook, Deschutes, Jefferson, Lake, Malheur*, Harney*	Pacific Power & Idaho Power*	0.550	0.550

Table 3 shows the results, applying the same set of calculations and assumptions, to all of the projects identified as "completed" or "received" during 2008-2010 in the updated ETO database. These results do not materially change if projects "completed" during 2008 are excluded from the calculations. Staff has included the workpapers that support these calculations as Attachment A.

Table 3. Staff's Calculation of Volumetric Incentive Rates for Projects from 2008-2010

Rate Class	IOU Service Counties	IOU	Project Size Less Than or Equal to 100kW	Project Size Greater Than 100kW and Less Than or Equal to 1000kW
			\$/KWH	\$/KWH
1	Benton, Clackamas, Clatsop, Columbia, Lane, Lincoln, Linn, Marion*, Multnomah*, Polk*, Tillamook, Washington, Yamhill*	Pacific Power & PGE*	0.700	0.550
2	Coos, Douglas, Hood River	Pacific Power & PGE*	0.650	0.550
3	Gilliam, Jackson, Josephine, Klamath, Morrow, Sherman, Umatilla, Wallowa, Wasco	Pacific Power	0.600	0.550
4	Baker*, Crook, Deschutes, Jefferson, Lake, Malheur*, Harney*	Pacific Power & Idaho Power*	0.550	0.550

Staff also developed a “look-up table” that provides VIR for various combinations of system capacity (measured in kilowatts) and system cost (measured in \$ per watt) for each of the proposed rate classes and project size categories. These VIR are based on the same set of calculations and cost assumptions applied to the ETO database. The VIR look-up table is included as Attachment B.

This concludes Staff's supplemental comments.

Dated at Salem, Oregon, this 29th day of April, 2010.



Maury Galbraith
 Program Manager
 Electric Rates & Planning

ATTACHMENT A

VIR Workpapers

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 INCREMENTAL PROJECTS ONLY**

The MEANS Procedure

Rate Class=1 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	393	14076.00	15640.00	20475.00	24169.56
DC_CAP	Capacity - DC (kW)	393	2.0000000	2.1000000	2.7600000	3.2616997
PUC_COST_WATT	System Cost per Watt (\$/watt)	393	6.3000000	6.8000000	6.9400000	7.5421521
KWH_YEAR	Expected Annual Generation (kWh)	393	1861.20	1954.26	2568.46	3035.34
CF_YEAR	Annual Capacity Factor (%)	393	10.6232877	10.6232877	10.6232877	10.6232877
LPC_TSRF_DEG	County LPC x TSRF x Degradation	393	0.9306000	0.9306000	0.9306000	0.9306000
CMTR	Combined Marginal Tax Rate	393	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	393	0.5736860	0.6214128	0.6662608	0.6966844
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	393	0.5896740	0.6389261	0.6837740	0.7161091
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	393	0.6063362	0.6567071	0.7015550	0.7358307
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	393	0.6242203	0.6747504	0.7195983	0.7558432
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	393	0.6423588	0.6930504	0.7378984	0.7761405
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	393	0.6607463	0.7116015	0.7564495	0.7967163
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	393	0.6793770	0.7303981	0.7752460	0.8175644
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	393	0.6982452	0.7494343	0.7942823	0.8386782
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	393	0.7173453	0.7687044	0.8135523	0.8600514

Rate Class=1 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	68	92268.00	131870.00	199660.00	259931.96
DC_CAP	Capacity - DC (kW)	68	12.6000000	19.1100000	27.6500000	34.7680882
PUC_COST_WATT	System Cost per Watt (\$/watt)	68	6.1600000	6.5000043	7.1422851	7.3374543
KWH_YEAR	Expected Annual Generation (kWh)	68	11725.56	17783.77	25731.09	32355.18
CF_YEAR	Annual Capacity Factor (%)	68	10.6232877	10.6232877	10.6232877	10.6232877
LPC_TSRF_DEG	County LPC x TSRF x Degradation	68	0.9306000	0.9306000	0.9306000	0.9306000
CMTR	Combined Marginal Tax Rate	68	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	68	0.5080930	0.5347005	0.5822251	0.6009701
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	68	0.5239580	0.5513110	0.6004823	0.6198676
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	68	0.5400655	0.5681754	0.6190186	0.6390540
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	68	0.5564106	0.5852885	0.6378283	0.6585233
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	68	0.5729883	0.6026452	0.6569056	0.6782698
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	68	0.5897934	0.6202400	0.6762447	0.6982871
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	68	0.6068209	0.6380676	0.6958397	0.7185693
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	68	0.6240655	0.6561225	0.7156845	0.7391101
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	68	0.6415219	0.6743992	0.7357731	0.7599033

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 INCREMENTAL PROJECTS ONLY**

The MEANS Procedure

Rate Class=2 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	21	17000.00	17750.00	19551.00	25037.53
DC_CAP	Capacity - DC (kW)	21	2.0700000	2.1000000	2.7300000	3.4365714
PUC_COST_WATT	System Cost per Watt (\$/watt)	21	6.1021111	6.6666667	8.0000000	7.5876147
KWH_YEAR	Expected Annual Generation (kWh)	21	2101.46	2131.92	2771.50	3488.81
CF_YEAR	Annual Capacity Factor (%)	21	11.5890411	11.5890411	11.5890411	11.5890411
LPC_TSRF_DEG	County LPC x TSRF x Degradation	21	1.0152000	1.0152000	1.0152000	1.0152000
CMTR	Combined Marginal Tax Rate	21	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	21	0.5018089	0.5440755	0.6756789	0.6359039
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	21	0.5165039	0.5598146	0.6939270	0.6538171
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	21	0.5314236	0.5757942	0.7124542	0.6720043
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	21	0.5465634	0.5920096	0.7312546	0.6904597
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	21	0.5619186	0.6084557	0.7503225	0.7091777
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	21	0.5774845	0.6251275	0.7696521	0.7281525
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	21	0.5932563	0.6420198	0.7892374	0.7473784
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	21	0.6092292	0.6591275	0.8090725	0.7668494
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	21	0.6253984	0.6764454	0.8291512	0.7865596

Rate Class=2 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	10	71457.30	77900.00	97025.00	120058.04
DC_CAP	Capacity - DC (kW)	10	10.0800000	12.0960000	16.5600000	18.1116000
PUC_COST_WATT	System Cost per Watt (\$/watt)	10	4.9002525	5.5625489	6.7585099	6.7313451
KWH_YEAR	Expected Annual Generation (kWh)	10	10233.22	12279.86	16811.71	18386.90
CF_YEAR	Annual Capacity Factor (%)	10	11.5890411	11.5890411	11.5890411	11.5890411
LPC_TSRF_DEG	County LPC x TSRF x Degradation	10	1.0152000	1.0152000	1.0152000	1.0152000
CMTR	Combined Marginal Tax Rate	10	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	10	0.3729353	0.4240017	0.5068390	0.5110162
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	10	0.3845041	0.4371341	0.5228019	0.5269080
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	10	0.3962498	0.4504673	0.5390088	0.5430427
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	10	0.4081687	0.4639971	0.5554548	0.5594154
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	10	0.4202572	0.4777194	0.5721349	0.5760210
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	10	0.4325116	0.4916301	0.5890438	0.5928546
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	10	0.4449281	0.5057247	0.6061763	0.6099108
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	10	0.4575029	0.5199991	0.6235274	0.6271845
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	10	0.4702322	0.5344488	0.6410916	0.6446704

COST ASSUMPTIONS:

STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94

LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 INCREMENTAL PROJECTS ONLY**

The MEANS Procedure

Rate Class=3 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	58	16290.00	20000.00	31625.00	36349.78
DC_CAP	Capacity - DC (kW)	58	2.1000000	2.7600000	4.1525000	4.5044828
PUC_COST_WATT	System Cost per Watt (\$/watt)	58	6.6666667	7.0899471	8.0212911	8.0504291
KWH_YEAR	Expected Annual Generation (kWh)	58	2309.58	3035.45	4566.92	4954.03
CF_YEAR	Annual Capacity Factor (%)	58	12.5547945	12.5547945	12.5547945	12.5547945
LPC_TSRF_DEG	County LPC x TSRF x Degradation	58	1.0998000	1.0998000	1.0998000	1.0998000
CMTR	Combined Marginal Tax Rate	58	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	58	0.5055524	0.5363787	0.5834655	0.6038394
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	58	0.5204408	0.5518295	0.6010903	0.6213834
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	58	0.5355569	0.5675165	0.6189845	0.6391955
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	58	0.5510013	0.5834349	0.6371427	0.6572703
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	58	0.5666960	0.5995798	0.6555593	0.6756024
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	58	0.5826060	0.6157473	0.6742286	0.6941860
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	58	0.5987265	0.6318687	0.6931448	0.7130155
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	58	0.6150526	0.6481958	0.7123023	0.7320850
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	58	0.6315792	0.6647234	0.7318022	0.7513888

Rate Class=3 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	20	76000.00	90875.00	153948.00	154511.06
DC_CAP	Capacity - DC (kW)	20	10.1090000	13.0600000	18.9120000	20.9733500
PUC_COST_WATT	System Cost per Watt (\$/watt)	20	6.3475508	6.5410079	7.4181456	7.4411706
KWH_YEAR	Expected Annual Generation (kWh)	20	11117.88	14363.39	20799.42	23066.49
CF_YEAR	Annual Capacity Factor (%)	20	12.5547945	12.5547945	12.5547945	12.5547945
LPC_TSRF_DEG	County LPC x TSRF x Degradation	20	1.0998000	1.0998000	1.0998000	1.0998000
CMTR	Combined Marginal Tax Rate	20	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	20	0.4416263	0.4548779	0.5184871	0.5189745
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	20	0.4554592	0.4692198	0.5346146	0.5351907
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	20	0.4695036	0.4837809	0.5509887	0.5516548
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	20	0.4837552	0.4985567	0.5676043	0.5683618
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	20	0.4982095	0.5135429	0.5844564	0.5853065
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	20	0.5128622	0.5287346	0.6015397	0.6024836
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	20	0.5277087	0.5441274	0.6188490	0.6198881
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	20	0.5427446	0.5597164	0.6363790	0.6375144
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	20	0.5579651	0.5754969	0.6541243	0.6553573

COST ASSUMPTIONS:

STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94

LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 INCREMENTAL PROJECTS ONLY**

The MEANS Procedure

Rate Class=4 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	50	13135.50	13880.00	14175.00	17615.05
DC_CAP	Capacity - DC (kW)	50	2.0000000	2.1000000	2.1000000	2.5969000
PUC_COST_WATT	System Cost per Watt (\$/watt)	50	6.2250000	6.3545455	6.7106676	6.7588251
KWH_YEAR	Expected Annual Generation (kWh)	50	2368.80	2487.24	2487.24	3075.77
CF_YEAR	Annual Capacity Factor (%)	50	13.5205479	13.5205479	13.5205479	13.5205479
LPC_TSRF_DEG	County LPC x TSRF x Degradation	50	1.1844000	1.1844000	1.1844000	1.1844000
CMTR	Combined Marginal Tax Rate	50	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	50	0.4578743	0.4897128	0.5065133	0.5089160
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	50	0.4699166	0.5023805	0.5201996	0.5225932
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	50	0.4821429	0.5152419	0.5343618	0.5364793
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	50	0.4945496	0.5282929	0.5487330	0.5505704
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	50	0.5075347	0.5415297	0.5633086	0.5648619
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	50	0.5212401	0.5549481	0.5776030	0.5793495
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	50	0.5351269	0.5685440	0.5919872	0.5940288
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	50	0.5491908	0.5831924	0.6065548	0.6088953
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	50	0.5634274	0.5975654	0.6213014	0.6239444

Rate Class=4 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	4	79999.00	107499.50	143137.80	176918.65
DC_CAP	Capacity - DC (kW)	4	10.4000000	14.5500000	23.7700000	25.5537500
PUC_COST_WATT	System Cost per Watt (\$/watt)	4	5.2453398	6.2322956	7.4557314	6.9669251
KWH_YEAR	Expected Annual Generation (kWh)	4	12317.76	17233.02	28153.19	30265.86
CF_YEAR	Annual Capacity Factor (%)	4	13.5205479	13.5205479	13.5205479	13.5205479
LPC_TSRF_DEG	County LPC x TSRF x Degradation	4	1.1844000	1.1844000	1.1844000	1.1844000
CMTR	Combined Marginal Tax Rate	4	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	4	0.3385688	0.4028077	0.4797430	0.4507440
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	4	0.3491832	0.4154194	0.4948493	0.4648422
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	4	0.3599599	0.4282238	0.5101865	0.4791560
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	4	0.3708955	0.4412171	0.5257499	0.4936809
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	4	0.3819868	0.4543953	0.5415348	0.5084124
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	4	0.3932303	0.4677543	0.5575363	0.5233461
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	4	0.4046225	0.4812900	0.5737495	0.5384774
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	4	0.4161599	0.4949983	0.5901694	0.5538016
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	4	0.4278391	0.5088751	0.6067910	0.5693140

COST ASSUMPTIONS:

STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94

LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 INCREMENTAL PROJECTS ONLY**

The MEANS Procedure

Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	522	13980.00	15640.00	20377.00	24930.01
DC_CAP	Capacity - DC (kW)	522	2.0160000	2.1000000	2.7600000	3.3431437
PUC_COST_WATT	System Cost per Watt (\$/watt)	522	6.2602381	6.8000000	6.9938142	7.5254250
KWH_YEAR	Expected Annual Generation (kWh)	522	1926.34	2131.92	2647.56	3270.64
CF_YEAR	Annual Capacity Factor (%)	522	10.6232877	10.6232877	10.6232877	11.1542670
LPC_TSRF_DEG	County LPC x TSRF x Degradation	522	0.9306000	0.9306000	0.9306000	0.9771138
CMTR	Combined Marginal Tax Rate	522	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	522	0.5177865	0.5867585	0.6510302	0.6659376
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	522	0.5323281	0.6035618	0.6685435	0.6845420
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	522	0.5467871	0.6212373	0.6863245	0.7034308
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	522	0.5627077	0.6386515	0.7043678	0.7225982
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	522	0.5788548	0.6569295	0.7226678	0.7420383
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	522	0.5952234	0.6756611	0.7412189	0.7617452
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	522	0.6118086	0.6945047	0.7600155	0.7817128
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	522	0.6286053	0.7135410	0.7790517	0.8019350
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	522	0.6456083	0.7325642	0.7983218	0.8224056

Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	102	79405.04	104813.00	176800.00	222292.64
DC_CAP	Capacity - DC (kW)	102	11.7600000	16.4560000	22.7400000	30.0689020
PUC_COST_WATT	System Cost per Watt (\$/watt)	102	5.9866567	6.5000000	7.1957041	7.2838378
KWH_YEAR	Expected Annual Generation (kWh)	102	11432.42	15606.16	22929.98	29082.50
CF_YEAR	Annual Capacity Factor (%)	102	10.6232877	10.6232877	10.6232877	11.2103143
LPC_TSRF_DEG	County LPC x TSRF x Degradation	102	0.9306000	0.9306000	0.9306000	0.9820235
CMTR	Combined Marginal Tax Rate	102	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	102	0.4526947	0.5142449	0.5554723	0.5701823
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	102	0.4669517	0.5300454	0.5729218	0.5880712
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	102	0.4814267	0.5460874	0.5905813	0.6062335
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	102	0.4961152	0.5623660	0.6083805	0.6246637
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	102	0.5110127	0.5788762	0.6264329	0.6433562
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	102	0.5261146	0.5956131	0.6447330	0.6623052
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	102	0.5414163	0.6125713	0.6632502	0.6815048
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	102	0.5569131	0.6297457	0.6819698	0.7009493
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	102	0.5726003	0.6471312	0.7009194	0.7206326

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 ALL PROJECTS**

The MEANS Procedure

Rate Class=1 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	634	14076.00	17204.00	22193.00	25996.79
DC_CAP	Capacity - DC (kW)	634	2.0000000	2.1000000	2.7750000	3.2865962
PUC_COST_WATT	System Cost per Watt (\$/watt)	634	6.5360870	6.8000000	7.6743165	8.0478709
KWH_YEAR	Expected Annual Generation (kWh)	634	1861.20	1954.26	2582.42	3058.51
CF_YEAR	Annual Capacity Factor (%)	634	10.6232877	10.6232877	10.6232877	10.6232877
LPC_TSRF_DEG	County LPC x TSRF x Degradation	634	0.9306000	0.9306000	0.9306000	0.9306000
CMTR	Combined Marginal Tax Rate	634	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	634	0.5992917	0.6414360	0.6978770	0.7368430
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	634	0.6169006	0.6589492	0.7178661	0.7575701
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	634	0.6342841	0.6767302	0.7386587	0.7786141
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	634	0.6518690	0.6950343	0.7596469	0.7999685
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	634	0.6705651	0.7143990	0.7804888	0.8216268
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	634	0.6868735	0.7333515	0.8013556	0.8435822
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	634	0.7038860	0.7527538	0.8223654	0.8658282
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	634	0.7227919	0.7729823	0.8435336	0.8883577
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	634	0.7399161	0.7936816	0.8654246	0.9111641

Rate Class=1 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	138	95772.00	125590.00	200660.00	253268.75
DC_CAP	Capacity - DC (kW)	138	12.2850000	16.5600000	28.6500000	33.8287681
PUC_COST_WATT	System Cost per Watt (\$/watt)	138	6.1600000	6.5000000	7.4556923	7.4532293
KWH_YEAR	Expected Annual Generation (kWh)	138	11432.42	15410.74	26661.69	31481.05
CF_YEAR	Annual Capacity Factor (%)	138	10.6232877	10.6232877	10.6232877	10.6232877
LPC_TSRF_DEG	County LPC x TSRF x Degradation	138	0.9306000	0.9306000	0.9306000	0.9306000
CMTR	Combined Marginal Tax Rate	138	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	138	0.5033311	0.5278654	0.6135713	0.6106005
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	138	0.5191961	0.5446060	0.6326719	0.6297961
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	138	0.5353036	0.5616026	0.6520646	0.6492852
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	138	0.5516487	0.5788499	0.6717433	0.6690618
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	138	0.5682263	0.5963426	0.6917021	0.6891198
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	138	0.5850315	0.6140753	0.7119347	0.7094530
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	138	0.6020590	0.6320426	0.7324349	0.7300552
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	138	0.6193035	0.6502390	0.7531966	0.7509201
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	138	0.6367600	0.6686590	0.7742133	0.7720413

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 ALL PROJECTS**

The MEANS Procedure

Rate Class=2 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	54	17595.00	20750.00	26489.65	28446.05
DC_CAP	Capacity - DC (kW)	54	2.0700000	2.4500000	3.5500000	3.6939444
PUC_COST_WATT	System Cost per Watt (\$/watt)	54	6.2500000	7.2983114	7.9889231	7.8633559
KWH_YEAR	Expected Annual Generation (kWh)	54	2101.46	2487.24	3603.96	3750.09
CF_YEAR	Annual Capacity Factor (%)	54	11.5890411	11.5890411	11.5890411	11.5890411
LPC_TSRF_DEG	County LPC x TSRF x Degradation	54	1.0152000	1.0152000	1.0152000	1.0152000
CMTR	Combined Marginal Tax Rate	54	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	54	0.5123279	0.5797974	0.6499788	0.6482212
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	54	0.5261645	0.5970276	0.6690717	0.6667855
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	54	0.5402125	0.6145213	0.6884565	0.6856336
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	54	0.5550090	0.6322730	0.7081272	0.7047596
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	54	0.5704272	0.6502774	0.7280778	0.7241579
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	54	0.5860570	0.6685287	0.7483022	0.7438223
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	54	0.6018935	0.6870216	0.7687941	0.7637469
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	54	0.6179320	0.7057502	0.7895473	0.7839255
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	54	0.6341675	0.7247089	0.8105555	0.8043520

Rate Class=2 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	13	70500.00	77900.00	97025.00	112415.80
DC_CAP	Capacity - DC (kW)	13	10.0800000	10.6600000	15.5800000	16.4762308
PUC_COST_WATT	System Cost per Watt (\$/watt)	13	4.9002525	5.9866567	6.9940476	6.9945874
KWH_YEAR	Expected Annual Generation (kWh)	13	10233.22	10822.03	15816.82	16726.67
CF_YEAR	Annual Capacity Factor (%)	13	11.5890411	11.5890411	11.5890411	11.5890411
LPC_TSRF_DEG	County LPC x TSRF x Degradation	13	1.0152000	1.0152000	1.0152000	1.0152000
CMTR	Combined Marginal Tax Rate	13	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	13	0.3729353	0.4601608	0.5256682	0.5318391
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	13	0.3845041	0.4742944	0.5421942	0.5483524
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	13	0.3962498	0.4886441	0.5589729	0.5651180
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	13	0.4081687	0.5032055	0.5759990	0.5821310
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	13	0.4202572	0.5179741	0.5932674	0.5993861
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	13	0.4325116	0.5329453	0.6107728	0.6168779
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	13	0.4449281	0.5481146	0.6285097	0.6346011
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	13	0.4575029	0.5634773	0.6464728	0.6525503
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	13	0.4702322	0.5790287	0.6646566	0.6707200

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 ALL PROJECTS**

The MEANS Procedure

Rate Class=3 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	149	17096.00	19900.00	27324.00	33172.01
DC_CAP	Capacity - DC (kW)	149	2.0400000	2.3400000	3.3600000	4.0310738
PUC_COST_WATT	System Cost per Watt (\$/watt)	149	6.8926496	7.3927536	8.0000000	8.2018609
KWH_YEAR	Expected Annual Generation (kWh)	149	2243.59	2573.53	3695.33	4433.37
CF_YEAR	Annual Capacity Factor (%)	149	12.5547945	12.5547945	12.5547945	12.5547945
LPC_TSRF_DEG	County LPC x TSRF x Degradation	149	1.0998000	1.0998000	1.0998000	1.0998000
CMTR	Combined Marginal Tax Rate	149	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	149	0.5154778	0.5552830	0.6045521	0.6206294
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	149	0.5294250	0.5718453	0.6212097	0.6385033
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	149	0.5435854	0.5886609	0.6386044	0.6566505
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	149	0.5582858	0.6057244	0.6572034	0.6750654
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	149	0.5740891	0.6230308	0.6762826	0.6937422
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	149	0.5901093	0.6405746	0.6959040	0.7126754
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	149	0.6063414	0.6583505	0.7157850	0.7318591
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	149	0.6227805	0.6758099	0.7359195	0.7512873
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	149	0.6394216	0.6936698	0.7544684	0.7709542

Rate Class=3 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	25	78000.00	91500.00	159600.00	161648.09
DC_CAP	Capacity - DC (kW)	25	10.1200000	13.8000000	19.6800000	21.9816800
PUC_COST_WATT	System Cost per Watt (\$/watt)	25	6.3891854	6.6200000	7.4726316	7.4577825
KWH_YEAR	Expected Annual Generation (kWh)	25	11129.98	15177.24	21644.06	24175.45
CF_YEAR	Annual Capacity Factor (%)	25	12.5547945	12.5547945	12.5547945	12.5547945
LPC_TSRF_DEG	County LPC x TSRF x Degradation	25	1.0998000	1.0998000	1.0998000	1.0998000
CMTR	Combined Marginal Tax Rate	25	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	25	0.4474831	0.4604440	0.5183844	0.5198316
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	25	0.4614067	0.4746960	0.5346124	0.5360840
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	25	0.4755432	0.4891659	0.5511461	0.5525848
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	25	0.4898883	0.5038492	0.5679237	0.5693291
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	25	0.5044374	0.5187415	0.5849400	0.5863116
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	25	0.5191862	0.5338381	0.6021898	0.6035271
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	25	0.5341301	0.5491344	0.6196678	0.6209704
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	25	0.5492646	0.5646257	0.6373687	0.6386361
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	25	0.5645849	0.5803074	0.6552870	0.6565189

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 ALL PROJECTS**

The MEANS Procedure

Rate Class=4 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	105	13215.00	13980.00	14780.00	21377.12
DC_CAP	Capacity - DC (kW)	105	2.0000000	2.0400000	2.1000000	2.8765238
PUC_COST_WATT	System Cost per Watt (\$/watt)	105	6.2678571	6.5949074	6.9900000	7.3086793
KWH_YEAR	Expected Annual Generation (kWh)	105	2368.80	2416.18	2487.24	3406.95
CF_YEAR	Annual Capacity Factor (%)	105	13.5205479	13.5205479	13.5205479	13.5205479
LPC_TSRF_DEG	County LPC x TSRF x Degradation	105	1.1844000	1.1844000	1.1844000	1.1844000
CMTR	Combined Marginal Tax Rate	105	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	105	0.4811248	0.4997235	0.5362542	0.5401789
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	105	0.4950876	0.5127324	0.5511801	0.5549687
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	105	0.5092638	0.5259400	0.5667300	0.5699846
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	105	0.5236492	0.5393425	0.5820413	0.5852220
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	105	0.5382392	0.5529357	0.5968217	0.6006762
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	105	0.5530295	0.5667155	0.6118048	0.6163424
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	105	0.5678242	0.5806775	0.6269862	0.6322159
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	105	0.5815715	0.5948175	0.6423611	0.6482918
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	105	0.5954876	0.6091313	0.6579250	0.6645652

Rate Class=4 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	9	79999.00	148000.00	198000.00	234086.07
DC_CAP	Capacity - DC (kW)	9	10.4000000	18.7000000	28.8400000	29.0172222
PUC_COST_WATT	System Cost per Watt (\$/watt)	9	5.2453398	7.6922115	7.9038282	7.9625572
KWH_YEAR	Expected Annual Generation (kWh)	9	12317.76	22148.28	34158.10	34368.00
CF_YEAR	Annual Capacity Factor (%)	9	13.5205479	13.5205479	13.5205479	13.5205479
LPC_TSRF_DEG	County LPC x TSRF x Degradation	9	1.1844000	1.1844000	1.1844000	1.1844000
CMTR	Combined Marginal Tax Rate	9	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	9	0.3385688	0.4924394	0.5049213	0.5121010
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	9	0.3491832	0.5080431	0.5207902	0.5282140
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	9	0.3599599	0.5238854	0.5370288	0.5445733
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	9	0.3708955	0.5399613	0.5535069	0.5611739
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	9	0.3819868	0.5562660	0.5702196	0.5780107
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	9	0.3932303	0.5727944	0.5871615	0.5950785
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	9	0.4046225	0.5895415	0.6043276	0.6123722
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	9	0.4161599	0.6065021	0.6217126	0.6298863
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	9	0.4278391	0.6236710	0.6393112	0.6476156

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2008-2010
 ALL PROJECTS**

The MEANS Procedure

Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	942	14076.00	17204.00	22500.00	26757.19
DC_CAP	Capacity - DC (kW)	942	2.0000000	2.1000000	2.8700000	3.3819958
PUC_COST_WATT	System Cost per Watt (\$/watt)	942	6.5000000	6.8016667	7.7483165	7.9792568
KWH_YEAR	Expected Annual Generation (kWh)	942	1907.73	2140.38	2782.49	3354.46
CF_YEAR	Annual Capacity Factor (%)	942	10.6232877	10.6232877	10.6232877	11.3071067
LPC_TSRF_DEG	County LPC x TSRF x Degradation	942	0.9306000	0.9306000	0.9306000	0.9905025
CMTR	Combined Marginal Tax Rate	942	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	942	0.5268585	0.5983675	0.6662608	0.6914596
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	942	0.5410630	0.6154527	0.6837740	0.7109497
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	942	0.5549032	0.6323181	0.7015550	0.7307376
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	942	0.5707150	0.6494322	0.7195983	0.7508175
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	942	0.5865006	0.6667899	0.7378984	0.7711831
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	942	0.6027881	0.6850779	0.7564495	0.7918282
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	942	0.6193614	0.7030452	0.7752460	0.8127463
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	942	0.6358569	0.7210450	0.7942823	0.8339312
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	942	0.6523279	0.7396615	0.8137749	0.8553764

Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	185	84888.00	114370.00	184100.00	230056.59
DC_CAP	Capacity - DC (kW)	185	11.5500000	15.8400000	25.2000000	30.7743676
PUC_COST_WATT	System Cost per Watt (\$/watt)	185	6.1600000	6.5000086	7.4715909	7.4463938
KWH_YEAR	Expected Annual Generation (kWh)	185	11256.54	15243.23	25075.44	29597.46
CF_YEAR	Annual Capacity Factor (%)	185	10.6232877	10.6232877	10.6232877	11.0931137
LPC_TSRF_DEG	County LPC x TSRF x Degradation	185	0.9306000	0.9306000	0.9306000	0.9717568
CMTR	Combined Marginal Tax Rate	185	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	185	0.4880098	0.5109700	0.5837703	0.5880080
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	185	0.5034096	0.5266459	0.6021938	0.6064674
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	185	0.5190448	0.5425614	0.6208988	0.6252091
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	185	0.5349107	0.5587117	0.6398798	0.6442272
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	185	0.5510023	0.5750918	0.6591309	0.6635159
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	185	0.5673147	0.5916966	0.6786461	0.6830693
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	185	0.5838430	0.6085212	0.6984331	0.7028813
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	185	0.6005819	0.6255602	0.7185546	0.7229460
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	185	0.6175266	0.6428086	0.7389233	0.7432572

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2009-2010
 EXCLUDES 2008 PROJECTS**

The MEANS Procedure

Rate Class=1 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	519	14076.00	16302.00	21538.00	25056.54
DC_CAP	Capacity - DC (kW)	519	2.0000000	2.1000000	2.7600000	3.2619306
PUC_COST_WATT	System Cost per Watt (\$/watt)	519	6.4434783	6.8000000	7.3043478	7.8123176
KWH_YEAR	Expected Annual Generation (kWh)	519	1861.20	1954.26	2568.46	3035.55
CF_YEAR	Annual Capacity Factor (%)	519	10.6232877	10.6232877	10.6232877	10.6232877
LPC_TSRF_DEG	County LPC x TSRF x Degradation	519	0.9306000	0.9306000	0.9306000	0.9306000
CMTR	Combined Marginal Tax Rate	519	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	519	0.5888297	0.6303663	0.6772509	0.7174211
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	519	0.6050408	0.6479168	0.6963252	0.7375416
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	519	0.6228218	0.6664741	0.7152121	0.7579696
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	519	0.6408650	0.6863336	0.7347465	0.7786990
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	519	0.6591651	0.7052868	0.7548227	0.7997234
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	519	0.6777162	0.7238379	0.7751744	0.8210362
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	519	0.6965128	0.7426345	0.7956105	0.8426310
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	519	0.7155490	0.7616707	0.8159454	0.8645012
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	519	0.7339660	0.7811174	0.8348063	0.8866400

Rate Class=1 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	106	94550.00	130700.00	200660.00	251253.29
DC_CAP	Capacity - DC (kW)	106	12.3200000	18.0600000	28.5000000	33.9011887
PUC_COST_WATT	System Cost per Watt (\$/watt)	106	6.1600000	6.4579808	7.3493576	7.3441443
KWH_YEAR	Expected Annual Generation (kWh)	106	11464.99	16806.64	26522.10	31548.45
CF_YEAR	Annual Capacity Factor (%)	106	10.6232877	10.6232877	10.6232877	10.6232877
LPC_TSRF_DEG	County LPC x TSRF x Degradation	106	0.9306000	0.9306000	0.9306000	0.9306000
CMTR	Combined Marginal Tax Rate	106	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	106	0.5027994	0.5266735	0.5976859	0.6015615
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	106	0.5186644	0.5434142	0.6166682	0.6204763
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	106	0.5347719	0.5604107	0.6359408	0.6396801
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	106	0.5511169	0.5776580	0.6554976	0.6591672
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	106	0.5676946	0.5951334	0.6753327	0.6789317
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	106	0.5844998	0.6127515	0.6954400	0.6989673
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	106	0.6015272	0.6306027	0.7158132	0.7192680
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	106	0.6187718	0.6486814	0.7364463	0.7398275
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	106	0.6362282	0.6669823	0.7573328	0.7606396

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2009-2010
 EXCLUDES 2008 PROJECTS**

The MEANS Procedure

Rate Class=2 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	38	17000.00	18870.00	26212.84	27648.23
DC_CAP	Capacity - DC (kW)	38	2.0700000	2.3000000	3.1950000	3.6008421
PUC_COST_WATT	System Cost per Watt (\$/watt)	38	6.2244516	7.2983114	8.0028571	7.8511504
KWH_YEAR	Expected Annual Generation (kWh)	38	2101.46	2334.96	3243.56	3655.57
CF_YEAR	Annual Capacity Factor (%)	38	11.5890411	11.5890411	11.5890411	11.5890411
LPC_TSRF_DEG	County LPC x TSRF x Degradation	38	1.0152000	1.0152000	1.0152000	1.0152000
CMTR	Combined Marginal Tax Rate	38	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	38	0.5123279	0.5797974	0.6613862	0.6501280
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	38	0.5261645	0.5970276	0.6804045	0.6686635
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	38	0.5402125	0.6145213	0.6997136	0.6874823
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	38	0.5544678	0.6322730	0.7193074	0.7065787
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	38	0.5689259	0.6502774	0.7391801	0.7259468
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	38	0.5835824	0.6685287	0.7593255	0.7455807
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	38	0.5984328	0.6870216	0.7797374	0.7654743
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	38	0.6134725	0.7057502	0.8004095	0.7856216
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	38	0.6286971	0.7247089	0.8213356	0.8060164

Rate Class=2 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	13	70500.00	77900.00	97025.00	112415.80
DC_CAP	Capacity - DC (kW)	13	10.0800000	10.6600000	15.5800000	16.4762308
PUC_COST_WATT	System Cost per Watt (\$/watt)	13	4.9002525	5.9866567	6.9940476	6.9945874
KWH_YEAR	Expected Annual Generation (kWh)	13	10233.22	10822.03	15816.82	16726.67
CF_YEAR	Annual Capacity Factor (%)	13	11.5890411	11.5890411	11.5890411	11.5890411
LPC_TSRF_DEG	County LPC x TSRF x Degradation	13	1.0152000	1.0152000	1.0152000	1.0152000
CMTR	Combined Marginal Tax Rate	13	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	13	0.3729353	0.4601608	0.5256682	0.5318391
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	13	0.3845041	0.4742944	0.5421942	0.5483524
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	13	0.3962498	0.4886441	0.5589729	0.5651180
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	13	0.4081687	0.5032055	0.5759990	0.5821310
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	13	0.4202572	0.5179741	0.5932674	0.5993861
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	13	0.4325116	0.5329453	0.6107728	0.6168779
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	13	0.4449281	0.5481146	0.6285097	0.6346011
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	13	0.4575029	0.5634773	0.6464728	0.6525503
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	13	0.4702322	0.5790287	0.6646566	0.6707200

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2009-2010
 EXCLUDES 2008 PROJECTS**

The MEANS Procedure

Rate Class=3 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	97	16600.00	19900.00	32250.00	36199.63
DC_CAP	Capacity - DC (kW)	97	2.0500000	2.5200000	4.3050000	4.3641237
PUC_COST_WATT	System Cost per Watt (\$/watt)	97	6.8318948	7.1544715	8.0000000	8.1646160
KWH_YEAR	Expected Annual Generation (kWh)	97	2254.59	2771.50	4734.64	4799.66
CF_YEAR	Annual Capacity Factor (%)	97	12.5547945	12.5547945	12.5547945	12.5547945
LPC_TSRF_DEG	County LPC x TSRF x Degradation	97	1.0998000	1.0998000	1.0998000	1.0998000
CMTR	Combined Marginal Tax Rate	97	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	97	0.5106460	0.5383940	0.5835355	0.6143605
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	97	0.5257022	0.5538608	0.6011332	0.6321533
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	97	0.5409886	0.5695196	0.6189998	0.6502181
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	97	0.5565005	0.5846911	0.6371554	0.6685493
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	97	0.5725187	0.6000785	0.6556003	0.6871414
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	97	0.5881816	0.6159462	0.6742984	0.7059886
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	97	0.6043411	0.6325292	0.6932438	0.7250851
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	97	0.6207066	0.6493616	0.7124307	0.7444251
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	97	0.6372731	0.6664464	0.7318534	0.7640027

Rate Class=3 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	22	78000.00	91500.00	159000.50	164996.65
DC_CAP	Capacity - DC (kW)	22	10.1200000	13.8000000	18.9120000	22.4019091
PUC_COST_WATT	System Cost per Watt (\$/watt)	22	6.3891854	6.5421607	7.4181456	7.4788665
KWH_YEAR	Expected Annual Generation (kWh)	22	11129.98	15177.24	20799.42	24637.62
CF_YEAR	Annual Capacity Factor (%)	22	12.5547945	12.5547945	12.5547945	12.5547945
LPC_TSRF_DEG	County LPC x TSRF x Degradation	22	1.0998000	1.0998000	1.0998000	1.0998000
CMTR	Combined Marginal Tax Rate	22	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	22	0.4474831	0.4570612	0.5184871	0.5211745
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	22	0.4614067	0.4714879	0.5346146	0.5374729
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	22	0.4755432	0.4861351	0.5509887	0.5540204
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	22	0.4898883	0.5009983	0.5676043	0.5708120
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	22	0.5044374	0.5160731	0.5844564	0.5878425
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	22	0.5191862	0.5313547	0.6015397	0.6051067
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	22	0.5341301	0.5468385	0.6188490	0.6225993
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	22	0.5492646	0.5625196	0.6363790	0.6403149
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	22	0.5645849	0.5783935	0.6541243	0.6582482

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2009-2010
 EXCLUDES 2008 PROJECTS**

The MEANS Procedure

Rate Class=4 Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	83	13200.00	13980.00	14230.00	18846.42
DC_CAP	Capacity - DC (kW)	83	2.0000000	2.0000000	2.1000000	2.6423012
PUC_COST_WATT	System Cost per Watt (\$/watt)	83	6.2600000	6.5000000	6.9000000	7.0825324
KWH_YEAR	Expected Annual Generation (kWh)	83	2368.80	2368.80	2487.24	3129.54
CF_YEAR	Annual Capacity Factor (%)	83	13.5205479	13.5205479	13.5205479	13.5205479
LPC_TSRF_DEG	County LPC x TSRF x Degradation	83	1.1844000	1.1844000	1.1844000	1.1844000
CMTR	Combined Marginal Tax Rate	83	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	83	0.4779102	0.4920476	0.5188118	0.5292604
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	83	0.4903872	0.5045939	0.5324710	0.5435926
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	83	0.5029569	0.5173320	0.5463391	0.5581439
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	83	0.5157120	0.5302580	0.5604117	0.5729097
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	83	0.5286486	0.5433679	0.5746846	0.5878858
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	83	0.5417628	0.5566576	0.5891533	0.6030673
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	83	0.5558120	0.5701232	0.6038134	0.6184496
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	83	0.5708758	0.5846678	0.6186605	0.6340281
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	83	0.5861247	0.5996530	0.6336899	0.6497979

Rate Class=4 Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	5	79999.00	135000.00	151275.60	209254.92
DC_CAP	Capacity - DC (kW)	5	10.4000000	18.7000000	28.8400000	29.0110000
PUC_COST_WATT	System Cost per Watt (\$/watt)	5	5.2453398	7.2192513	7.6922115	7.1543057
KWH_YEAR	Expected Annual Generation (kWh)	5	12317.76	22148.28	34158.10	34360.63
CF_YEAR	Annual Capacity Factor (%)	5	13.5205479	13.5205479	13.5205479	13.5205479
LPC_TSRF_DEG	County LPC x TSRF x Degradation	5	1.1844000	1.1844000	1.1844000	1.1844000
CMTR	Combined Marginal Tax Rate	5	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	5	0.3385688	0.4670467	0.4924394	0.4615544
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	5	0.3491832	0.4816555	0.5080431	0.4760318
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	5	0.3599599	0.4964877	0.5238854	0.4907305
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	5	0.3708955	0.5115386	0.5399613	0.5056461
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	5	0.3819868	0.5268037	0.5562660	0.5207738
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	5	0.3932303	0.5422783	0.5727944	0.5361092
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	5	0.4046225	0.5579576	0.5895415	0.5516474
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	5	0.4161599	0.5738367	0.6065021	0.5673838
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	5	0.4278391	0.5899110	0.6236710	0.5833135

COST ASSUMPTIONS:

**STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94
 LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100**

**STAFF SUPPLEMENTAL VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
 UPDATED ETO SOLAR PV DATA 2009-2010
 EXCLUDES 2008 PROJECTS**

The MEANS Procedure

Project Size Category=0 - 10 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	737	13980.00	16000.00	21600.00	25957.38
DC_CAP	Capacity - DC (kW)	737	2.0000000	2.1000000	2.7600000	3.3546879
PUC_COST_WATT	System Cost per Watt (\$/watt)	737	6.3545455	6.8000000	7.3573171	7.7785000
KWH_YEAR	Expected Annual Generation (kWh)	737	1926.34	2140.38	2735.96	3310.29
CF_YEAR	Annual Capacity Factor (%)	737	10.6232877	10.6232877	10.6232877	11.2535826
LPC_TSRF_DEG	County LPC x TSRF x Degradation	737	0.9306000	0.9306000	0.9306000	0.9858138
CMTR	Combined Marginal Tax Rate	737	0.3795000	0.3795000	0.3795000	0.3795000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	737	0.5188118	0.5875275	0.6576506	0.6791967
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	737	0.5332394	0.6049106	0.6765082	0.6982773
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	737	0.5489285	0.6221093	0.6947699	0.7176495
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	737	0.5648490	0.6399016	0.7135759	0.7373074
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	737	0.5809961	0.6585065	0.7334510	0.7572451
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	737	0.5973648	0.6770917	0.7539118	0.7774564
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	737	0.6128447	0.6959184	0.7745715	0.7979350
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	737	0.6296414	0.7149851	0.7942823	0.8186748
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	737	0.6466444	0.7333193	0.8135523	0.8396693

Project Size Category=10 - 100 KW

Variable	Label	N	10th Pctl	25th Pctl	50th Pctl	Mean
System_Cost	System Cost (\$)	146	79999.00	110500.00	177850.00	224455.17
DC_CAP	Capacity - DC (kW)	146	11.7600000	16.3200000	25.2500000	30.4494110
PUC_COST_WATT	System Cost per Watt (\$/watt)	146	6.1600000	6.5000000	7.3299070	7.3268187
KWH_YEAR	Expected Annual Generation (kWh)	146	11256.54	15410.74	24943.46	29283.65
CF_YEAR	Annual Capacity Factor (%)	146	10.6232877	10.6232877	10.6232877	11.0995496
LPC_TSRF_DEG	County LPC x TSRF x Degradation	146	0.9306000	0.9306000	0.9306000	0.9723205
CMTR	Combined Marginal Tax Rate	146	0.3929000	0.3929000	0.3929000	0.3929000
VIR_600	Volumetric Incentive Rate at 6.00% (\$/kWh)	146	0.4670467	0.5056353	0.5669476	0.5784455
VIR_650	Volumetric Incentive Rate at 6.50% (\$/kWh)	146	0.4816555	0.5215002	0.5844906	0.5966002
VIR_700	Volumetric Incentive Rate at 7.00% (\$/kWh)	146	0.4964877	0.5376077	0.6023017	0.6150324
VIR_750	Volumetric Incentive Rate at 7.50% (\$/kWh)	146	0.5115386	0.5539528	0.6204359	0.6337365
VIR_800	Volumetric Incentive Rate at 8.00% (\$/kWh)	146	0.5268037	0.5705305	0.6390334	0.6527067
VIR_850	Volumetric Incentive Rate at 8.50% (\$/kWh)	146	0.5422783	0.5873357	0.6578861	0.6719372
VIR_900	Volumetric Incentive Rate at 9.00% (\$/kWh)	146	0.5579576	0.6043631	0.6769881	0.6914222
VIR_950	Volumetric Incentive Rate at 9.50% (\$/kWh)	146	0.5738367	0.6217126	0.6963338	0.7111556
VIR_1000	Volumetric Incentive Rate at 10.00% (\$/kWh)	146	0.5899110	0.6393112	0.7159171	0.7311314

COST ASSUMPTIONS:

STEP = STEP8, PERIOD = 15, COUNTY CLASS = 3, TSRF = 0.90, DEGRADATION = 0.94

LOAN FEE = 0.01, INSURANCE = 0.0022, METER SERVICE = 120, TAX CALC = 1, TAX PREP = 100

ATTACHMENT B
VIR Look-up Table

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=1 Project Size Category=0 - 10 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
3	5.75	0.542	0.557	0.572	0.587	0.603	0.618	0.634
3	6.00	0.562	0.578	0.593	0.609	0.626	0.642	0.658
3	6.25	0.582	0.599	0.615	0.631	0.648	0.665	0.683
3	6.50	0.603	0.619	0.636	0.654	0.671	0.689	0.707
3	6.75	0.623	0.640	0.658	0.676	0.694	0.712	0.731
3	7.00	0.643	0.661	0.679	0.698	0.717	0.736	0.755
3	7.25	0.663	0.682	0.701	0.720	0.739	0.759	0.779
3	7.50	0.683	0.703	0.722	0.742	0.762	0.783	0.803
3	7.75	0.703	0.723	0.744	0.764	0.785	0.806	0.828
3	8.00	0.724	0.744	0.765	0.786	0.808	0.830	0.852
4	5.75	0.522	0.537	0.552	0.568	0.583	0.599	0.615
4	6.00	0.543	0.558	0.574	0.590	0.606	0.622	0.639
4	6.25	0.563	0.579	0.595	0.612	0.629	0.646	0.663
4	6.50	0.583	0.600	0.617	0.634	0.651	0.669	0.687
4	6.75	0.603	0.620	0.638	0.656	0.674	0.693	0.711
4	7.00	0.623	0.641	0.660	0.678	0.697	0.716	0.735
4	7.25	0.643	0.662	0.681	0.700	0.720	0.740	0.760
4	7.50	0.664	0.683	0.702	0.722	0.743	0.763	0.784
4	7.75	0.684	0.704	0.724	0.744	0.765	0.786	0.808
4	8.00	0.704	0.724	0.745	0.767	0.788	0.810	0.832
5	5.75	0.511	0.525	0.541	0.556	0.571	0.587	0.603
5	6.00	0.531	0.546	0.562	0.578	0.594	0.610	0.627
5	6.25	0.551	0.567	0.583	0.600	0.617	0.634	0.651
5	6.50	0.571	0.588	0.605	0.622	0.640	0.657	0.675
5	6.75	0.591	0.609	0.626	0.644	0.662	0.681	0.699
5	7.00	0.611	0.629	0.648	0.666	0.685	0.704	0.724
5	7.25	0.632	0.650	0.669	0.688	0.708	0.728	0.748
5	7.50	0.652	0.671	0.691	0.711	0.731	0.751	0.772
5	7.75	0.672	0.692	0.712	0.733	0.753	0.775	0.796
5	8.00	0.692	0.713	0.734	0.755	0.776	0.798	0.820

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=1 Project Size Category=0 - 10 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
6	5.75	0.503	0.518	0.533	0.548	0.563	0.579	0.595
6	6.00	0.523	0.538	0.554	0.570	0.586	0.603	0.619
6	6.25	0.543	0.559	0.576	0.592	0.609	0.626	0.643
6	6.50	0.563	0.580	0.597	0.614	0.632	0.649	0.667
6	6.75	0.583	0.601	0.618	0.636	0.654	0.673	0.692
6	7.00	0.604	0.622	0.640	0.658	0.677	0.696	0.716
6	7.25	0.624	0.642	0.661	0.681	0.700	0.720	0.740
6	7.50	0.644	0.663	0.683	0.703	0.723	0.743	0.764
6	7.75	0.664	0.684	0.704	0.725	0.746	0.767	0.788
6	8.00	0.684	0.705	0.726	0.747	0.768	0.790	0.812
7	5.75	0.497	0.512	0.527	0.542	0.558	0.573	0.589
7	6.00	0.517	0.533	0.548	0.564	0.581	0.597	0.613
7	6.25	0.537	0.554	0.570	0.586	0.603	0.620	0.638
7	6.50	0.558	0.574	0.591	0.609	0.626	0.644	0.662
7	6.75	0.578	0.595	0.613	0.631	0.649	0.667	0.686
7	7.00	0.598	0.616	0.634	0.653	0.672	0.691	0.710
7	7.25	0.618	0.637	0.656	0.675	0.694	0.714	0.734
7	7.50	0.638	0.657	0.677	0.697	0.717	0.738	0.758
7	7.75	0.658	0.678	0.699	0.719	0.740	0.761	0.783
7	8.00	0.678	0.699	0.720	0.741	0.763	0.785	0.807

Rate Class=1 Project Size Category=10 - 100 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
40	5.75	0.469	0.484	0.499	0.514	0.530	0.546	0.561
40	6.00	0.489	0.505	0.521	0.536	0.553	0.569	0.586
40	6.25	0.510	0.526	0.542	0.559	0.575	0.592	0.610
40	6.50	0.530	0.546	0.563	0.581	0.598	0.616	0.634

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=1 Project Size Category=10 - 100 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
40	6.75	0.550	0.567	0.585	0.603	0.621	0.639	0.658
40	7.00	0.570	0.588	0.606	0.625	0.644	0.663	0.682
40	7.25	0.590	0.609	0.628	0.647	0.667	0.686	0.706
40	7.50	0.610	0.630	0.649	0.669	0.689	0.710	0.731
40	7.75	0.630	0.650	0.671	0.691	0.712	0.733	0.755
40	8.00	0.651	0.671	0.692	0.713	0.735	0.757	0.779
50	5.75	0.468	0.483	0.498	0.513	0.529	0.544	0.560
50	6.00	0.488	0.504	0.519	0.535	0.551	0.568	0.584
50	6.25	0.508	0.524	0.541	0.557	0.574	0.591	0.609
50	6.50	0.529	0.545	0.562	0.580	0.597	0.615	0.633
50	6.75	0.549	0.566	0.584	0.602	0.620	0.638	0.657
50	7.00	0.569	0.587	0.605	0.624	0.643	0.662	0.681
50	7.25	0.589	0.608	0.627	0.646	0.665	0.685	0.705
50	7.50	0.609	0.628	0.648	0.668	0.688	0.709	0.729
50	7.75	0.629	0.649	0.670	0.690	0.711	0.732	0.753
50	8.00	0.649	0.670	0.691	0.712	0.734	0.756	0.778
60	5.75	0.467	0.482	0.497	0.512	0.528	0.544	0.559
60	6.00	0.487	0.503	0.519	0.535	0.551	0.567	0.584
60	6.25	0.508	0.524	0.540	0.557	0.573	0.591	0.608
60	6.50	0.528	0.544	0.561	0.579	0.596	0.614	0.632
60	6.75	0.548	0.565	0.583	0.601	0.619	0.637	0.656
60	7.00	0.568	0.586	0.604	0.623	0.642	0.661	0.680
60	7.25	0.588	0.607	0.626	0.645	0.665	0.684	0.704
60	7.50	0.608	0.628	0.647	0.667	0.687	0.708	0.729
60	7.75	0.628	0.648	0.669	0.689	0.710	0.731	0.753
60	8.00	0.649	0.669	0.690	0.711	0.733	0.755	0.777

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=1 Project Size Category=100+ KW

Capacity-DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
250	5.75	0.464	0.479	0.494	0.509	0.525	0.541	0.556
250	6.00	0.484	0.500	0.516	0.532	0.548	0.564	0.581
250	6.25	0.505	0.521	0.537	0.554	0.570	0.588	0.605
250	6.50	0.525	0.542	0.559	0.576	0.593	0.611	0.629
250	6.75	0.545	0.562	0.580	0.598	0.616	0.634	0.653
250	7.00	0.565	0.583	0.601	0.620	0.639	0.658	0.677
250	7.25	0.585	0.604	0.623	0.642	0.662	0.681	0.701
250	7.50	0.605	0.625	0.644	0.664	0.684	0.705	0.726
250	7.75	0.625	0.645	0.666	0.686	0.707	0.728	0.750
250	8.00	0.646	0.666	0.687	0.708	0.730	0.752	0.774
300	5.75	0.464	0.479	0.494	0.509	0.525	0.540	0.556
300	6.00	0.484	0.500	0.515	0.531	0.548	0.564	0.580
300	6.25	0.504	0.521	0.537	0.553	0.570	0.587	0.605
300	6.50	0.525	0.541	0.558	0.576	0.593	0.611	0.629
300	6.75	0.545	0.562	0.580	0.598	0.616	0.634	0.653
300	7.00	0.565	0.583	0.601	0.620	0.639	0.658	0.677
300	7.25	0.585	0.604	0.623	0.642	0.661	0.681	0.701
300	7.50	0.605	0.625	0.644	0.664	0.684	0.705	0.725
300	7.75	0.625	0.645	0.666	0.686	0.707	0.728	0.750
300	8.00	0.645	0.666	0.687	0.708	0.730	0.752	0.774
350	5.75	0.464	0.479	0.494	0.509	0.525	0.540	0.556
350	6.00	0.484	0.500	0.515	0.531	0.547	0.564	0.580
350	6.25	0.504	0.520	0.537	0.553	0.570	0.587	0.605
350	6.50	0.524	0.541	0.558	0.575	0.593	0.611	0.629
350	6.75	0.545	0.562	0.580	0.598	0.616	0.634	0.653
350	7.00	0.565	0.583	0.601	0.620	0.639	0.658	0.677
350	7.25	0.585	0.604	0.623	0.642	0.661	0.681	0.701
350	7.50	0.605	0.624	0.644	0.664	0.684	0.705	0.725
350	7.75	0.625	0.645	0.665	0.686	0.707	0.728	0.749
350	8.00	0.645	0.666	0.687	0.708	0.730	0.751	0.774

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=2 Project Size Category=0 - 10 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
3	5.75	0.497	0.511	0.524	0.538	0.553	0.567	0.581
3	6.00	0.515	0.530	0.544	0.559	0.573	0.588	0.604
3	6.25	0.534	0.549	0.564	0.579	0.594	0.610	0.626
3	6.50	0.552	0.568	0.583	0.599	0.615	0.631	0.648
3	6.75	0.571	0.587	0.603	0.619	0.636	0.653	0.670
3	7.00	0.589	0.606	0.623	0.640	0.657	0.674	0.692
3	7.25	0.608	0.625	0.642	0.660	0.678	0.696	0.714
3	7.50	0.626	0.644	0.662	0.680	0.699	0.717	0.736
3	7.75	0.645	0.663	0.682	0.700	0.720	0.739	0.759
3	8.00	0.663	0.682	0.701	0.721	0.740	0.760	0.781
4	5.75	0.479	0.493	0.506	0.520	0.534	0.549	0.563
4	6.00	0.497	0.512	0.526	0.541	0.555	0.570	0.586
4	6.25	0.516	0.531	0.546	0.561	0.576	0.592	0.608
4	6.50	0.534	0.550	0.565	0.581	0.597	0.613	0.630
4	6.75	0.553	0.569	0.585	0.601	0.618	0.635	0.652
4	7.00	0.571	0.588	0.605	0.622	0.639	0.656	0.674
4	7.25	0.590	0.607	0.624	0.642	0.660	0.678	0.696
4	7.50	0.608	0.626	0.644	0.662	0.681	0.699	0.718
4	7.75	0.627	0.645	0.664	0.682	0.702	0.721	0.741
4	8.00	0.645	0.664	0.683	0.703	0.722	0.742	0.763
5	5.75	0.468	0.482	0.495	0.509	0.524	0.538	0.553
5	6.00	0.487	0.501	0.515	0.530	0.545	0.560	0.575
5	6.25	0.505	0.520	0.535	0.550	0.565	0.581	0.597
5	6.50	0.524	0.539	0.554	0.570	0.586	0.603	0.619
5	6.75	0.542	0.558	0.574	0.591	0.607	0.624	0.641
5	7.00	0.560	0.577	0.594	0.611	0.628	0.646	0.663
5	7.25	0.579	0.596	0.613	0.631	0.649	0.667	0.685
5	7.50	0.597	0.615	0.633	0.651	0.670	0.689	0.708
5	7.75	0.616	0.634	0.653	0.672	0.691	0.710	0.730
5	8.00	0.634	0.653	0.672	0.692	0.712	0.732	0.752

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=2 Project Size Category=0 - 10 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
6	5.75	0.461	0.474	0.488	0.502	0.516	0.531	0.545
6	6.00	0.479	0.494	0.508	0.522	0.537	0.552	0.567
6	6.25	0.498	0.513	0.528	0.543	0.558	0.574	0.590
6	6.50	0.516	0.532	0.547	0.563	0.579	0.595	0.612
6	6.75	0.535	0.551	0.567	0.583	0.600	0.617	0.634
6	7.00	0.553	0.570	0.587	0.604	0.621	0.638	0.656
6	7.25	0.572	0.589	0.606	0.624	0.642	0.660	0.678
6	7.50	0.590	0.608	0.626	0.644	0.663	0.681	0.700
6	7.75	0.609	0.627	0.645	0.664	0.683	0.703	0.722
6	8.00	0.627	0.646	0.665	0.685	0.704	0.724	0.745
7	5.75	0.456	0.469	0.483	0.497	0.511	0.526	0.540
7	6.00	0.474	0.488	0.503	0.517	0.532	0.547	0.562
7	6.25	0.493	0.507	0.522	0.538	0.553	0.569	0.584
7	6.50	0.511	0.526	0.542	0.558	0.574	0.590	0.607
7	6.75	0.530	0.546	0.562	0.578	0.595	0.612	0.629
7	7.00	0.548	0.565	0.581	0.598	0.616	0.633	0.651
7	7.25	0.567	0.584	0.601	0.619	0.637	0.655	0.673
7	7.50	0.585	0.603	0.621	0.639	0.657	0.676	0.695
7	7.75	0.603	0.622	0.640	0.659	0.678	0.698	0.717
7	8.00	0.622	0.641	0.660	0.679	0.699	0.719	0.739

Rate Class=2 Project Size Category=10 - 100 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
40	5.75	0.430	0.444	0.458	0.472	0.486	0.500	0.515
40	6.00	0.449	0.463	0.477	0.492	0.507	0.522	0.537
40	6.25	0.467	0.482	0.497	0.512	0.527	0.543	0.559
40	6.50	0.486	0.501	0.517	0.532	0.548	0.565	0.581

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=2 Project Size Category=10 - 100 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6:00% (\$/kWh)	Volumetric Incentive Rate at 6:50% (\$/kWh)	Volumetric Incentive Rate at 7:00% (\$/kWh)	Volumetric Incentive Rate at 7:50% (\$/kWh)	Volumetric Incentive Rate at 8:00% (\$/kWh)	Volumetric Incentive Rate at 8:50% (\$/kWh)	Volumetric Incentive Rate at 9:00% (\$/kWh)
40	6:75	0.504	0.520	0.536	0.553	0.569	0.586	0.603
40	7:00	0.523	0.539	0.556	0.573	0.590	0.608	0.625
40	7:25	0.541	0.558	0.575	0.593	0.611	0.629	0.648
40	7:50	0.559	0.577	0.595	0.613	0.632	0.651	0.670
40	7:75	0.578	0.596	0.615	0.634	0.653	0.672	0.692
40	8:00	0.596	0.615	0.634	0.654	0.674	0.694	0.714
50	5:75	0.429	0.443	0.456	0.470	0.485	0.499	0.514
50	6:00	0.448	0.462	0.476	0.491	0.506	0.521	0.536
50	6:25	0.466	0.481	0.496	0.511	0.526	0.542	0.558
50	6:50	0.485	0.500	0.515	0.531	0.547	0.564	0.580
50	6:75	0.503	0.519	0.535	0.552	0.568	0.585	0.602
50	7:00	0.521	0.538	0.555	0.572	0.589	0.607	0.624
50	7:25	0.540	0.557	0.574	0.592	0.610	0.628	0.646
50	7:50	0.558	0.576	0.594	0.612	0.631	0.650	0.669
50	7:75	0.577	0.595	0.614	0.633	0.652	0.671	0.691
50	8:00	0.595	0.614	0.633	0.653	0.673	0.693	0.713
60	5:75	0.428	0.442	0.456	0.470	0.484	0.498	0.513
60	6:00	0.447	0.461	0.475	0.490	0.505	0.520	0.535
60	6:25	0.465	0.480	0.495	0.510	0.526	0.541	0.557
60	6:50	0.484	0.499	0.515	0.531	0.547	0.563	0.579
60	6:75	0.502	0.518	0.534	0.551	0.567	0.584	0.601
60	7:00	0.521	0.537	0.554	0.571	0.588	0.606	0.624
60	7:25	0.539	0.556	0.574	0.591	0.609	0.627	0.646
60	7:50	0.558	0.575	0.593	0.612	0.630	0.649	0.668
60	7:75	0.576	0.594	0.613	0.632	0.651	0.670	0.690
60	8:00	0.595	0.613	0.633	0.652	0.672	0.692	0.712

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=2 Project Size Category=100+ KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6:00% (\$/kWh)	Volumetric Incentive Rate at 6:50% (\$/kWh)	Volumetric Incentive Rate at 7:00% (\$/kWh)	Volumetric Incentive Rate at 7:50% (\$/kWh)	Volumetric Incentive Rate at 8:00% (\$/kWh)	Volumetric Incentive Rate at 8:50% (\$/kWh)	Volumetric Incentive Rate at 9:00% (\$/kWh)
250	5.75	0.426	0.439	0.453	0.467	0.481	0.496	0.510
250	6.00	0.444	0.458	0.473	0.487	0.502	0.517	0.532
250	6.25	0.463	0.477	0.492	0.508	0.523	0.539	0.554
250	6.50	0.481	0.496	0.512	0.528	0.544	0.560	0.577
250	6.75	0.500	0.515	0.532	0.548	0.565	0.582	0.599
250	7.00	0.518	0.534	0.551	0.568	0.586	0.603	0.621
250	7.25	0.536	0.554	0.571	0.589	0.606	0.625	0.643
250	7.50	0.555	0.573	0.591	0.609	0.627	0.646	0.665
250	7.75	0.573	0.592	0.610	0.629	0.648	0.668	0.687
250	8.00	0.592	0.611	0.630	0.649	0.669	0.689	0.709
300	5.75	0.425	0.439	0.453	0.467	0.481	0.495	0.510
300	6.00	0.444	0.458	0.473	0.487	0.502	0.517	0.532
300	6.25	0.462	0.477	0.492	0.507	0.523	0.538	0.554
300	6.50	0.481	0.496	0.512	0.528	0.544	0.560	0.576
300	6.75	0.499	0.515	0.531	0.548	0.565	0.581	0.599
300	7.00	0.518	0.534	0.551	0.568	0.585	0.603	0.621
300	7.25	0.536	0.553	0.571	0.588	0.606	0.624	0.643
300	7.50	0.555	0.572	0.590	0.609	0.627	0.646	0.665
300	7.75	0.573	0.592	0.610	0.629	0.648	0.667	0.687
300	8.00	0.592	0.611	0.630	0.649	0.669	0.689	0.709
350	5.75	0.425	0.439	0.453	0.467	0.481	0.495	0.510
350	6.00	0.444	0.458	0.472	0.487	0.502	0.517	0.532
350	6.25	0.462	0.477	0.492	0.507	0.523	0.538	0.554
350	6.50	0.481	0.496	0.512	0.528	0.544	0.560	0.576
350	6.75	0.499	0.515	0.531	0.548	0.564	0.581	0.598
350	7.00	0.518	0.534	0.551	0.568	0.585	0.603	0.621
350	7.25	0.536	0.553	0.571	0.588	0.606	0.624	0.643
350	7.50	0.555	0.572	0.590	0.609	0.627	0.646	0.665
350	7.75	0.573	0.591	0.610	0.629	0.648	0.667	0.687
350	8.00	0.592	0.610	0.630	0.649	0.669	0.689	0.709

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=3 Project Size Category=0 - 10 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
3	5.75	0.459	0.471	0.484	0.497	0.510	0.523	0.537
3	6.00	0.476	0.489	0.502	0.516	0.529	0.543	0.557
3	6.25	0.493	0.506	0.520	0.534	0.549	0.563	0.578
3	6.50	0.510	0.524	0.538	0.553	0.568	0.583	0.598
3	6.75	0.527	0.542	0.557	0.572	0.587	0.603	0.618
3	7.00	0.544	0.559	0.575	0.590	0.606	0.623	0.639
3	7.25	0.561	0.577	0.593	0.609	0.626	0.642	0.659
3	7.50	0.578	0.594	0.611	0.628	0.645	0.662	0.680
3	7.75	0.595	0.612	0.629	0.647	0.664	0.682	0.700
3	8.00	0.612	0.630	0.647	0.665	0.684	0.702	0.721
4	5.75	0.442	0.455	0.467	0.480	0.493	0.507	0.520
4	6.00	0.459	0.472	0.485	0.499	0.513	0.526	0.541
4	6.25	0.476	0.490	0.504	0.518	0.532	0.546	0.561
4	6.50	0.493	0.507	0.522	0.536	0.551	0.566	0.581
4	6.75	0.510	0.525	0.540	0.555	0.570	0.586	0.602
4	7.00	0.527	0.543	0.558	0.574	0.590	0.606	0.622
4	7.25	0.544	0.560	0.576	0.593	0.609	0.626	0.643
4	7.50	0.561	0.578	0.594	0.611	0.628	0.646	0.663
4	7.75	0.578	0.595	0.613	0.630	0.648	0.665	0.684
4	8.00	0.596	0.613	0.631	0.649	0.667	0.685	0.704
5	5.75	0.432	0.445	0.457	0.470	0.483	0.497	0.510
5	6.00	0.449	0.462	0.475	0.489	0.503	0.516	0.531
5	6.25	0.466	0.480	0.494	0.508	0.522	0.536	0.551
5	6.50	0.483	0.497	0.512	0.526	0.541	0.556	0.571
5	6.75	0.500	0.515	0.530	0.545	0.560	0.576	0.592
5	7.00	0.517	0.533	0.548	0.564	0.580	0.596	0.612
5	7.25	0.534	0.550	0.566	0.582	0.599	0.616	0.633
5	7.50	0.551	0.568	0.584	0.601	0.618	0.636	0.653
5	7.75	0.568	0.585	0.603	0.620	0.638	0.655	0.674
5	8.00	0.586	0.603	0.621	0.639	0.657	0.675	0.694

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=3 Project Size Category=0 - 10 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
6	5.75	0.425	0.438	0.451	0.464	0.477	0.490	0.503
6	6.00	0.442	0.456	0.469	0.482	0.496	0.510	0.524
6	6.25	0.460	0.473	0.487	0.501	0.515	0.530	0.544
6	6.50	0.477	0.491	0.505	0.520	0.535	0.550	0.565
6	6.75	0.494	0.508	0.523	0.538	0.554	0.569	0.585
6	7.00	0.511	0.526	0.541	0.557	0.573	0.589	0.606
6	7.25	0.528	0.544	0.560	0.576	0.592	0.609	0.626
6	7.50	0.545	0.561	0.578	0.595	0.612	0.629	0.646
6	7.75	0.562	0.579	0.596	0.613	0.631	0.649	0.667
6	8.00	0.579	0.596	0.614	0.632	0.650	0.669	0.687
7	5.75	0.421	0.433	0.446	0.459	0.472	0.485	0.499
7	6.00	0.438	0.451	0.464	0.478	0.491	0.505	0.519
7	6.25	0.455	0.468	0.482	0.496	0.510	0.525	0.540
7	6.50	0.472	0.486	0.500	0.515	0.530	0.545	0.560
7	6.75	0.489	0.504	0.518	0.534	0.549	0.565	0.580
7	7.00	0.506	0.521	0.537	0.552	0.568	0.584	0.601
7	7.25	0.523	0.539	0.555	0.571	0.588	0.604	0.621
7	7.50	0.540	0.556	0.573	0.590	0.607	0.624	0.642
7	7.75	0.557	0.574	0.591	0.608	0.626	0.644	0.662
7	8.00	0.574	0.592	0.609	0.627	0.645	0.664	0.683

Rate Class=3 Project Size Category=10 - 100 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
40	5.75	0.397	0.410	0.422	0.435	0.448	0.462	0.475
40	6.00	0.414	0.427	0.440	0.454	0.468	0.481	0.496
40	6.25	0.431	0.445	0.459	0.473	0.487	0.501	0.516
40	6.50	0.448	0.462	0.477	0.491	0.506	0.521	0.536

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=3 Project Size Category=10 - 100 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6:00% (\$/kWh)	Volumetric Incentive Rate at 6:50% (\$/kWh)	Volumetric Incentive Rate at 7:00% (\$/kWh)	Volumetric Incentive Rate at 7:50% (\$/kWh)	Volumetric Incentive Rate at 8:00% (\$/kWh)	Volumetric Incentive Rate at 8:50% (\$/kWh)	Volumetric Incentive Rate at 9:00% (\$/kWh)
40	6.75	0.465	0.480	0.495	0.510	0.525	0.541	0.557
40	7.00	0.482	0.498	0.513	0.529	0.545	0.561	0.577
40	7.25	0.499	0.515	0.531	0.547	0.564	0.581	0.598
40	7.50	0.516	0.533	0.549	0.566	0.583	0.601	0.618
40	7.75	0.533	0.550	0.568	0.585	0.603	0.620	0.639
40	8.00	0.551	0.568	0.586	0.604	0.622	0.640	0.659
50	5.75	0.396	0.409	0.421	0.434	0.447	0.461	0.474
50	6.00	0.413	0.426	0.439	0.453	0.467	0.480	0.495
50	6.25	0.430	0.444	0.458	0.472	0.486	0.500	0.515
50	6.50	0.447	0.461	0.476	0.490	0.505	0.520	0.535
50	6.75	0.464	0.479	0.494	0.509	0.524	0.540	0.556
50	7.00	0.481	0.497	0.512	0.528	0.544	0.560	0.576
50	7.25	0.498	0.514	0.530	0.546	0.563	0.580	0.597
50	7.50	0.515	0.532	0.548	0.565	0.582	0.600	0.617
50	7.75	0.532	0.549	0.567	0.584	0.602	0.619	0.638
50	8.00	0.550	0.567	0.585	0.603	0.621	0.639	0.658
60	5.75	0.395	0.408	0.421	0.434	0.447	0.460	0.473
60	6.00	0.412	0.426	0.439	0.452	0.466	0.480	0.494
60	6.25	0.430	0.443	0.457	0.471	0.485	0.500	0.514
60	6.50	0.447	0.461	0.475	0.490	0.505	0.520	0.535
60	6.75	0.464	0.478	0.493	0.508	0.524	0.539	0.555
60	7.00	0.481	0.496	0.511	0.527	0.543	0.559	0.576
60	7.25	0.498	0.514	0.530	0.546	0.562	0.579	0.596
60	7.50	0.515	0.531	0.548	0.565	0.582	0.599	0.616
60	7.75	0.532	0.549	0.566	0.583	0.601	0.619	0.637
60	8.00	0.549	0.566	0.584	0.602	0.620	0.639	0.657

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=3 Project Size Category=100+ KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
250	5.75	0.393	0.405	0.418	0.431	0.444	0.457	0.471
250	6.00	0.410	0.423	0.436	0.450	0.463	0.477	0.491
250	6.25	0.427	0.441	0.454	0.468	0.483	0.497	0.512
250	6.50	0.444	0.458	0.473	0.487	0.502	0.517	0.532
250	6.75	0.461	0.476	0.491	0.506	0.521	0.537	0.553
250	7.00	0.478	0.493	0.509	0.525	0.541	0.557	0.573
250	7.25	0.495	0.511	0.527	0.543	0.560	0.577	0.593
250	7.50	0.512	0.529	0.545	0.562	0.579	0.596	0.614
250	7.75	0.529	0.546	0.563	0.581	0.598	0.616	0.634
250	8.00	0.546	0.564	0.581	0.599	0.618	0.636	0.655
300	5.75	0.393	0.405	0.418	0.431	0.444	0.457	0.471
300	6.00	0.410	0.423	0.436	0.450	0.463	0.477	0.491
300	6.25	0.427	0.440	0.454	0.468	0.483	0.497	0.512
300	6.50	0.444	0.458	0.472	0.487	0.502	0.517	0.532
300	6.75	0.461	0.476	0.491	0.506	0.521	0.537	0.552
300	7.00	0.478	0.493	0.509	0.524	0.540	0.557	0.573
300	7.25	0.495	0.511	0.527	0.543	0.560	0.576	0.593
300	7.50	0.512	0.528	0.545	0.562	0.579	0.596	0.614
300	7.75	0.529	0.546	0.563	0.581	0.598	0.616	0.634
300	8.00	0.546	0.564	0.581	0.599	0.617	0.636	0.655
350	5.75	0.393	0.405	0.418	0.431	0.444	0.457	0.471
350	6.00	0.410	0.423	0.436	0.450	0.463	0.477	0.491
350	6.25	0.427	0.440	0.454	0.468	0.482	0.497	0.512
350	6.50	0.444	0.458	0.472	0.487	0.502	0.517	0.532
350	6.75	0.461	0.476	0.490	0.506	0.521	0.537	0.552
350	7.00	0.478	0.493	0.509	0.524	0.540	0.556	0.573
350	7.25	0.495	0.511	0.527	0.543	0.560	0.576	0.593
350	7.50	0.512	0.528	0.545	0.562	0.579	0.596	0.614
350	7.75	0.529	0.546	0.563	0.580	0.598	0.616	0.634
350	8.00	0.546	0.564	0.581	0.599	0.617	0.636	0.655

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=4 Project Size Category=0 - 10 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
3	5.75	0.426	0.438	0.449	0.461	0.474	0.486	0.498
3	6.00	0.442	0.454	0.466	0.479	0.491	0.504	0.517
3	6.25	0.458	0.470	0.483	0.496	0.509	0.523	0.536
3	6.50	0.473	0.487	0.500	0.514	0.527	0.541	0.555
3	6.75	0.489	0.503	0.517	0.531	0.545	0.560	0.574
3	7.00	0.505	0.519	0.534	0.548	0.563	0.578	0.593
3	7.25	0.521	0.536	0.551	0.566	0.581	0.597	0.612
3	7.50	0.537	0.552	0.567	0.583	0.599	0.615	0.631
3	7.75	0.553	0.568	0.584	0.600	0.617	0.633	0.650
3	8.00	0.568	0.585	0.601	0.618	0.635	0.652	0.669
4	5.75	0.411	0.422	0.434	0.446	0.458	0.470	0.483
4	6.00	0.426	0.438	0.451	0.463	0.476	0.489	0.502
4	6.25	0.442	0.455	0.468	0.481	0.494	0.507	0.521
4	6.50	0.458	0.471	0.485	0.498	0.512	0.526	0.540
4	6.75	0.474	0.487	0.501	0.515	0.530	0.544	0.559
4	7.00	0.490	0.504	0.518	0.533	0.548	0.563	0.578
4	7.25	0.505	0.520	0.535	0.550	0.566	0.581	0.597
4	7.50	0.521	0.537	0.552	0.568	0.583	0.599	0.616
4	7.75	0.537	0.553	0.569	0.585	0.601	0.618	0.635
4	8.00	0.553	0.569	0.586	0.602	0.619	0.636	0.654
5	5.75	0.401	0.413	0.425	0.437	0.449	0.461	0.474
5	6.00	0.417	0.429	0.442	0.454	0.467	0.480	0.493
5	6.25	0.433	0.446	0.458	0.471	0.485	0.498	0.512
5	6.50	0.449	0.462	0.475	0.489	0.503	0.516	0.531
5	6.75	0.465	0.478	0.492	0.506	0.520	0.535	0.550
5	7.00	0.480	0.495	0.509	0.524	0.538	0.553	0.569
5	7.25	0.496	0.511	0.526	0.541	0.556	0.572	0.588
6	7.50	0.512	0.527	0.543	0.558	0.574	0.590	0.606
5	7.75	0.528	0.544	0.559	0.576	0.592	0.609	0.625
5	8.00	0.544	0.560	0.576	0.593	0.610	0.627	0.644

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=4 Project Size Category=0 - 10 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
6	5.75	0.395	0.407	0.418	0.430	0.443	0.455	0.467
6	6.00	0.411	0.423	0.435	0.448	0.461	0.473	0.486
6	6.25	0.427	0.439	0.452	0.465	0.478	0.492	0.505
6	6.50	0.443	0.456	0.469	0.483	0.496	0.510	0.524
6	6.75	0.458	0.472	0.486	0.500	0.514	0.529	0.543
6	7.00	0.474	0.488	0.503	0.517	0.532	0.547	0.562
6	7.25	0.490	0.505	0.520	0.535	0.550	0.566	0.581
6	7.50	0.506	0.521	0.536	0.552	0.568	0.584	0.600
6	7.75	0.522	0.537	0.553	0.569	0.586	0.602	0.619
6	8.00	0.538	0.554	0.570	0.587	0.604	0.621	0.638
7	5.75	0.391	0.402	0.414	0.426	0.438	0.451	0.463
7	6.00	0.406	0.419	0.431	0.443	0.456	0.469	0.482
7	6.25	0.422	0.435	0.448	0.461	0.474	0.487	0.501
7	6.50	0.438	0.451	0.465	0.478	0.492	0.506	0.520
7	6.75	0.454	0.468	0.481	0.496	0.510	0.524	0.539
7	7.00	0.470	0.484	0.498	0.513	0.528	0.543	0.558
7	7.25	0.486	0.500	0.515	0.530	0.546	0.561	0.577
7	7.50	0.501	0.517	0.532	0.548	0.564	0.580	0.596
7	7.75	0.517	0.533	0.549	0.565	0.581	0.598	0.615
7	8.00	0.533	0.549	0.566	0.582	0.599	0.616	0.634

Rate Class=4 Project Size Category=10 - 100 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
40	5.75	0.369	0.380	0.392	0.404	0.416	0.429	0.441
40	6.00	0.385	0.397	0.409	0.422	0.434	0.447	0.460
40	6.25	0.400	0.413	0.426	0.439	0.452	0.466	0.479
40	6.50	0.416	0.429	0.443	0.456	0.470	0.484	0.498

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=4 Project Size Category=10 - 100 KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6.00% (\$/kWh)	Volumetric Incentive Rate at 6.50% (\$/kWh)	Volumetric Incentive Rate at 7.00% (\$/kWh)	Volumetric Incentive Rate at 7.50% (\$/kWh)	Volumetric Incentive Rate at 8.00% (\$/kWh)	Volumetric Incentive Rate at 8.50% (\$/kWh)	Volumetric Incentive Rate at 9.00% (\$/kWh)
40	6.75	0.432	0.446	0.460	0.474	0.488	0.502	0.517
40	7.00	0.448	0.462	0.476	0.491	0.506	0.521	0.536
40	7.25	0.464	0.478	0.493	0.508	0.524	0.539	0.555
40	7.50	0.480	0.495	0.510	0.526	0.542	0.558	0.574
40	7.75	0.495	0.511	0.527	0.543	0.560	0.576	0.593
40	8.00	0.511	0.527	0.544	0.560	0.577	0.595	0.612
50	5.75	0.368	0.379	0.391	0.403	0.415	0.428	0.440
50	6.00	0.384	0.396	0.408	0.421	0.433	0.446	0.459
50	6.25	0.399	0.412	0.425	0.438	0.451	0.465	0.478
50	6.50	0.415	0.428	0.442	0.455	0.469	0.483	0.497
50	6.75	0.431	0.445	0.459	0.473	0.487	0.501	0.516
50	7.00	0.447	0.461	0.475	0.490	0.505	0.520	0.535
50	7.25	0.463	0.477	0.492	0.507	0.523	0.538	0.554
50	7.50	0.479	0.494	0.509	0.525	0.541	0.557	0.573
50	7.75	0.494	0.510	0.526	0.542	0.559	0.575	0.592
50	8.00	0.510	0.526	0.543	0.560	0.576	0.594	0.611
60	5.75	0.367	0.379	0.391	0.403	0.415	0.427	0.440
60	6.00	0.383	0.395	0.407	0.420	0.433	0.446	0.459
60	6.25	0.399	0.411	0.424	0.437	0.451	0.464	0.478
60	6.50	0.415	0.428	0.441	0.455	0.468	0.482	0.497
60	6.75	0.430	0.444	0.458	0.472	0.486	0.501	0.515
60	7.00	0.446	0.460	0.475	0.489	0.504	0.519	0.534
60	7.25	0.462	0.477	0.492	0.507	0.522	0.538	0.553
60	7.50	0.478	0.493	0.509	0.524	0.540	0.556	0.572
60	7.75	0.494	0.509	0.525	0.542	0.558	0.575	0.591
60	8.00	0.510	0.526	0.542	0.559	0.576	0.593	0.610

**STAFF SIMULATED VIR RATES BY RATE CLASS AND PROJECT SIZE CATEGORY
STAFF STEP 8 COST ASSUMPTIONS**

Rate Class=4 Project Size Category=100+ KW

Capacity - DC (kW)	System Cost per Watt (\$/watt)	Volumetric Incentive Rate at 6:00% (\$/kWh)	Volumetric Incentive Rate at 6:50% (\$/kWh)	Volumetric Incentive Rate at 7:00% (\$/kWh)	Volumetric Incentive Rate at 7:50% (\$/kWh)	Volumetric Incentive Rate at 8:00% (\$/kWh)	Volumetric Incentive Rate at 8:50% (\$/kWh)	Volumetric Incentive Rate at 9:00% (\$/kWh)
250	5.75	0.365	0.376	0.388	0.400	0.412	0.425	0.437
250	6.00	0.381	0.393	0.405	0.418	0.430	0.443	0.456
250	6.25	0.396	0.409	0.422	0.435	0.448	0.462	0.475
250	6.50	0.412	0.425	0.439	0.452	0.466	0.480	0.494
250	6.75	0.428	0.442	0.456	0.470	0.484	0.498	0.513
250	7.00	0.444	0.458	0.473	0.487	0.502	0.517	0.532
250	7.25	0.460	0.474	0.489	0.504	0.520	0.535	0.551
250	7.50	0.476	0.491	0.506	0.522	0.538	0.554	0.570
250	7.75	0.491	0.507	0.523	0.539	0.556	0.572	0.589
250	8.00	0.507	0.523	0.540	0.557	0.574	0.591	0.608
300	5.75	0.365	0.376	0.388	0.400	0.412	0.425	0.437
300	6.00	0.381	0.393	0.405	0.418	0.430	0.443	0.456
300	6.25	0.396	0.409	0.422	0.435	0.448	0.461	0.475
300	6.50	0.412	0.425	0.439	0.452	0.466	0.480	0.494
300	6.75	0.428	0.442	0.456	0.470	0.484	0.498	0.513
300	7.00	0.444	0.458	0.472	0.487	0.502	0.517	0.532
300	7.25	0.460	0.474	0.489	0.504	0.520	0.535	0.551
300	7.50	0.476	0.491	0.506	0.522	0.538	0.554	0.570
300	7.75	0.491	0.507	0.523	0.539	0.555	0.572	0.589
300	8.00	0.507	0.523	0.540	0.556	0.573	0.591	0.608
350	5.75	0.365	0.376	0.388	0.400	0.412	0.425	0.437
350	6.00	0.380	0.393	0.405	0.417	0.430	0.443	0.456
350	6.25	0.396	0.409	0.422	0.435	0.448	0.461	0.475
350	6.50	0.412	0.425	0.439	0.452	0.466	0.480	0.494
350	6.75	0.428	0.442	0.455	0.470	0.484	0.498	0.513
350	7.00	0.444	0.458	0.472	0.487	0.502	0.517	0.532
350	7.25	0.460	0.474	0.489	0.504	0.520	0.535	0.551
350	7.50	0.475	0.491	0.506	0.522	0.538	0.554	0.570
350	7.75	0.491	0.507	0.523	0.539	0.555	0.572	0.589
350	8.00	0.507	0.523	0.540	0.556	0.573	0.590	0.608

1 **CERTIFICATE OF SERVICE**

2 I certify that on April 30, 2010, I served the foregoing Supplemental Comments upon the
3 parties in this proceeding by electronic mail and by sending a true, exact and full copy by regular
4 mail, postage prepaid, or by hand-delivery/shuttle, to the parties accepting paper service.

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