OG&E SMART STUDY TOGETHER IMPACT RESULTS

Auxiliary Final Report – Summer 2011 Appendices

1299-01

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APPENDIX A- DESCRIPTION OF DIFFERENCING ESTIMATION

This appendix describes the analysis we did using differencing methods to estimate the hourly impacts for the Pilot. As described in the report, first year recruits are analyzed by calculating the difference between participant and control group loads. Second year recruits are analyzed by adjusting the difference between participant and control group loads by the pre-participation differences between the two groups, using a difference of differences method. Because the needs of these two different approaches are different, there were additional requirements needed for the analysis of the second year recruits. Because the difference of differences approach requires pre-treatment data for days similar to those being analyzed in the treatment period, we created "would-be" event days during 2010 that matched each of the 2011 event days, which were paired together for the analysis.

1.1 First Year Recruits

For the first year recruits, a differencing analysis method was used as follows. For each customer, including both participant and control, an average load shape was calculated for each day type. The day types were defined as follows. For the TOU-VP customers, the 24 hours for an average non-event weekday and an average weekend day for the summer were calculated. For the VPP-CP, an average weekend day and an average non-event weekday for each price level were calculated. For both pricing groups, each of the event days were treated as individual day types, and so were left as the actual hourly load for that day. This step did not involve any estimation, with the result being the actual average for that day type for that customer for the summer of 2011, so no variance term was calculated at this step.

We then averaged each of the day types for all customers in each participant group and for all customers in the control group, creating one average for all control group customers and another including only those with CAC. The result was an estimate of the average load shape by day type for participants and the average load shape by day type for the control group. This average was calculated as a stratified estimate, with the customers in both groups stratified by age and income segments, and the weights reflecting the mixture of these demographic segments in the OG&E service territory as a whole. Because of this, the results will more accurately reflect the results of the rates and technologies if they were to be rolled out to the whole OG&E service territory. Not only did the weighting allow for more appropriate estimation of the effects for a future roll-out, it was necessary because of the nature of the recruiting, with the distribution of customers across demographic segments being approximately equal, rather than reflecting the population distribution.

Along with the average day type load shapes, we also calculated the variance of the stratified estimator, enabling us to calculate the 90% confidence intervals around these load shapes and to carry the variances through to the final savings calculations. The day type load shapes at this step are what are shown in Figures 4-1 through 4-7 and 4-37 through 4-50 in the report. The hourly savings were then calculated as the difference between the participant average load shapes and the appropriate control group average load shape for each day type. Because the participant and control groups were two separate samples, the load shape estimates are statistically independent, so the variance of the estimate of the difference is the sum of the variances of the two estimates. We calculated this for each hour for each day type, and then calculated the associated 90% confidence interval for the savings.

Figures showing the load shapes for the participant and control groups for each rate/technology group along with the savings, each with the 90% confidence intervals, are included in Appendix C.

1.2 Second Year Recruits

The differencing analysis method used for the second year recruits (both residential and commercial) was very similar, but included the extra step of subtracting out the pre-participation difference from each estimate. The average load shape by day type for each customer was calculated as described above, but separate averages were calculated for 2010 (the pre-participation period) and for 2011 (the treatment period). Day type averages by rate/technology group were again calculated, separately for both summers, along with the associated variances.

Then the first differences were calculated, as described above under the first year recruits. Then the additional step of subtracting the first difference for the pre-participation period from the first difference in the treatment period was done. This corrected the savings estimate during the treatment period for any pre-treatment differences between the participant and control groups. Again, the variances were carried through, and confidence intervals calculated. For the residential customers recruited in the second year, the pre-treatment data for each event day was the "would be" event day from 2010 that matched the 2011 event day being estimated. But for the commercial customers, the loads were much more variable, so we averaged all the "would be" event days in 2010 and used that average as the pre-treatment data for each of the 2011 event days. This stabilized the estimates of the event day savings in 2011 for the commercial customers.

In order to show the savings more clearly on load shape graphs, we also did the difference calculations for the second year recruits in a slightly different order. The results are the same, but we subtracted the first difference for the pre-participation period from the control group load shape for the treatment period to get an adjusted control group load shape for the treatment period. This adjusted control group load shape was then plotted with the participant load shape for the treatment period to show the load impacts in a manner similar to the first year recruits. This approach results in a load shape graph where the difference between the participant group and the adjusted control group is the savings. To reiterate, this just involved changing the order of the differencing calculations, so the numeric results were unchanged. The day type load shapes in figures 4-8 through 4-21 and 4-51 through 4-78 reflect this method. Appendix D and Appendix E include the adjusted control group, participant, and savings load shapes with 90% confidence intervals.

APPENDIX B- REGRESSION DESCRIPTION AND STATISTICS

For this Pilot, we used a regression analysis to quantify as much of customer energy use as possible, including energy use driven by factors not related to participation in the Pilot and driven by participation. The point of this effort was to enable the estimation of load impacts for a variety of days in the future. The differencing approach is very good at estimating load impacts by hour for the actual days in the study period, but is not easily generalizable beyond the characteristics and weather of those actual days. In this appendix, we describe the models used for the regression analysis, and provide summaries of the model parameters.

For the regression analysis, we pooled the first- and second-year recruits in order to obtain greater statistical power. However, we analyzed TOU-CP and VPP-CP customers separately because of the variable price component associated with those on the VPP-CP rate. All Control Group customers were used, if data were available for both years. Also, the sample included pre-enrollment data from summer 2010 for those customers who enrolled between summer 2010 and summer 2011 (the second year recruits).

In both models, we used household survey data to control for factors other than weather and price that affect electricity use. These factors include household characteristics, such as year built and square footage, the number of occupants, appliance indicators—for central air, televisions, refrigerators, electric cook tops, electric dryers, pools, and hot tubs—and whether the occupants own or lease the home. Weather is controlled for using cooling degree days (CDD), calculated using a base of 70 degrees. We also included a CDD88 variable, which uses a base of 88 to capture incremental usage effects on very hot days. Because of the heterogeneity of the variance of the residuals in the data, we tested the model with both the usual least squares standard errors and the more robust heteroskedasticity-consistent standard errors. The results were very similar. A summary of the results of the SAS regression analysis for the TOU-CP customers follows. The dependent variable in the model is on-peak kWh. Most of the variables are not related to participation, and are used to estimate the baseline consumption. The last 8 variables are related to participation in the Pilot with the four different technologies. These variables are all negative, indicating a reduction in energy use for participants. In these models, an observation is the on peak energy for each day, for each customer.

The REG Procedure
Model: TOU-CP MODEL
Dependent Variable: onkwh

Number of Observations Read	389793
Number of Observations Used	389671
Number of Observations with Missing Values	122

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	39	16037872	411227	916.59	<.0001
Error	389631	174807015	448.64760		
Corrected Total	389670	190844887			

Root MSE	21.18130	R-Square	0.0840
Dependent Mean	15.16060	Adj R-Sq	0.0839
Coeff Var	139.71279		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	--Heteroscedasticity Consistent- Standard Error	t Value	Pr > |t|
Intercept	1	-2.76319	0.25941	-10.65	<.0001	0.24310	-11.37	<.0001
own	1	0.55874	0.10347	5.40	<.0001	0.03520	15.87	<.0001
year1950	1	1.61028	0.18228	8.83	<.0001	0.07075	22.76	<.0001
year1960	1	1.99291	0.15732	12.67	<.0001	0.06326	31.50	<.0001
year1970	1	0.45135	0.11796	3.83	0.0001	0.04178	10.80	<.0001
year1980	1	1.13643	0.10448	10.88	<.0001	0.04425	25.68	<.0001
year1990	1	0.55289	0.11673	4.74	<.0001	0.04159	13.29	<.0001
year2000	1	1.86813	0.11023	16.95	<.0001	0.21229	8.80	<.0001
year2010	1	1.20241	0.07097	16.94	<.0001	0.05799	20.73	<.0001
occupant2	1	2.06969	0.09603	21.55	<.0001	0.05764	35.91	<.0001
occupant3	1	4.14809	0.11680	35.51	<.0001	0.04712	88.02	<.0001
occupant4	1	4.95501	0.12432	39.86	<.0001	0.06619	74.86	<.0001
occupant5	1	6.94567	0.17563	39.55	<.0001	0.08110	85.64	<.0001
occupantsgt5	1	7.20812	0.21414	33.66	<.0001	0.08879	81.18	<.0001
addlrefrg	1	2.13831	0.07470	28.63	<.0001	0.06775	31.56	<.0001
eleccook	1	-0.20663	0.08379	-2.47	0.0137	0.05517	-3.75	0.0002
elecdryer	1	1.02970	0.09745	10.57	<.0001	0.04774	21.57	<.0001
tv1	1	0.90023	0.09270	9.71	<.0001	0.08388	10.73	<.0001
tv2	1	1.19567	0.10312	11.59	<.0001	0.04333	27.59	<.0001
tv3	1	2.22333	0.13357	16.65	<.0001	0.08564	25.96	<.0001
tv4	1	3.36713	0.17939	18.77	<.0001	0.11316	29.76	<.0001
tvgt4	1	4.42326	0.21484	20.59	<.0001	0.14798	29.89	<.0001
pool	1	4.67969	0.11923	39.25	<.0001	0.33324	14.04	<.0001
hottub	1	1.31539	0.12808	10.27	<.0001	0.16071	8.19	<.0001
sqft1600	1	2.31924	0.28426	8.16	<.0001	0.10827	21.42	<.0001
sqft2200	1	1.77272	0.31258	5.67	<.0001	0.12612	14.06	<.0001
sqftgt2200	1	6.43418	0.12949	49.69	<.0001	0.08160	78.85	<.0001
cacsqft1600	1	-0.49704	0.29183	-1.70	0.0885	0.12835	-3.87	0.0001
cacsqft2200	1	0.81236	0.31765	2.56	0.0105	0.16767	4.84	<.0001
cac	1	0.84874	0.16917	5.02	<.0001	0.10189	8.33	<.0001
CDD	1	0.70329	0.01040	67.66	<.0001	0.00386	182.37	<.0001
CDD88	1	-0.39363	0.02982	-13.20	<.0001	0.02502	-15.73	<.0001
web_ind	1	-0.56568	0.21768	-2.60	0.0094	0.68818	-0.82	0.4111
ihd_ind	1	-1.11578	0.22624	-4.93	<.0001	0.07168	-15.57	<.0001
pct_ind	1	-1.73727	0.23111	-7.52	<.0001	0.06958	-24.97	<.0001
all_ind	1	-1.58266	0.22855	-6.92	<.0001	0.07267	-21.78	<.0001
cddweb	1	-0.10407	0.01563	-6.66	<.0001	0.04145	-2.51	0.0120
cddihd	1	-0.08558	0.01621	-5.28	<.0001	0.00536	-15.96	<.0001
cddpct	1	-0.17979	0.01657	-10.85	<.0001	0.00534	-33.68	<.0001
cddall	1	-0.16597	0.01641	-10.11	<.0001	0.00554	-29.95	<.0001

The TOU-CP model, shown above, includes, as the primary variables of interest, the four technology indicators on their own as well as interacted with the CDD variable. While the model is highly significant, it achieves an R2 value of 0.0840, indicating that factors other than those controlled for in the model are affecting on-peak usage. Controlling for weather and household characteristics, participants with programmable communicating thermostats (PCTs) save, on average, 1.74 kWh during the on-peak period for average temperatures at or below 70 degrees. For every CDD above 70 degrees, customers with PCTs save an additional 0.18 kWh during the on-peak period. This follows for the other technologies as well, except for Web Portal, which is not statistically significant using the robust standard errors.

A similar model was developed for the VPP-CP customers, but was more complex because of the different price levels that VPP-CP customers experienced during the pilot. Again, there were many variables not related to participation used to establish baseline energy. The participation variables all start with the character "p" followed by the price for the day that the variable applies to. The nature of the relationship between load and other factors such as price, temperature, and technology is more complex here than with the TOU-CP.

The REG Procedure
Model: VPP-CP MODEL
Dependent Variable: onkwh

Number of Observations Read	401525
Number of Observations Used	401320
Number of Observations with Missing Values	205

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	67	15611465	233007	4360.63	<.0001
Error	401252	21440581	53.43420		
Corrected Total	401319	37052046			

Root MSE	7.30987	R-Square	0.4213
Dependent Mean	15.53344	Adj R-Sq	0.4212
Coeff Var	47.05892		

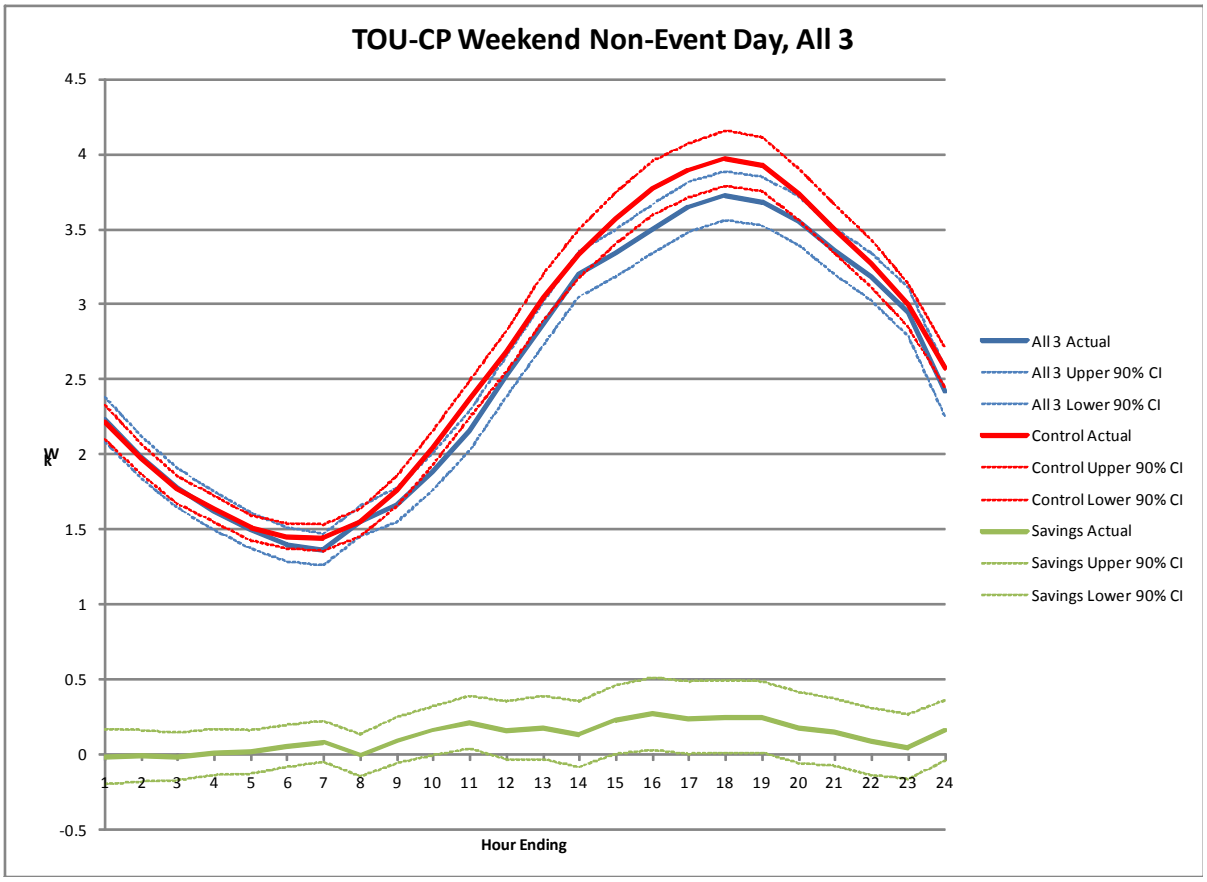
Parameter Estimates

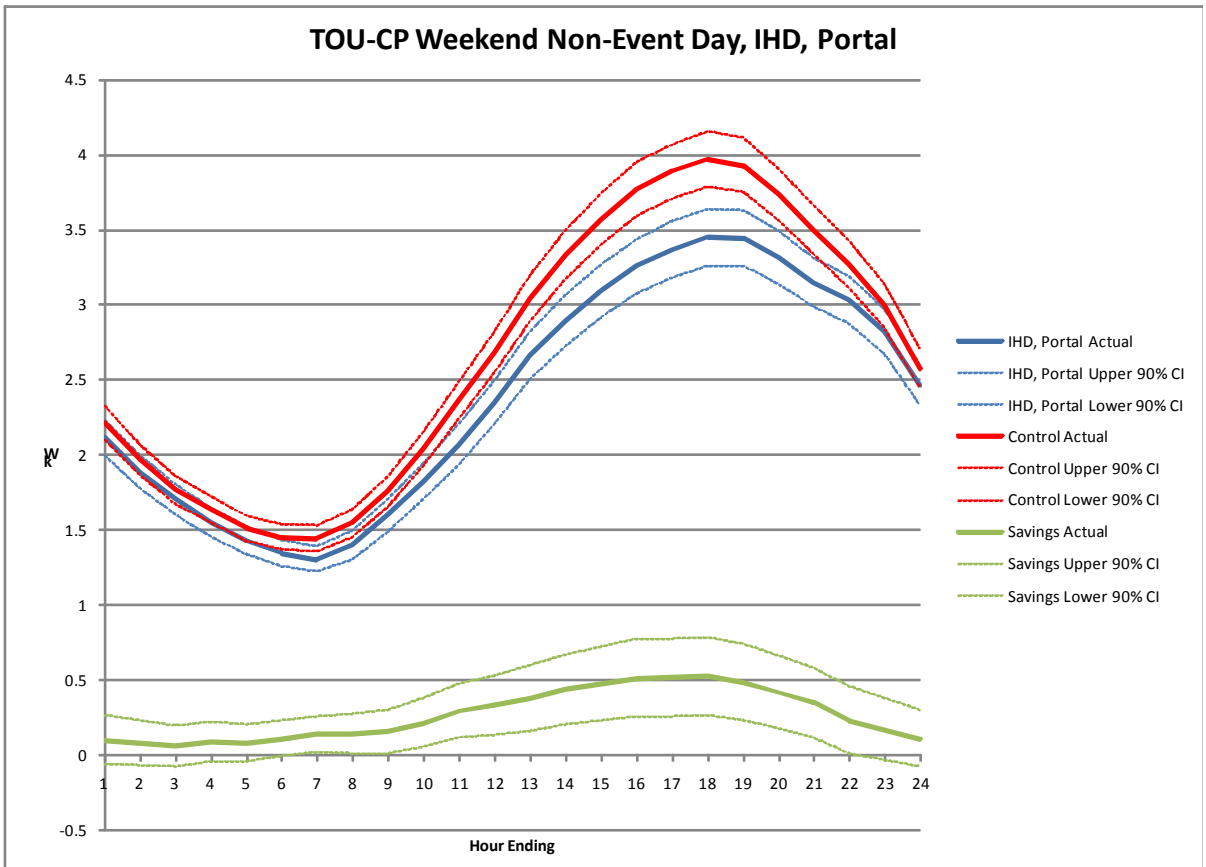
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|	--Heteroscedasticity Consistent- Standard Error	t Value	Pr > |t|
Intercept	1	-2.11121	0.12095	-17.46	<.0001	0.10096	-20.91	<.0001
own	1	0.67567	0.03547	19.05	<.0001	0.03182	21.23	<.0001
year1950	1	1.18087	0.06099	19.36	<.0001	0.05189	22.76	<.0001
year1960	1	1.35555	0.05027	26.97	<.0001	0.04884	27.76	<.0001
year1970	1	0.88206	0.04024	21.92	<.0001	0.04086	21.59	<.0001
year1980	1	1.17695	0.03593	32.76	<.0001	0.03644	32.30	<.0001
year1990	1	0.41676	0.04096	10.17	<.0001	0.04024	10.36	<.0001
year2000	1	2.26745	0.03635	62.38	<.0001	0.03805	59.59	<.0001
year2010	1	0.56441	0.02701	20.90	<.0001	0.02608	21.64	<.0001
occupant2	1	2.23719	0.03314	67.50	<.0001	0.02882	77.62	<.0001
occupant3	1	3.65414	0.03978	91.85	<.0001	0.03649	100.15	<.0001
occupant4	1	5.01777	0.04196	119.60	<.0001	0.04072	123.22	<.0001
occupant5	1	7.58442	0.05971	127.02	<.0001	0.07067	107.32	<.0001
occupantsgt5	1	6.26225	0.06918	90.52	<.0001	0.07552	82.92	<.0001
addlrefrg	1	2.38965	0.02577	92.74	<.0001	0.02799	85.39	<.0001
eleccook	1	-0.37178	0.02902	-12.81	<.0001	0.02832	-13.13	<.0001
elecdryer	1	1.27027	0.03397	37.40	<.0001	0.03170	40.07	<.0001
tv1	1	0.65294	0.03134	20.83	<.0001	0.02902	22.50	<.0001
tv2	1	1.71941	0.03470	49.54	<.0001	0.03316	51.84	<.0001
tv3	1	2.34538	0.04474	52.42	<.0001	0.04588	51.12	<.0001
tv4	1	3.65686	0.06167	59.30	<.0001	0.07238	50.52	<.0001
tvgt4	1	3.02119	0.07520	40.17	<.0001	0.09593	31.49	<.0001
pool	1	3.69571	0.04010	92.16	<.0001	0.04988	74.09	<.0001
hottub	1	1.31015	0.04303	30.45	<.0001	0.05180	25.29	<.0001
sqft1600	1	1.50664	0.03815	39.49	<.0001	0.03228	46.67	<.0001
sqft2200	1	3.13973	0.09334	33.64	<.0001	0.08380	37.47	<.0001
sqftgt2200	1	5.49853	0.10576	51.99	<.0001	0.12514	43.94	<.0001
cacsqft2200	1	-0.65937	0.09494	-6.94	<.0001	0.08540	-7.72	<.0001
cacsqftgt2200	1	0.54146	0.10606	5.11	<.0001	0.12909	4.19	<.0001
cac	1	0.40999	0.10962	3.74	0.0002	0.09047	4.53	<.0001
CDD	1	0.67913	0.00826	82.18	<.0001	0.00741	91.64	<.0001
CDD88	1	-0.40737	0.03704	-11.00	<.0001	0.03992	-10.20	<.0001
caccdd	1	0.03495	0.00811	4.31	<.0001	0.00727	4.81	<.0001
caccdd88	1	-0.12284	0.03626	-3.39	0.0007	0.03950	-3.11	0.0019
p045web	1	-0.88268	0.08544	-10.33	<.0001	0.07156	-12.33	<.0001
p045ihd	1	-0.99513	0.09445	-10.54	<.0001	0.07706	-12.91	<.0001
p045pct	1	-0.90711	0.09455	-9.59	<.0001	0.07990	-11.35	<.0001
p045all	1	-0.62413	0.09409	-6.63	<.0001	0.07464	-8.36	<.0001
p230web	1	1.47254	0.39193	3.76	0.0002	0.40077	3.67	0.0002
p230ihd	1	1.58528	0.43671	3.63	0.0003	0.44154	3.59	0.0003
p230pct	1	2.32321	0.44437	5.23	<.0001	0.50054	4.64	<.0001
p230all	1	2.12173	0.44238	4.80	<.0001	0.45810	4.63	<.0001
p460web	1	-3.48918	0.80769	-4.32	<.0001	0.83097	-4.20	<.0001
p460ihd	1	-4.05810	0.89733	-4.52	<.0001	0.92376	-4.39	<.0001
p460pct	1	-3.95559	0.12804	-30.89	<.0001	0.15407	-25.67	<.0001
p460all	1	-3.91529	0.12747	-30.71	<.0001	0.14135	-27.70	<.0001
p045cddweb	1	-0.03988	0.01072	-3.72	0.0002	0.00964	-4.14	<.0001
p045cddihd	1	-0.03124	0.01193	-2.62	0.0088	0.01054	-2.96	0.0030
p045cddpct	1	-0.02428	0.01204	-2.02	0.0438	0.01156	-2.10	0.0358
p045cddall	1	-0.05944	0.01200	-4.96	<.0001	0.01019	-5.83	<.0001
p113cddweb	1	-0.12810	0.00356	-35.94	<.0001	0.00365	-35.08	<.0001
p113cddihd	1	-0.13629	0.00394	-34.58	<.0001	0.00400	-34.11	<.0001
p113cddpct	1	-0.26404	0.00396	-66.61	<.0001	0.00434	-60.80	<.0001
p113cddall	1	-0.25989	0.00394	-65.88	<.0001	0.00393	-66.05	<.0001
p230cddweb	1	-0.21719	0.02535	-8.57	<.0001	0.02603	-8.34	<.0001
p230cddihd	1	-0.23166	0.02826	-8.20	<.0001	0.02881	-8.04	<.0001
p230cddpct	1	-0.42453	0.02873	-14.78	<.0001	0.03259	-13.03	<.0001
p230cddall	1	-0.40764	0.02860	-14.25	<.0001	0.02970	-13.73	<.0001
p460cddweb	1	0.10602	0.04989	2.13	0.0336	0.05171	2.05	0.0403
p460cddihd	1	0.13058	0.05543	2.36	0.0185	0.05742	2.27	0.0229
p230cdd88web	1	0.16359	0.05743	2.85	0.0044	0.06073	2.69	0.0071
p230cdd88ihd	1	0.17101	0.06408	2.67	0.0076	0.06795	2.52	0.0118
p230cdd88pct	1	0.35486	0.06481	5.48	<.0001	0.07536	4.71	<.0001
p230cdd88all	1	0.31634	0.06446	4.91	<.0001	0.06852	4.62	<.0001
p460cdd88web	1	-0.16320	0.07362	-2.22	0.0266	0.07828	-2.08	0.0371
p460cdd88ihd	1	-0.21040	0.08179	-2.57	0.0101	0.08658	-2.43	0.0151
p460cdd88pct	1	-0.34507	0.03543	-9.74	<.0001	0.04297	-8.03	<.0001
p460cdd88all	1	-0.35394	0.03526	-10.04	<.0001	0.04013	-8.82	<.0001

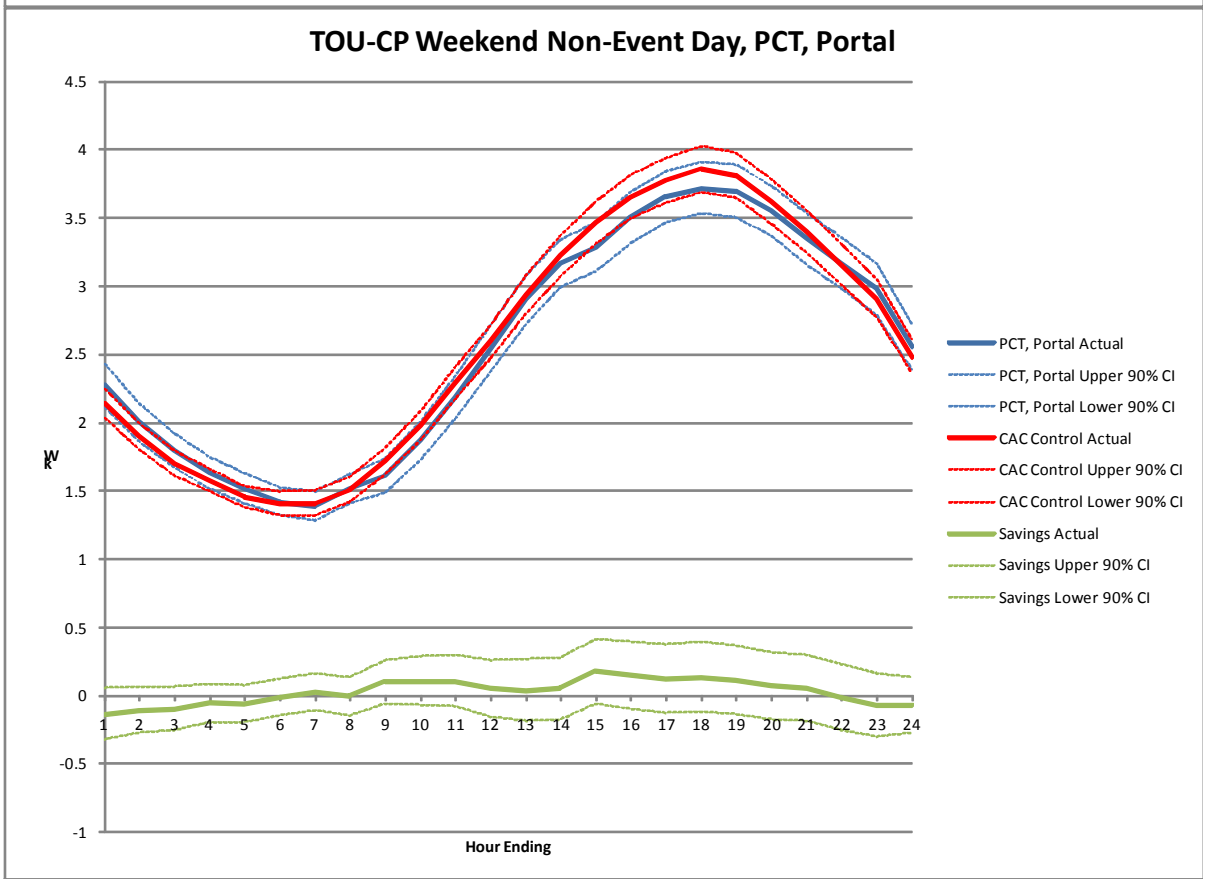
Building upon the TOU-CP specification, the VPP-CP model includes each of the four prices interacted with the technologies, with the technologies and CDD, and with the technologies and CDD88. There are cases where groups of variables are not statistically significant. For example, at the standard price (11.3¢), the savings associated with each of the enabling technologies is not different from zero. This, in many ways, makes sense as the control group is consuming electricity at the same price and is subject to the same weather conditions. In the model, we also include CAC interacted with both CDD and CDD88, which was not statistically significant in the TOU-CP specification. The VPP-CP model is highly significant and has an R2 value of 0.4213, capturing a fair amount of the variation in on-peak usage with the variables included. Controlling for weather, price, and household characteristics, participants with In-Home Displays (IHDs) on critical price days save, on average, 4.06 kWh during the on-peak period for average temperatures at or below 70 degrees. These customers save an additional 0.13 kWh for every additional degree when the average daily temperature is between 70 and 88 degrees and an additional 0.34 kWh (0.13058 + 0.21040) for every additional degree when the average daily temperature is above 88 degrees.

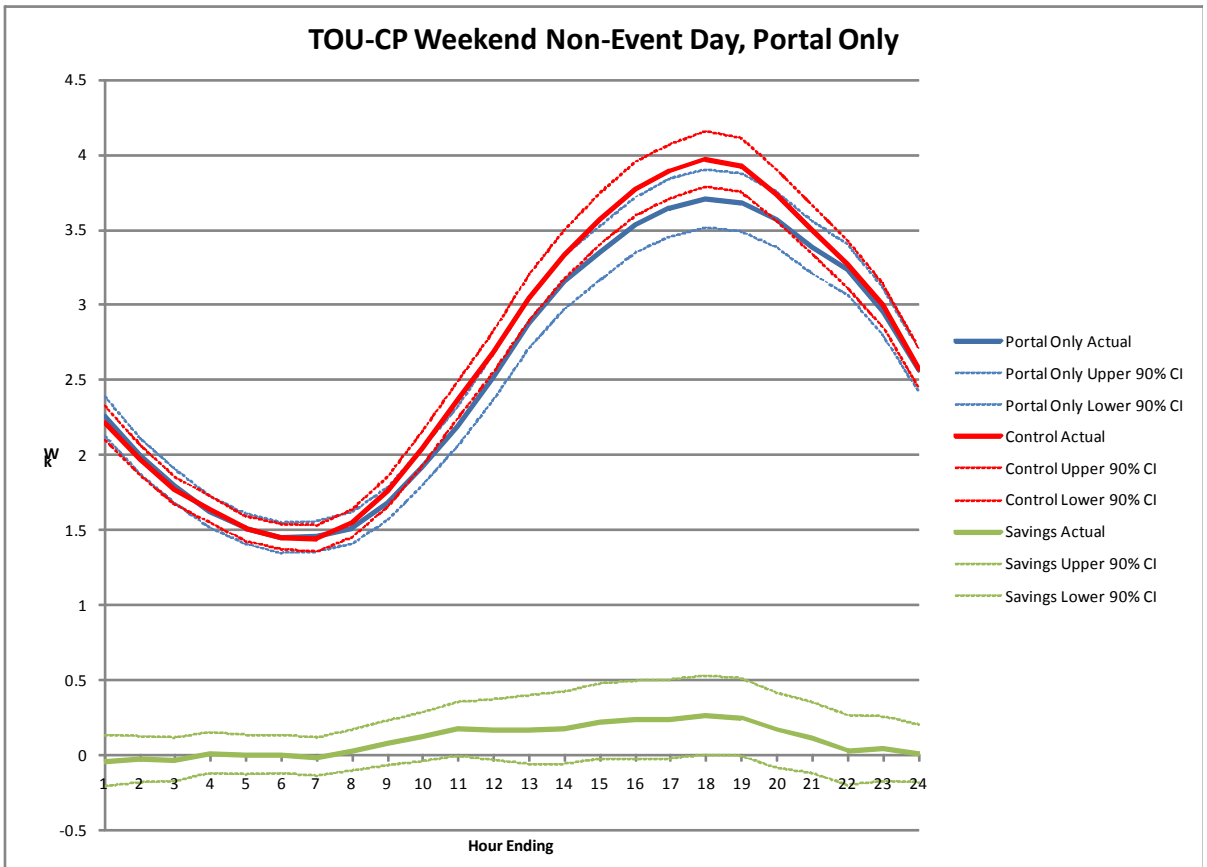
APPENDIX C- INDIVIDUAL LOAD SHAPES: FIRST YEAR RECRUITS

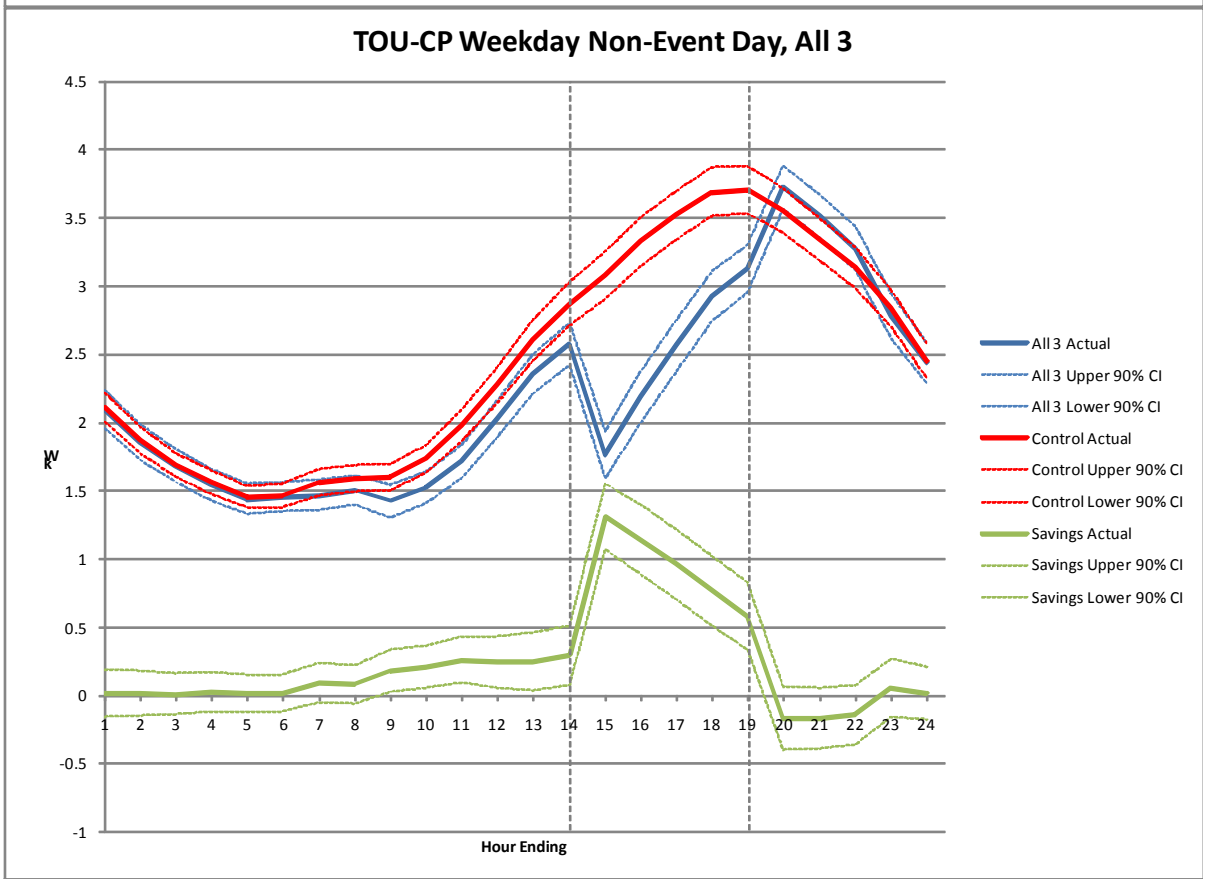
The following Appendix C graphs compare the estimated first year recruits residential participant load shapes to the estimated control group load shapes for each of the 21 day types for each of the four enabling technology options: Portal Only; IHD, Portal; PCT, Portal; and All 3. A third line, the estimated savings, which is the difference between the control group and participant shapes, is shown in green. Each of the shapes is surrounded by dashed lines indicating the 90% confidence intervals. When the 90% confidence interval on the savings estimate does not include zero, the savings are statistically significant. This appendix contains 84 graphs.




TOU-CP Weekend Non-Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP Weekend Non-Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP Weekend Non-Event Day, Portal Only
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP Weekday Non-Event Day, All 3
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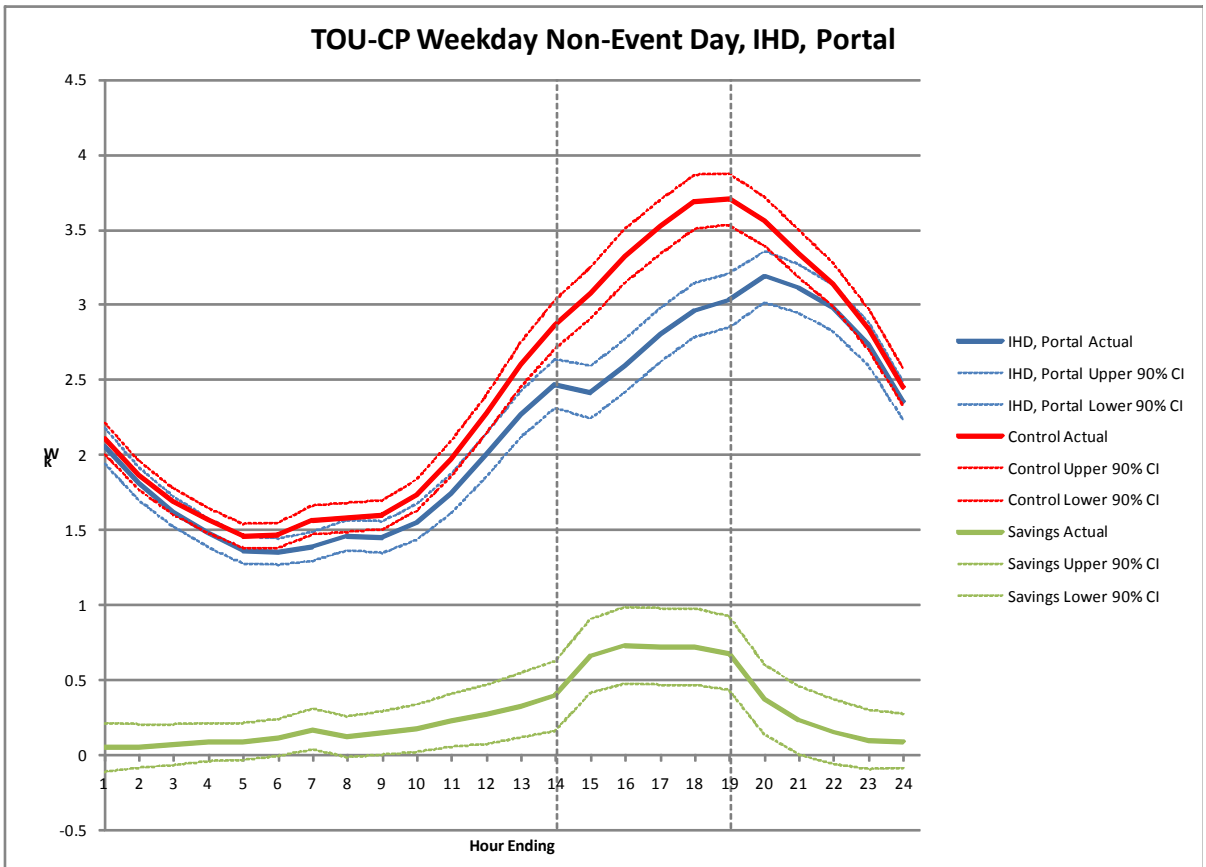
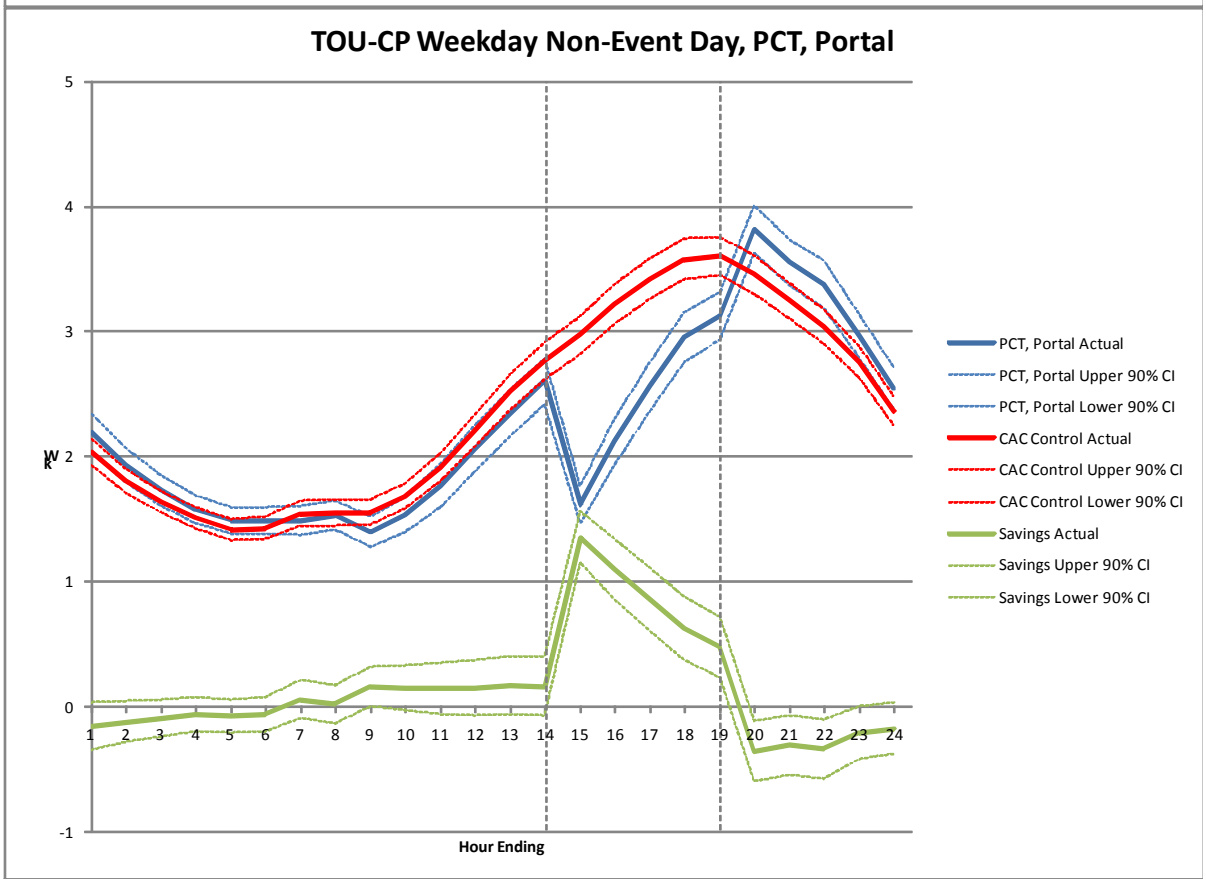
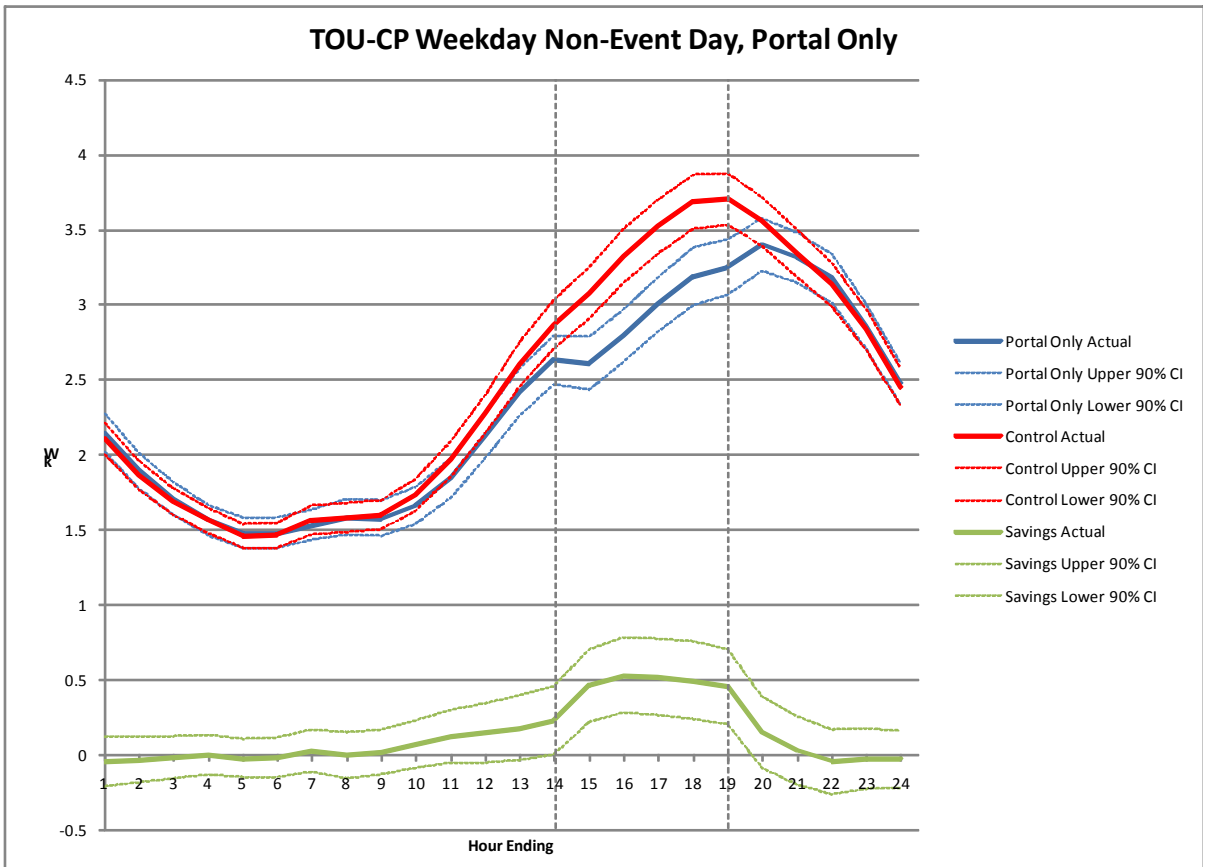
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP Weekday Non-Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP Weekday Non-Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP Weekday Non-Event Day, Portal Only
4.5
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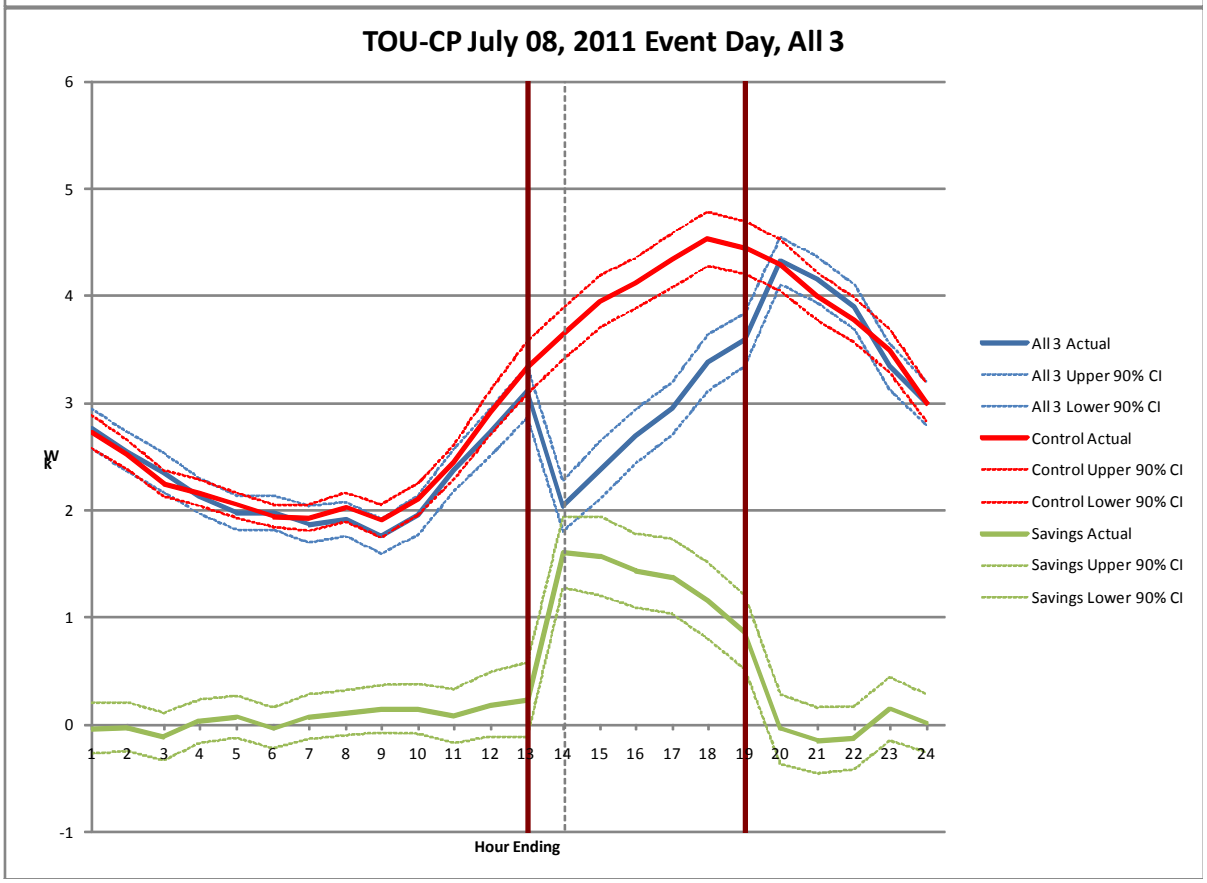
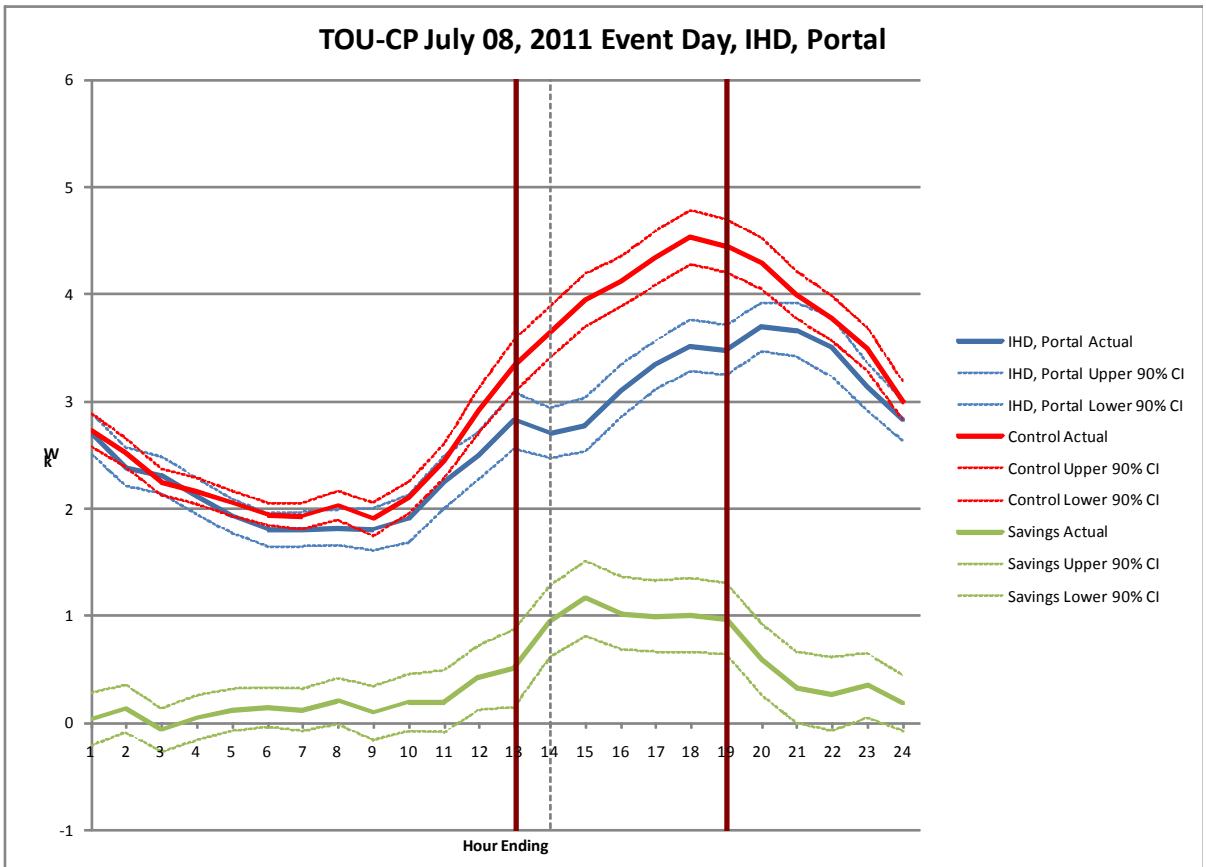
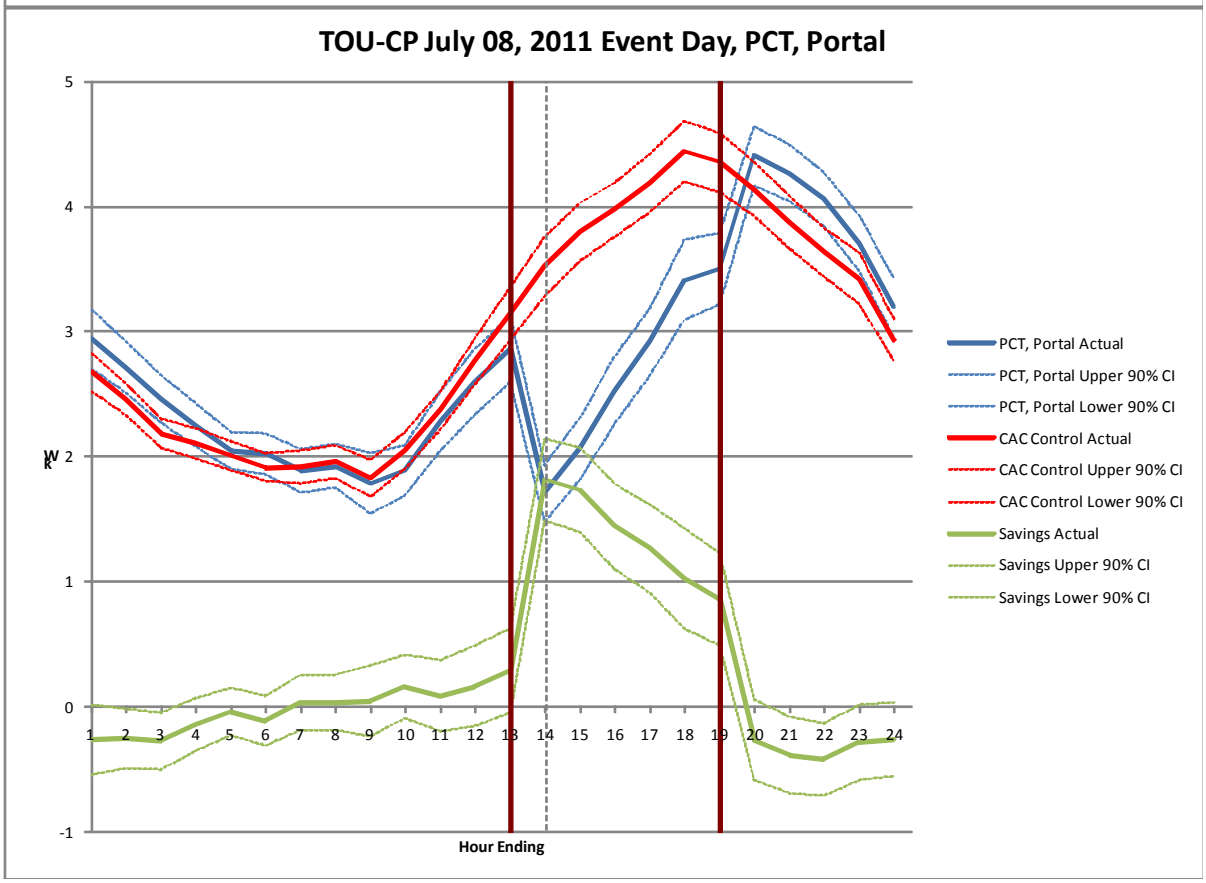
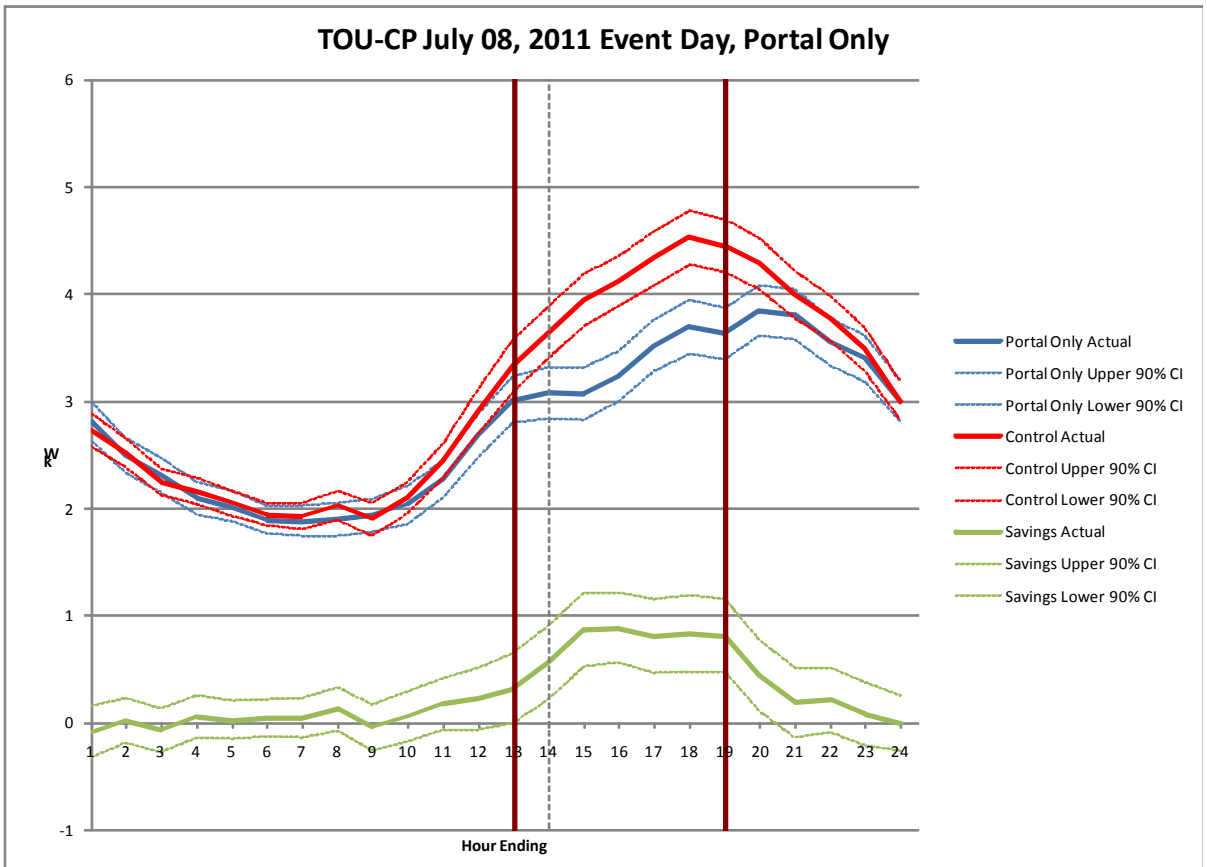
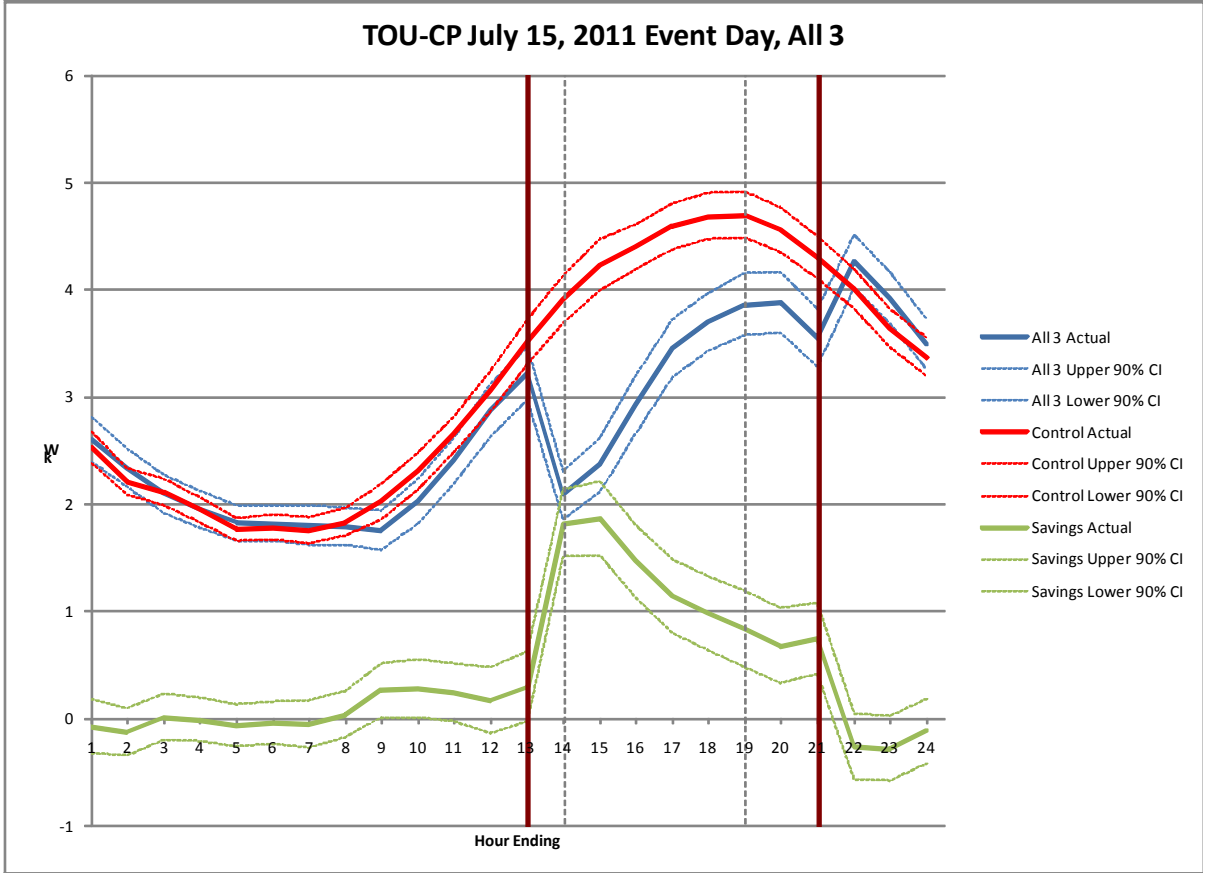
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

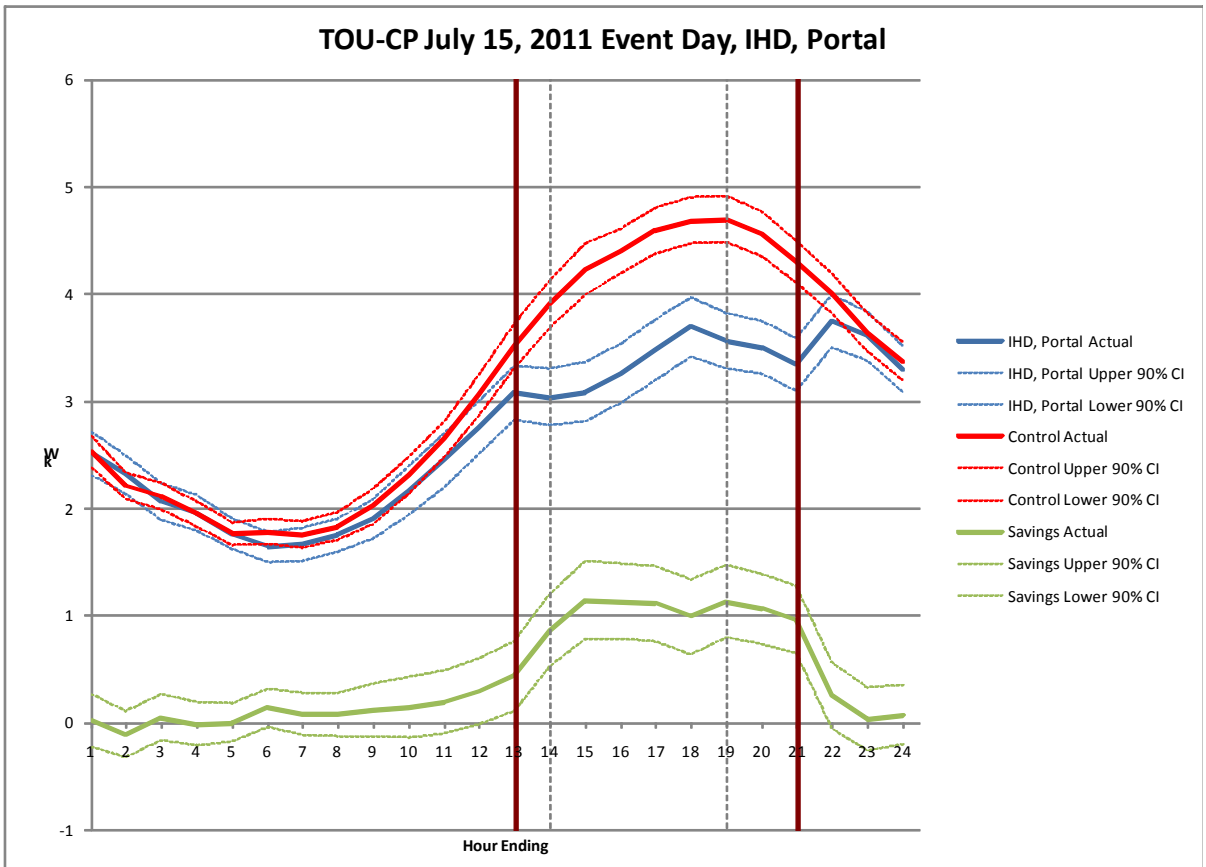

TOU-CP July 08, 2011 Event Day, All 3
6
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

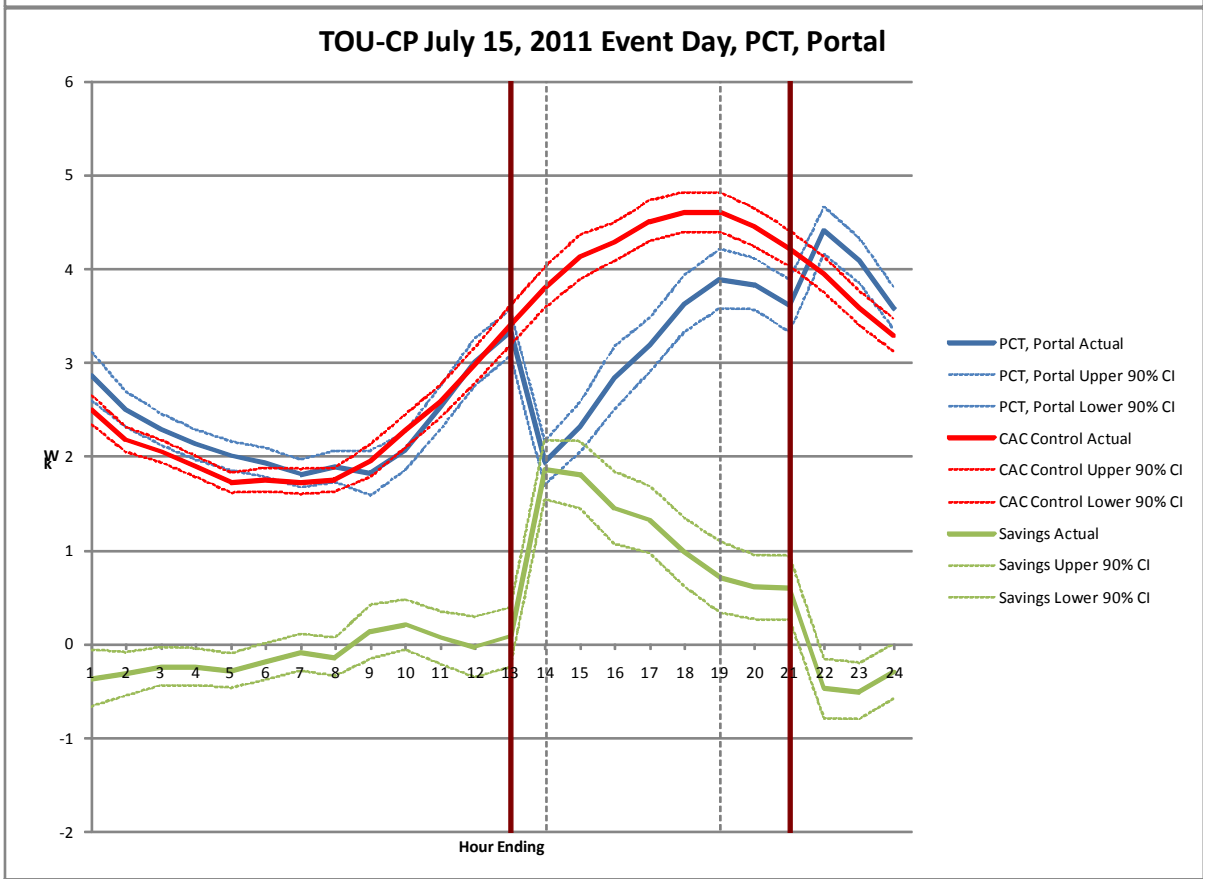

TOU-CP July 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

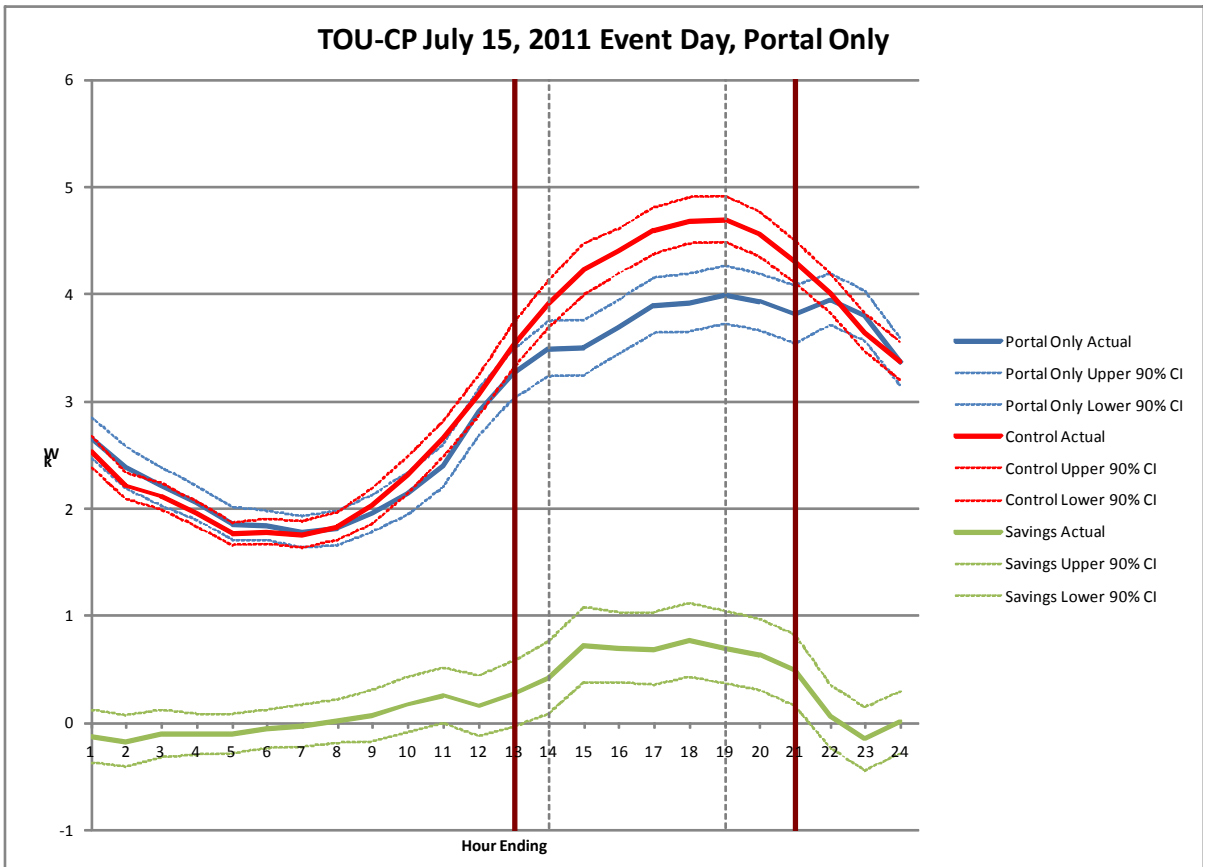

TOU-CP July 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

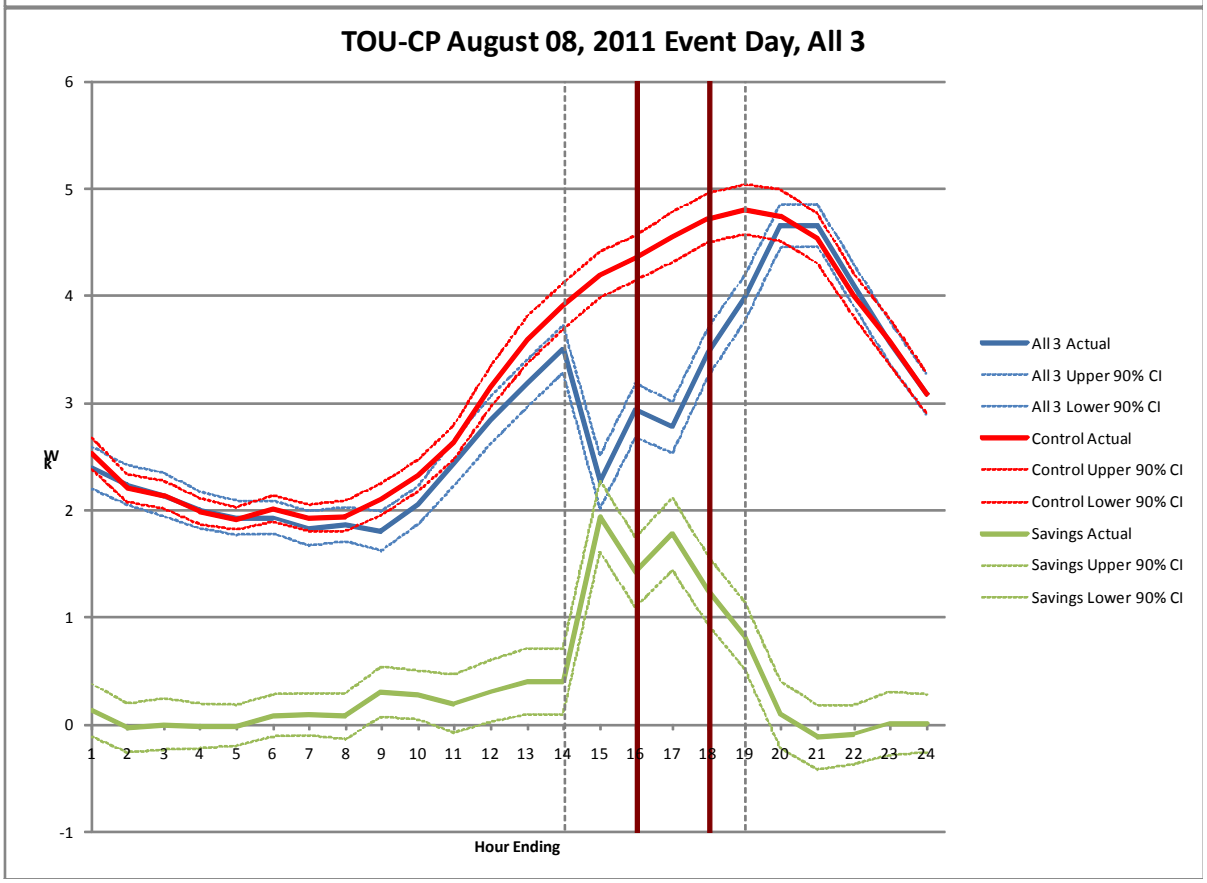

TOU-CP July 08, 2011 Event Day, Portal Only
6
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

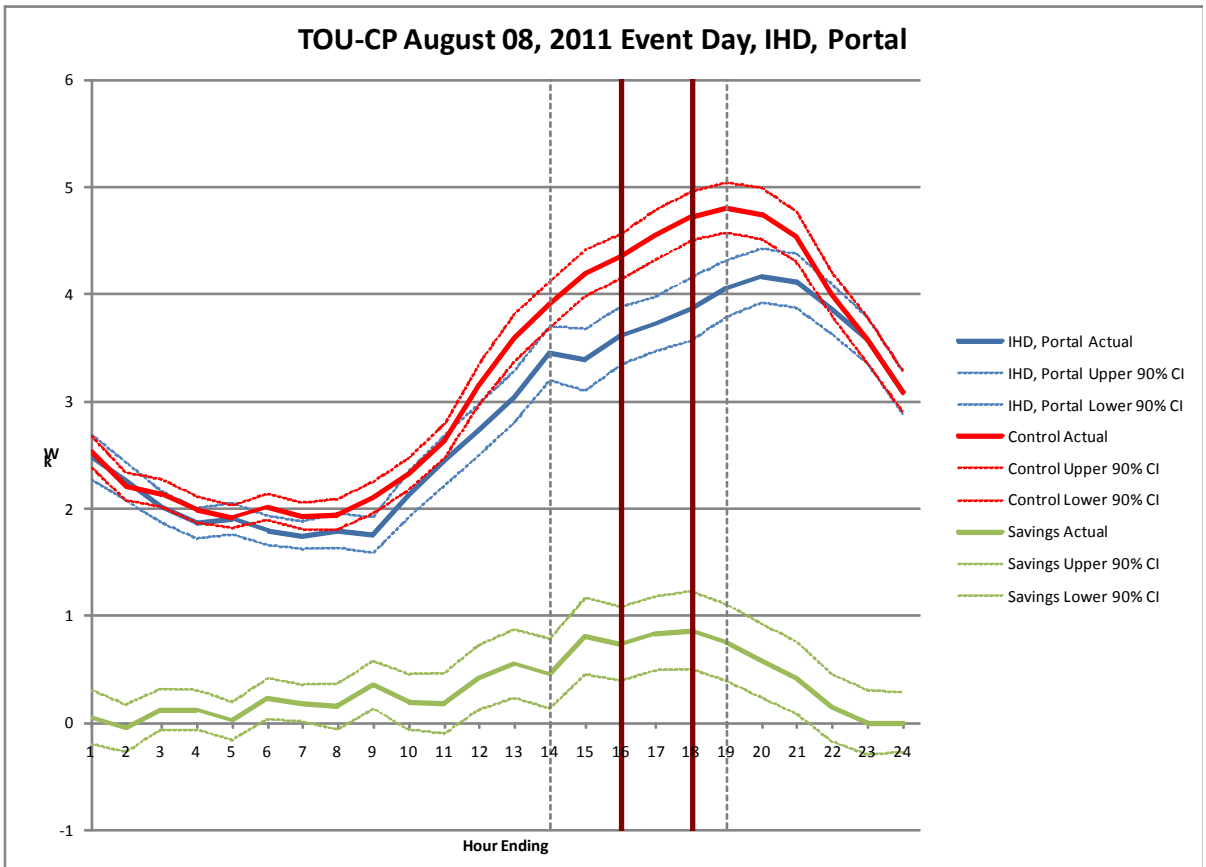

TOU-CP July 15, 2011 Event Day, All 3
6
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

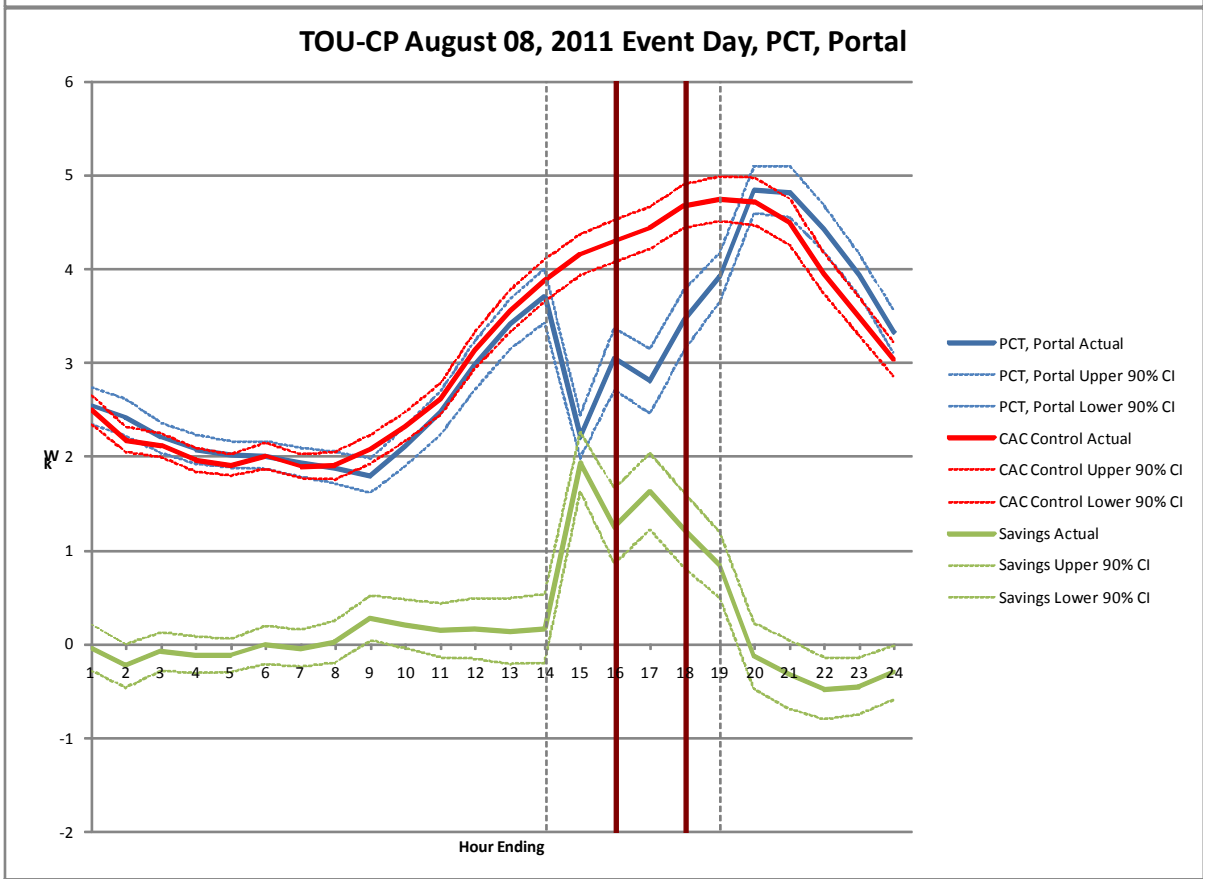

TOU-CP July 15, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

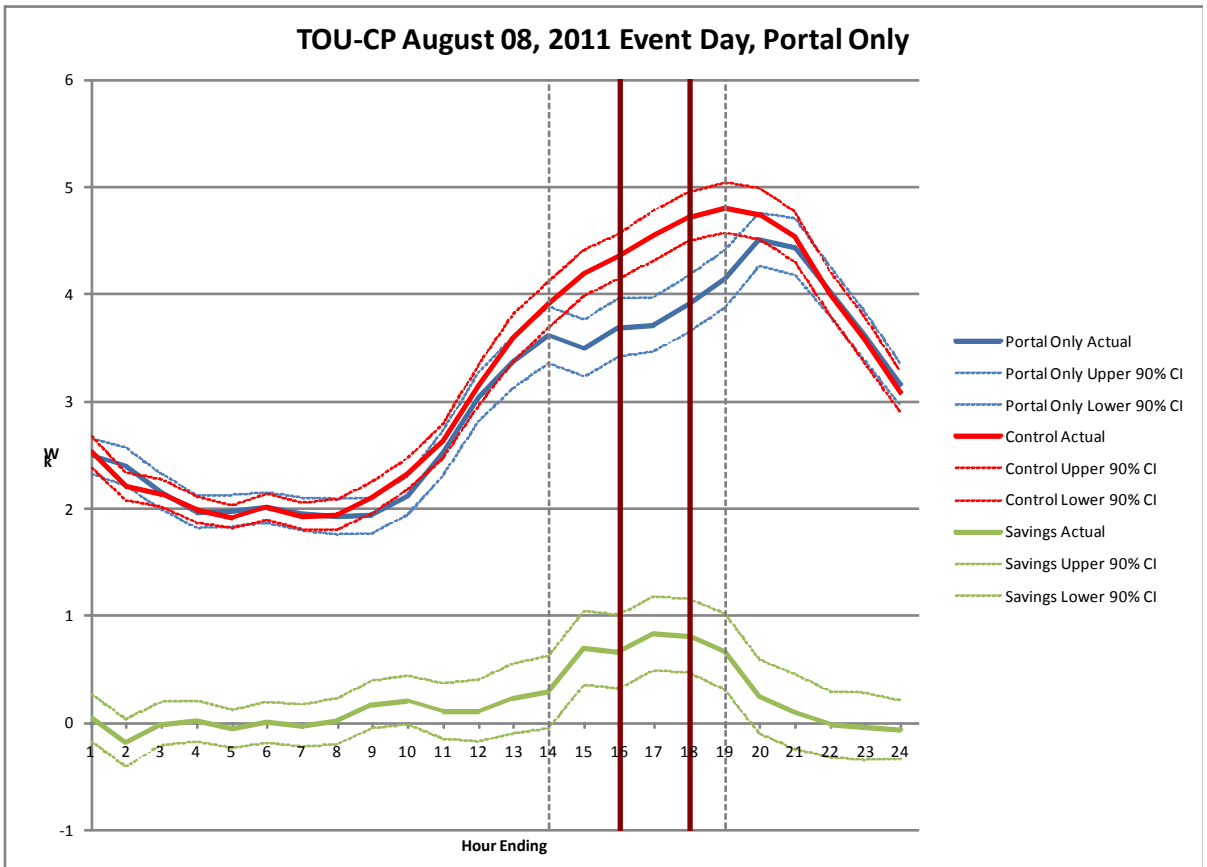

TOU-CP July 15, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

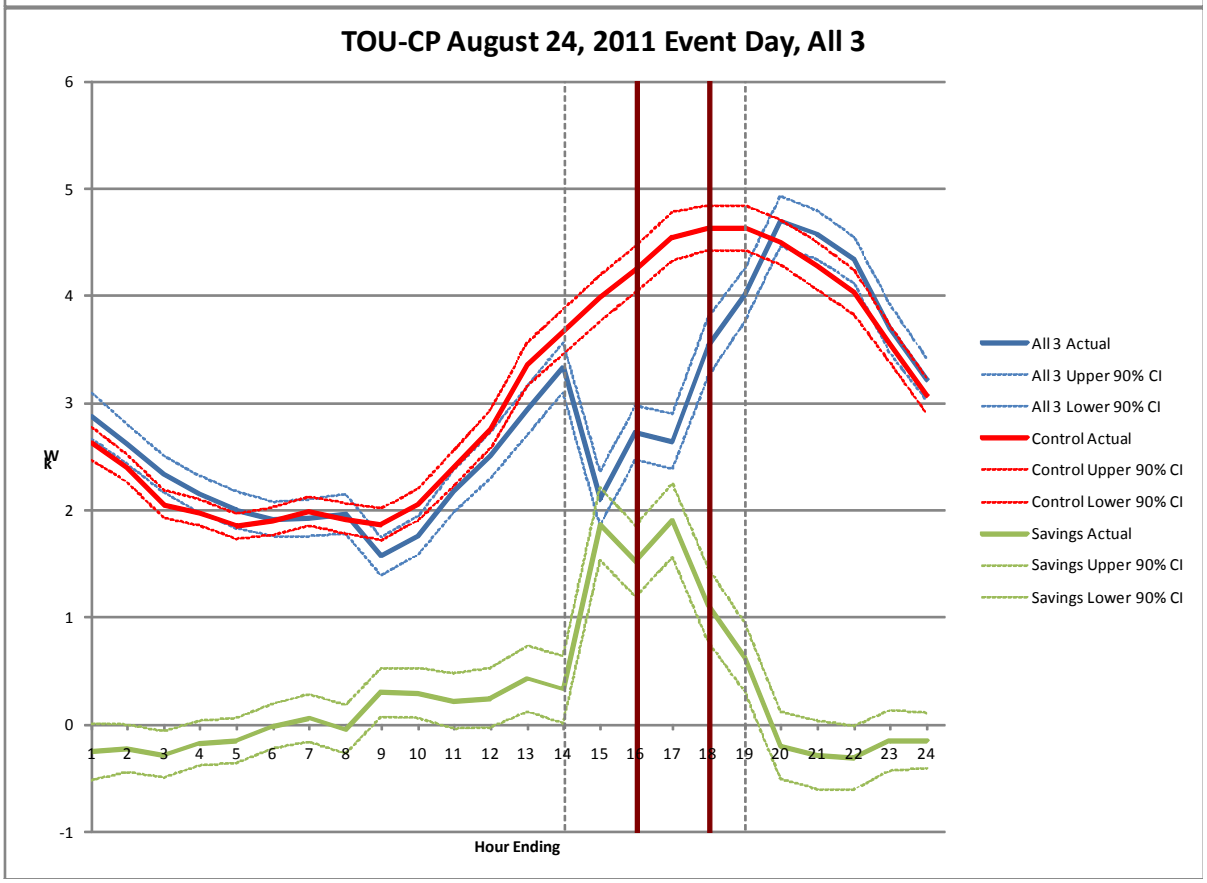

TOU-CP July 15, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 08, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 08, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 24, 2011 Event Day, All 3
kW
Hour Ending
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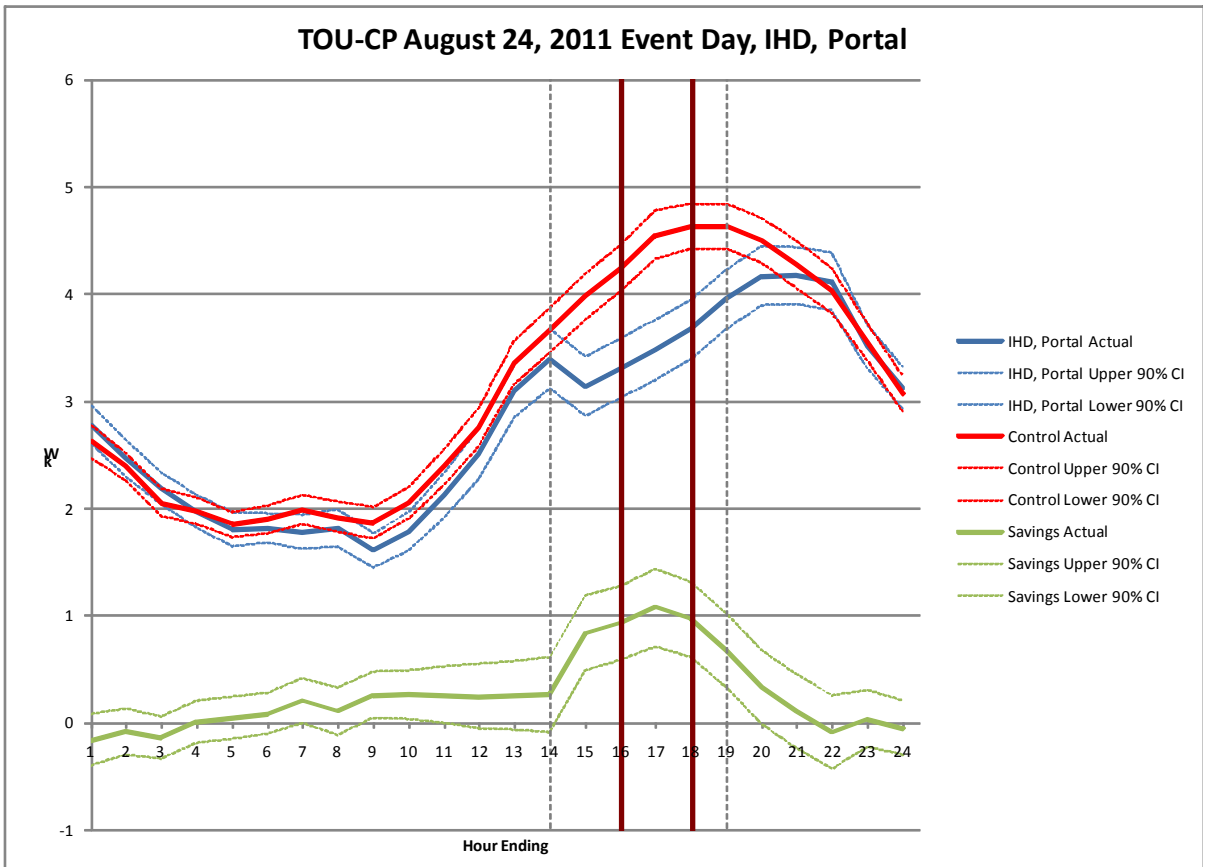
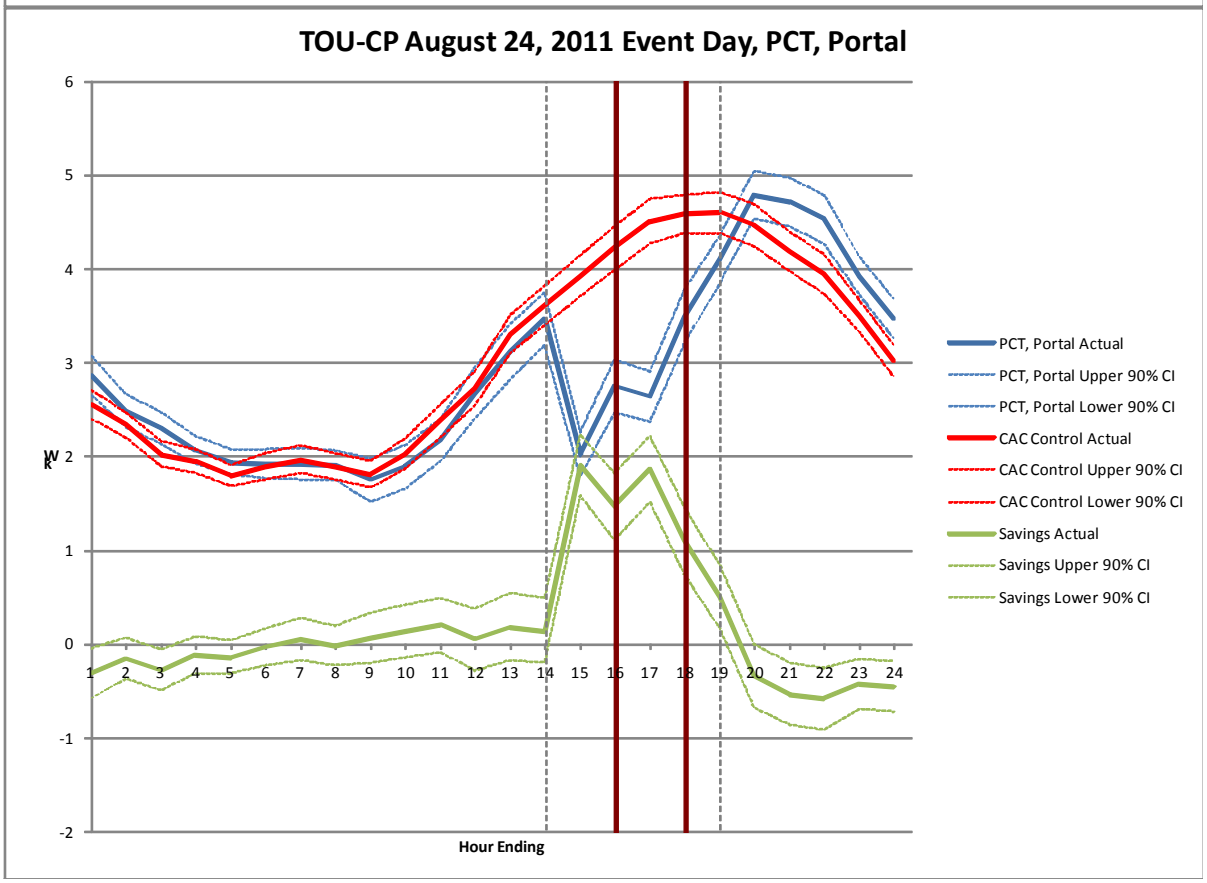
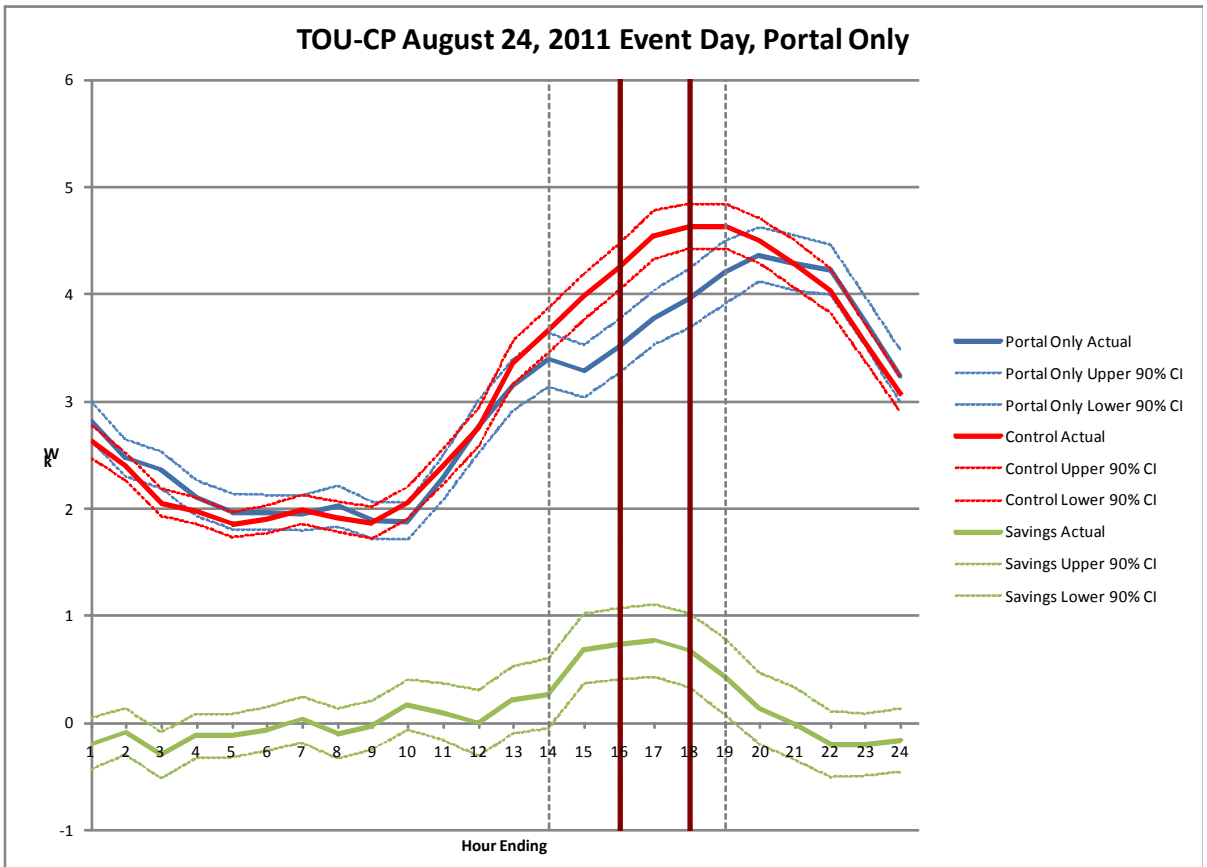
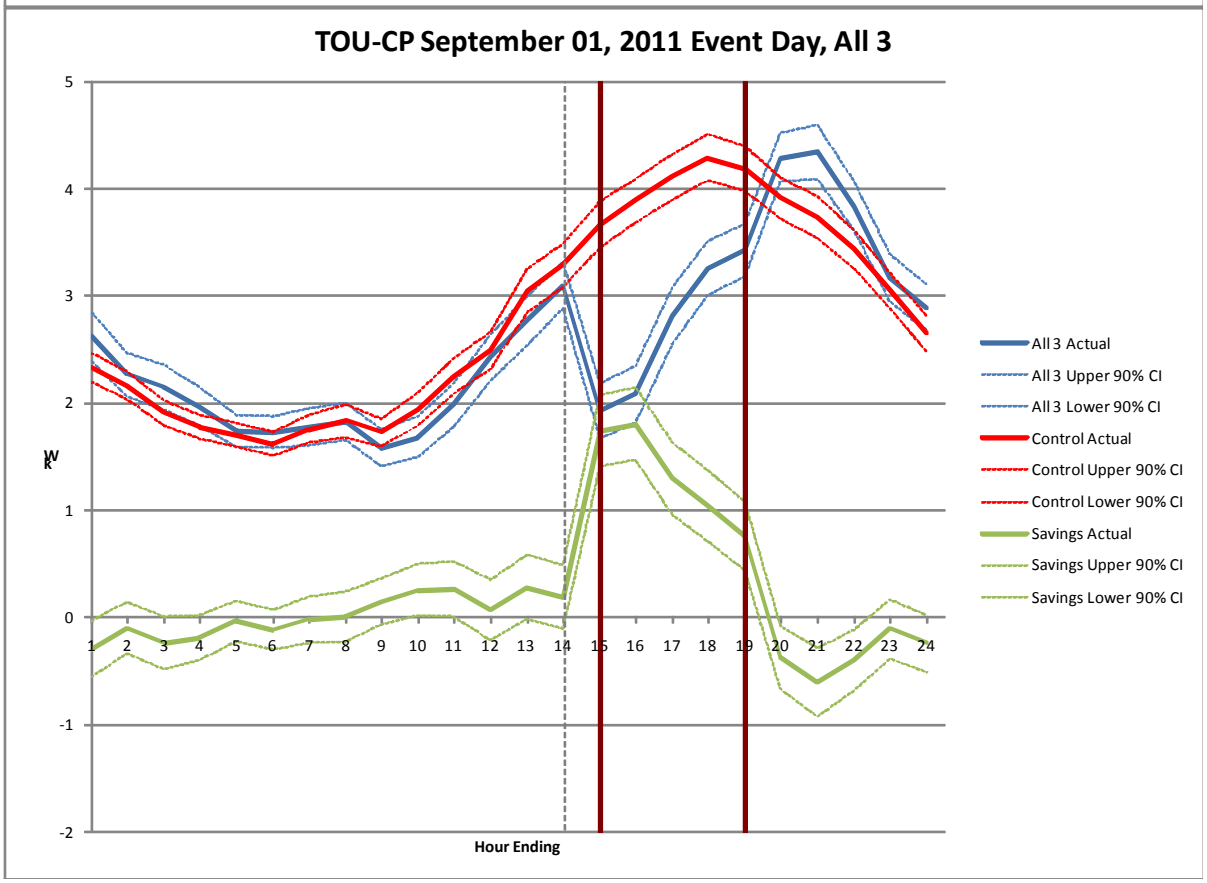
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 24, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 24, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 24, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 01, 2011 Event Day, All 3
kW
Hour Ending
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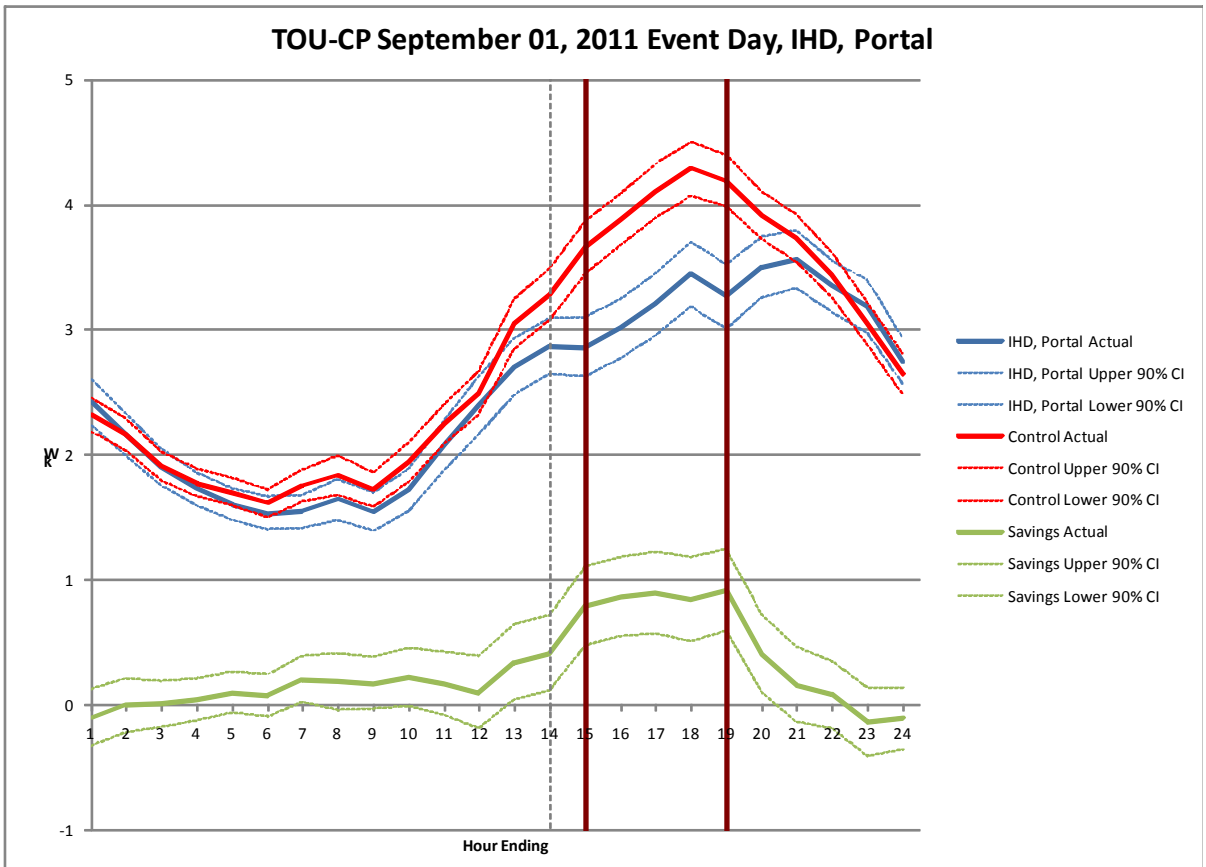
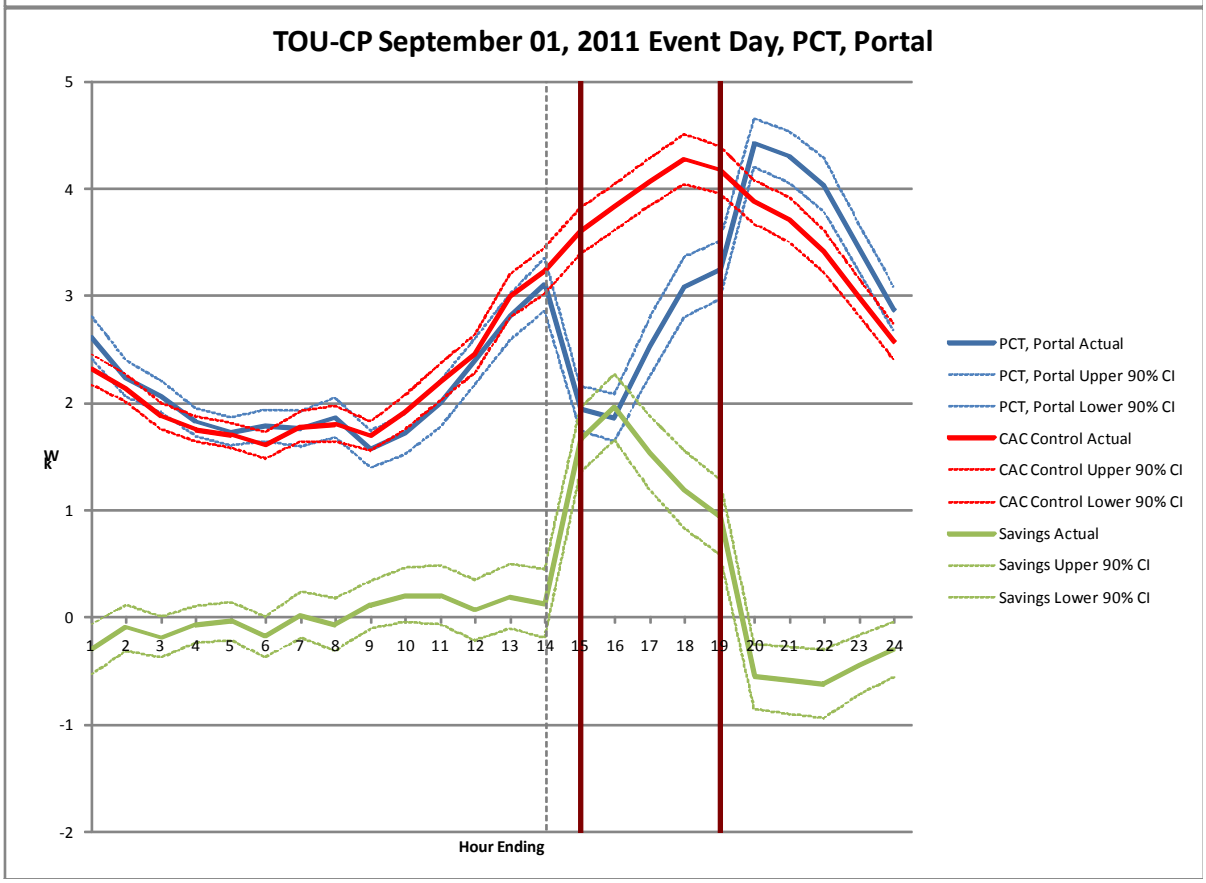
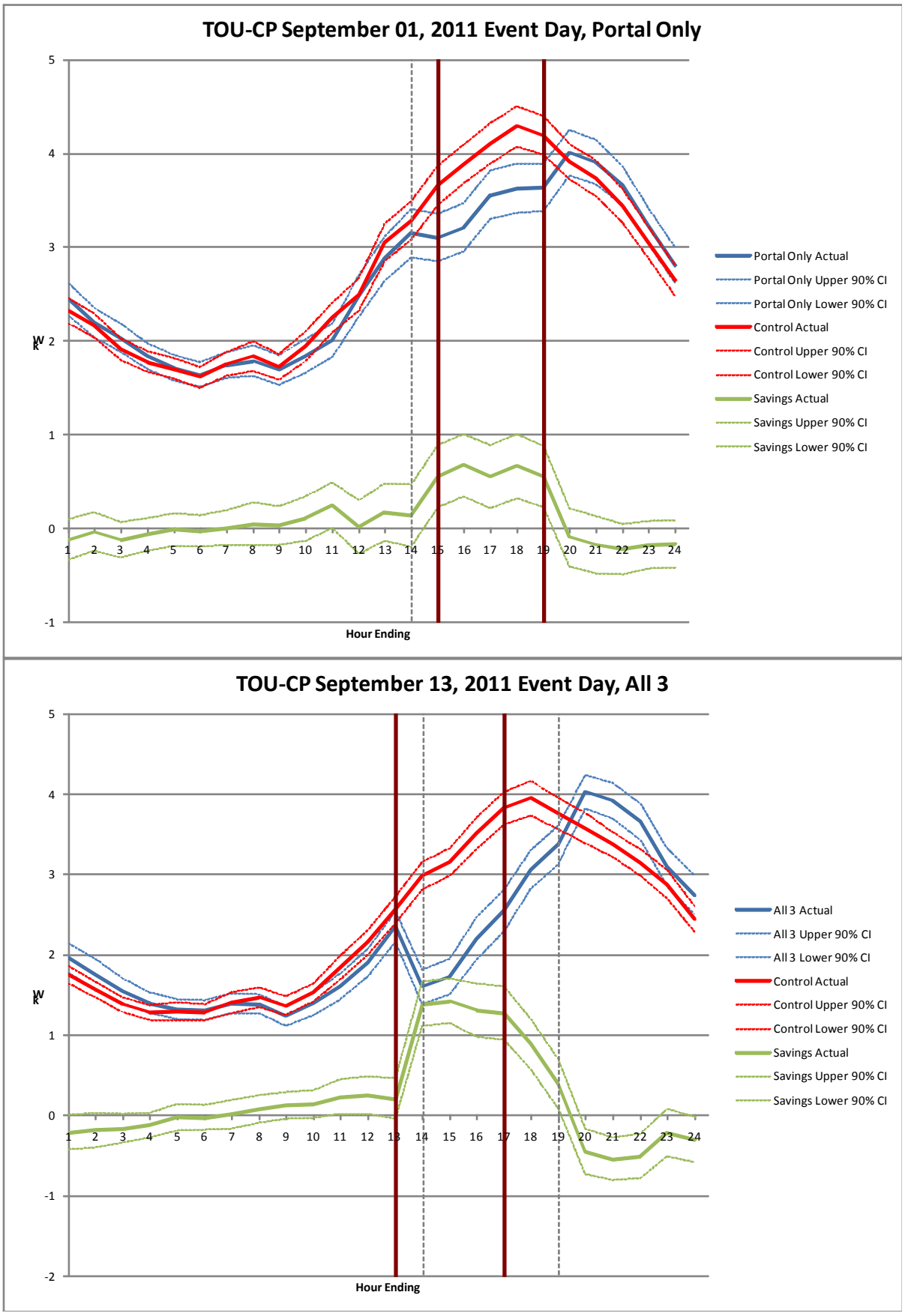
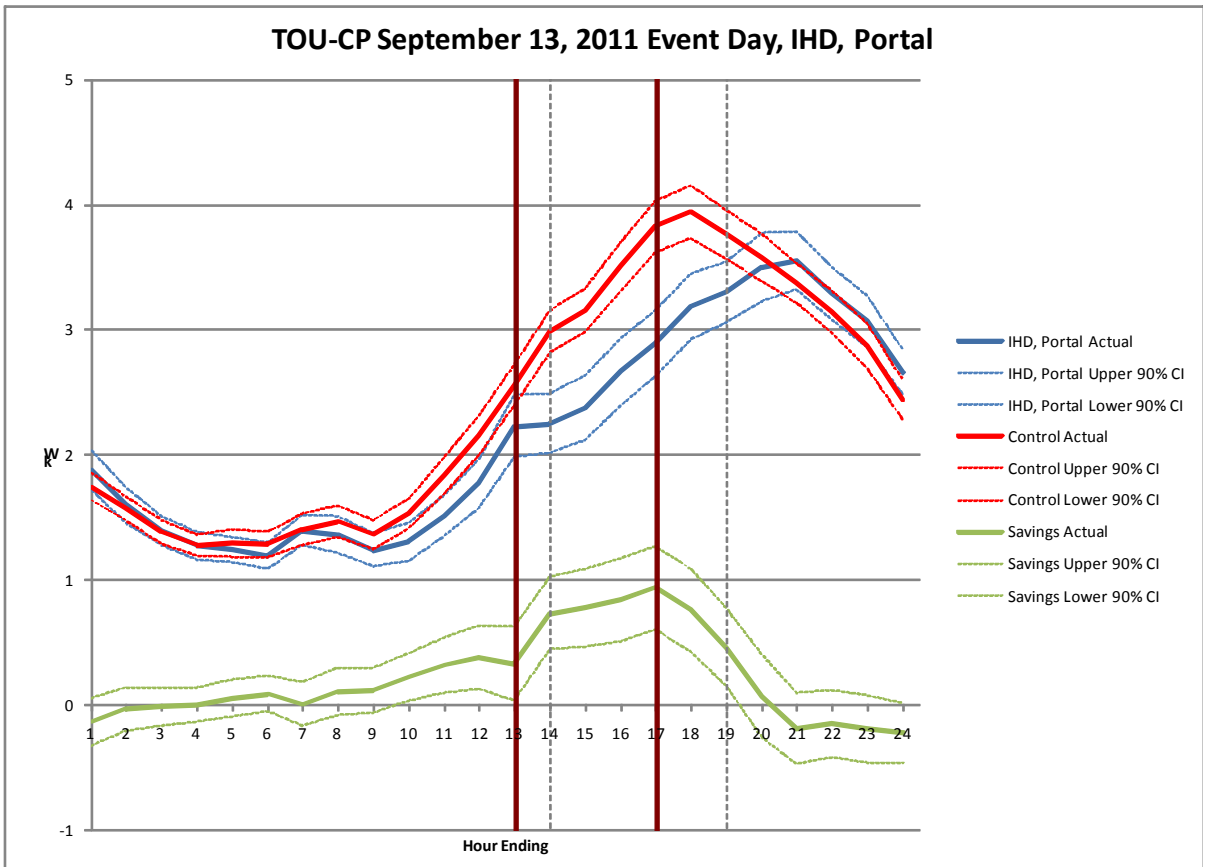
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 01, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 01, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 01, 2011 Event Day, Portal Only
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
TOU-CP September 13, 2011 Event Day, All 3
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 13, 2011 Event Day, IHD, Portal
kW
5
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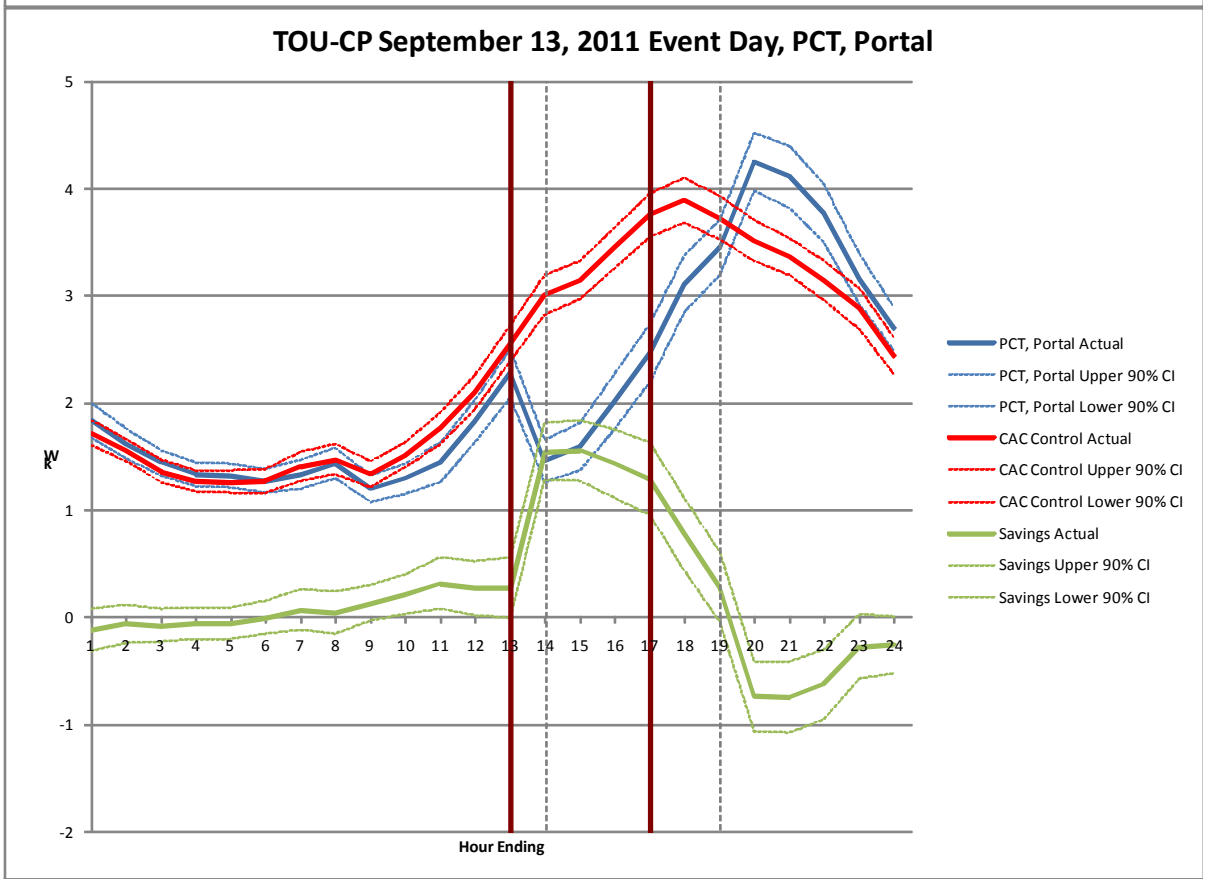
3
2
1
0
-1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 13, 2011 Event Day, PCT, Portal
kW
5
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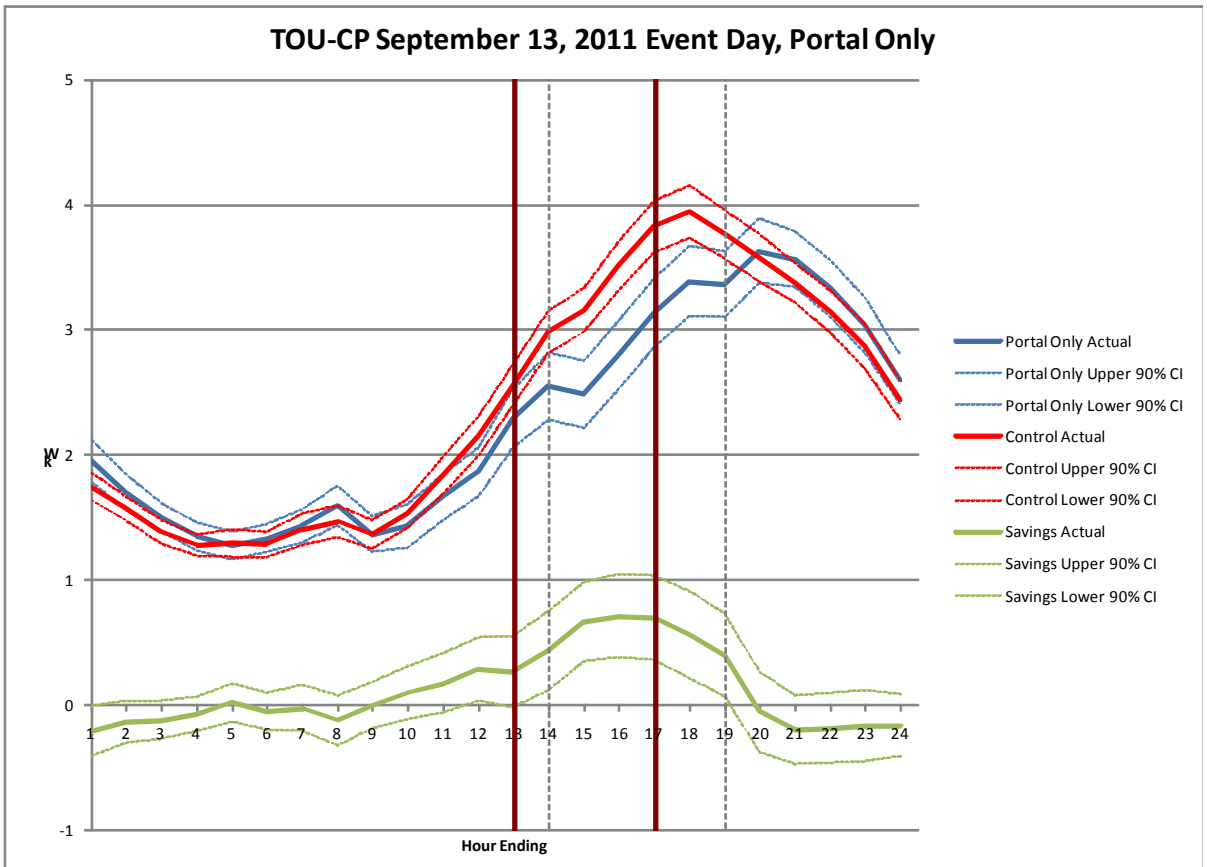
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 13, 2011 Event Day, Portal Only
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4
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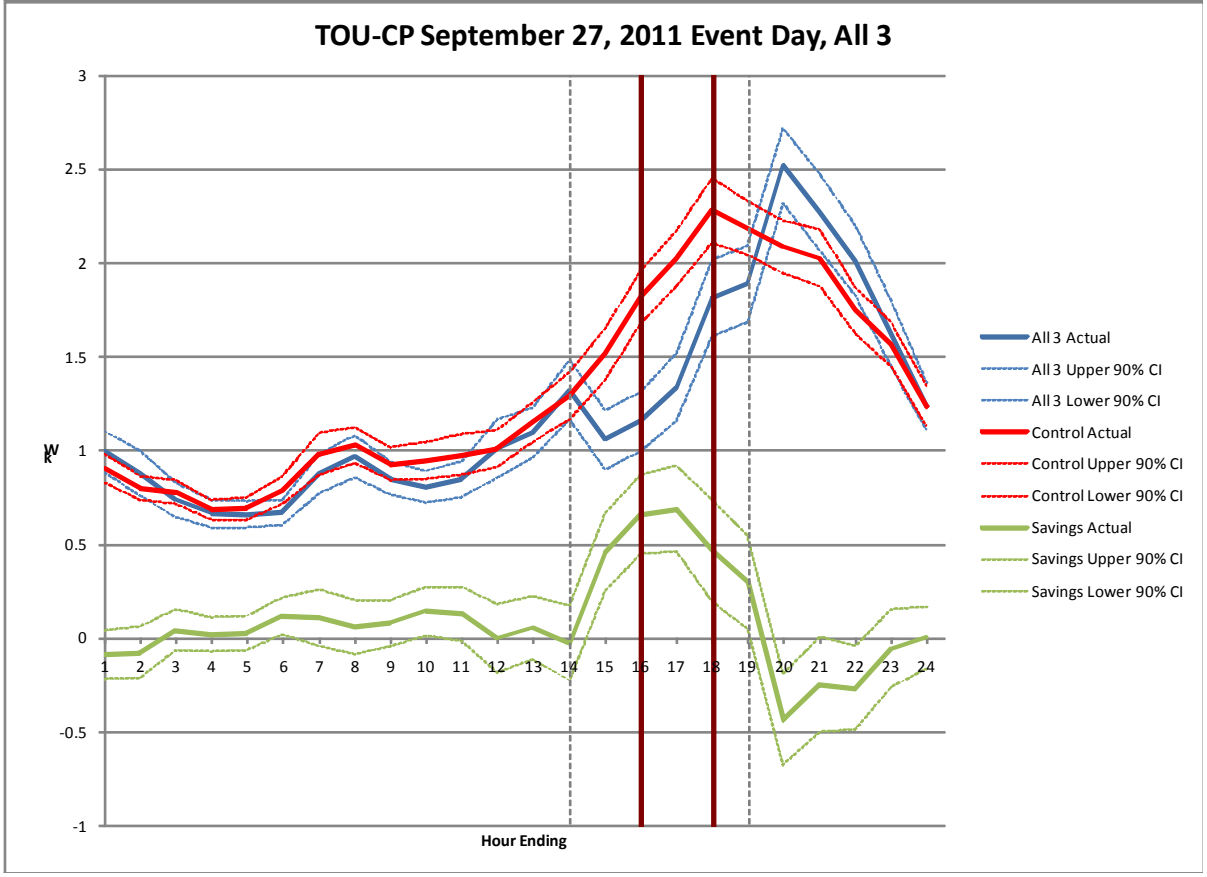
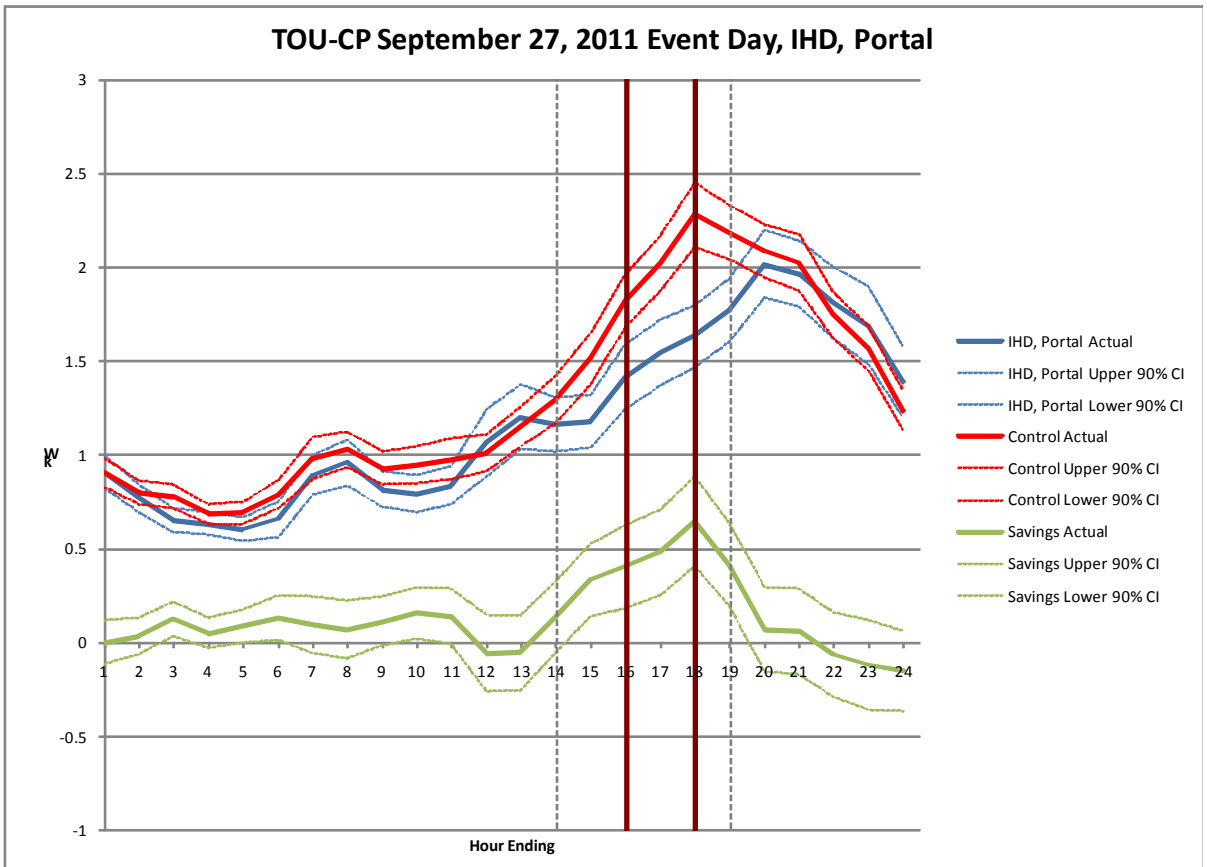
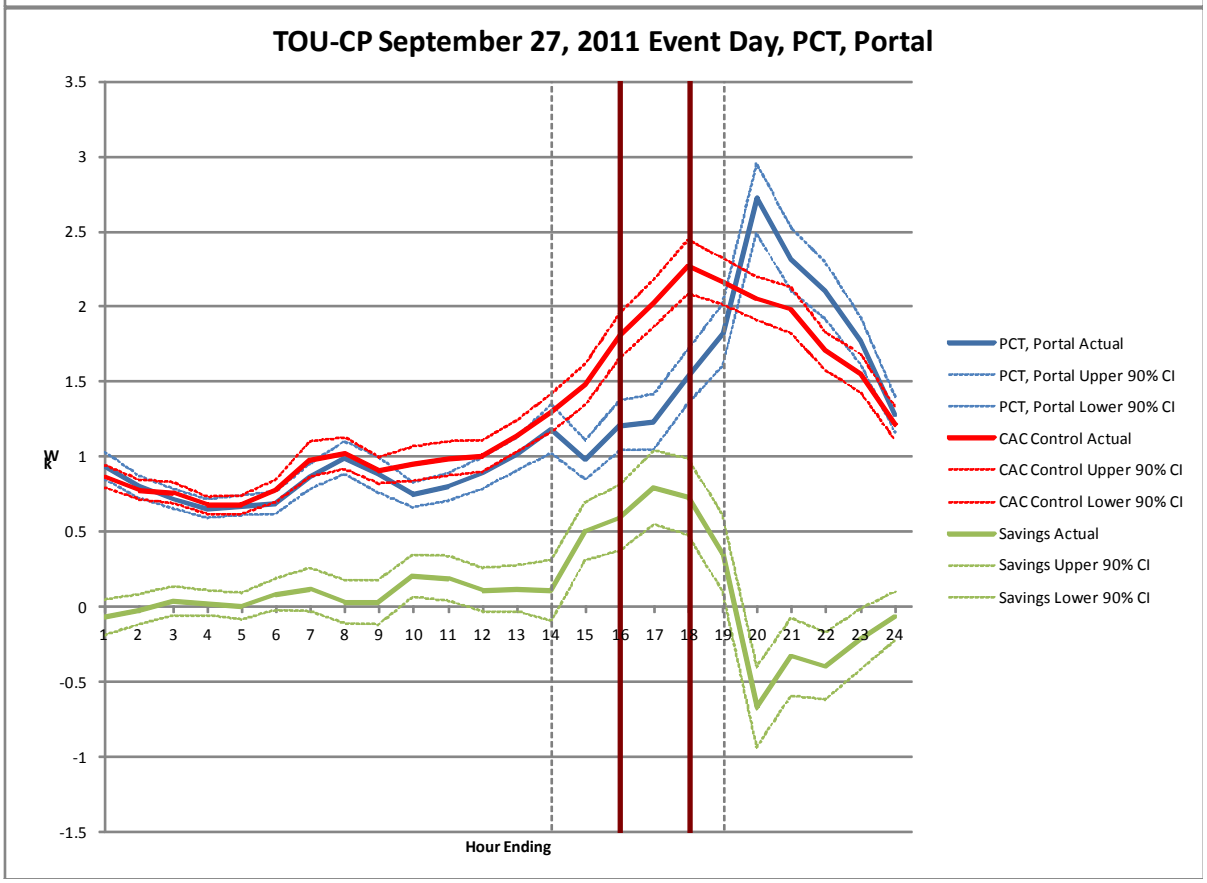
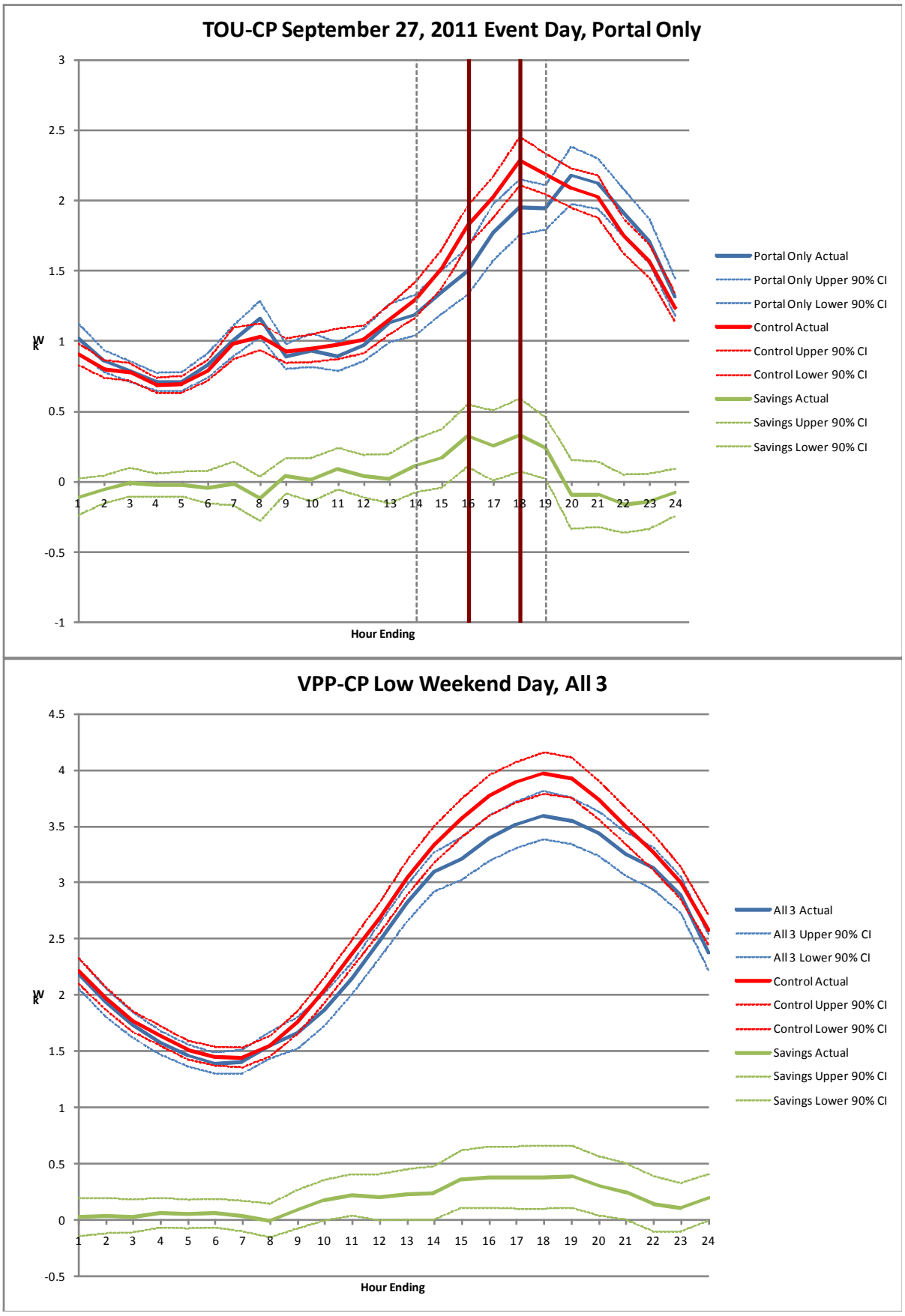
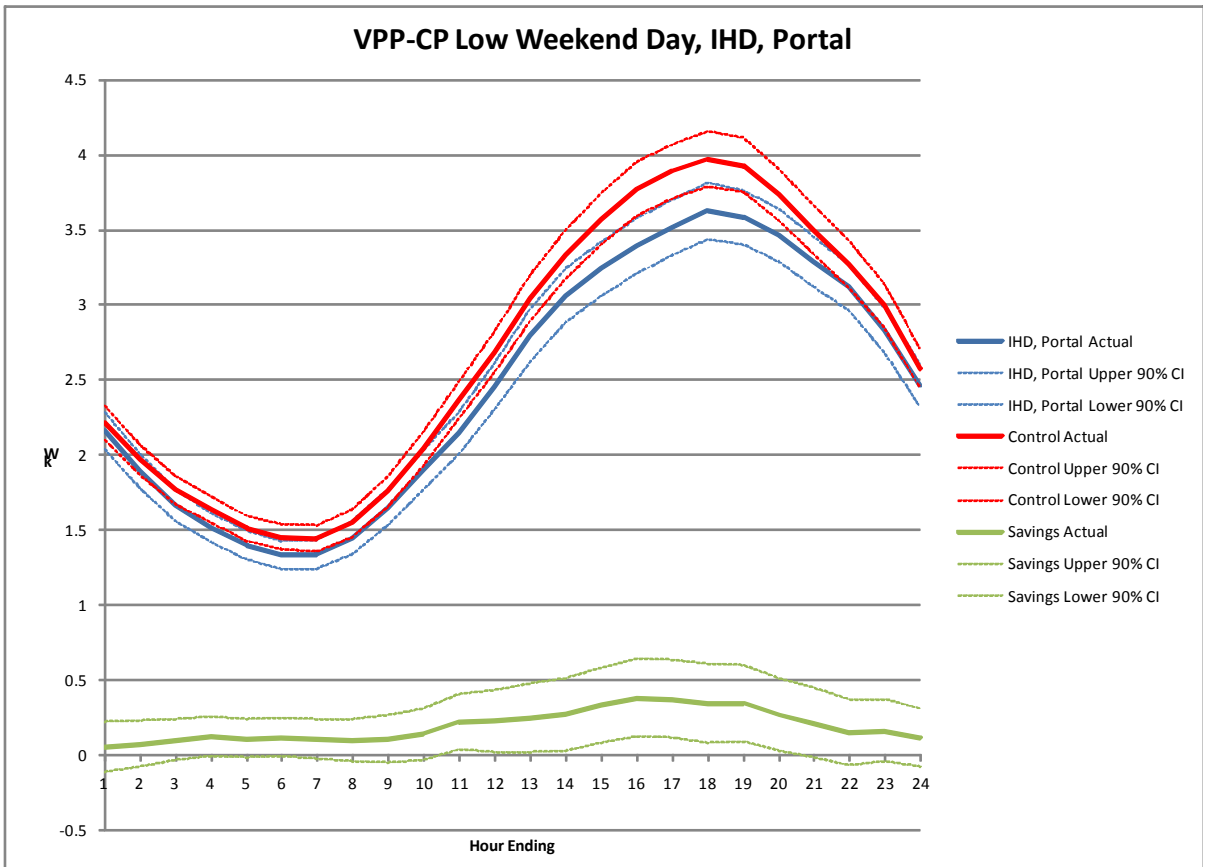
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

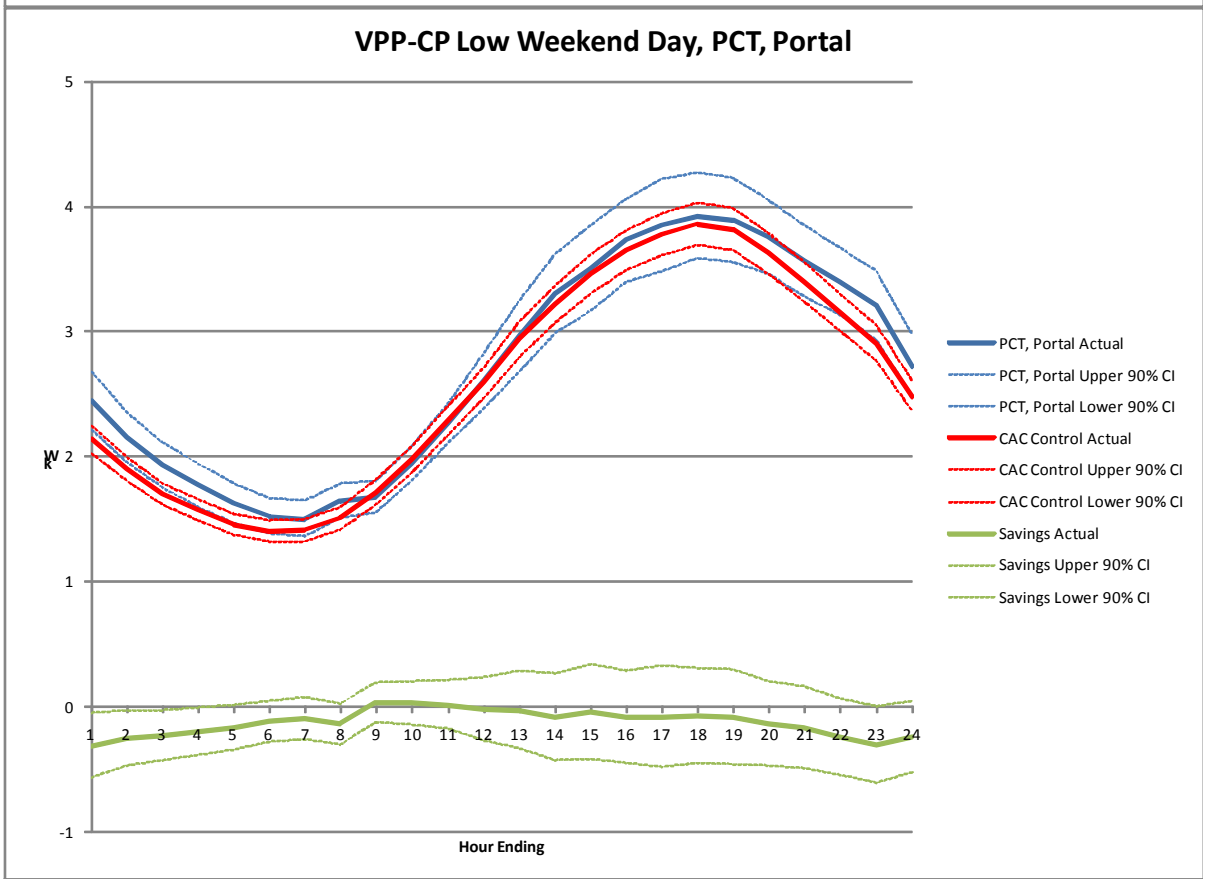

TOU-CP September 27, 2011 Event Day, All 3
3
2.5
2
1.5
1
0.5
0
-0.5
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

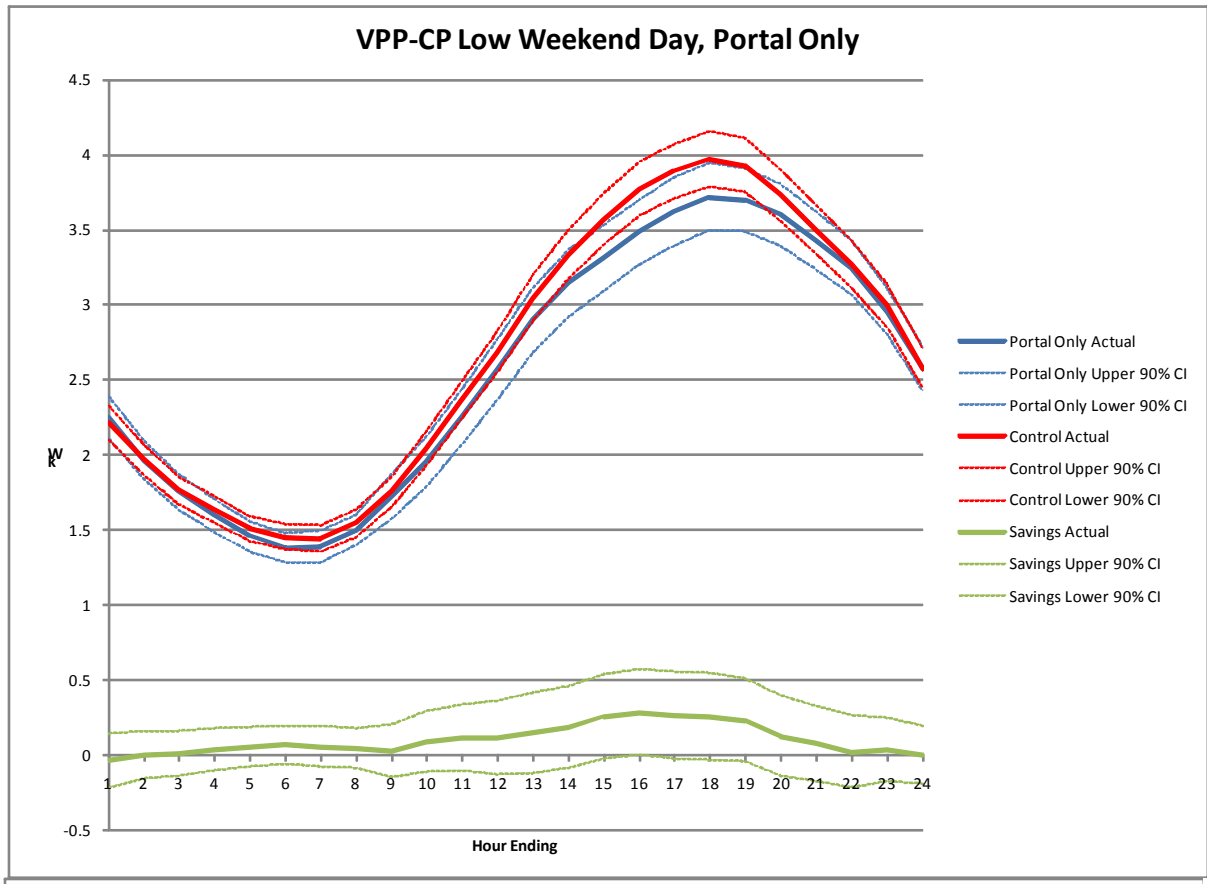

TOU-CP September 27, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

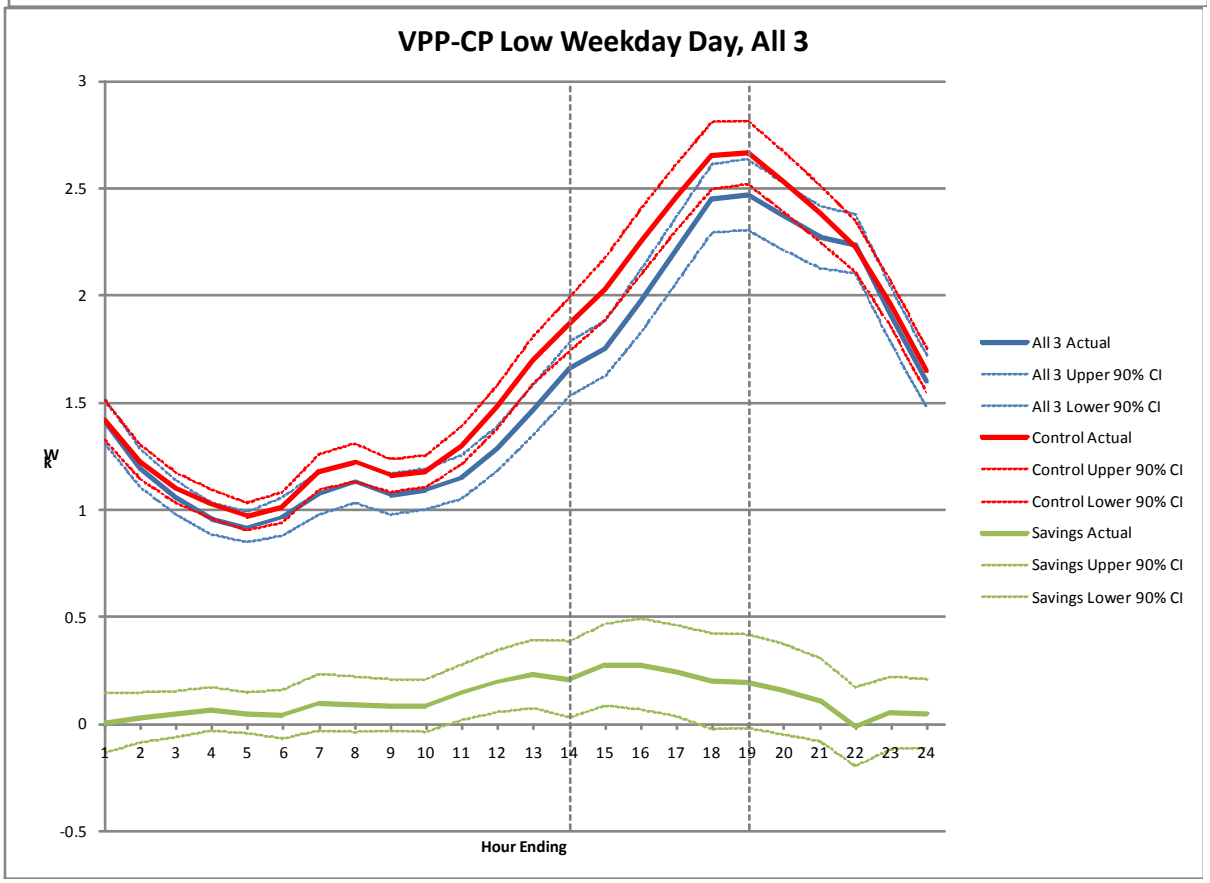

TOU-CP September 27, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

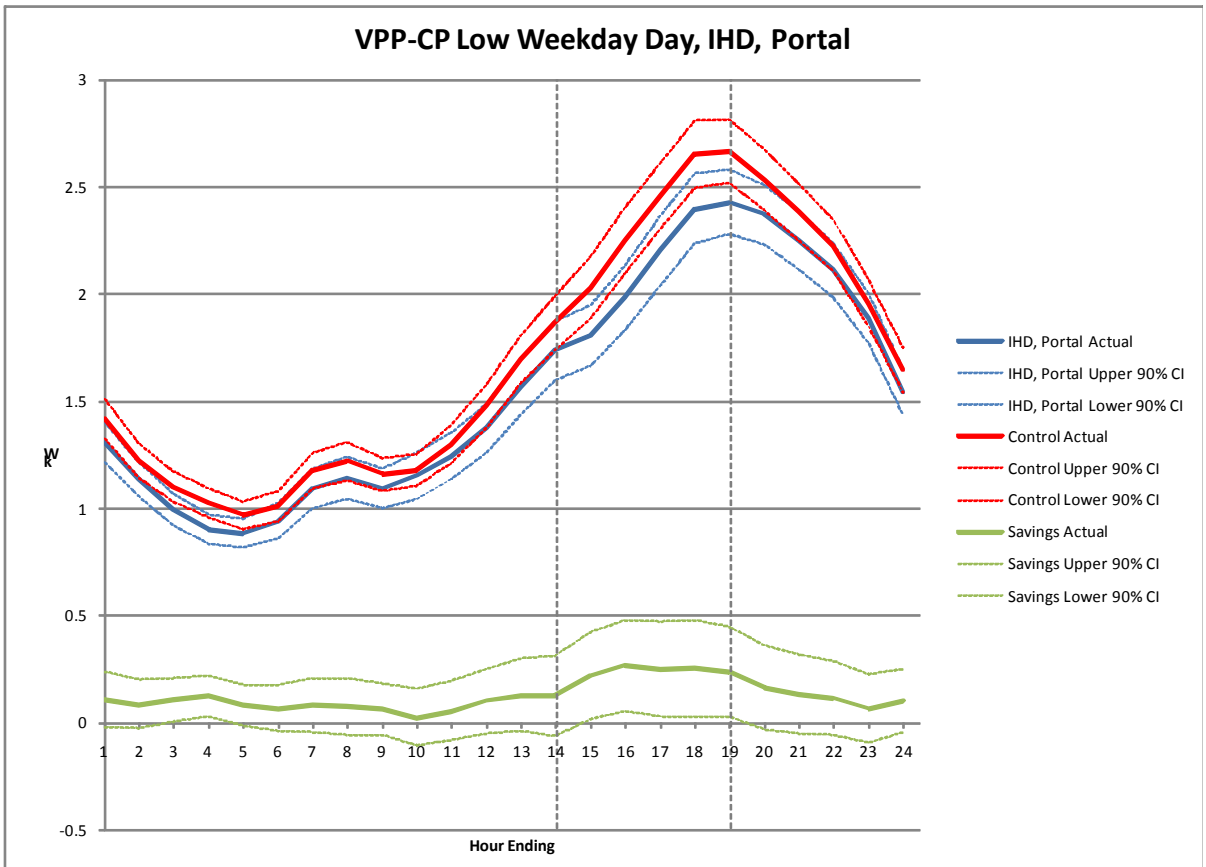

TOU-CP September 27, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
VPP-CP Low Weekend Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

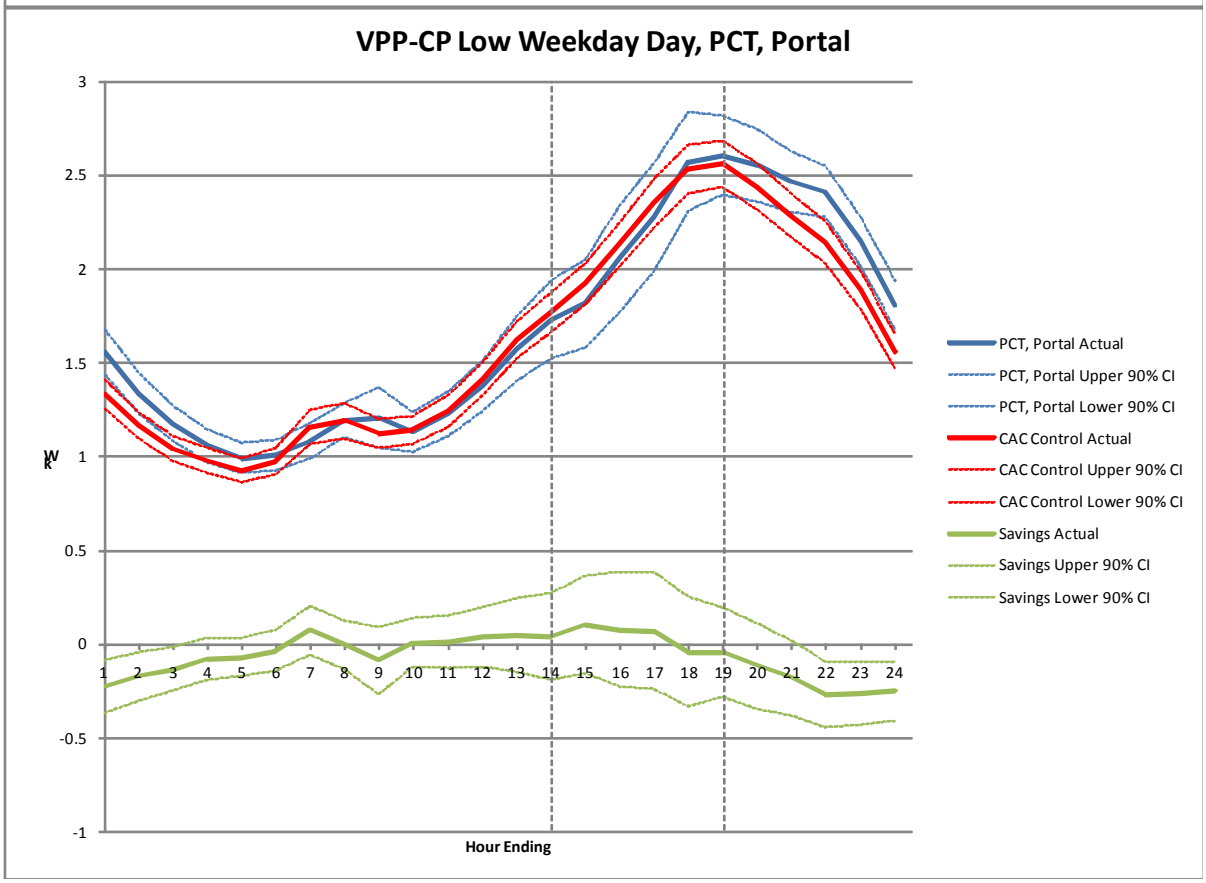

VPP-CP Low Weekend Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

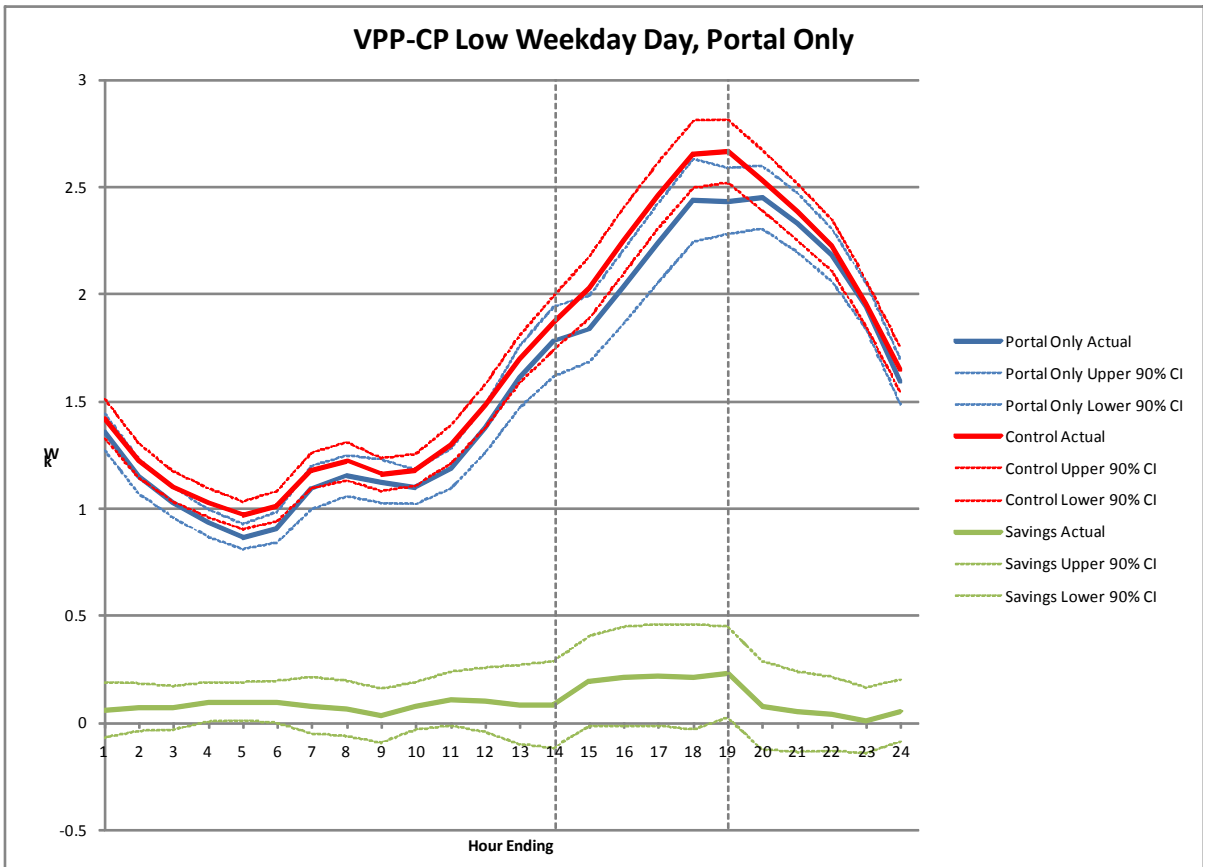

VPP-CP Low Weekend Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

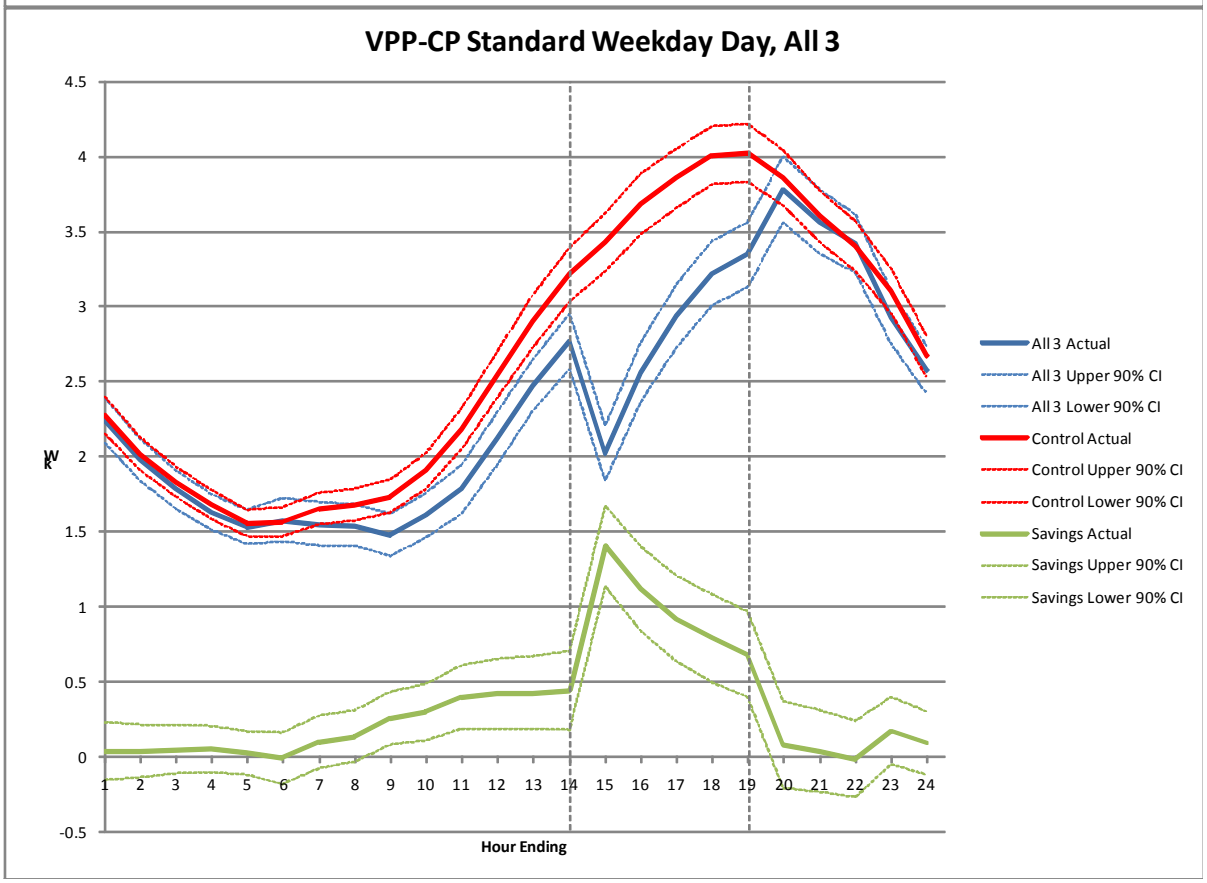

VPP-CP Low Weekend Day, Portal Only
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

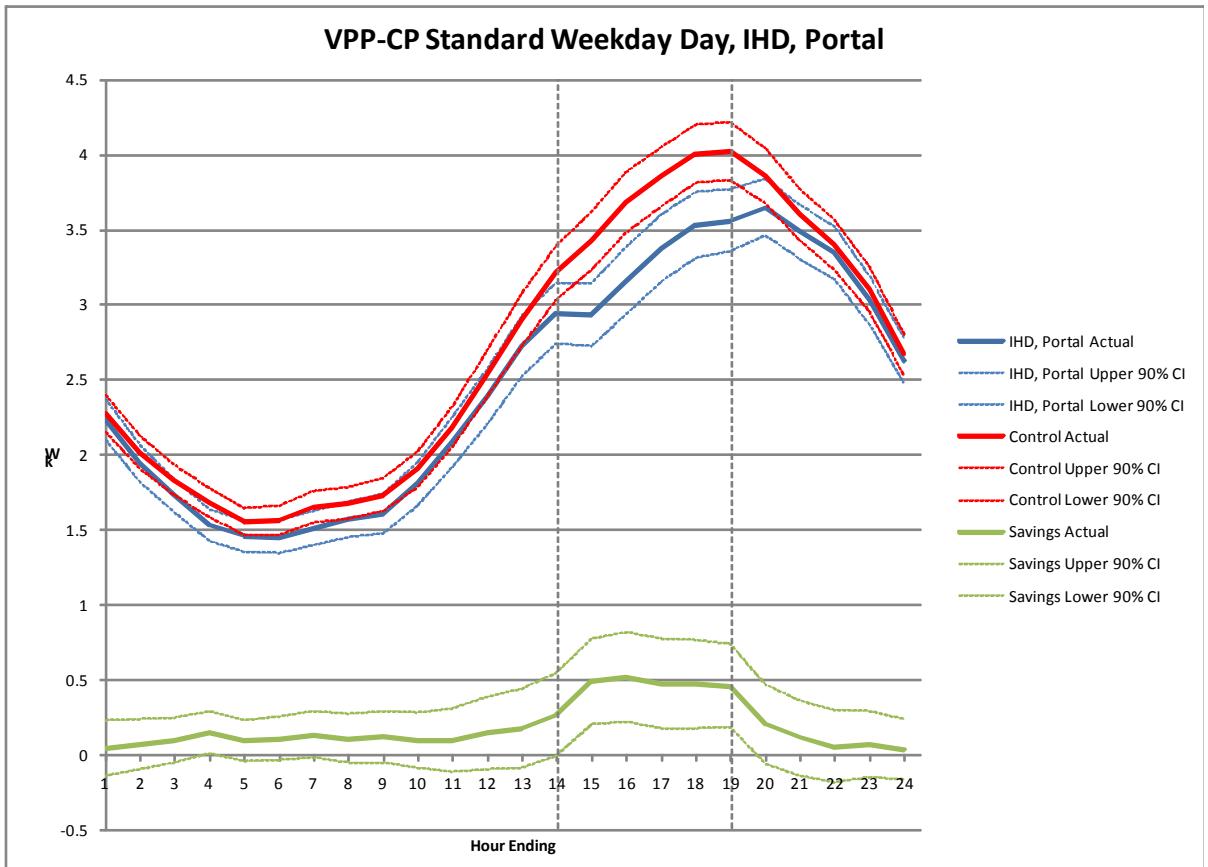

VPP-CP Low Weekday Day, All 3
3
2.5
2
1.5
1
0.5
0
-0.5
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

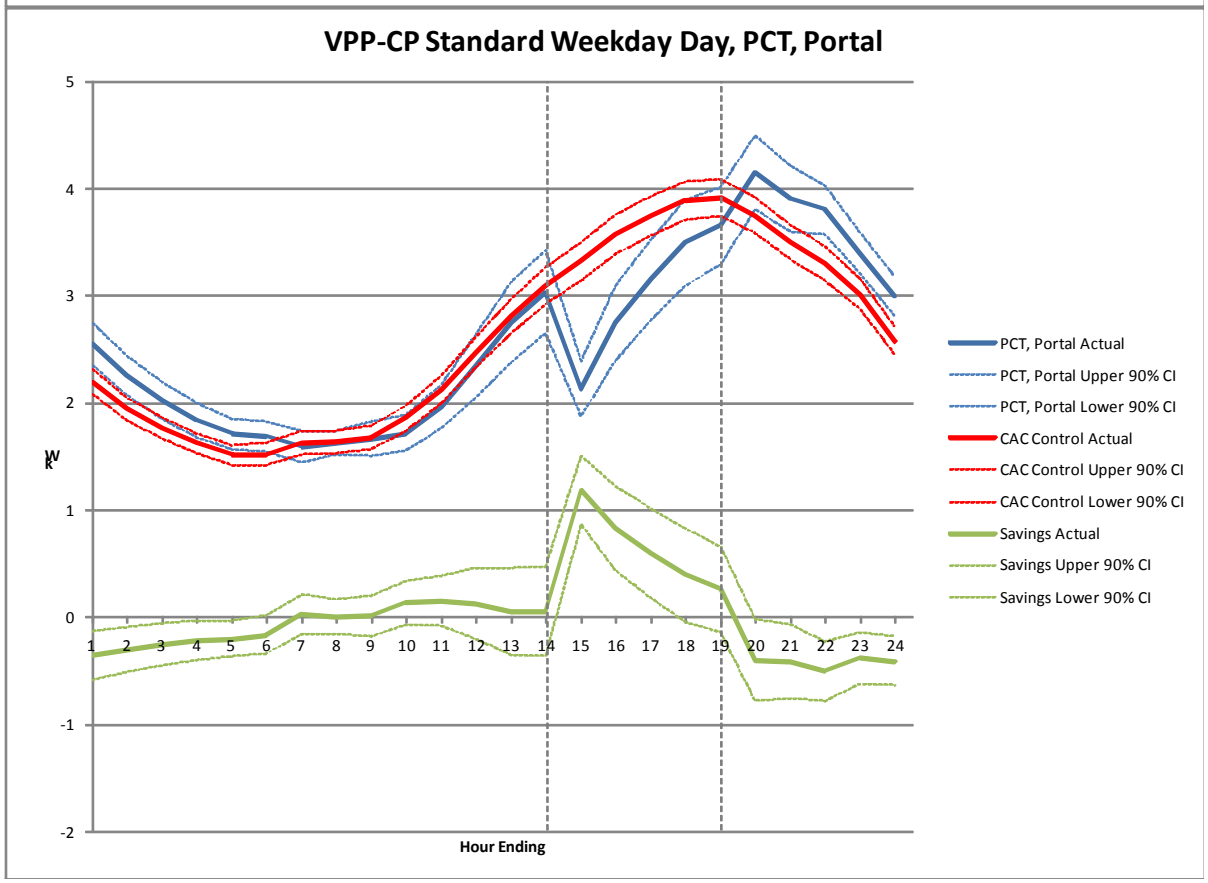

VPP-CP Low Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

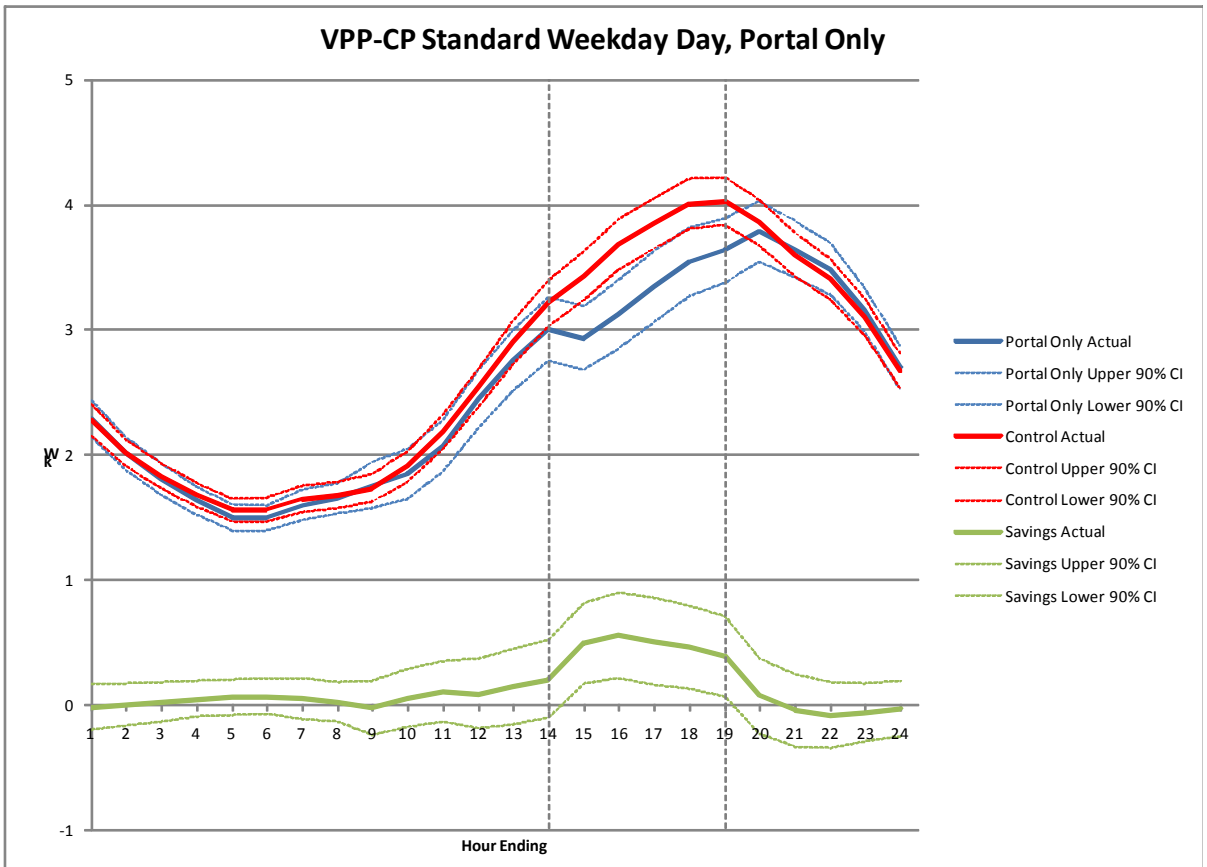

VPP-CP Low Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

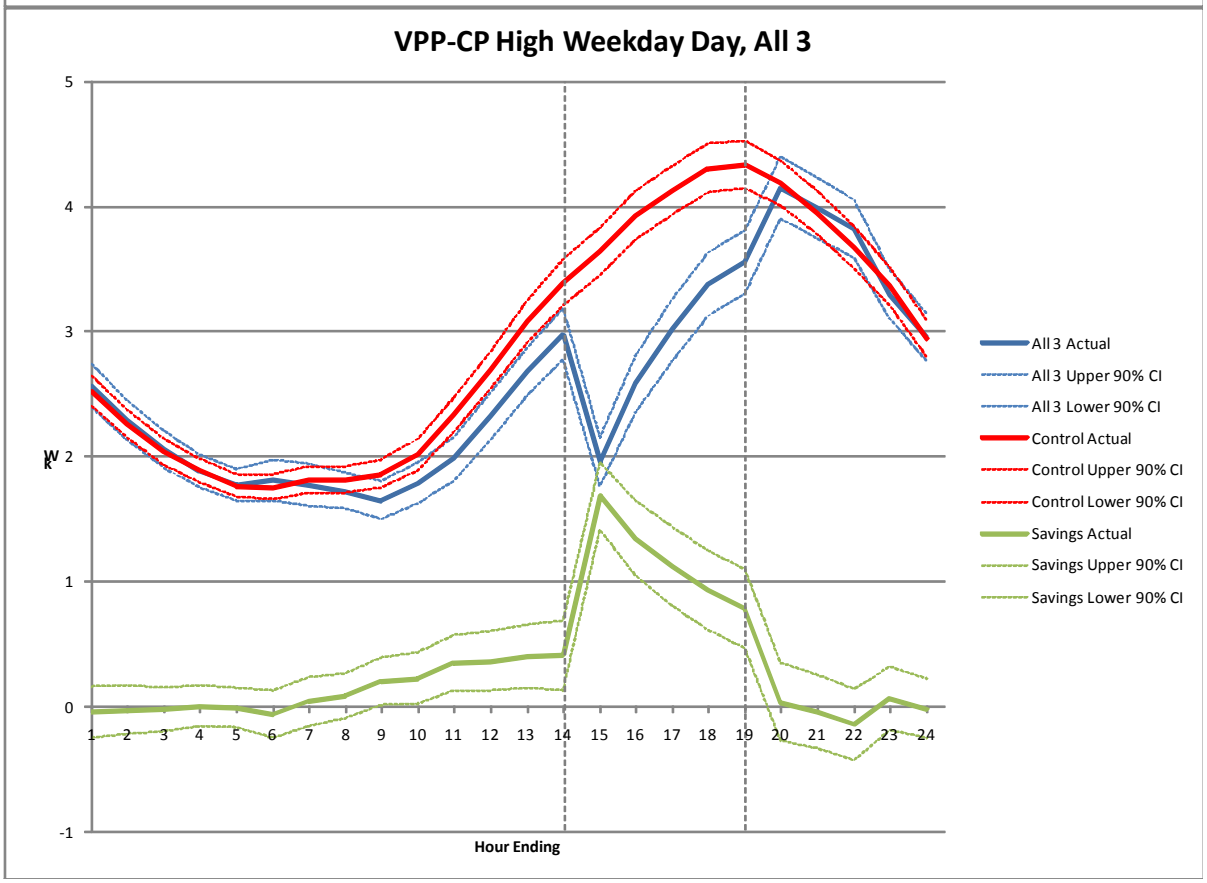

VPP-CP Low Weekday Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Standard Weekday Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Standard Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Standard Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Standard Weekday Day, Portal Only
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP High Weekday Day, All 3
5
4
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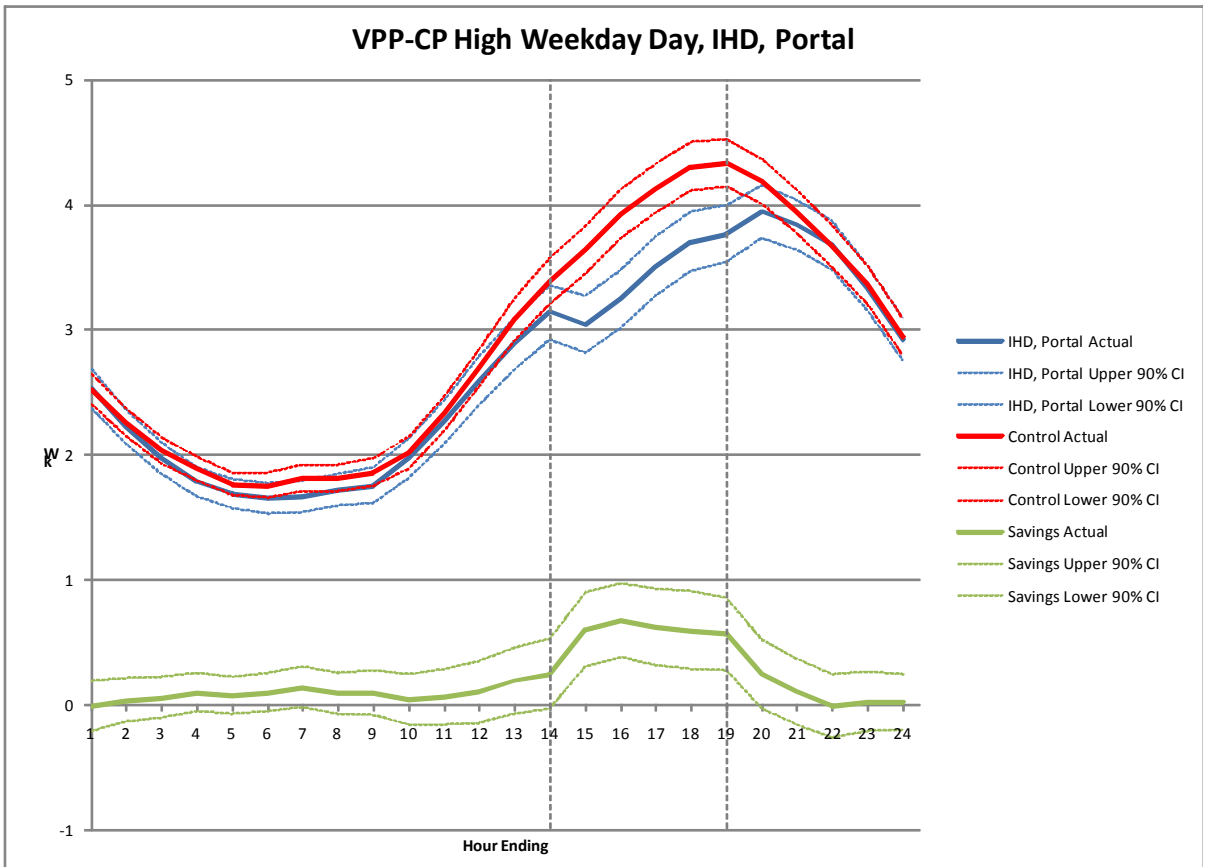
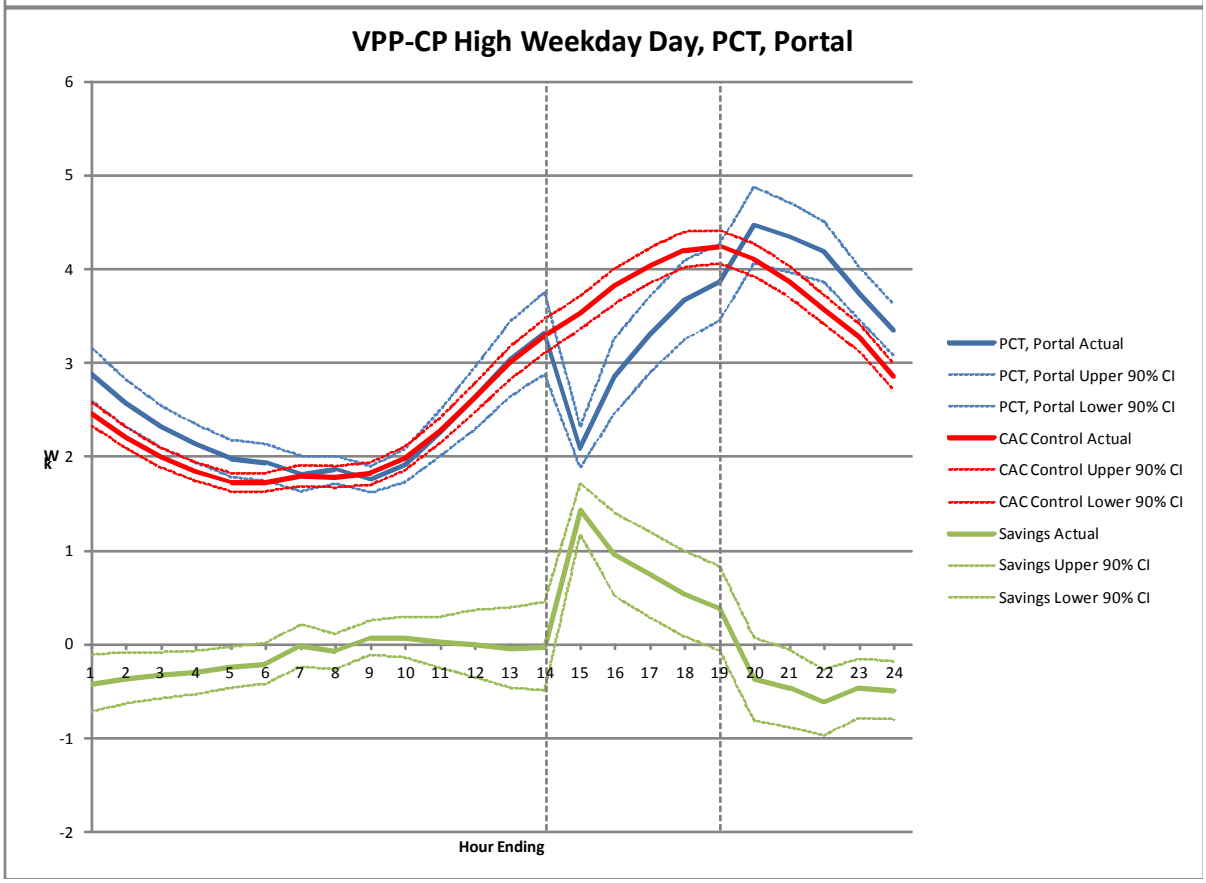
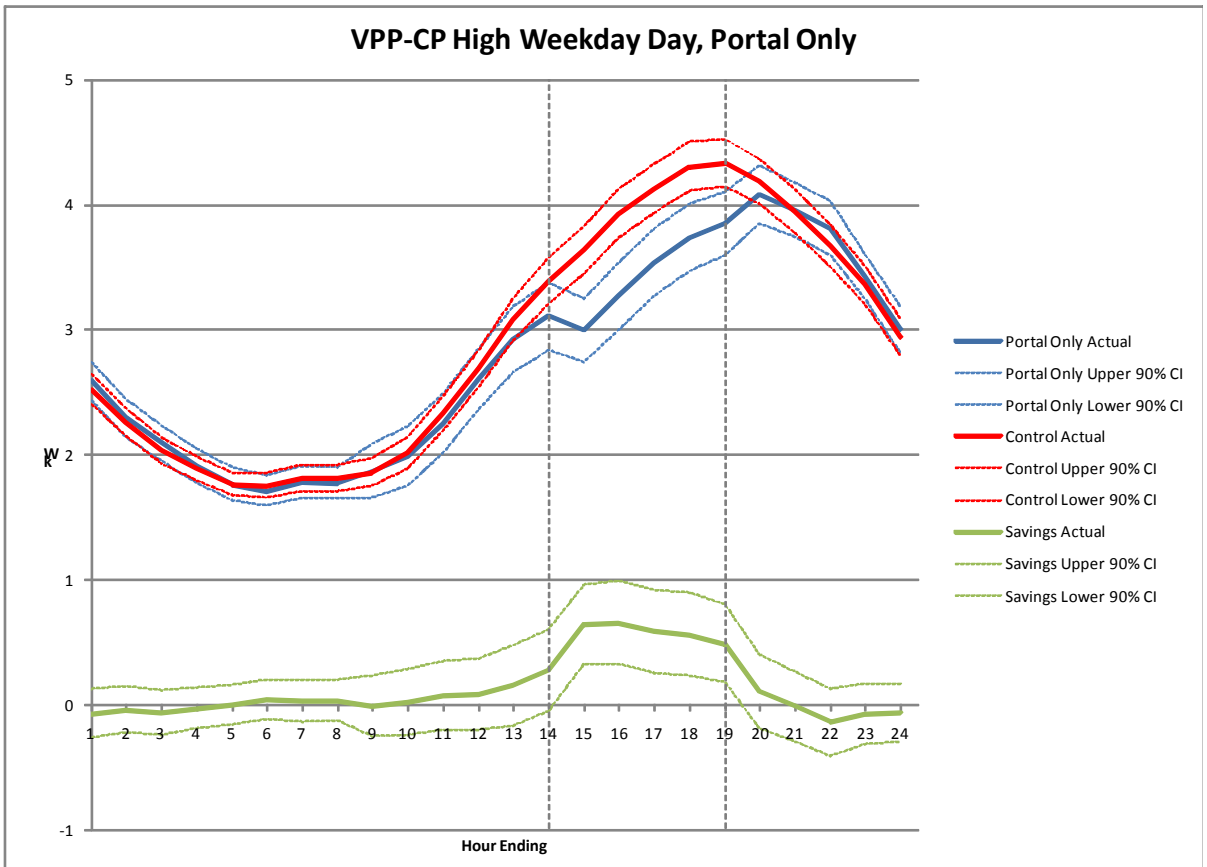
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP High Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP High Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP High Weekday Day, Portal Only
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4
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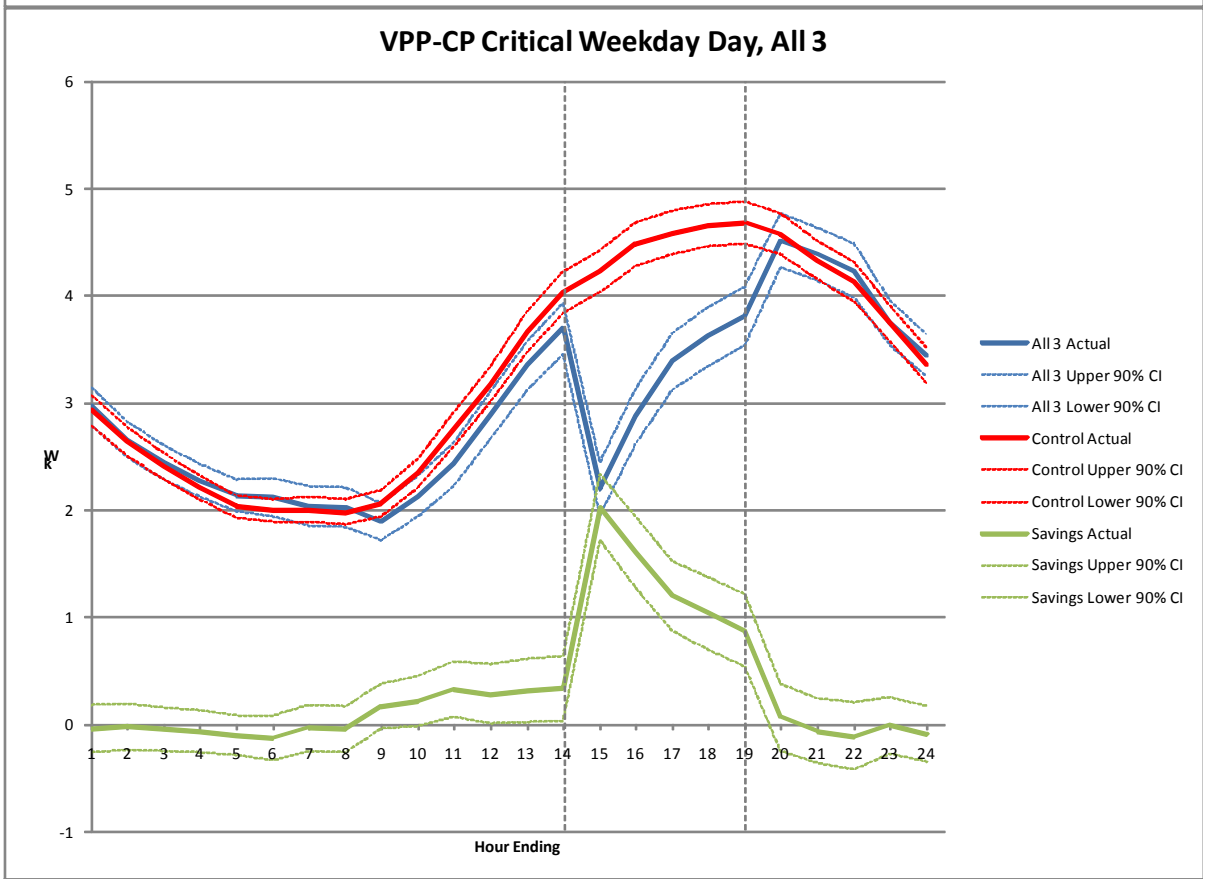
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Critical Weekday Day, All 3
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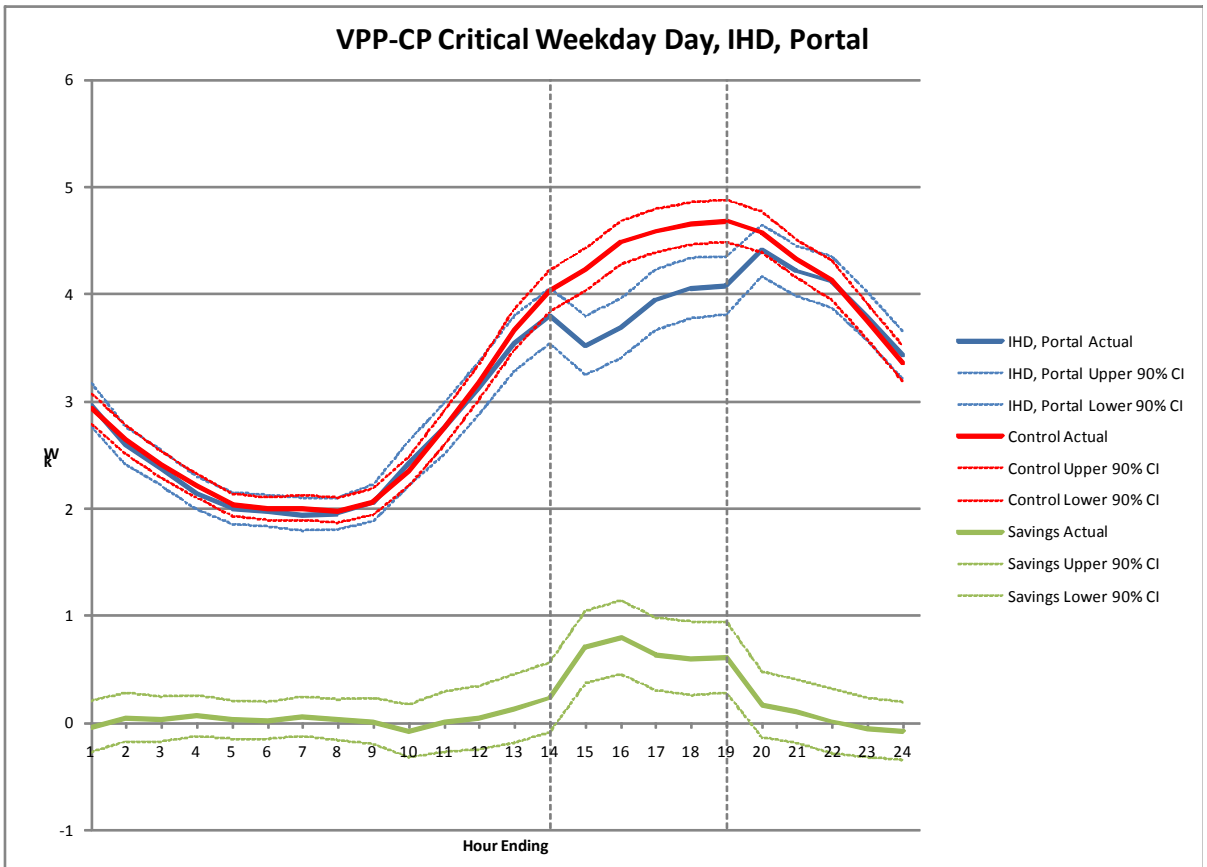
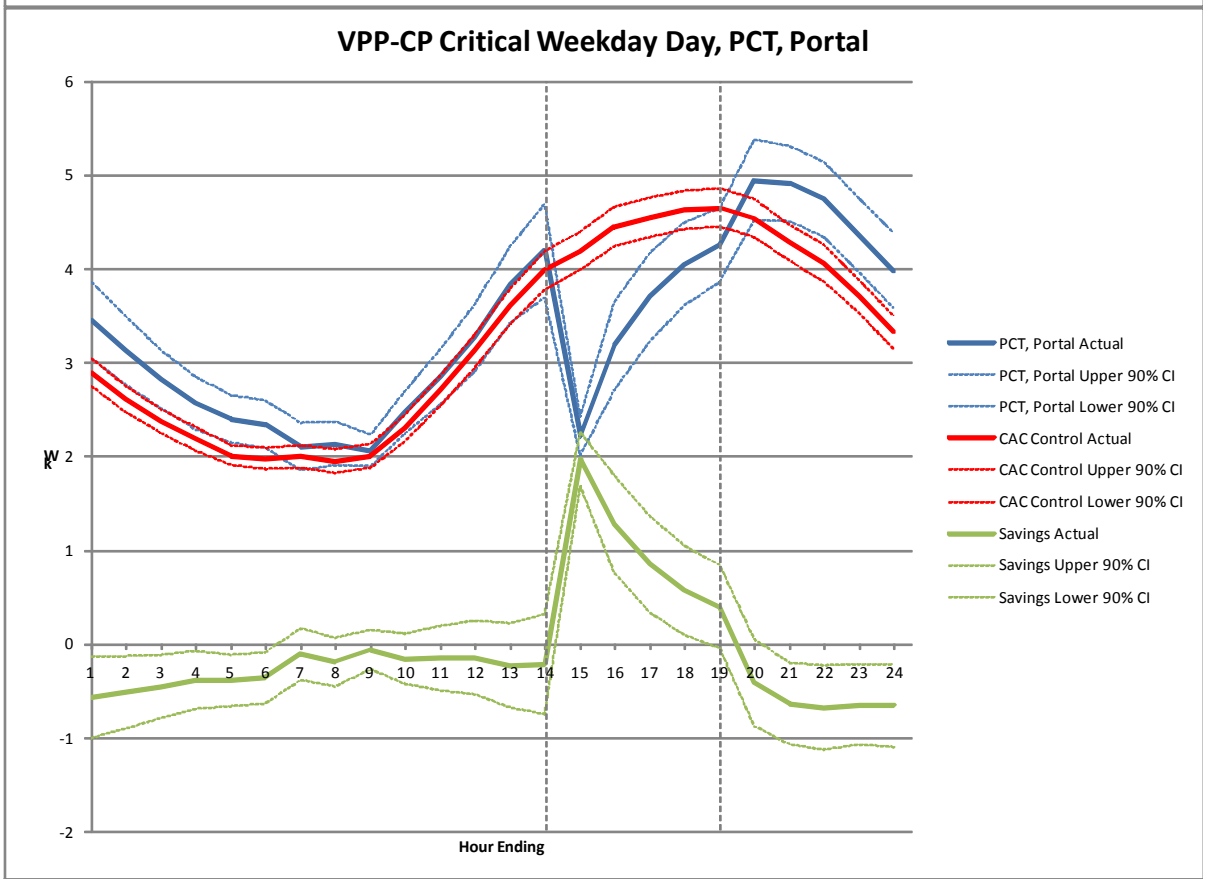
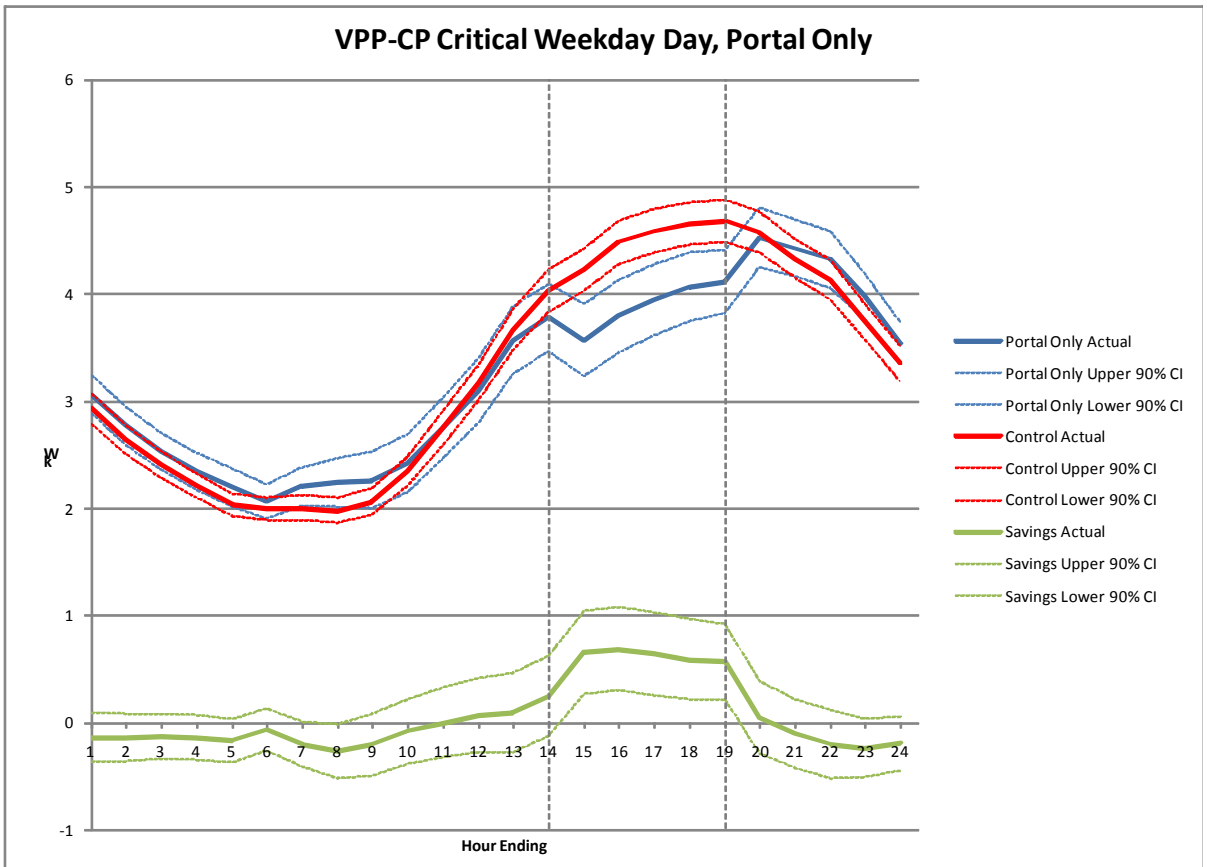
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Critical Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Critical Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Critical Weekday Day, Portal Only
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4
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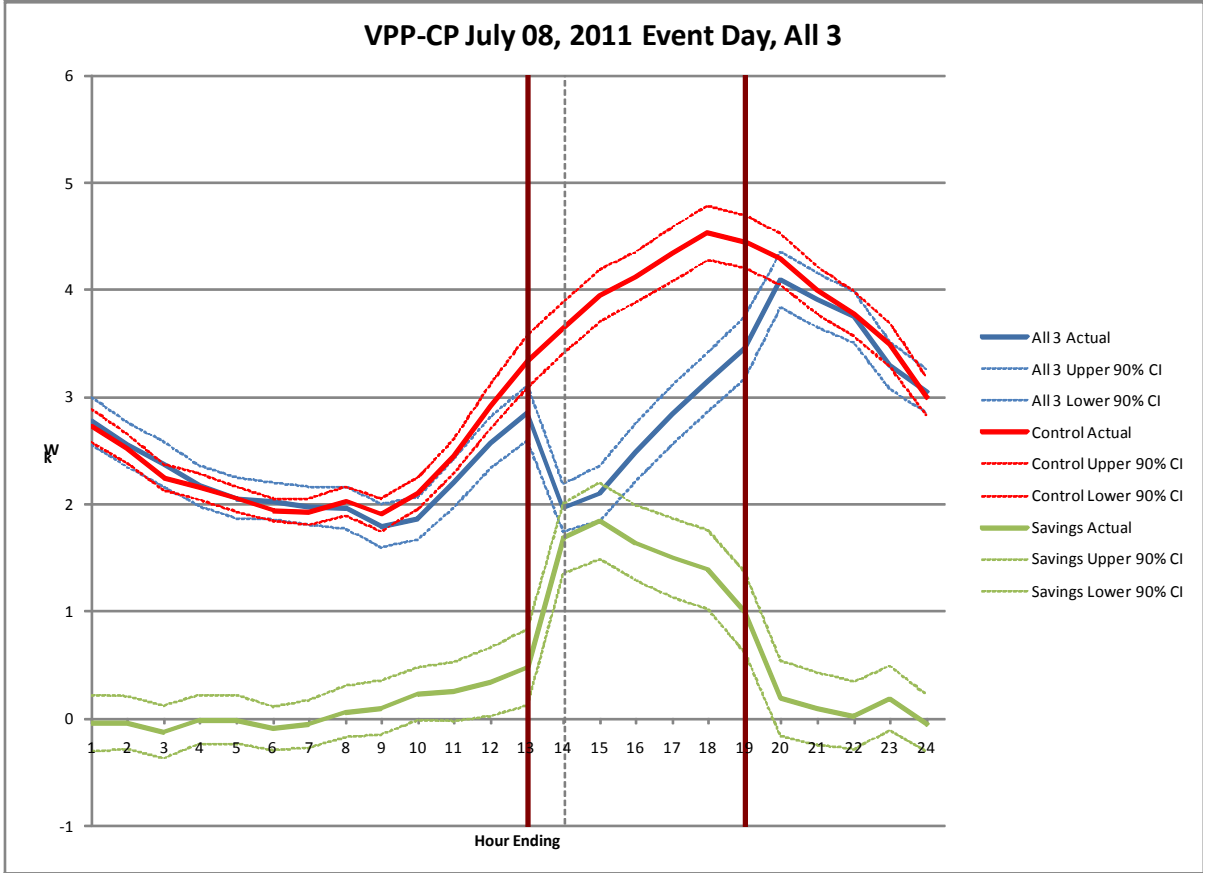
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP July 08, 2011 Event Day, All 3
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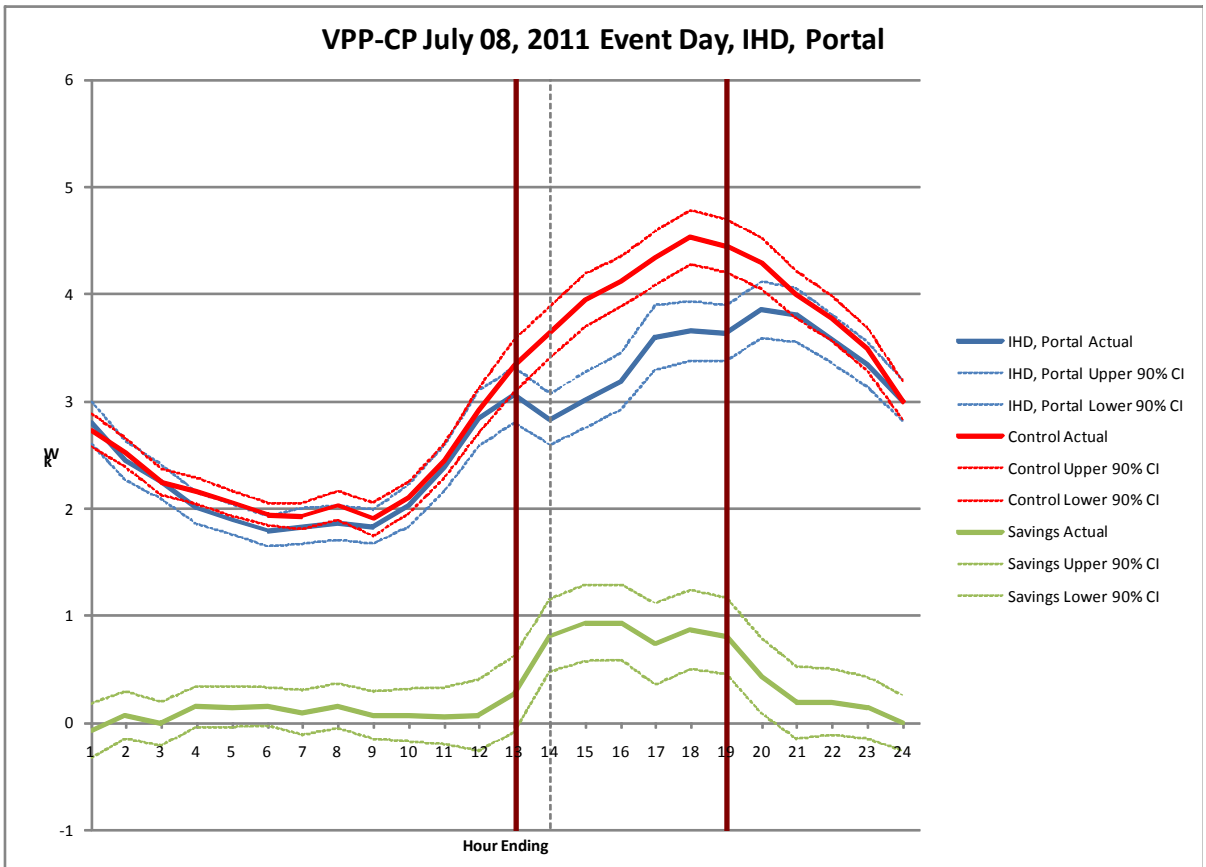
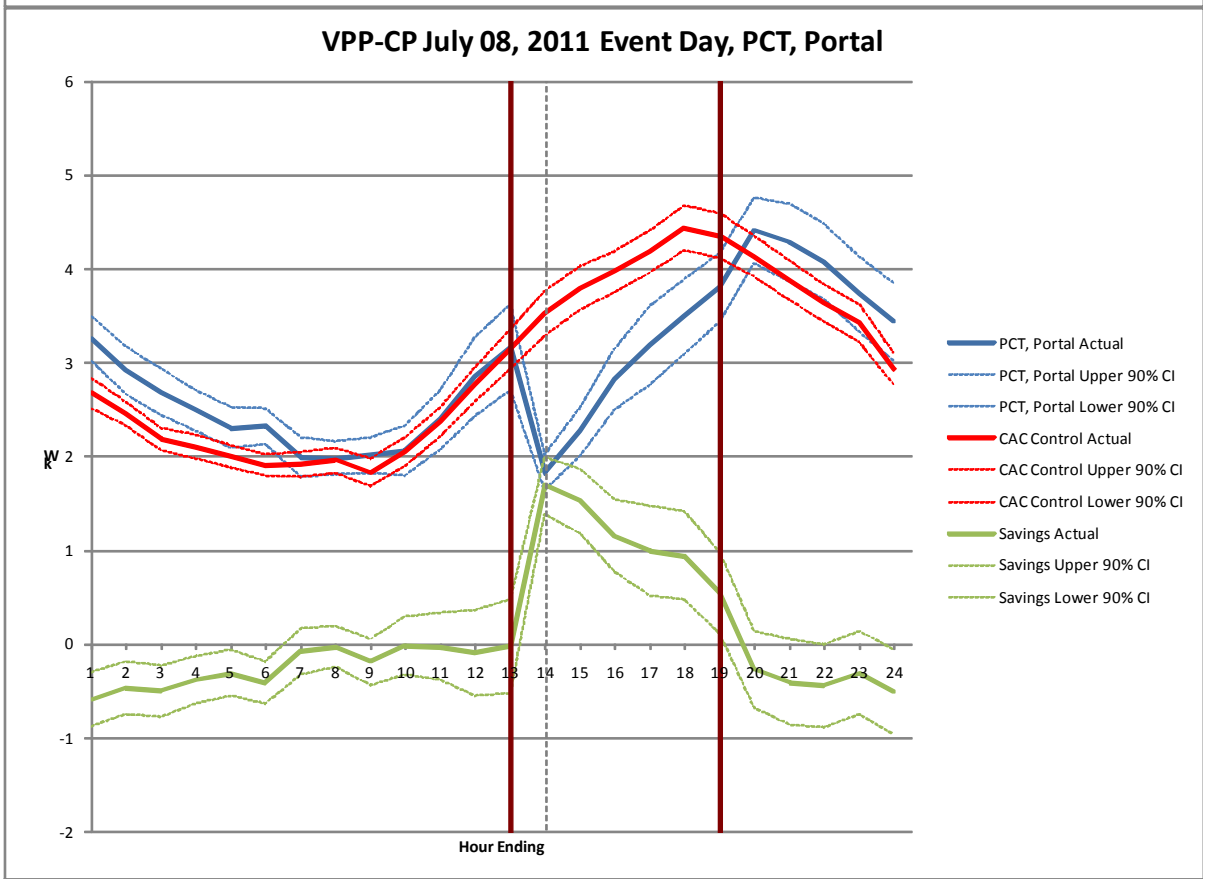
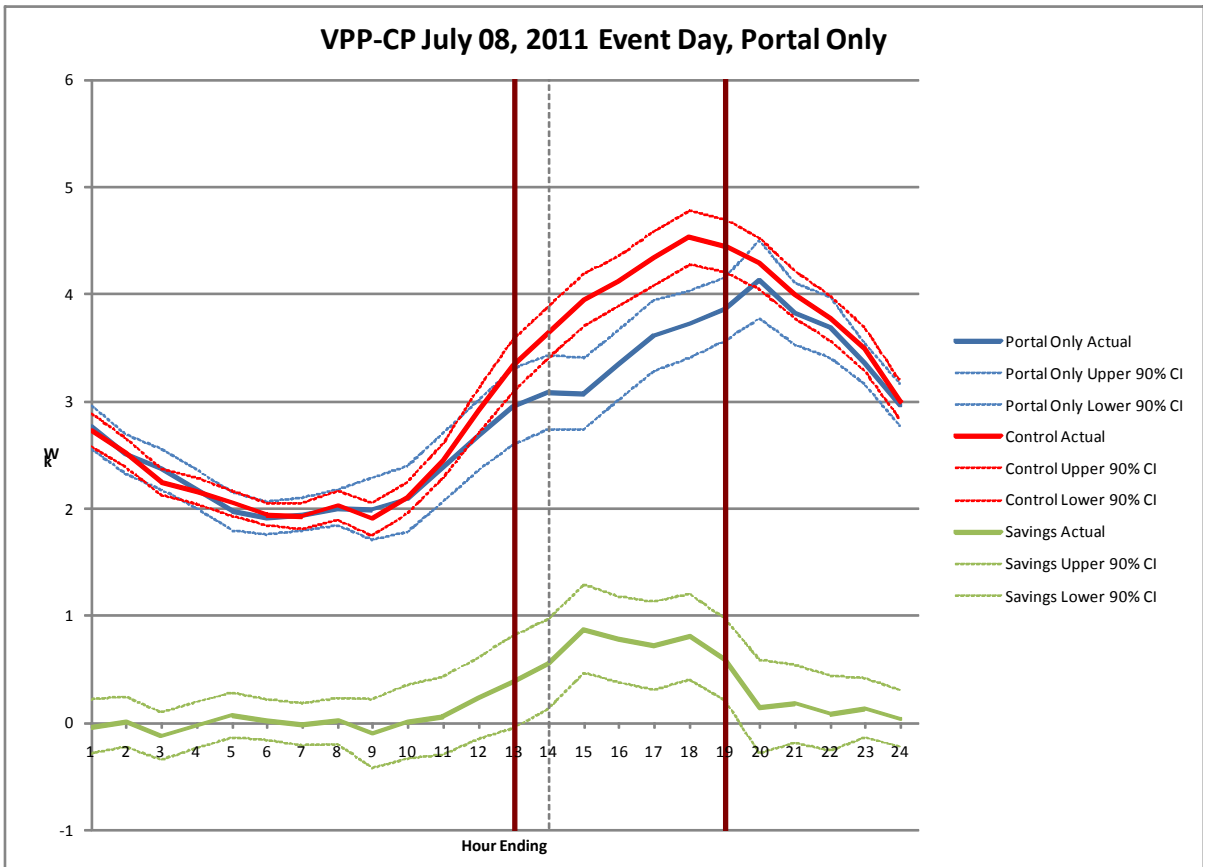
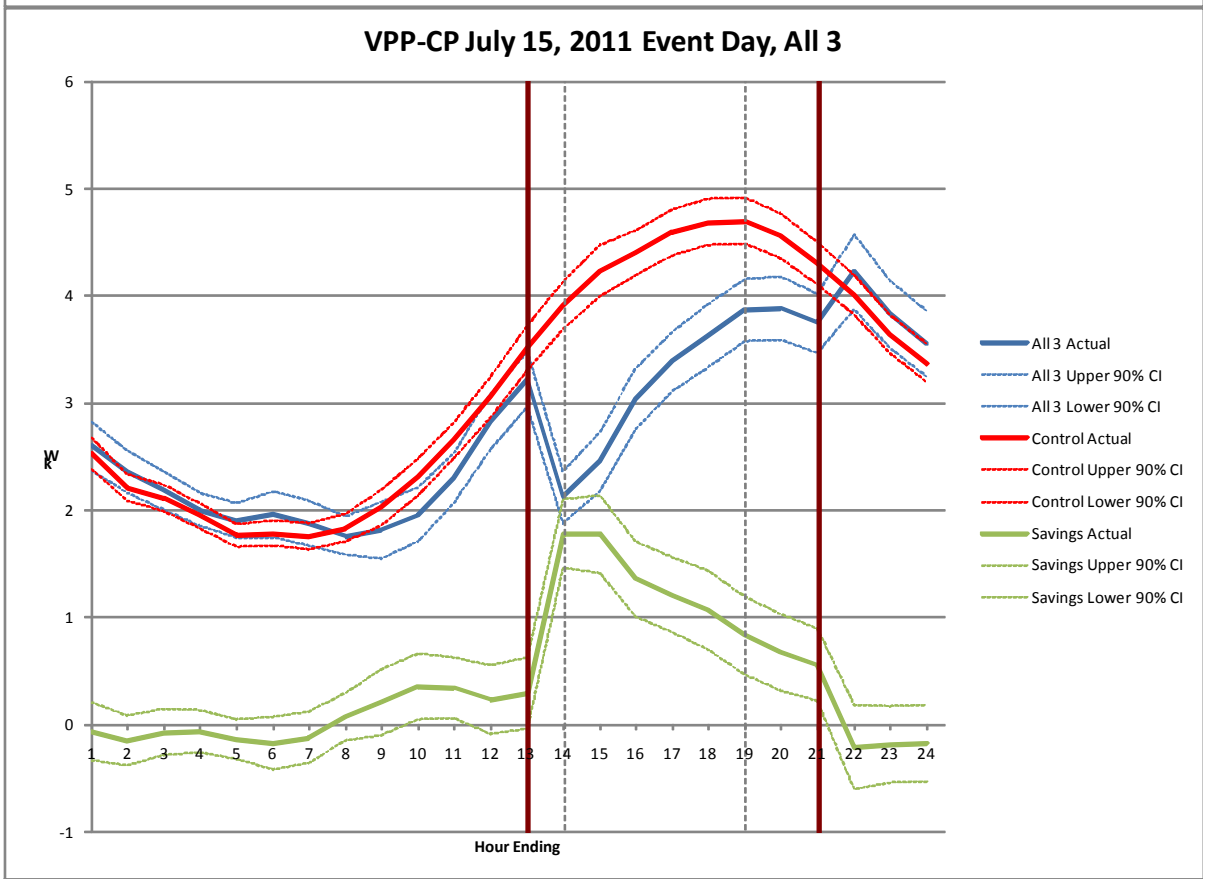
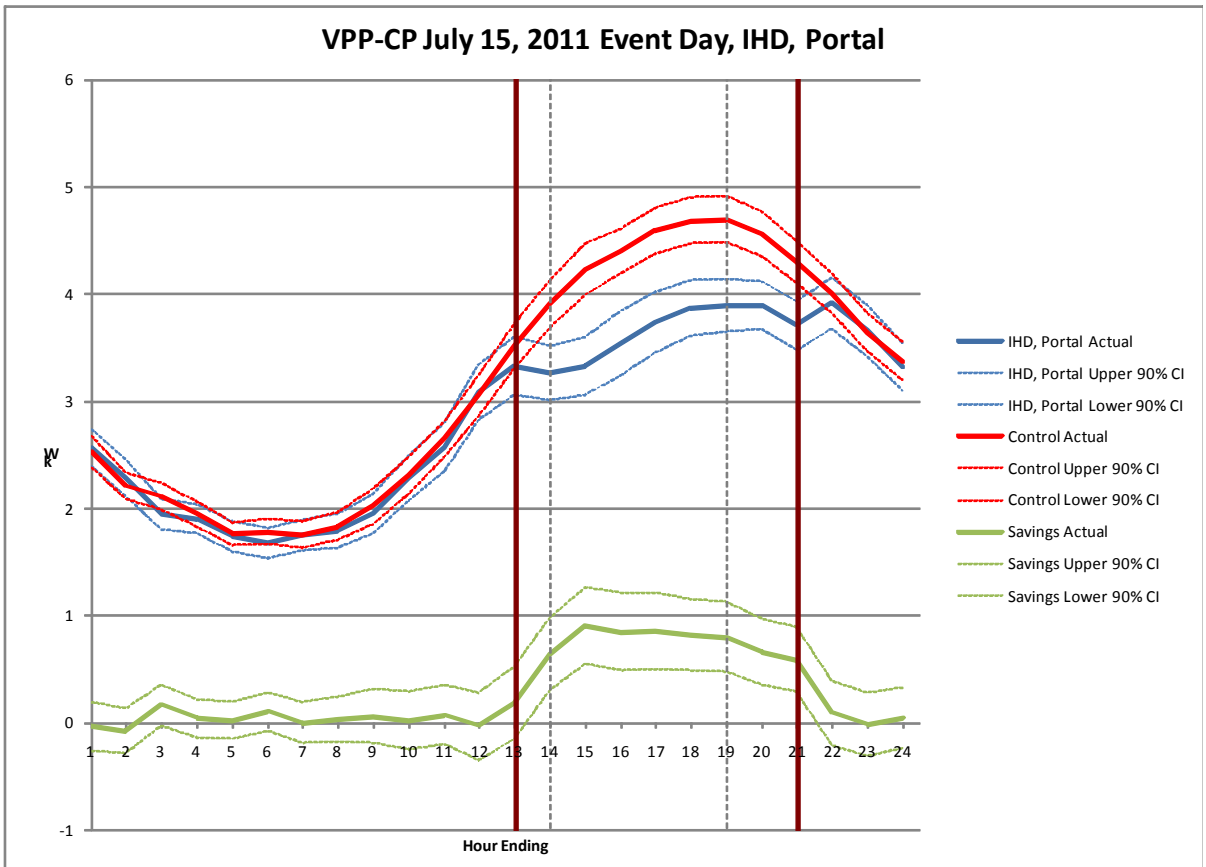
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

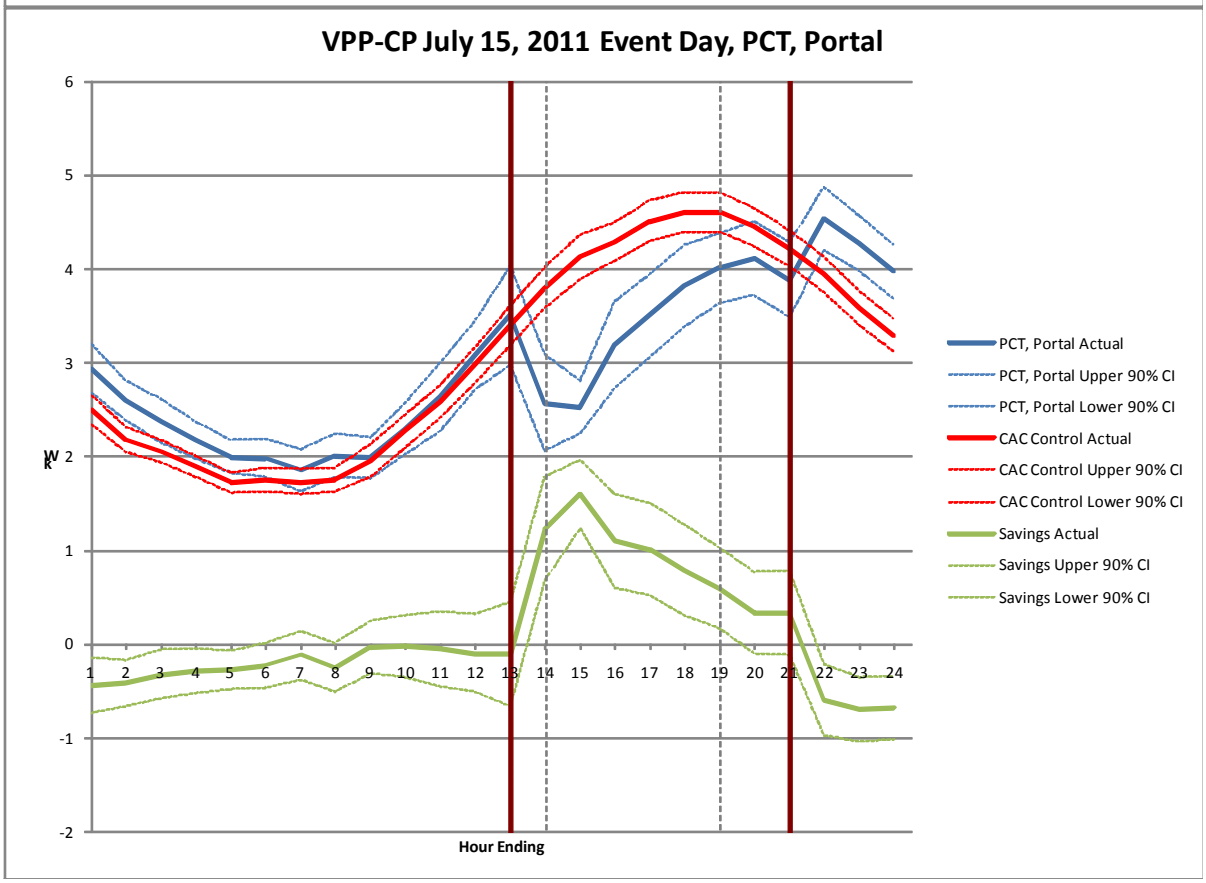

VPP-CP July 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

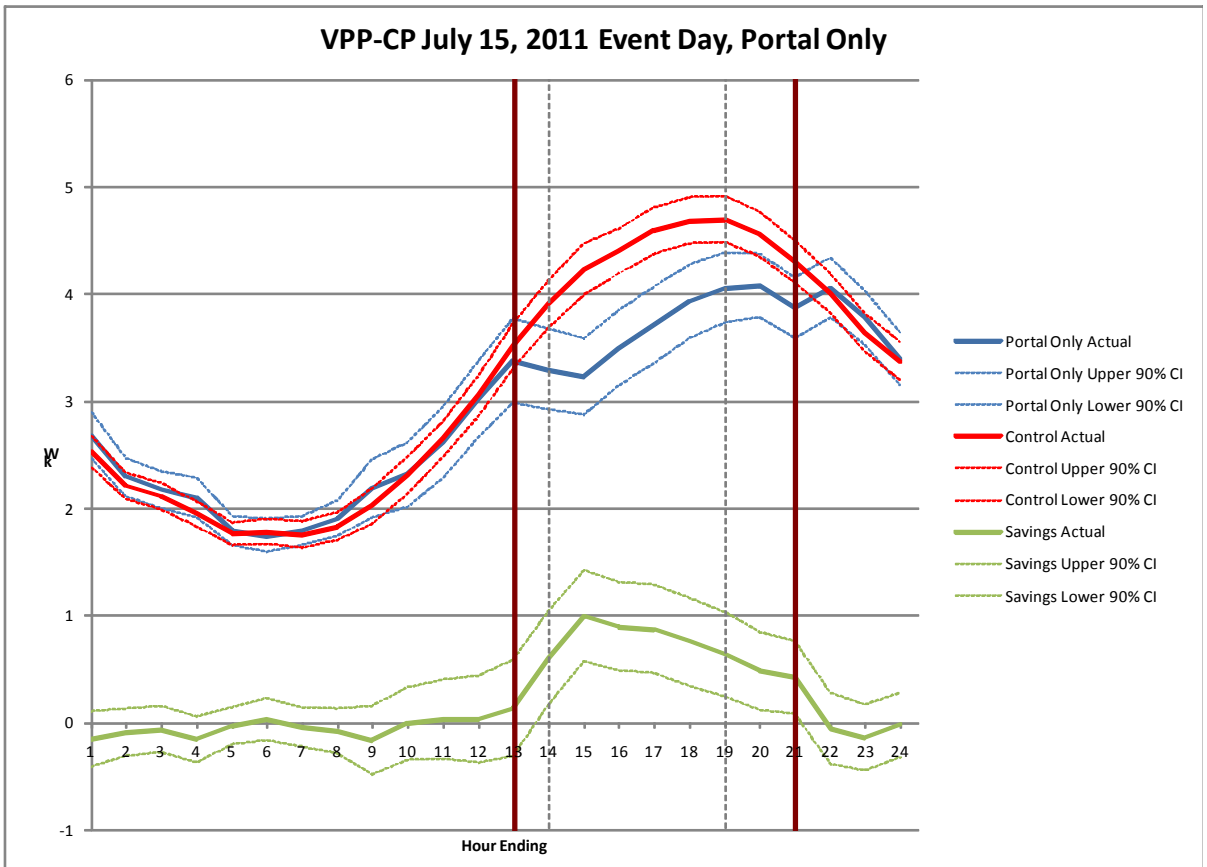

VPP-CP July 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

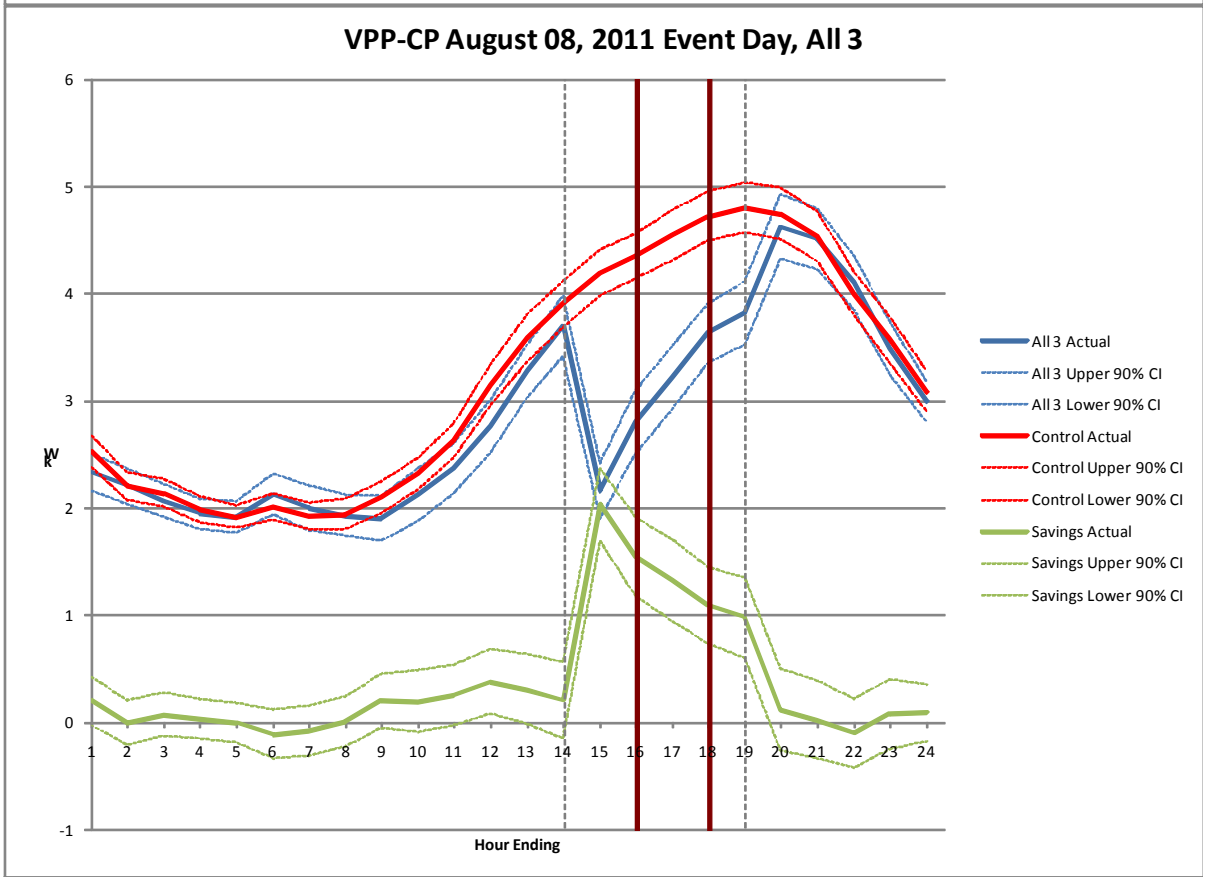

VPP-CP July 08, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP July 15, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP July 15, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP July 15, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP July 15, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP August 08, 2011 Event Day, All 3
kW
Hour Ending
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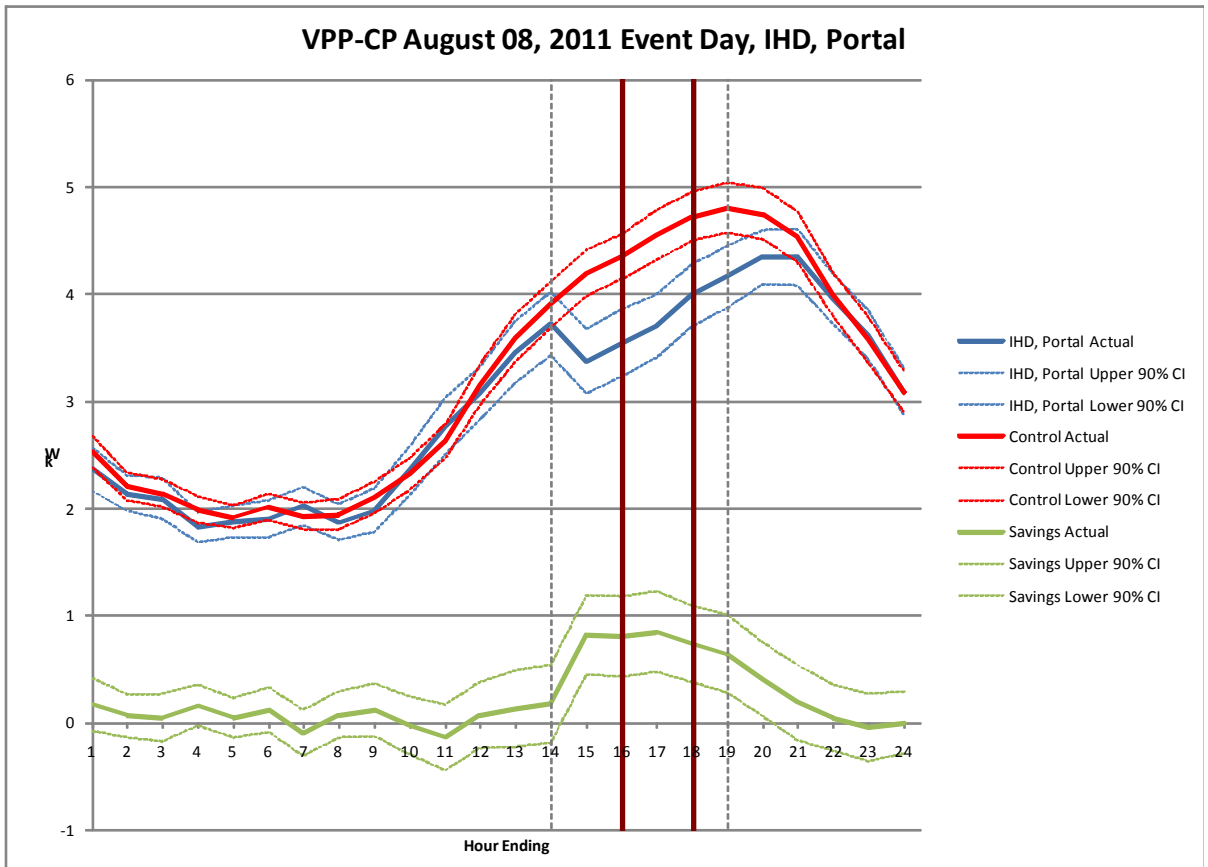
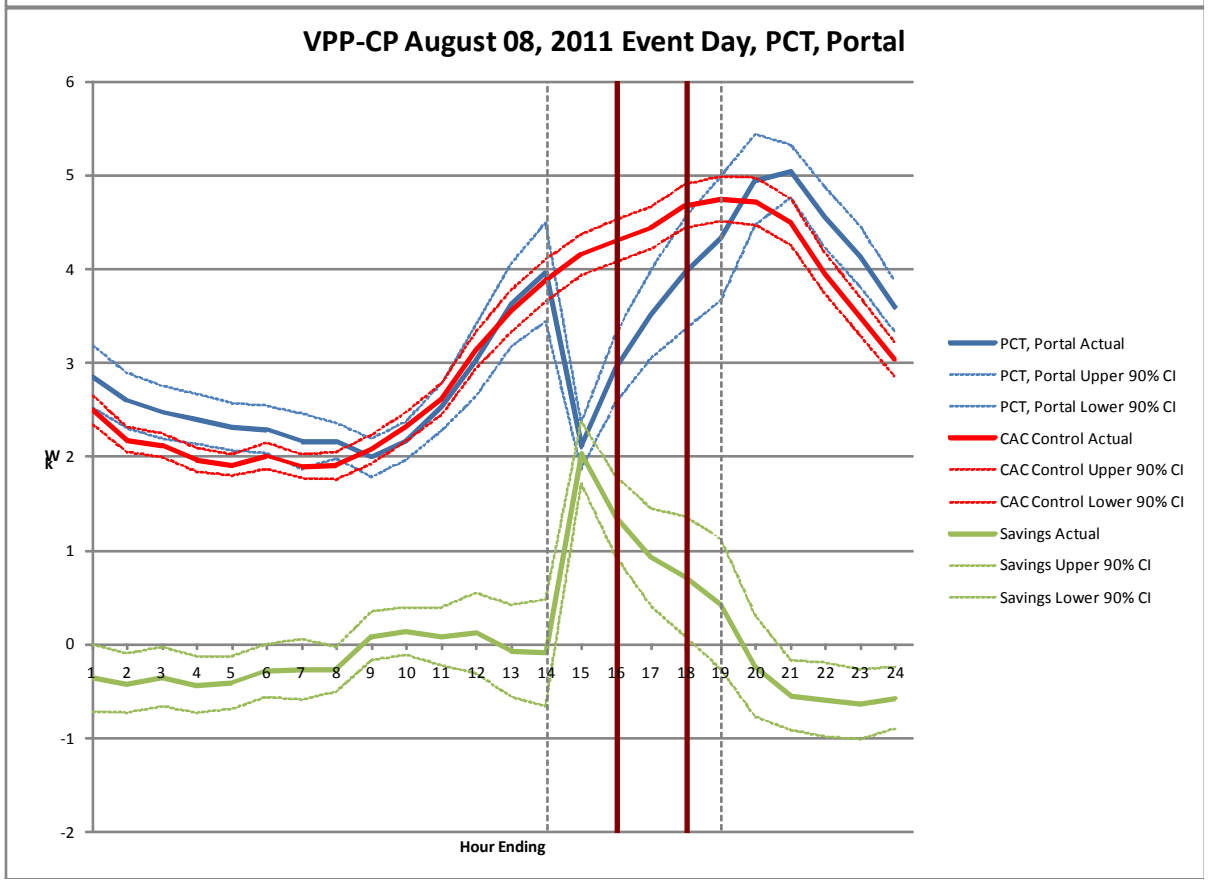
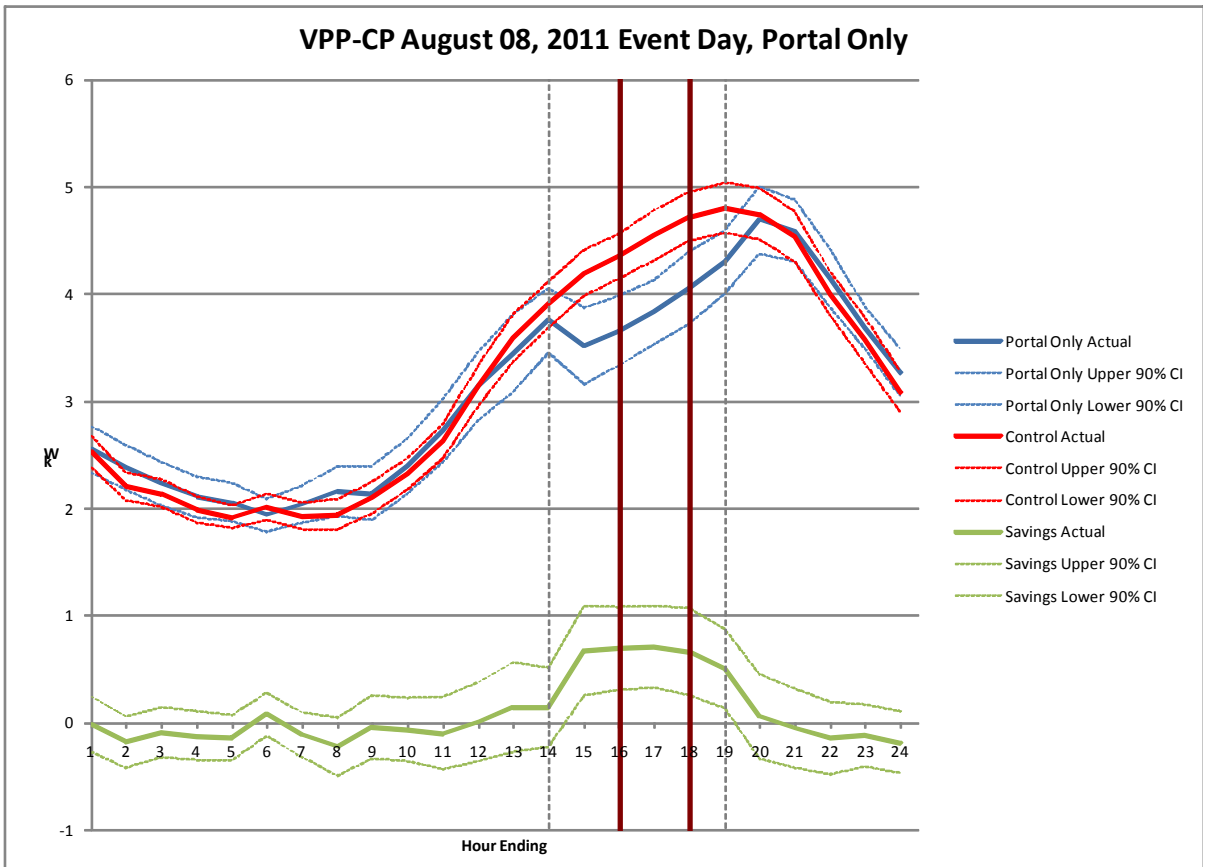
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP August 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP August 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP August 08, 2011 Event Day, Portal Only
6
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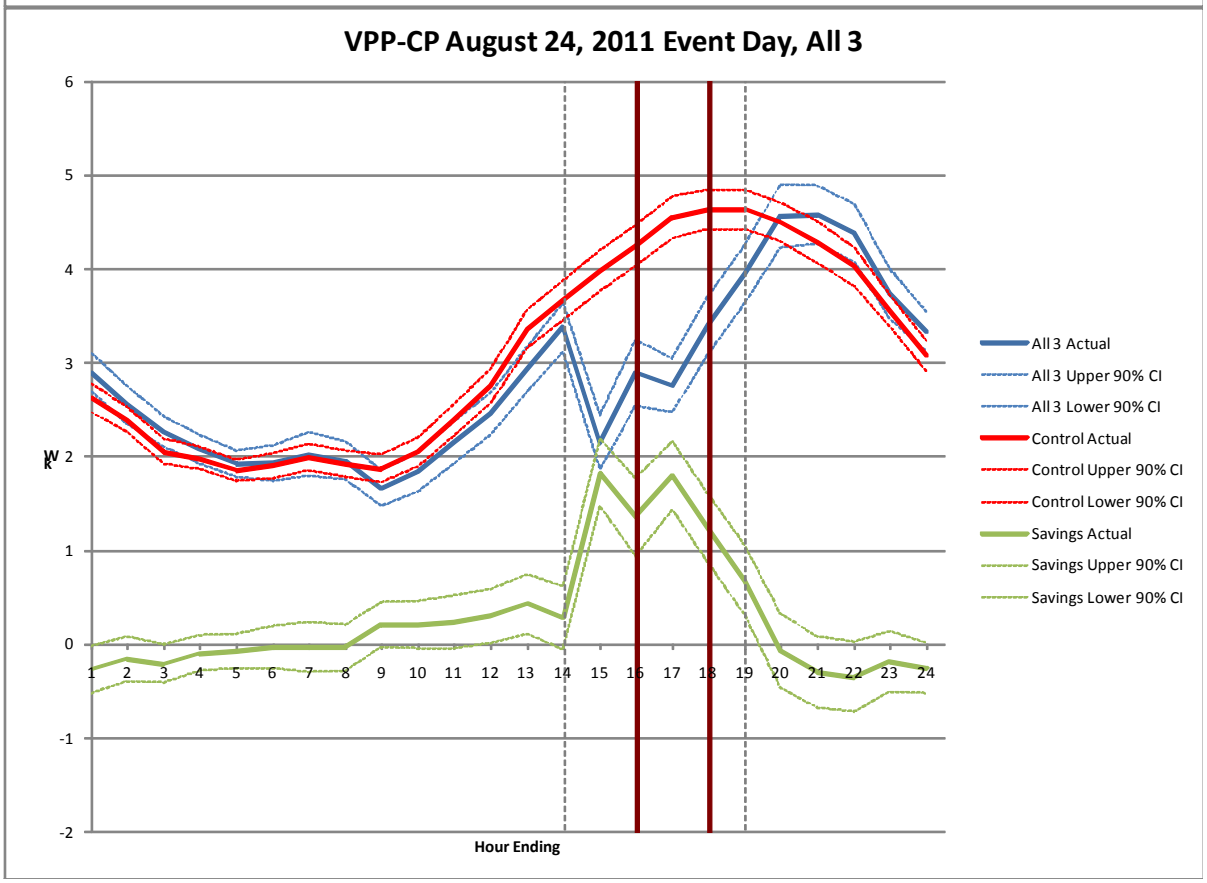
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP August 24, 2011 Event Day, All 3
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3
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1
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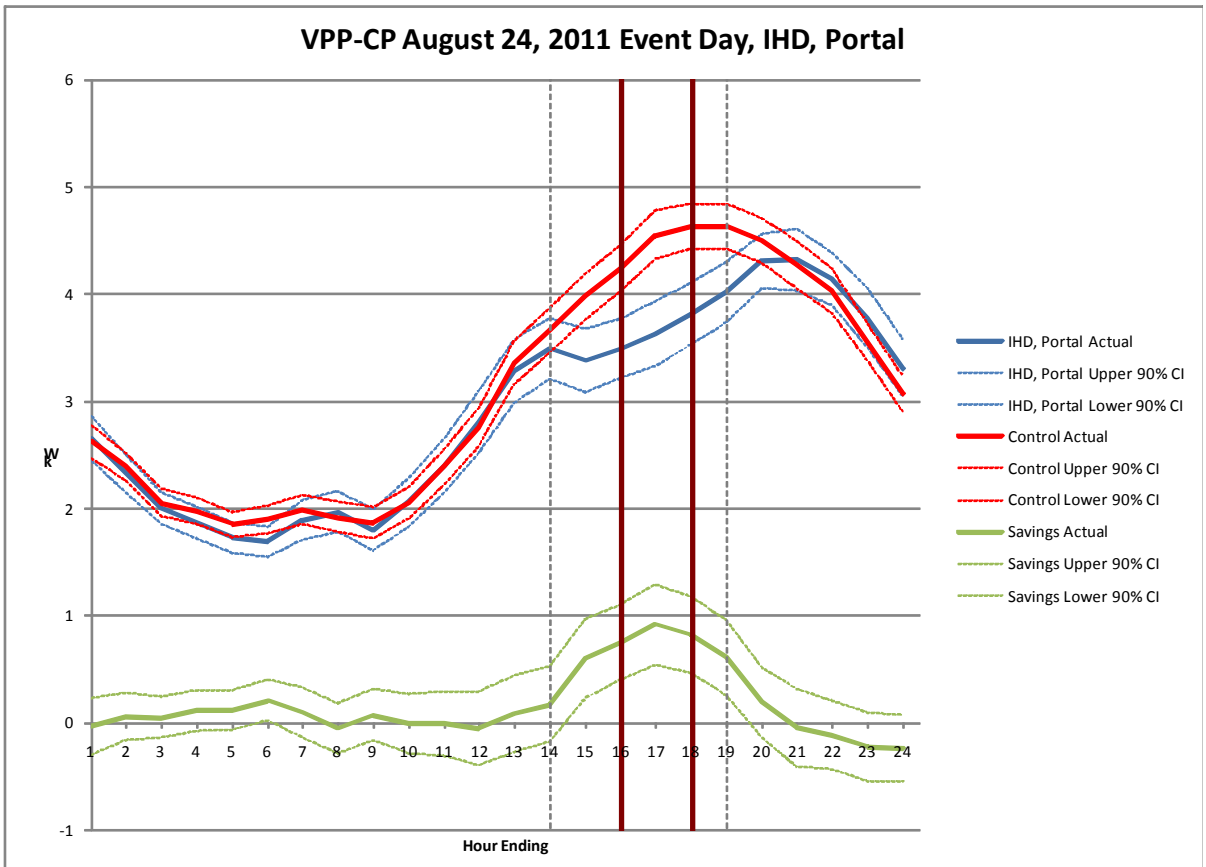
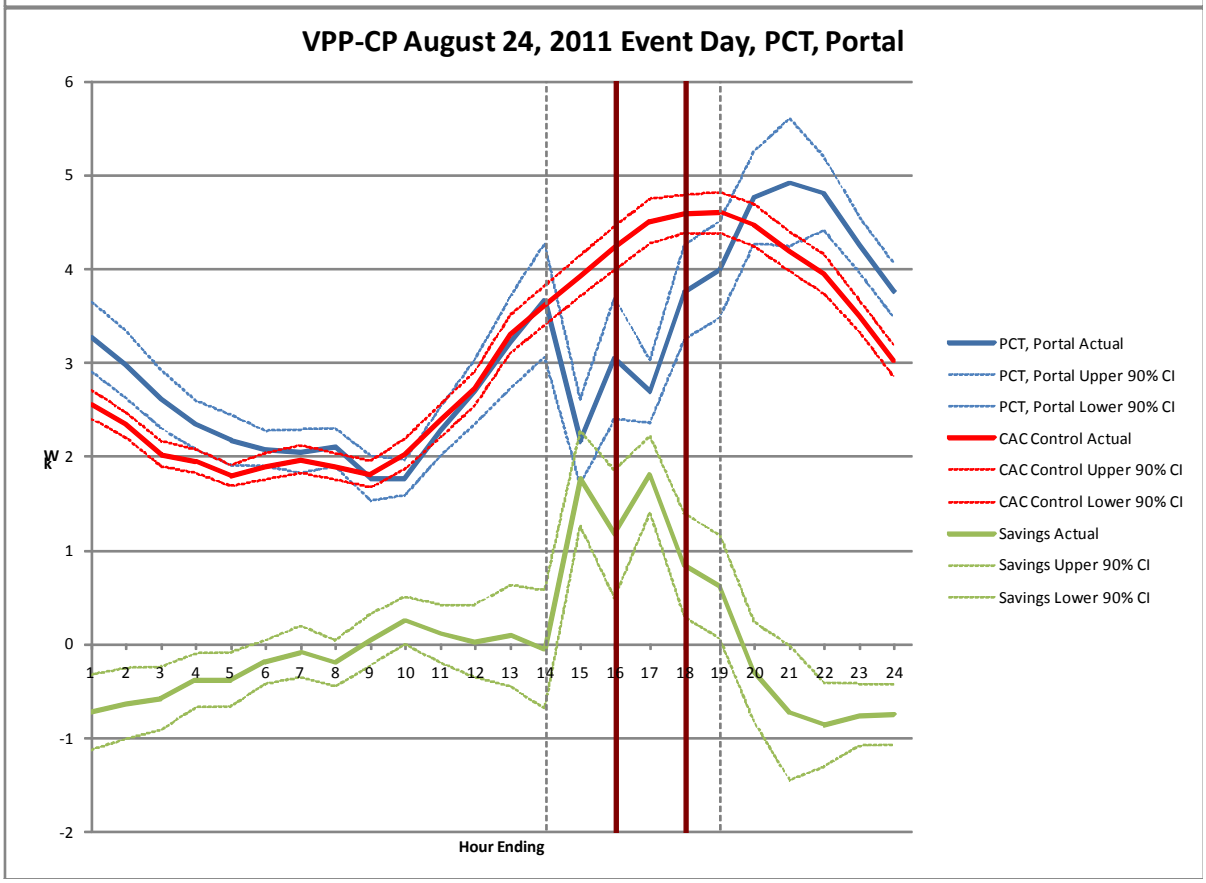
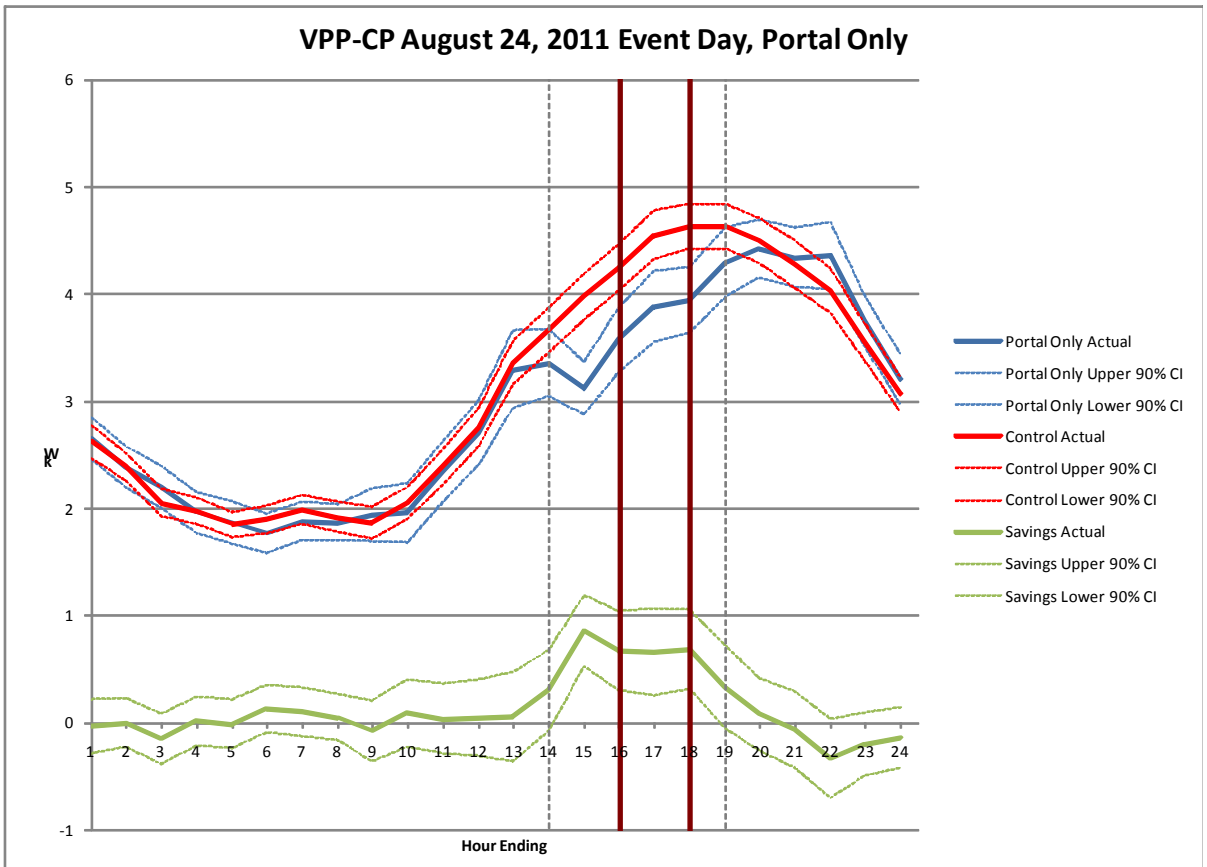
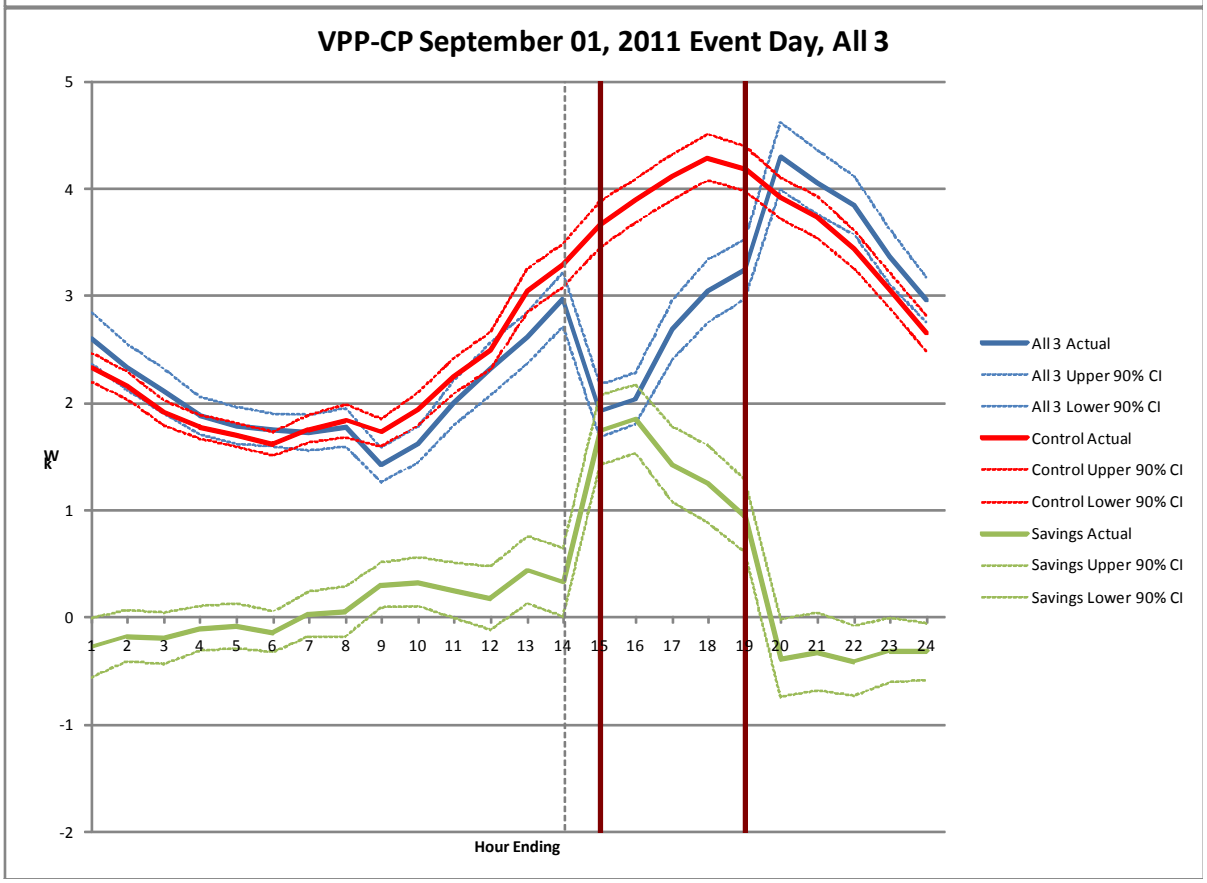
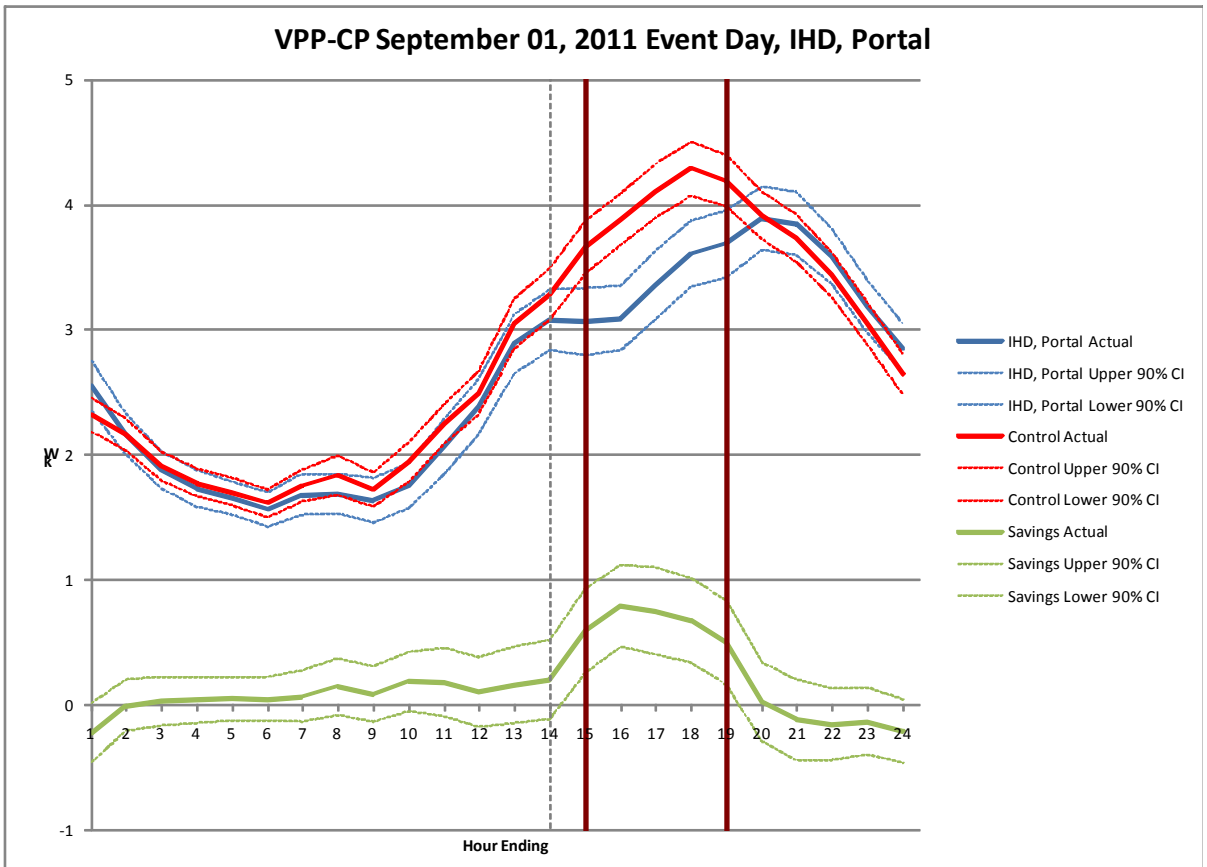
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

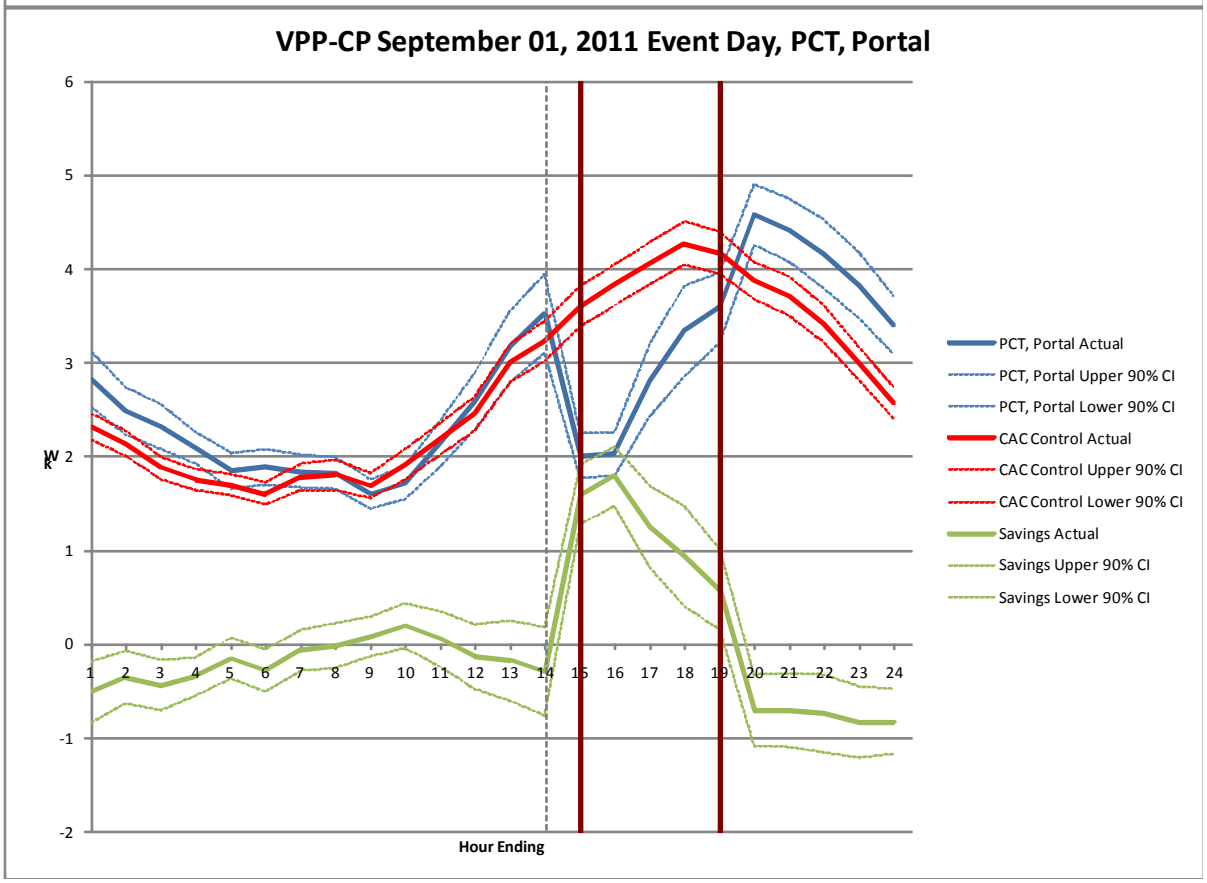

VPP-CP August 24, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

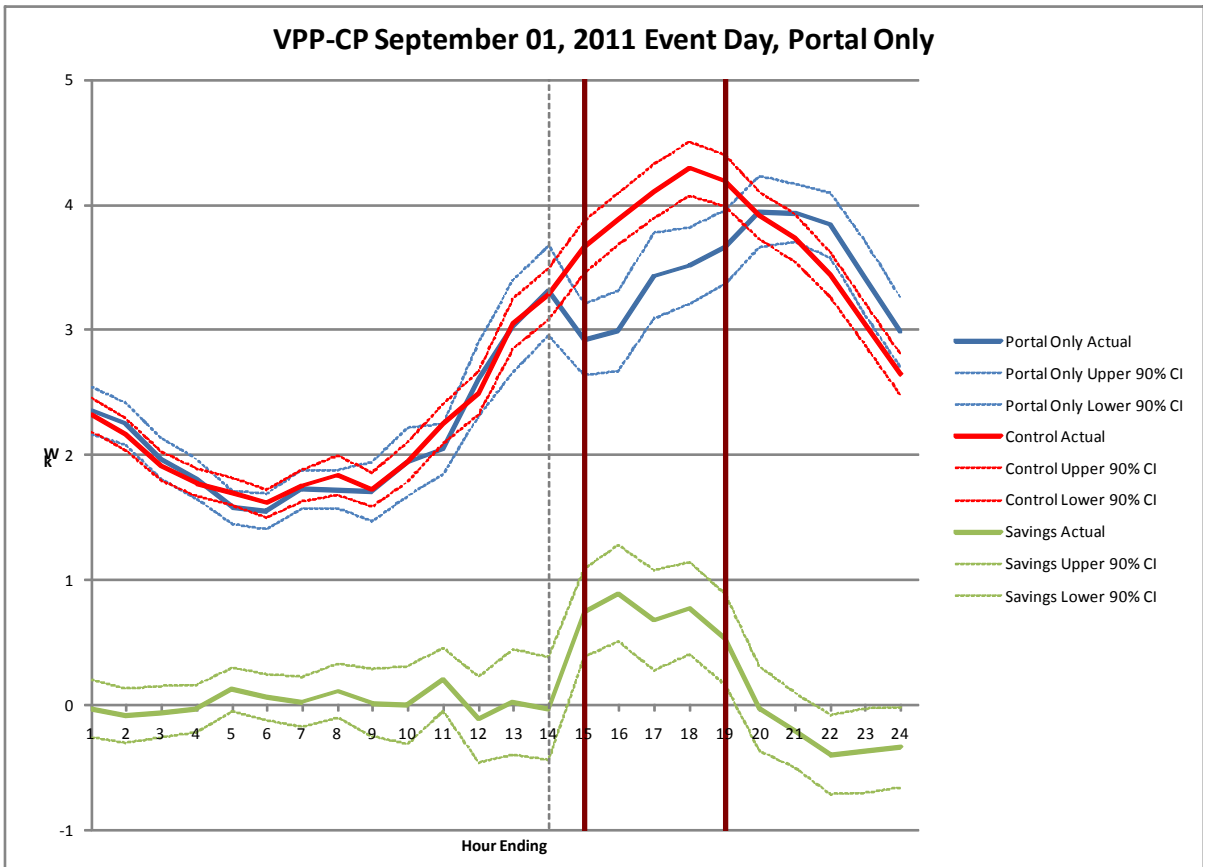

VPP-CP August 24, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

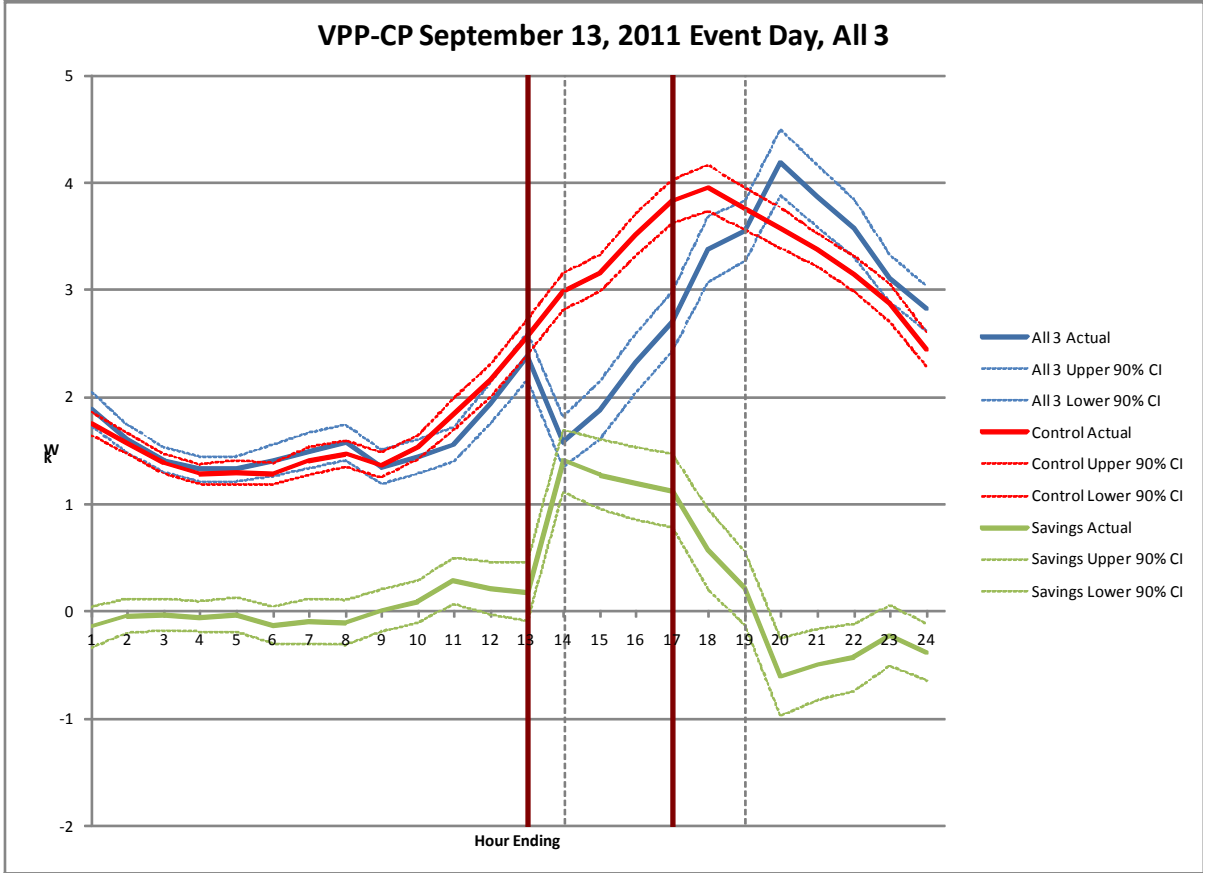

VPP-CP August 24, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

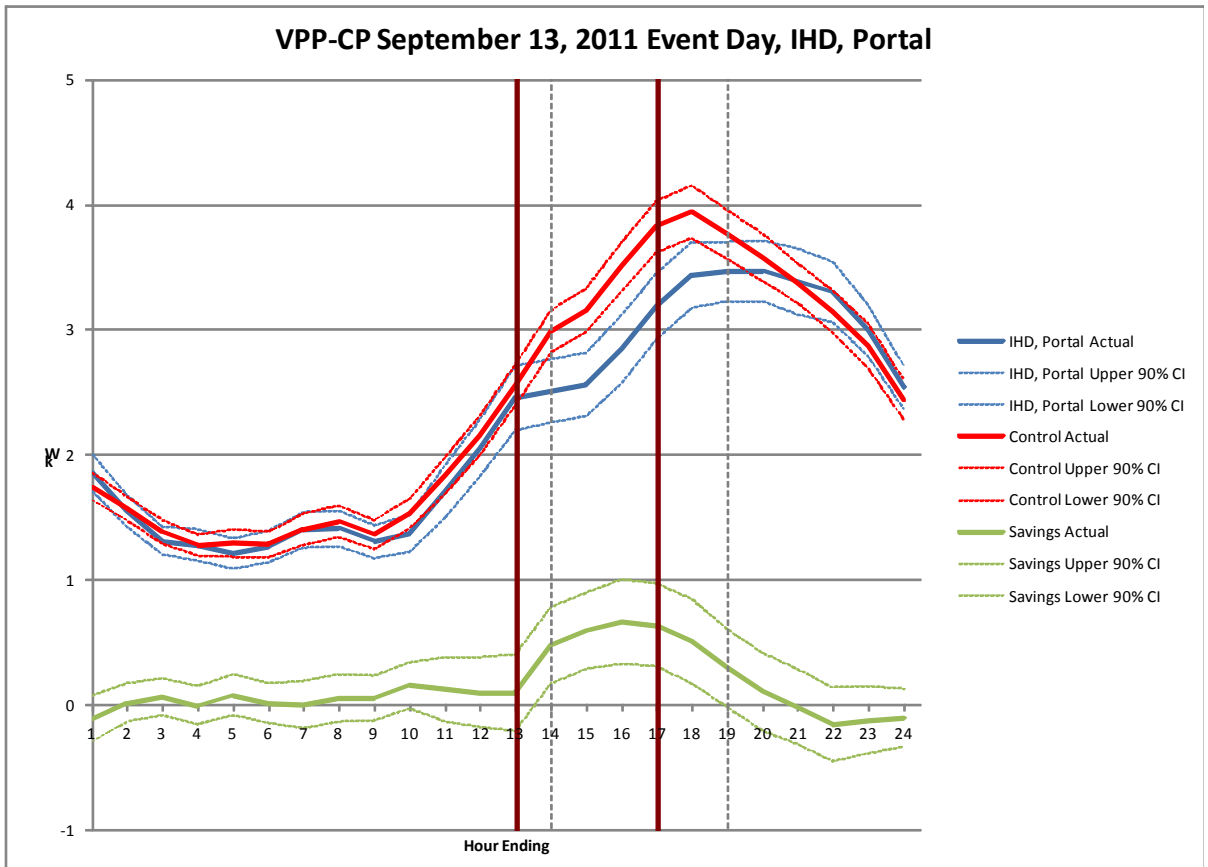

VPP-CP September 01, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

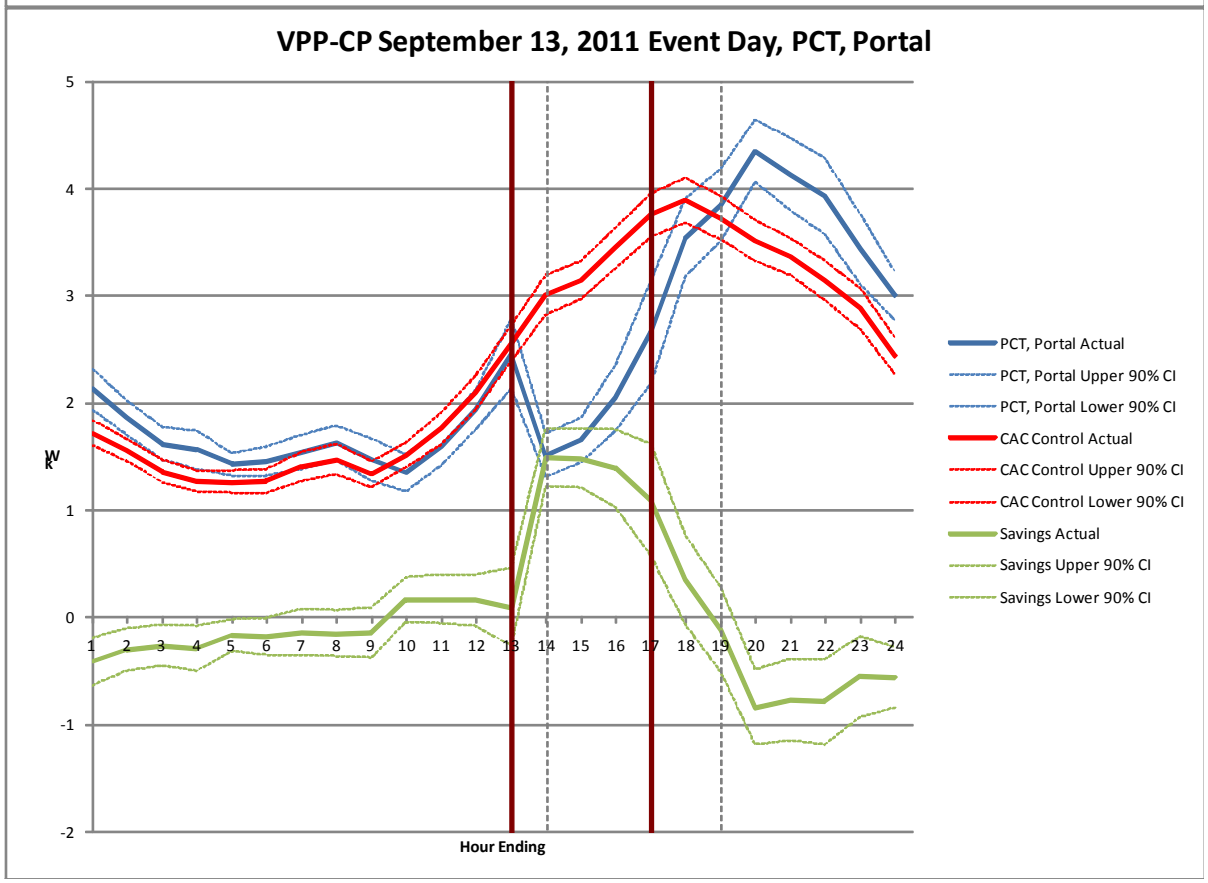

VPP-CP September 01, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

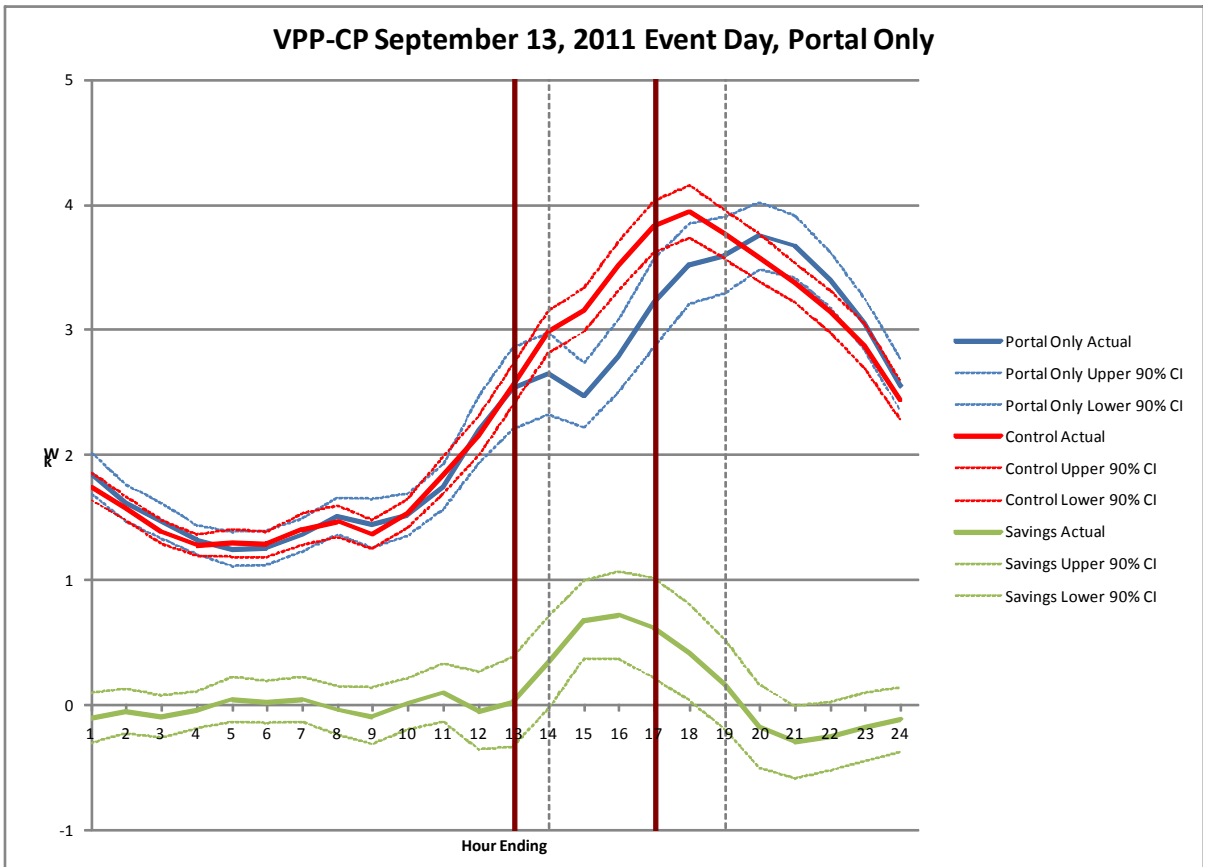

VPP-CP September 01, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

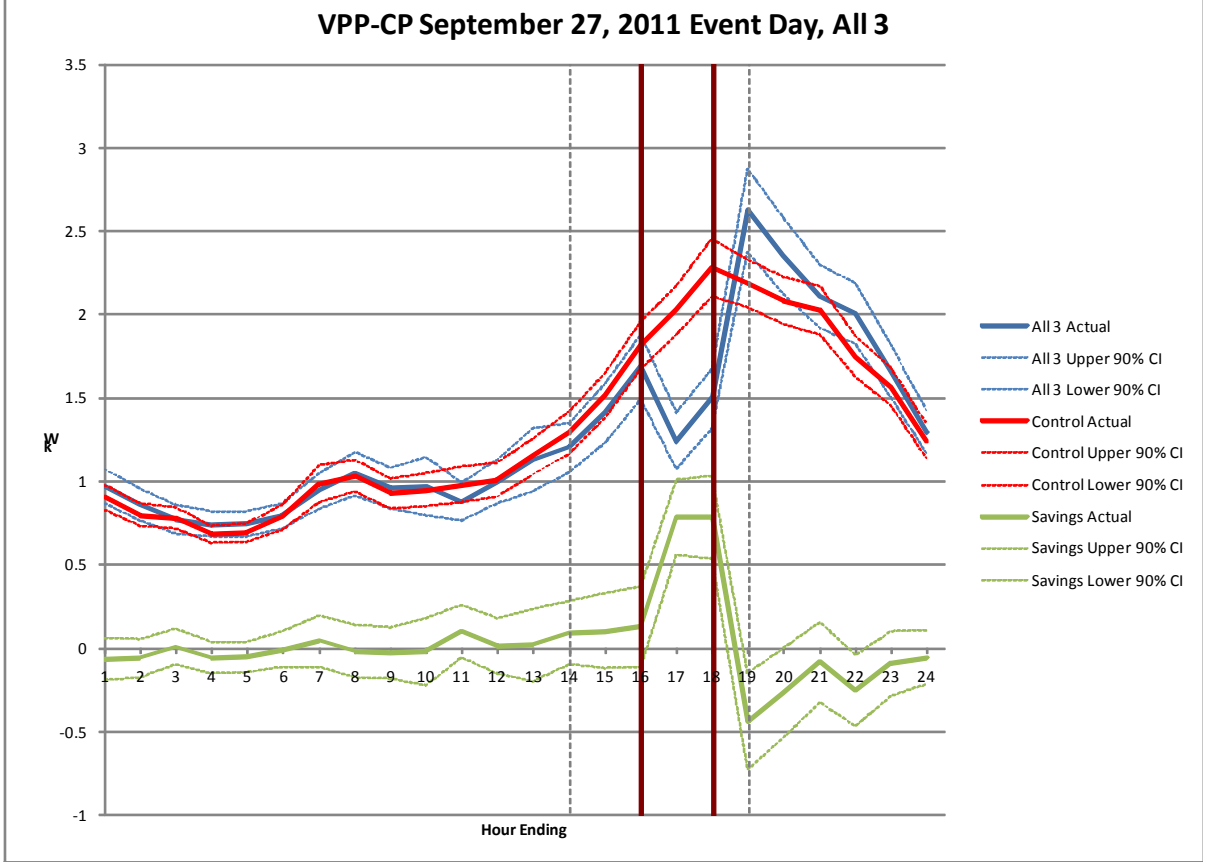

VPP-CP September 01, 2011 Event Day, Portal Only
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

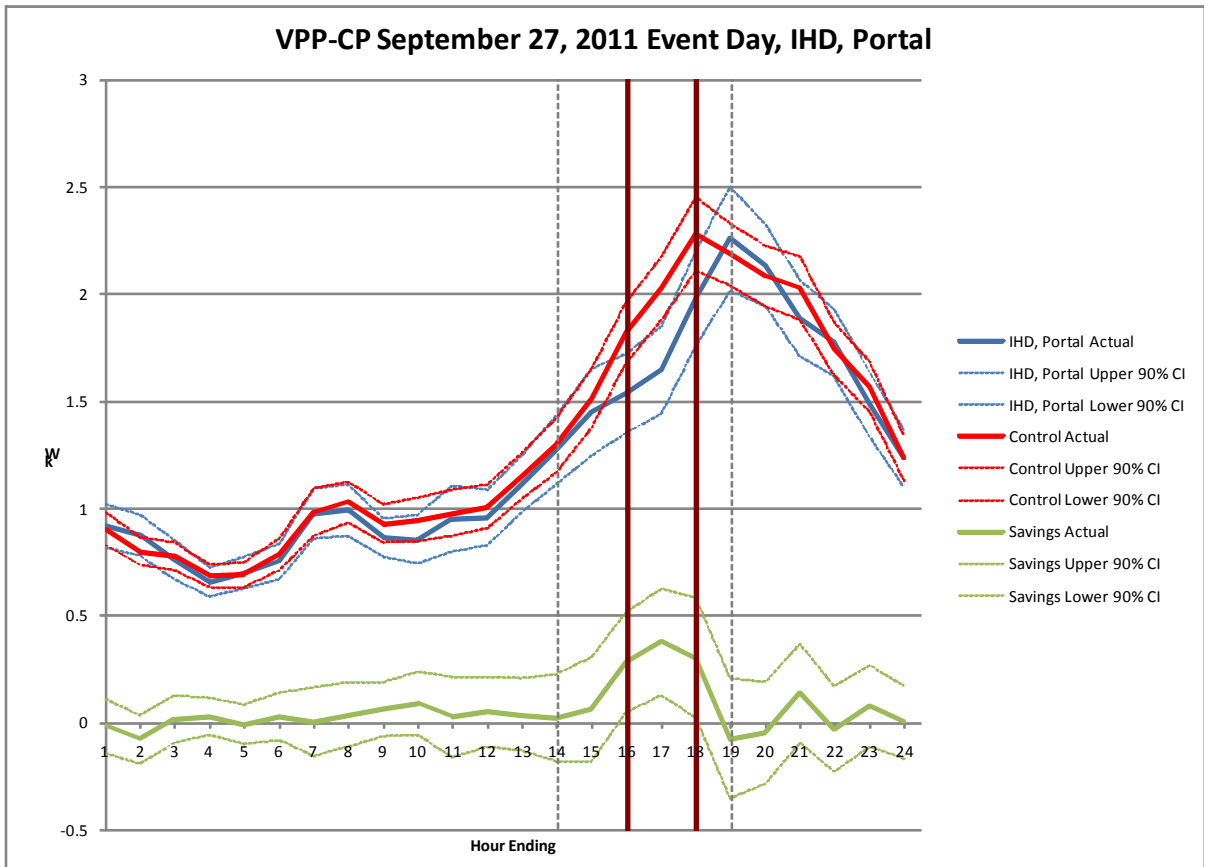

VPP-CP September 13, 2011 Event Day, All 3
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

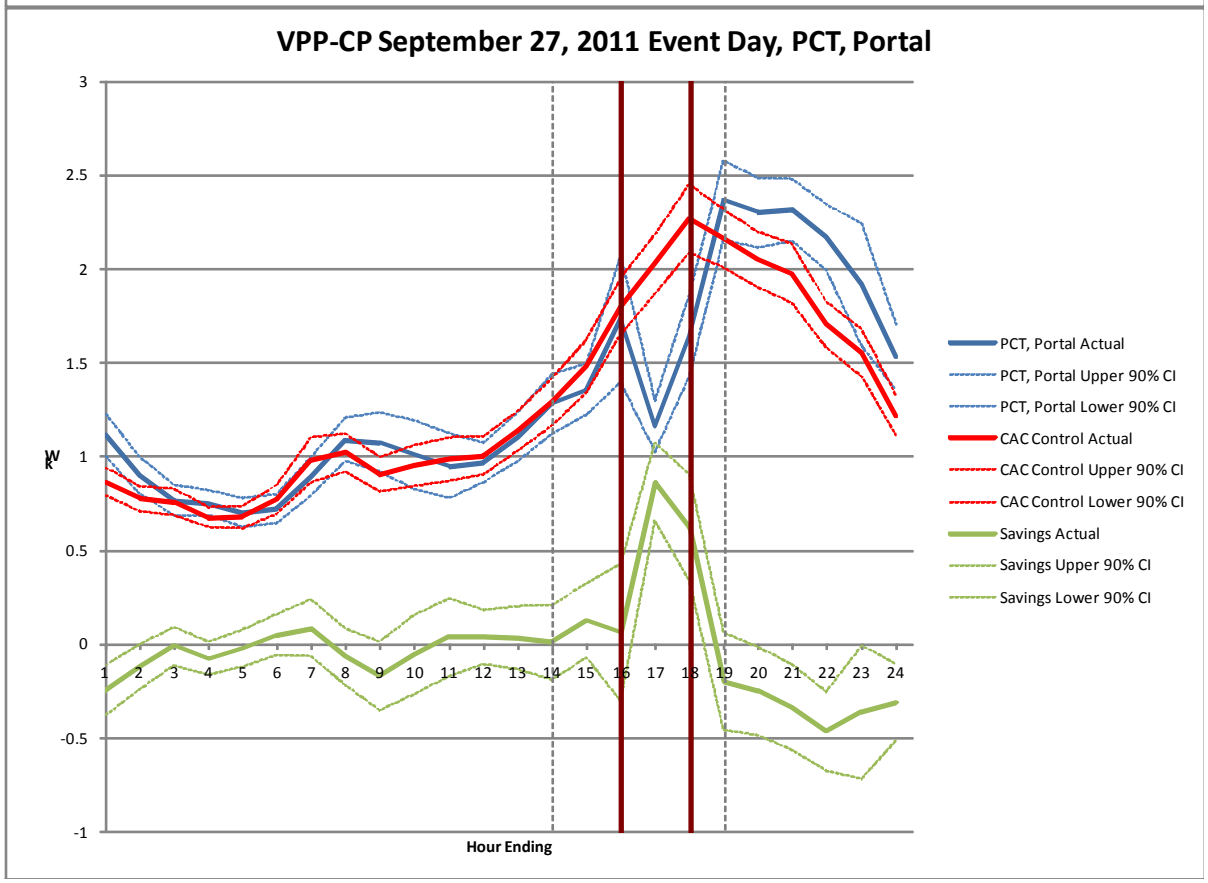

VPP-CP September 13, 2011 Event Day, IHD, Portal
kW
5
4
3
2
1
0
-1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

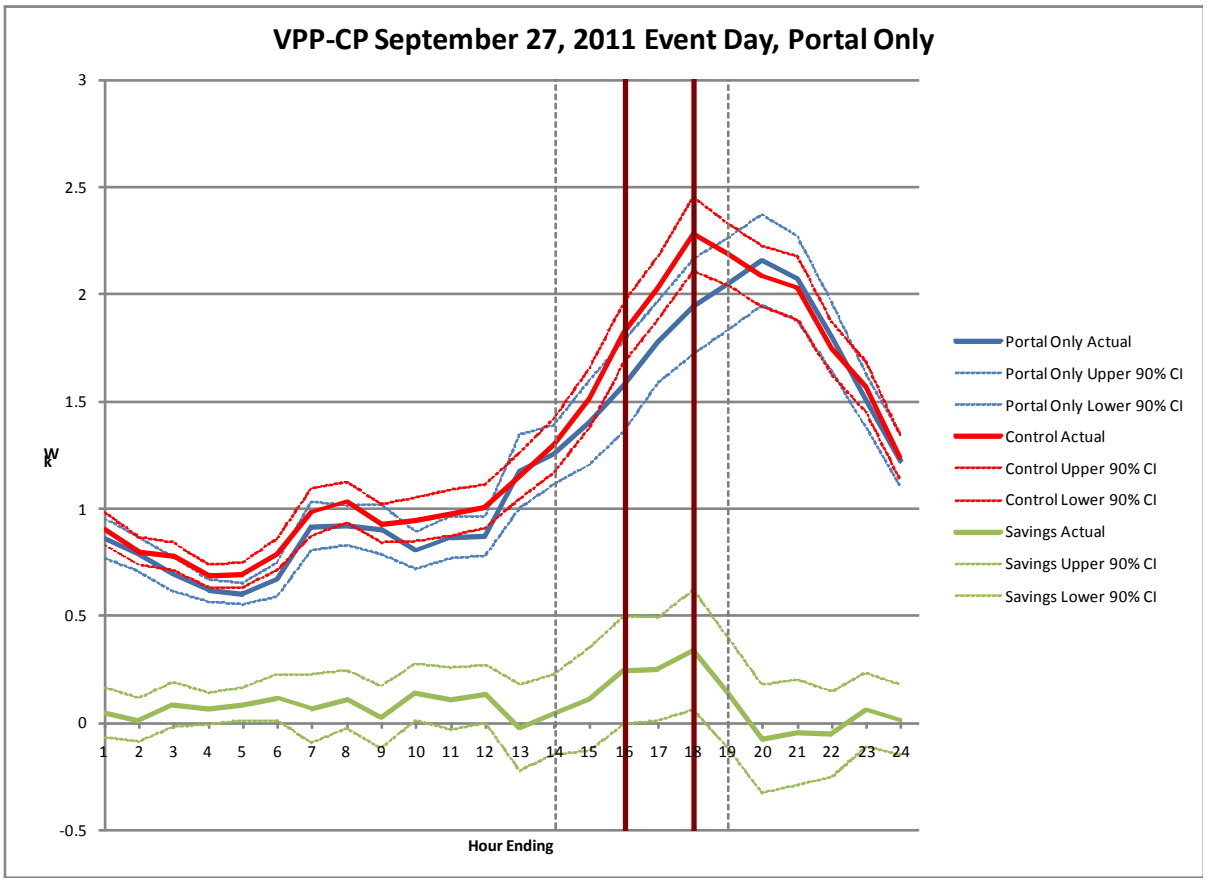

VPP-CP September 13, 2011 Event Day, PCT, Portal
kW
5
4
3
2
1
0
-1
-2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 13, 2011 Event Day, Portal Only
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 27, 2011 Event Day, All 3
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

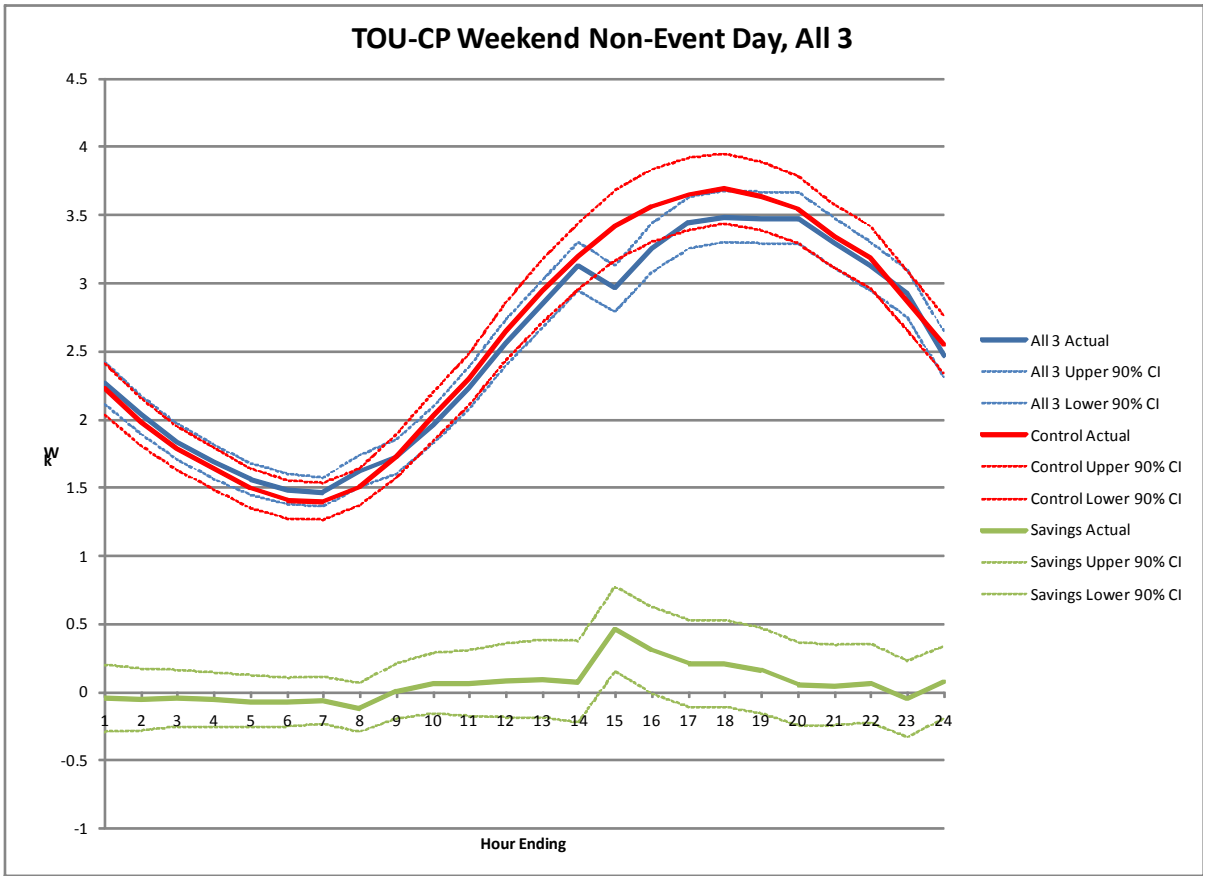

VPP-CP September 27, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

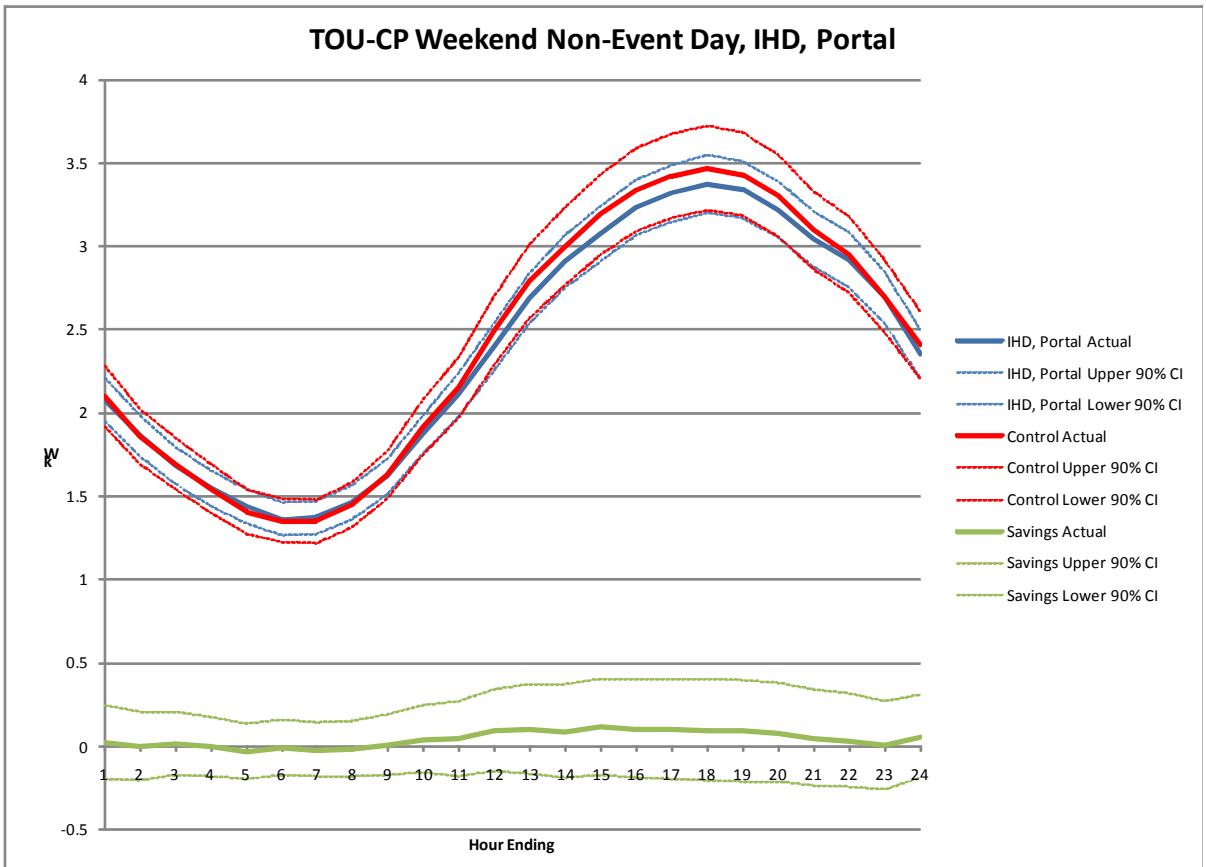

VPP-CP September 27, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

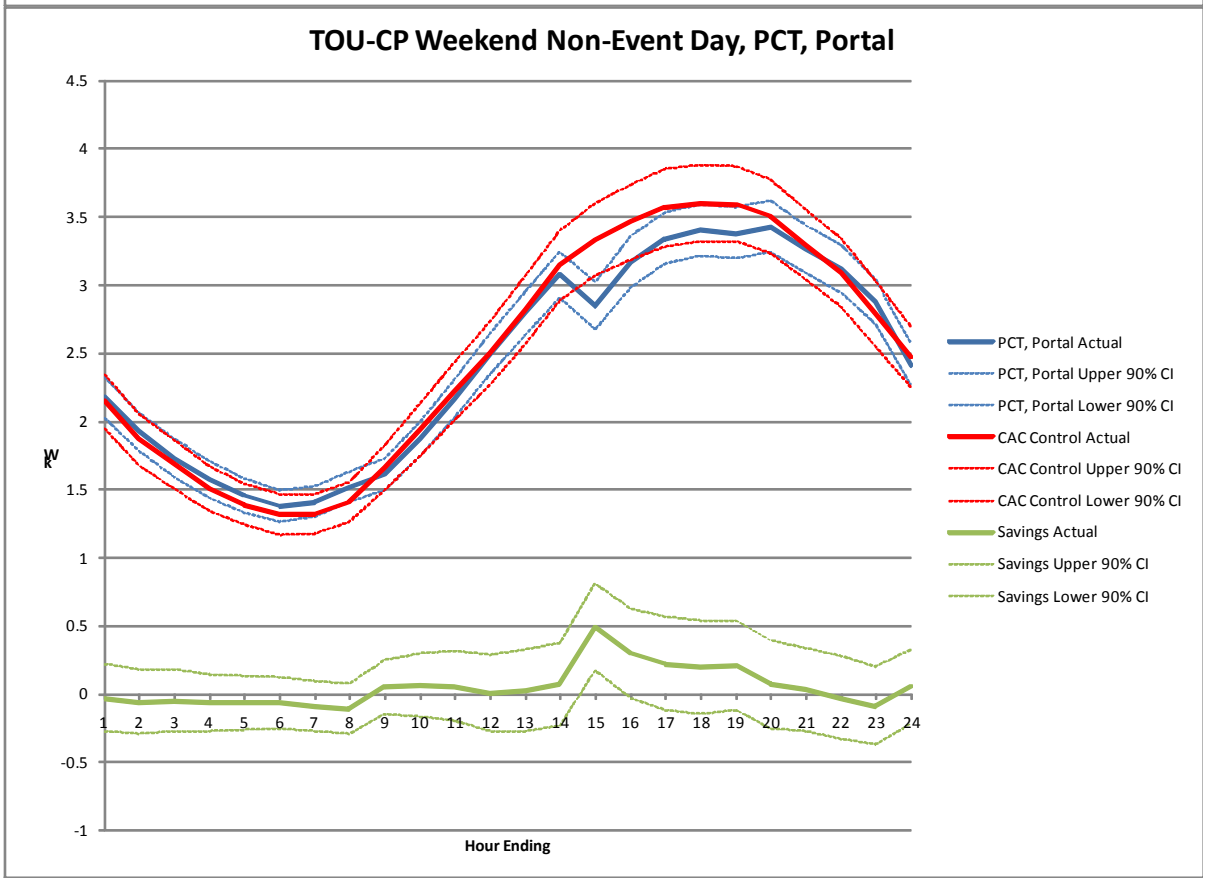

VPP-CP September 27, 2011 Event Day, Portal Only
3
2.5
2
1.5
1
0.5
0
-0.5
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

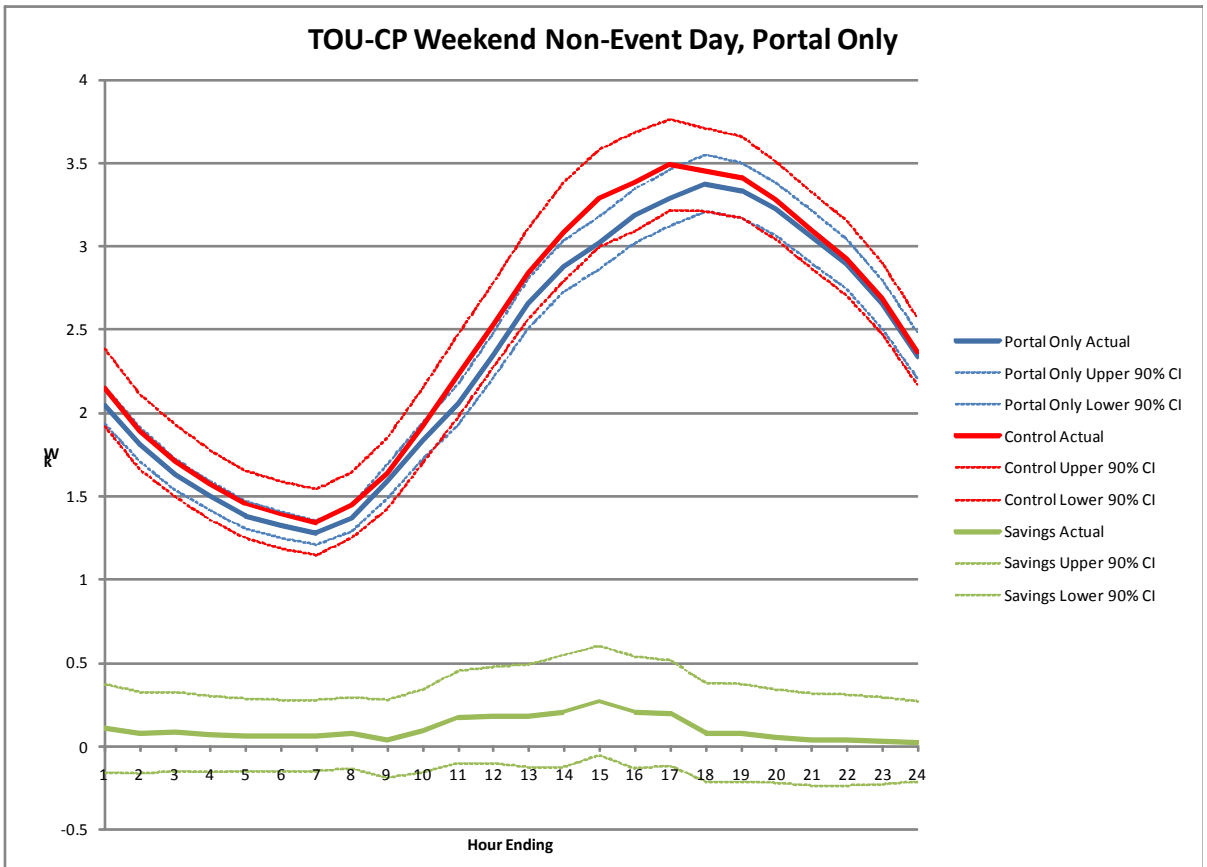
APPENDIX D- INDIVIDUAL LOAD SHAPES: SECOND YEAR RECRUITS – RESIDENTIAL

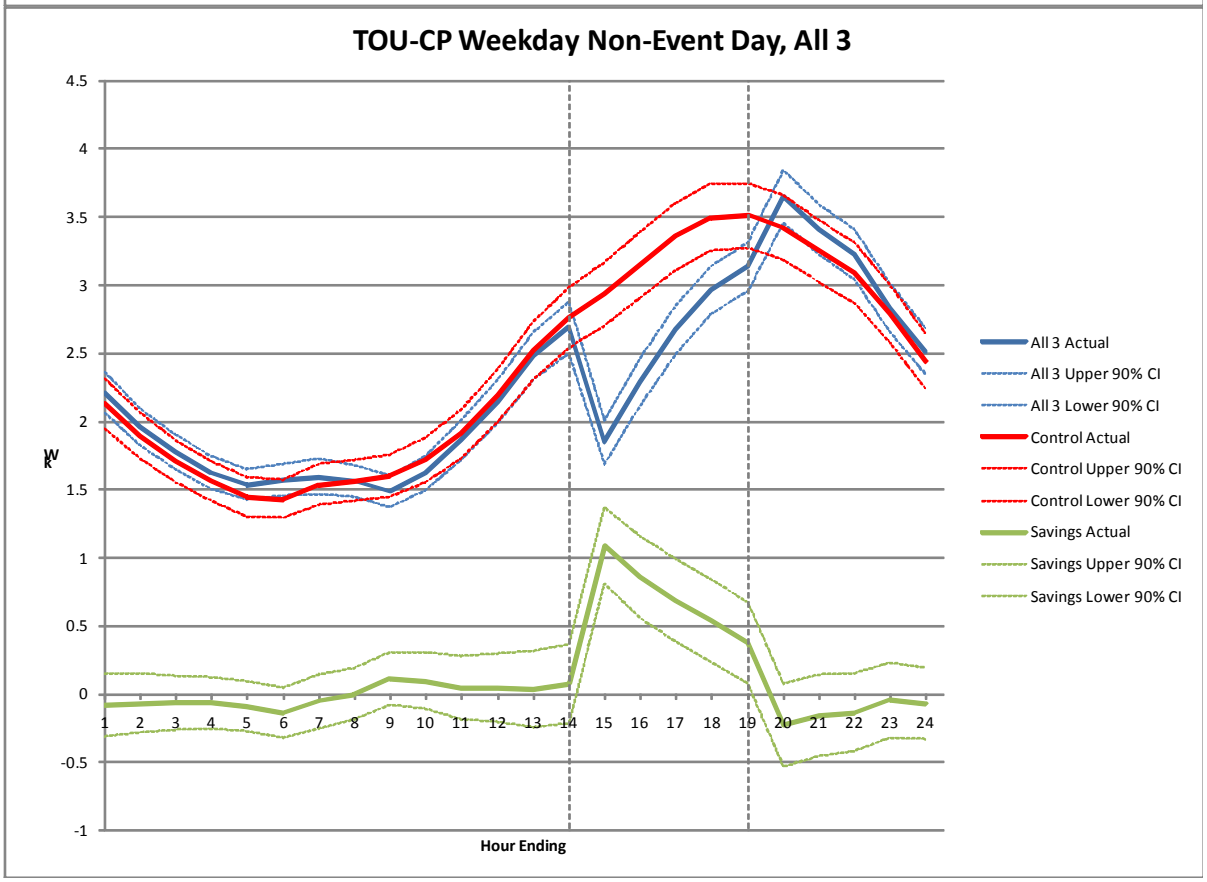
The following Appendix D graphs compare the estimated second year recruits residential participant load shapes to the estimated control group load shapes for each of the 21 day types for each of the four enabling technology options: Portal Only; IHD, Portal; PCT, Portal; and All 3. A third line, the estimated savings, which is the difference between the control group and participant shapes, is shown in green. Each of the shapes is surrounded by dashed lines indicating the 90% confidence intervals. When the 90% confidence interval on the savings estimate does not include zero, the savings are statistically significant. This appendix contains 84 graphs.

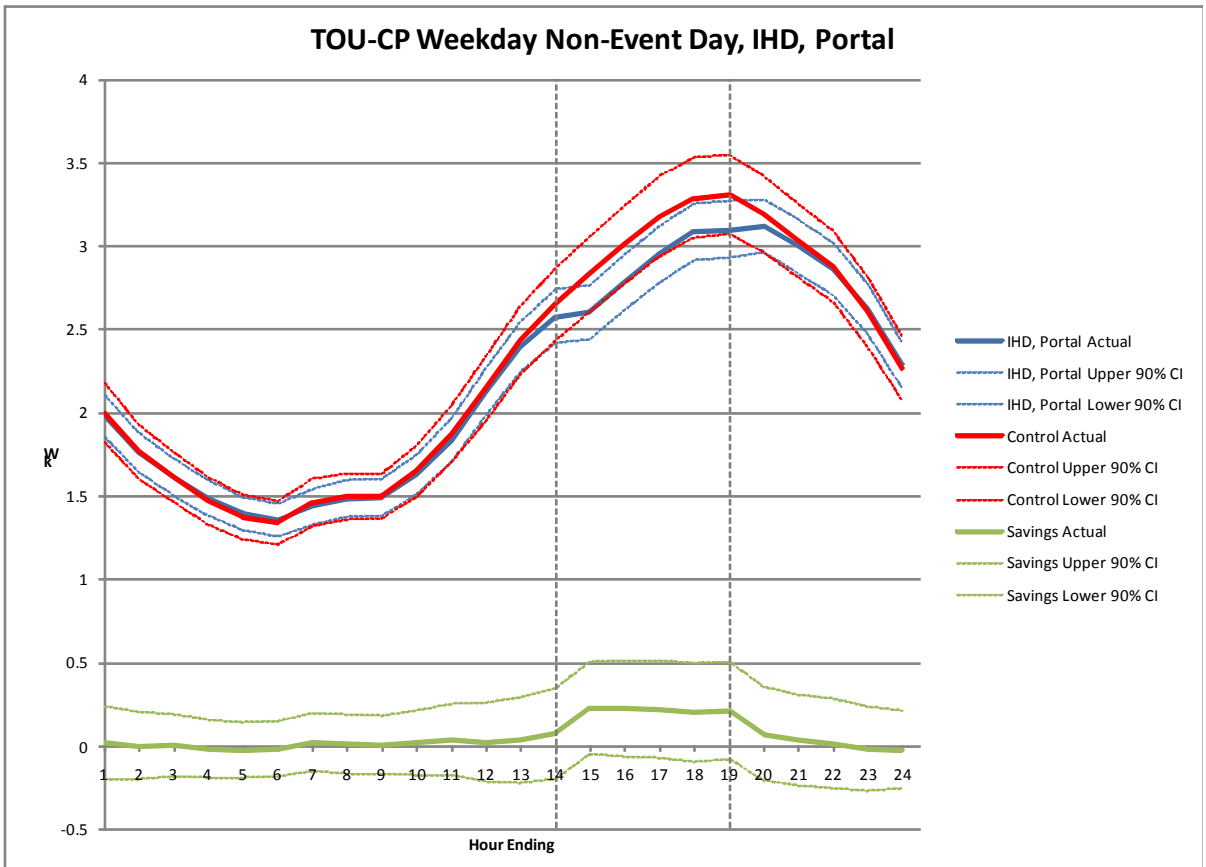


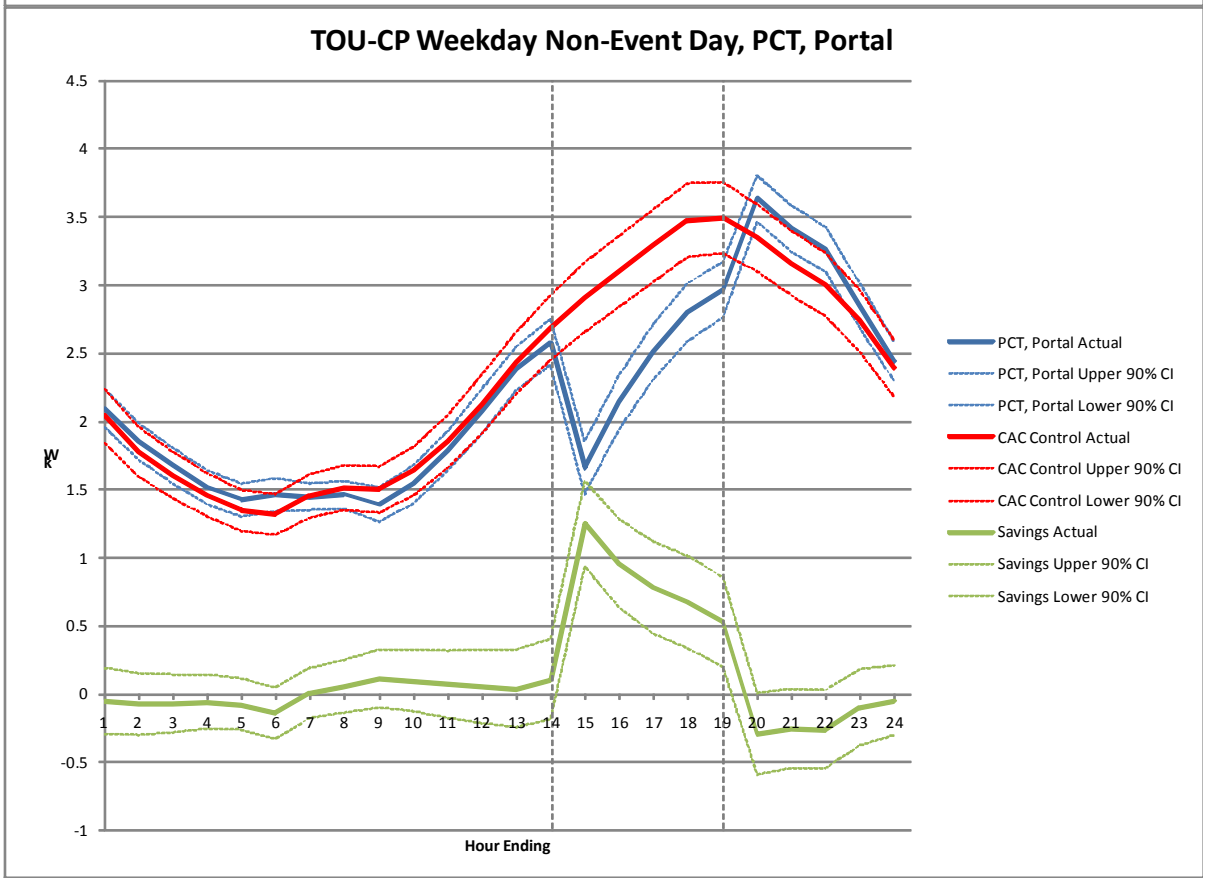

TOU-CP Weekend Non-Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

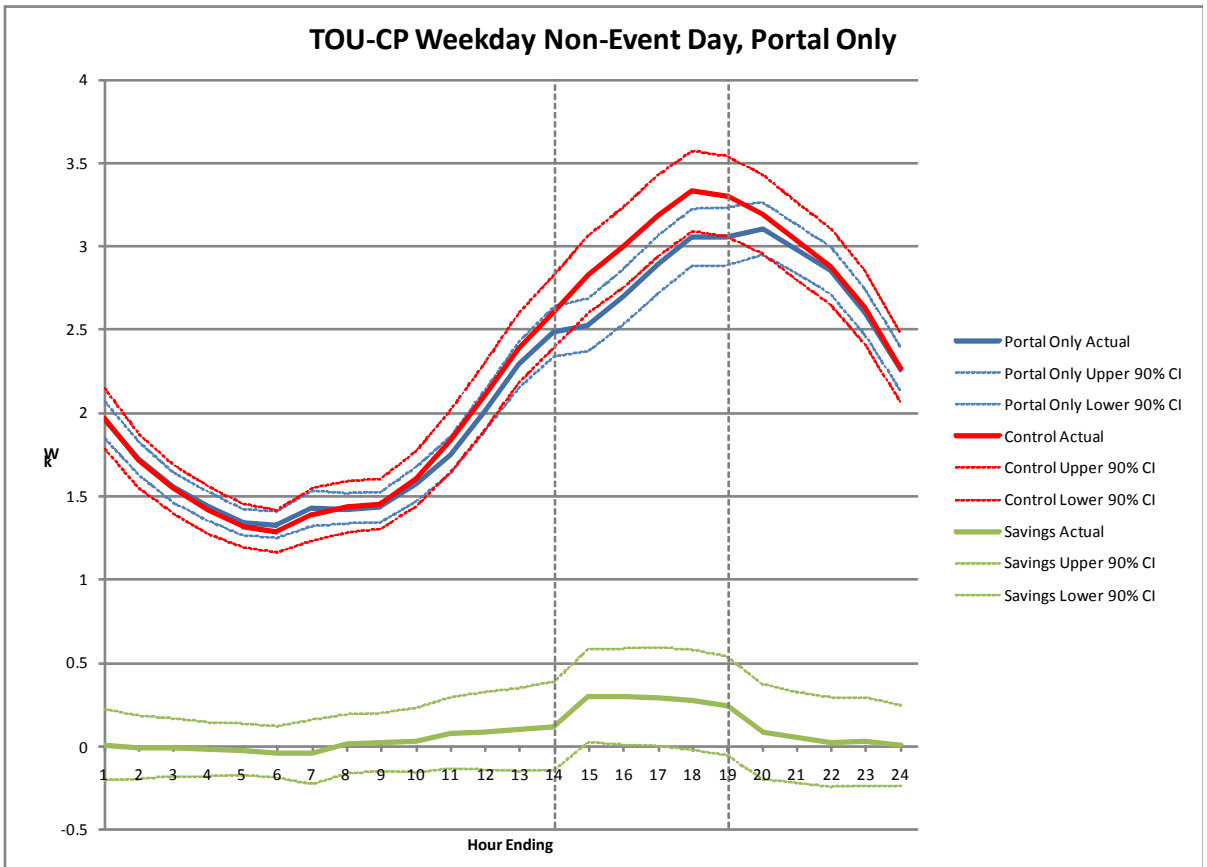

TOU-CP Weekend Non-Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

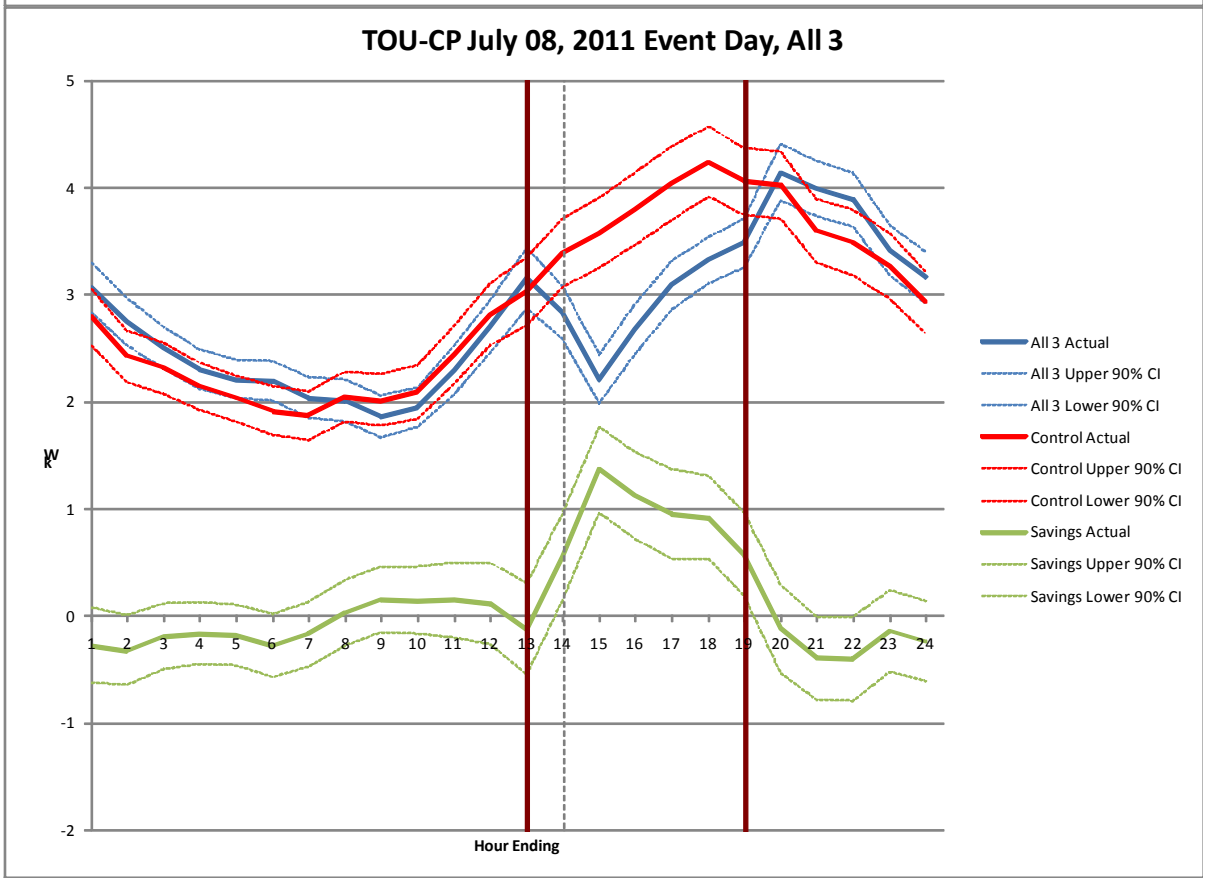

TOU-CP Weekend Non-Event Day, Portal Only
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

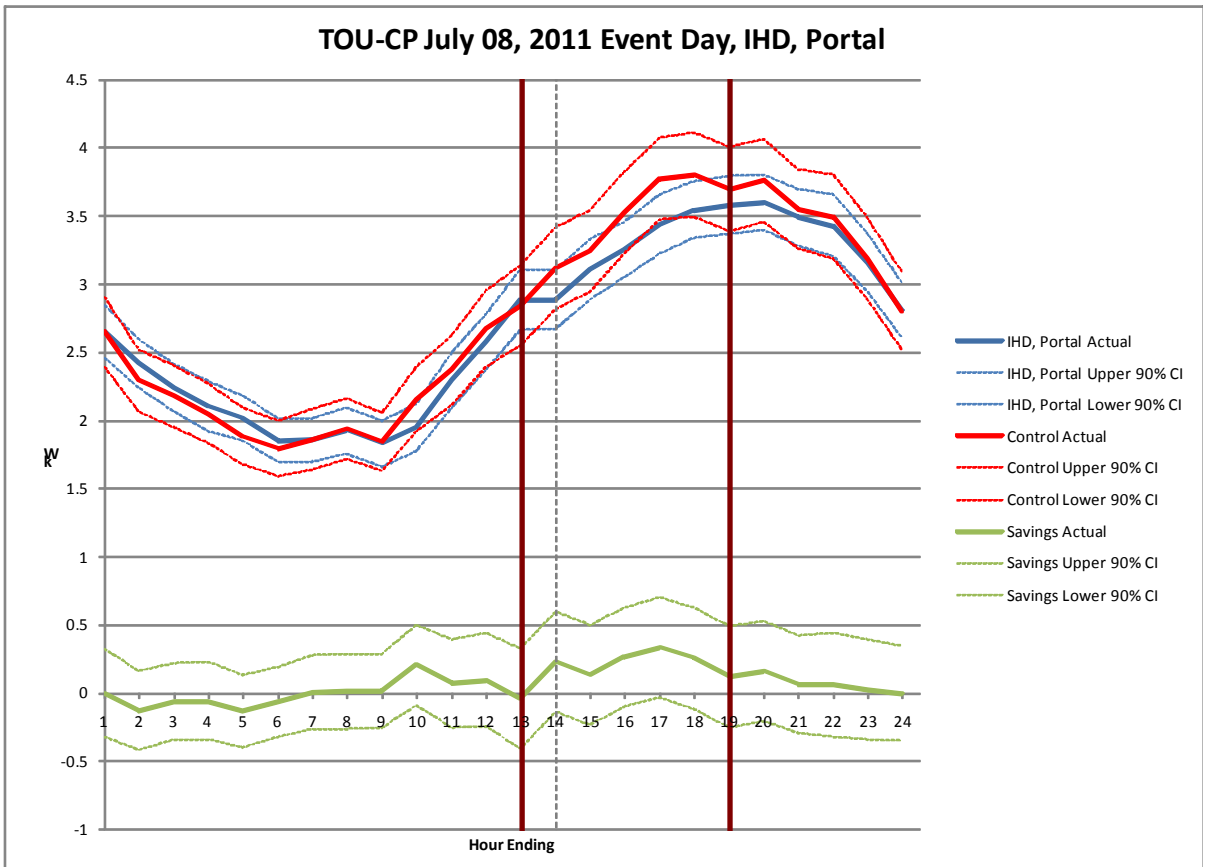

TOU-CP Weekday Non-Event Day, All 3
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
-0.5
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

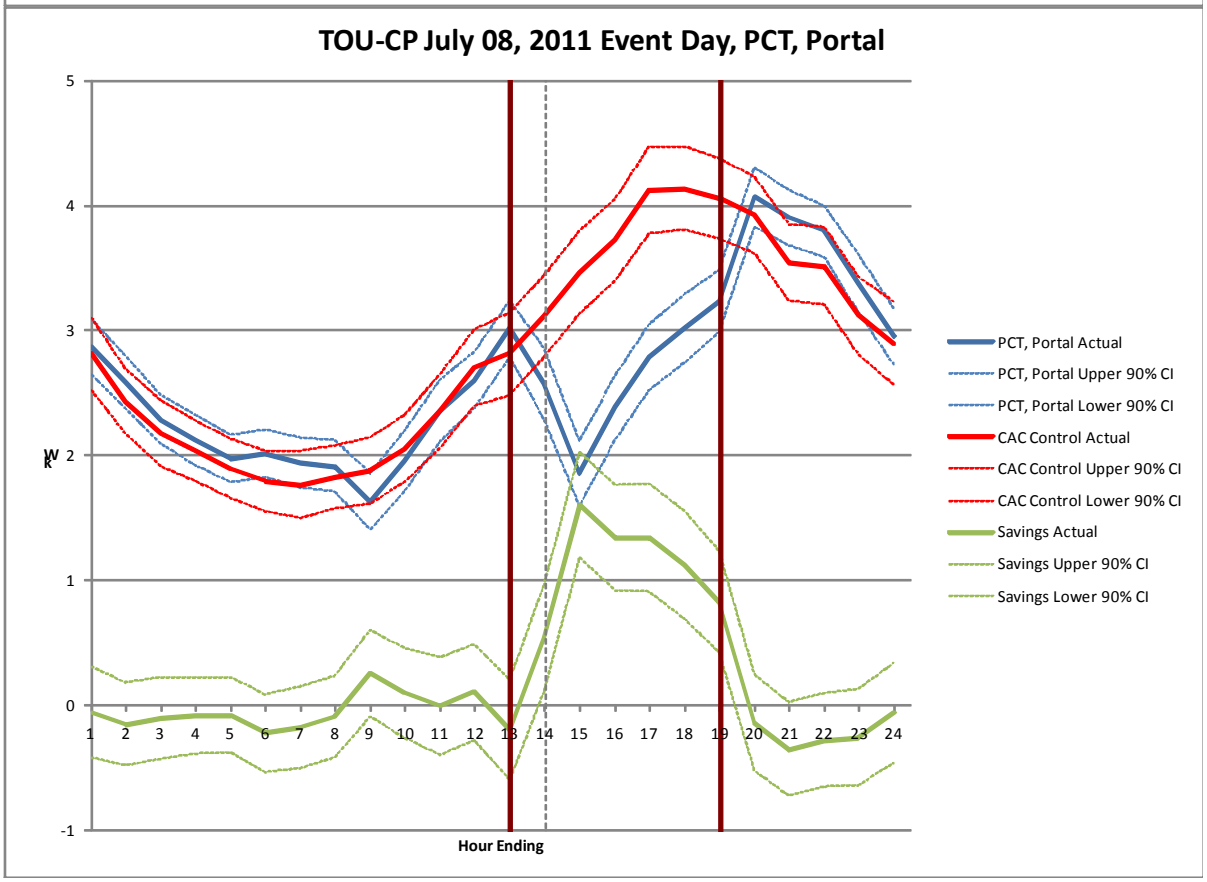

TOU-CP Weekday Non-Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

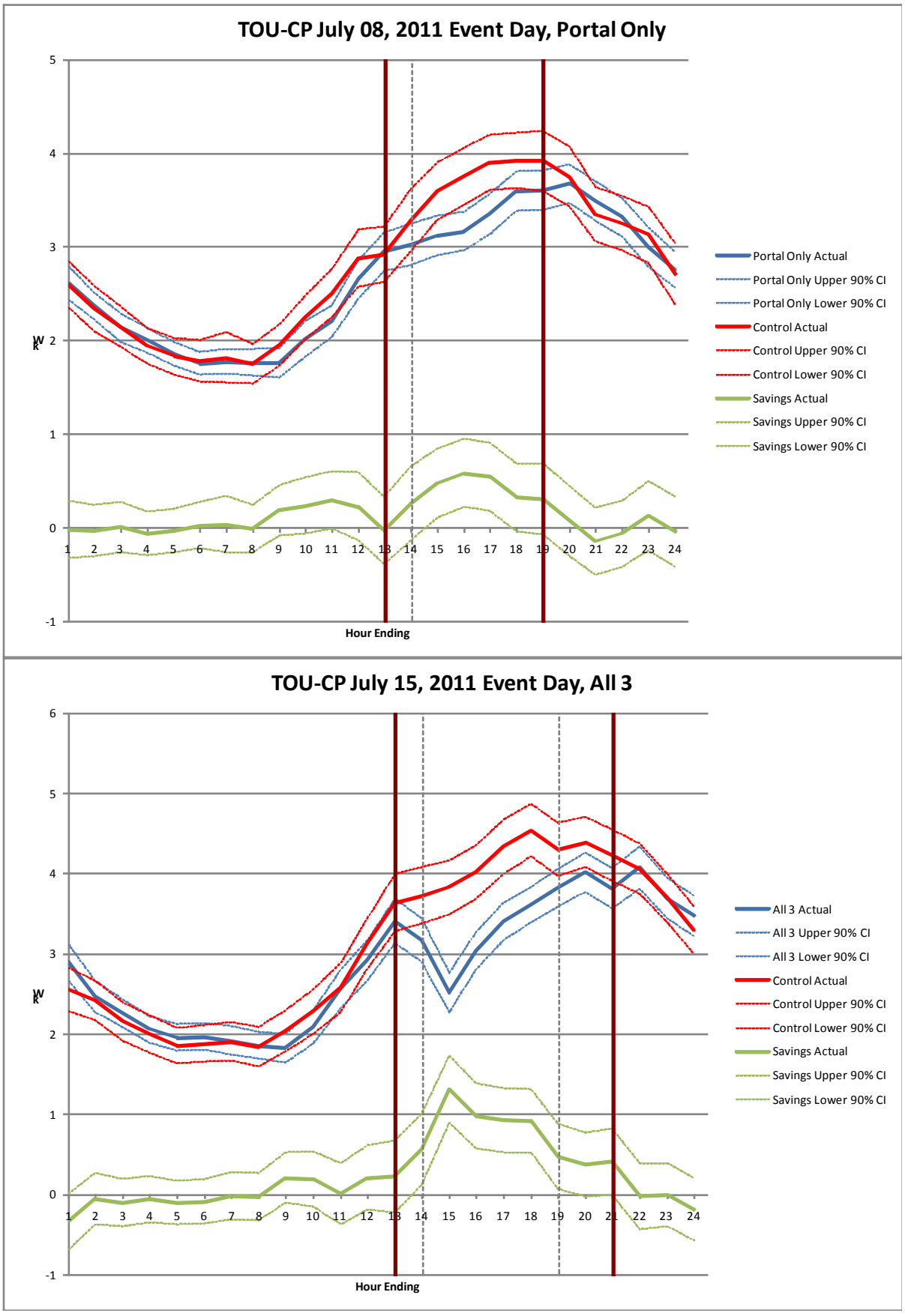

TOU-CP Weekday Non-Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

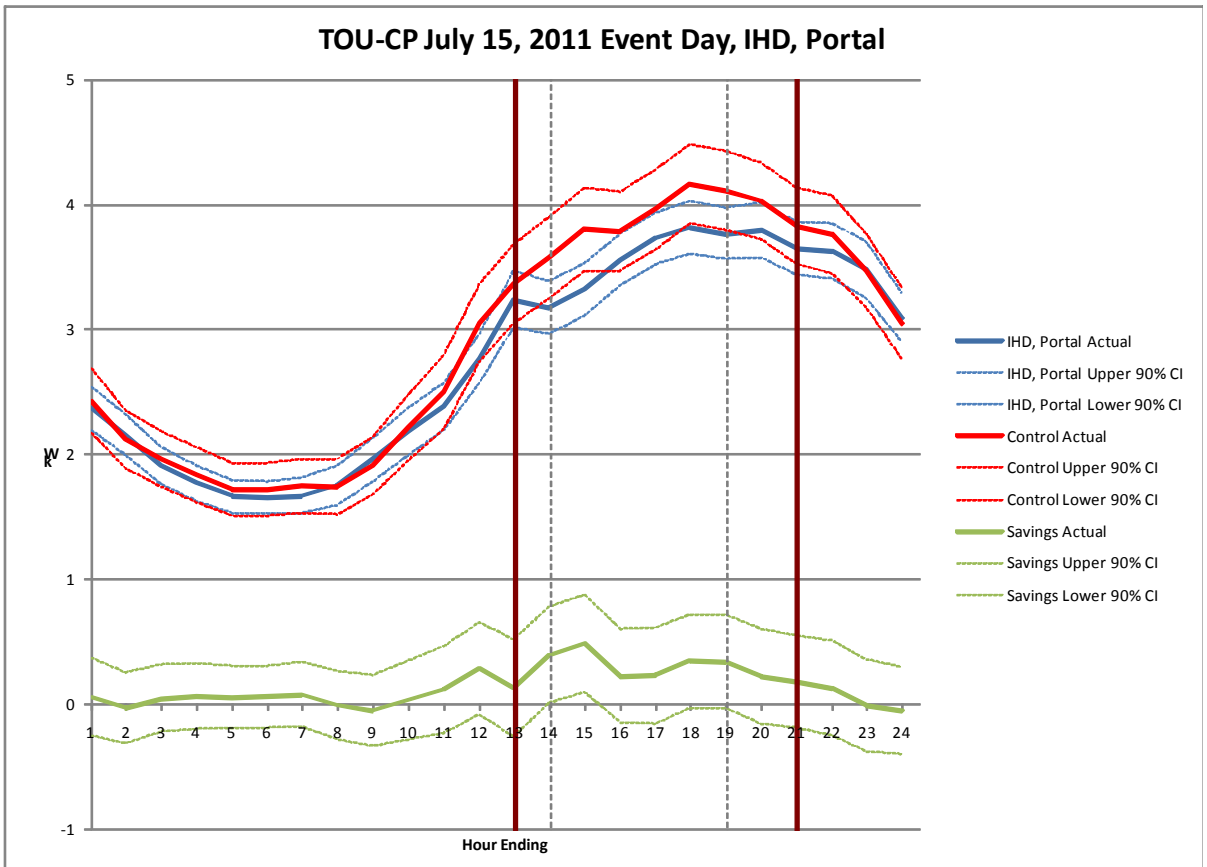

TOU-CP Weekday Non-Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

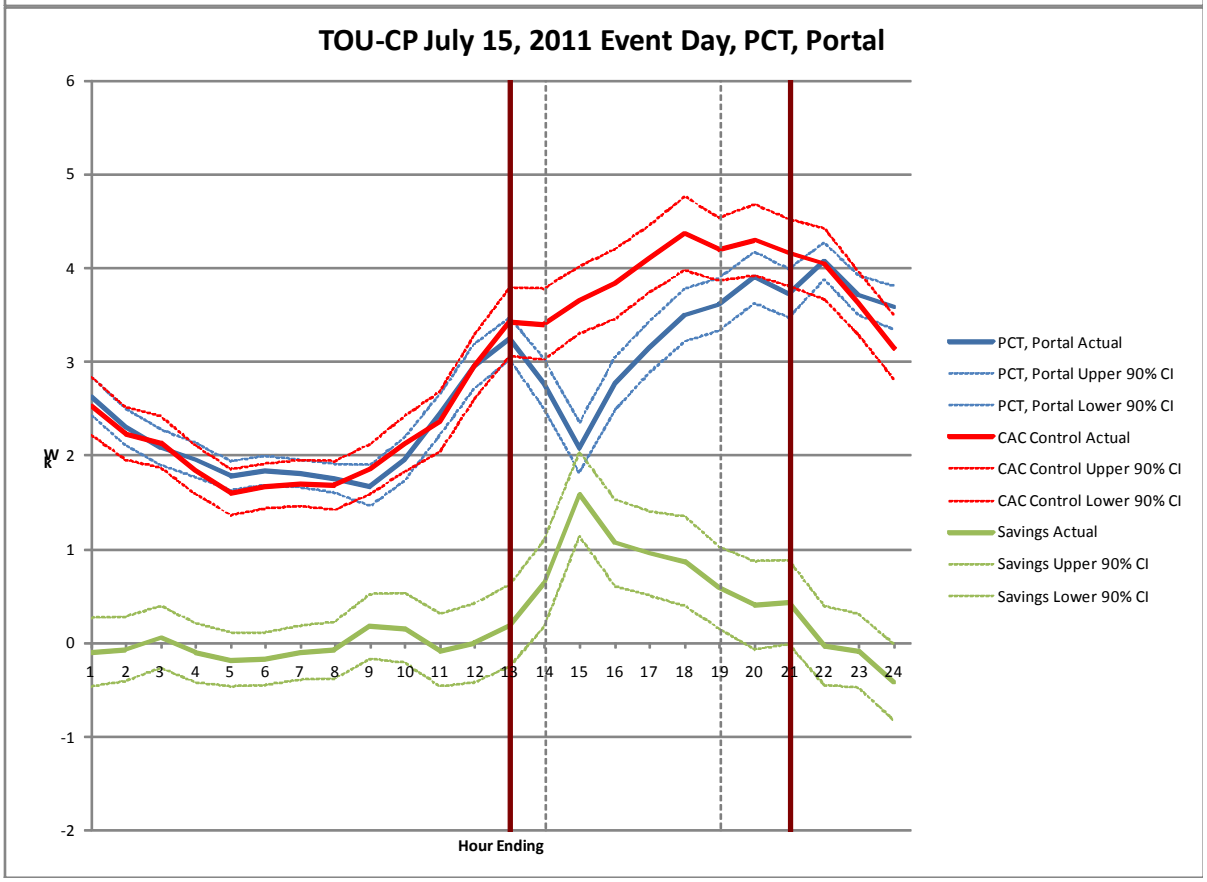

TOU-CP July 08, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

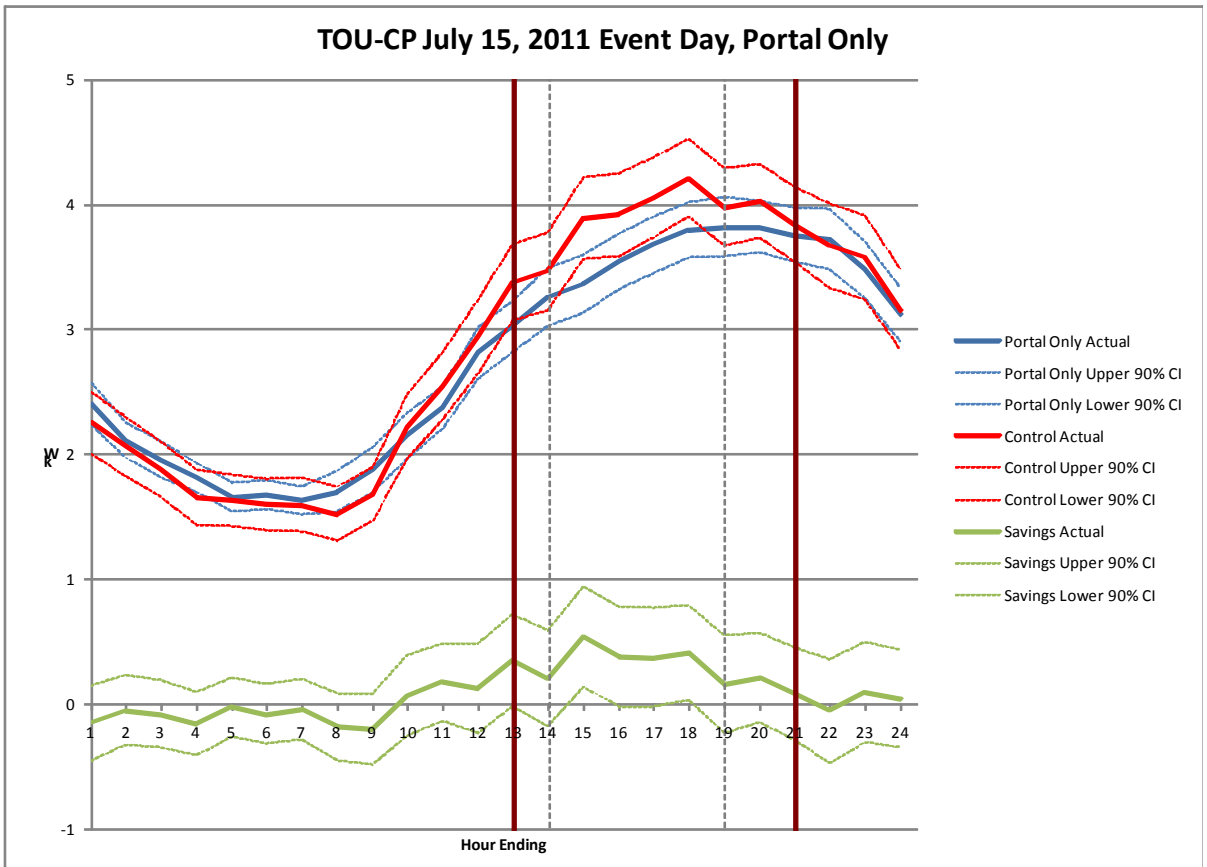

TOU-CP July 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

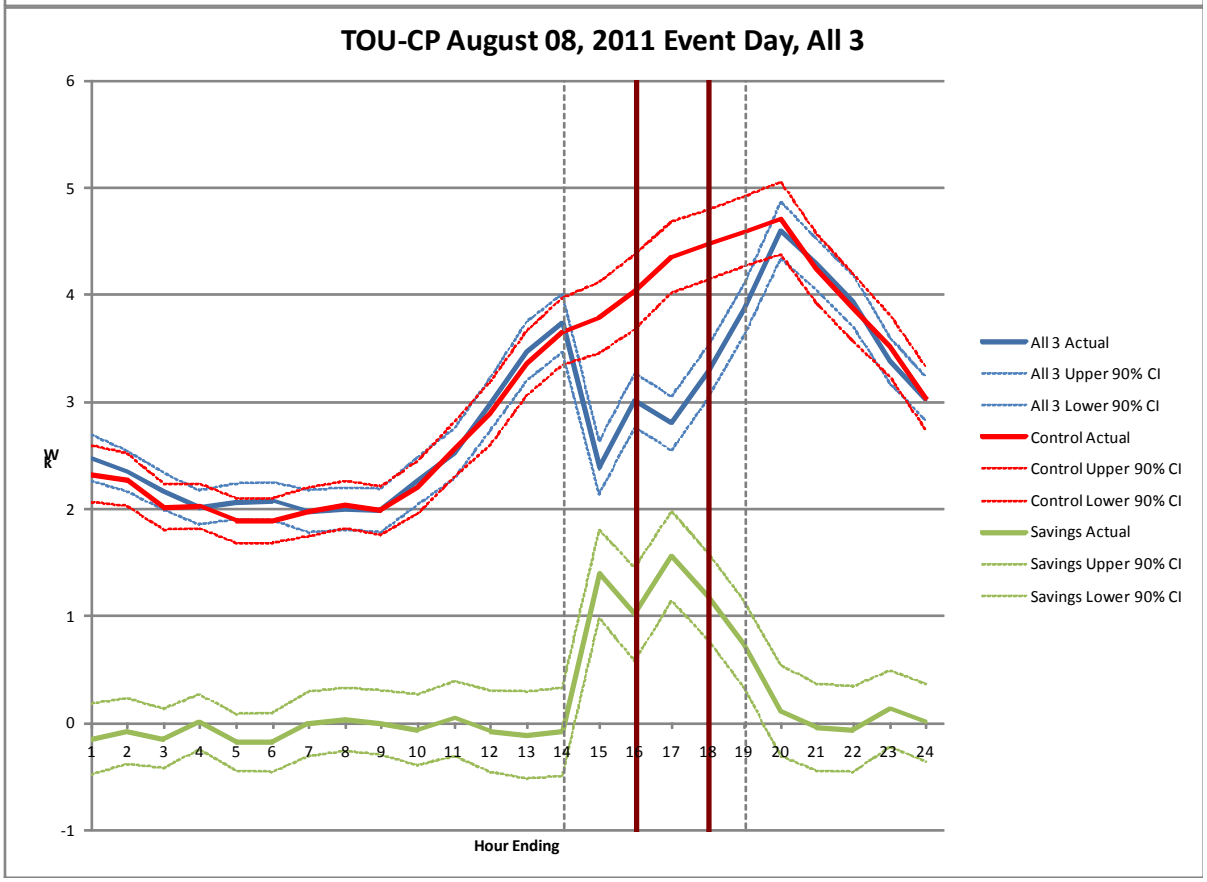

TOU-CP July 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

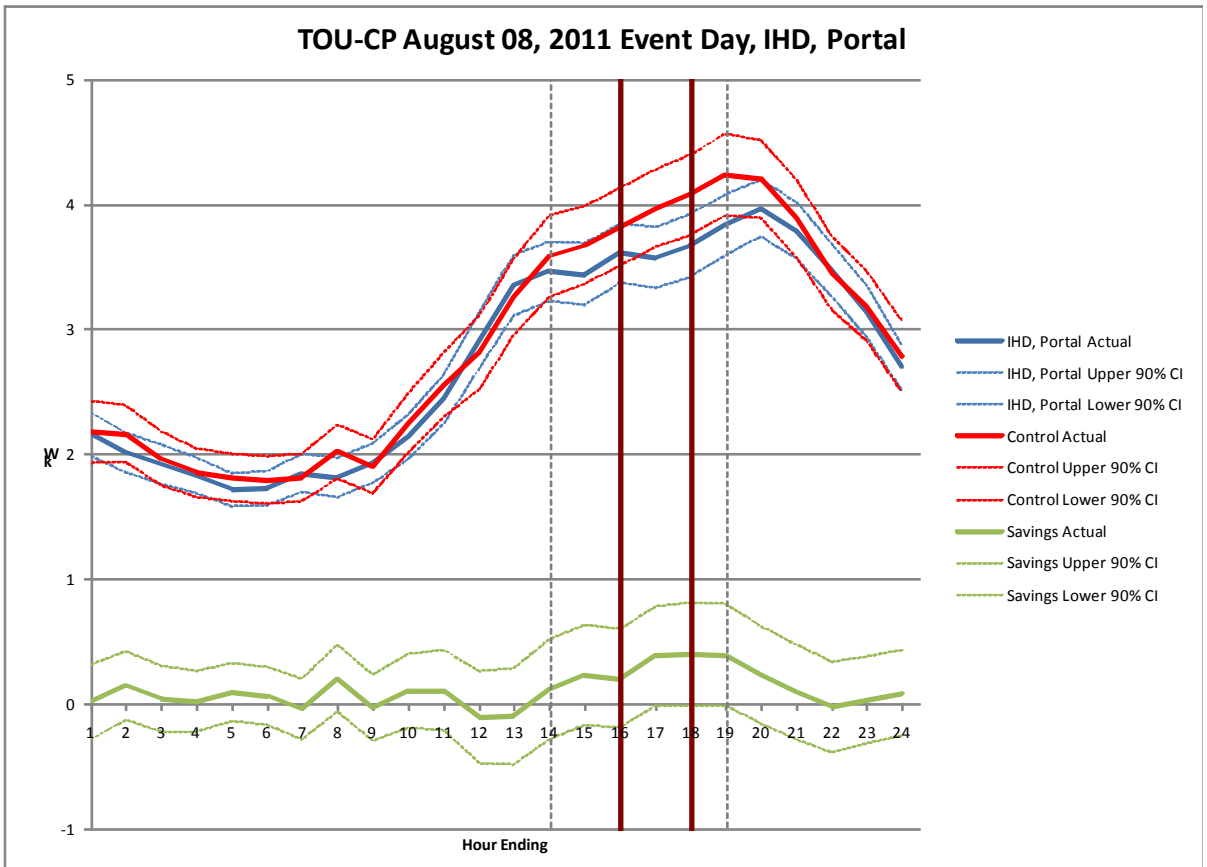

TOU-CP July 08, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
TOU-CP July 15, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

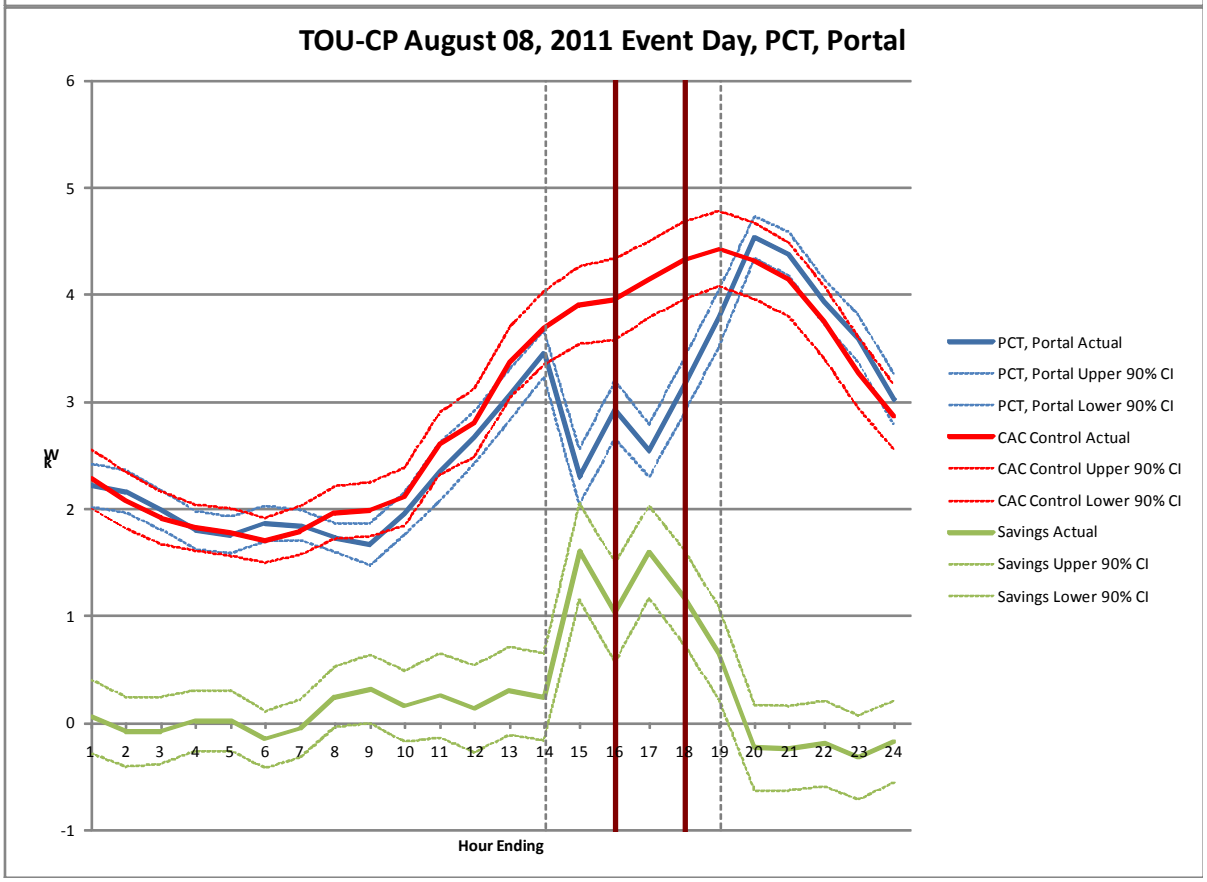

TOU-CP July 15, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

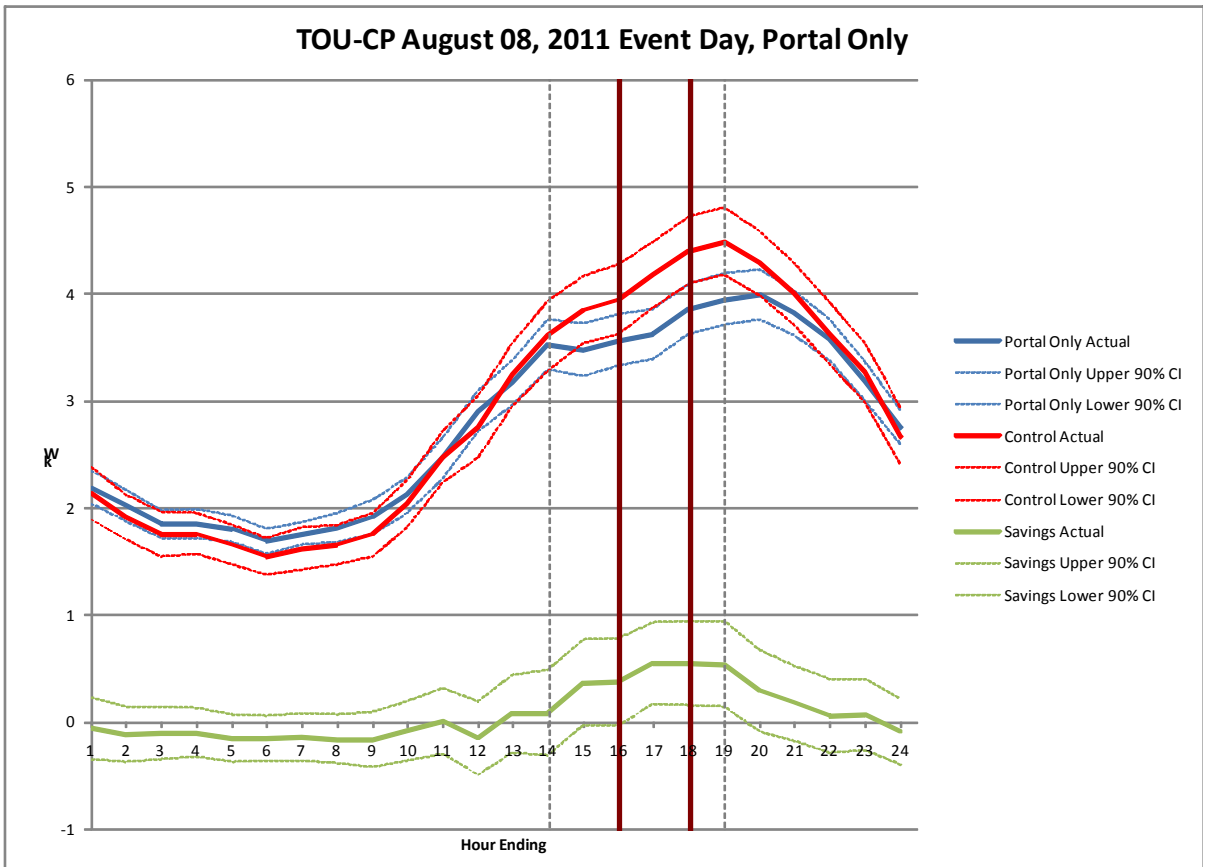

TOU-CP July 15, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

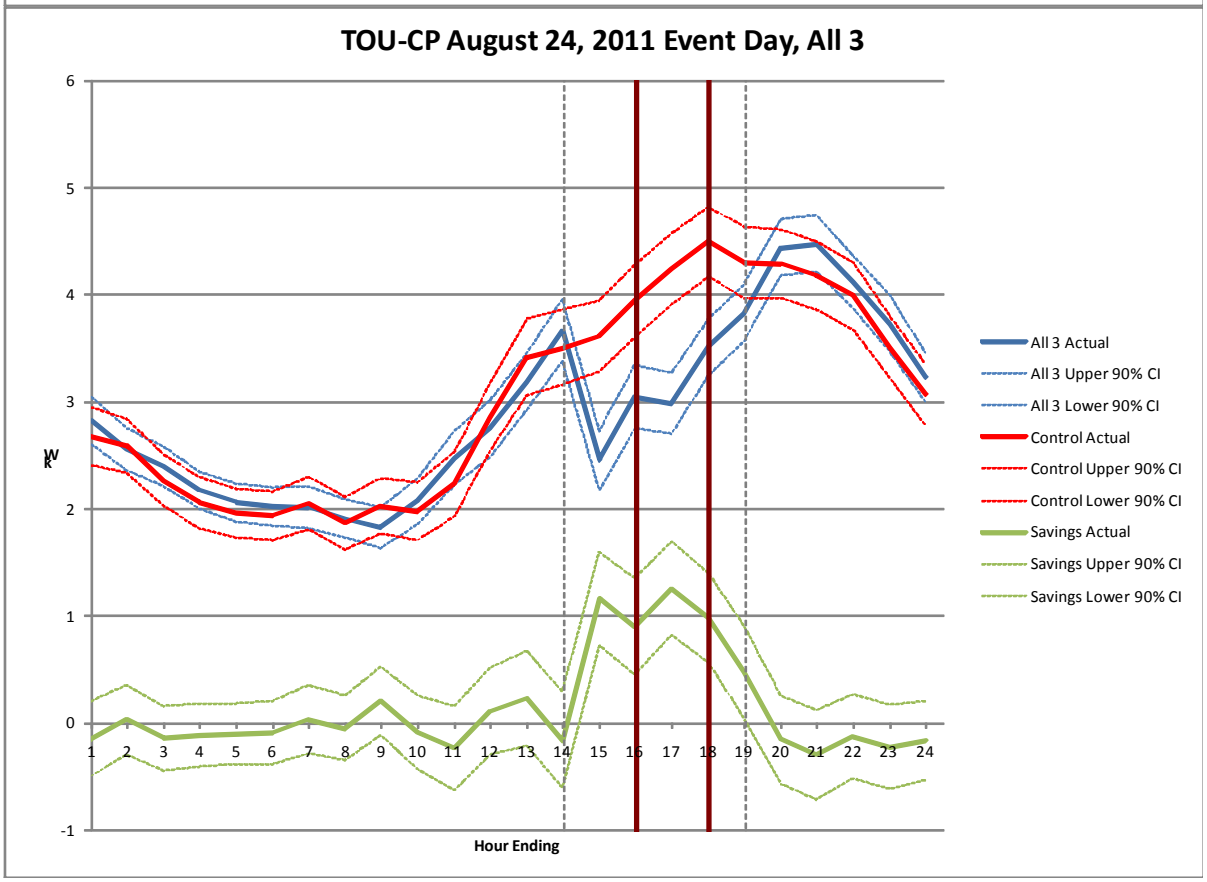

TOU-CP July 15, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

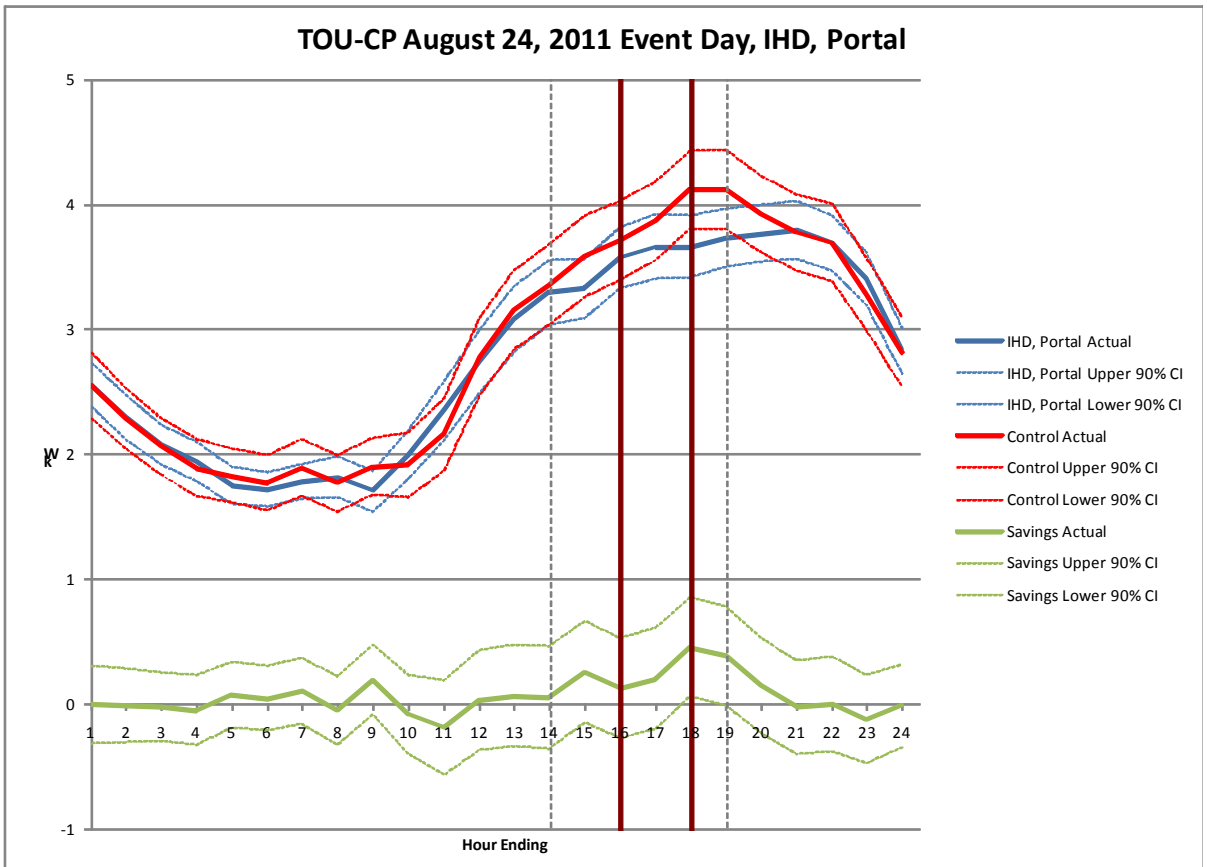

TOU-CP August 08, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

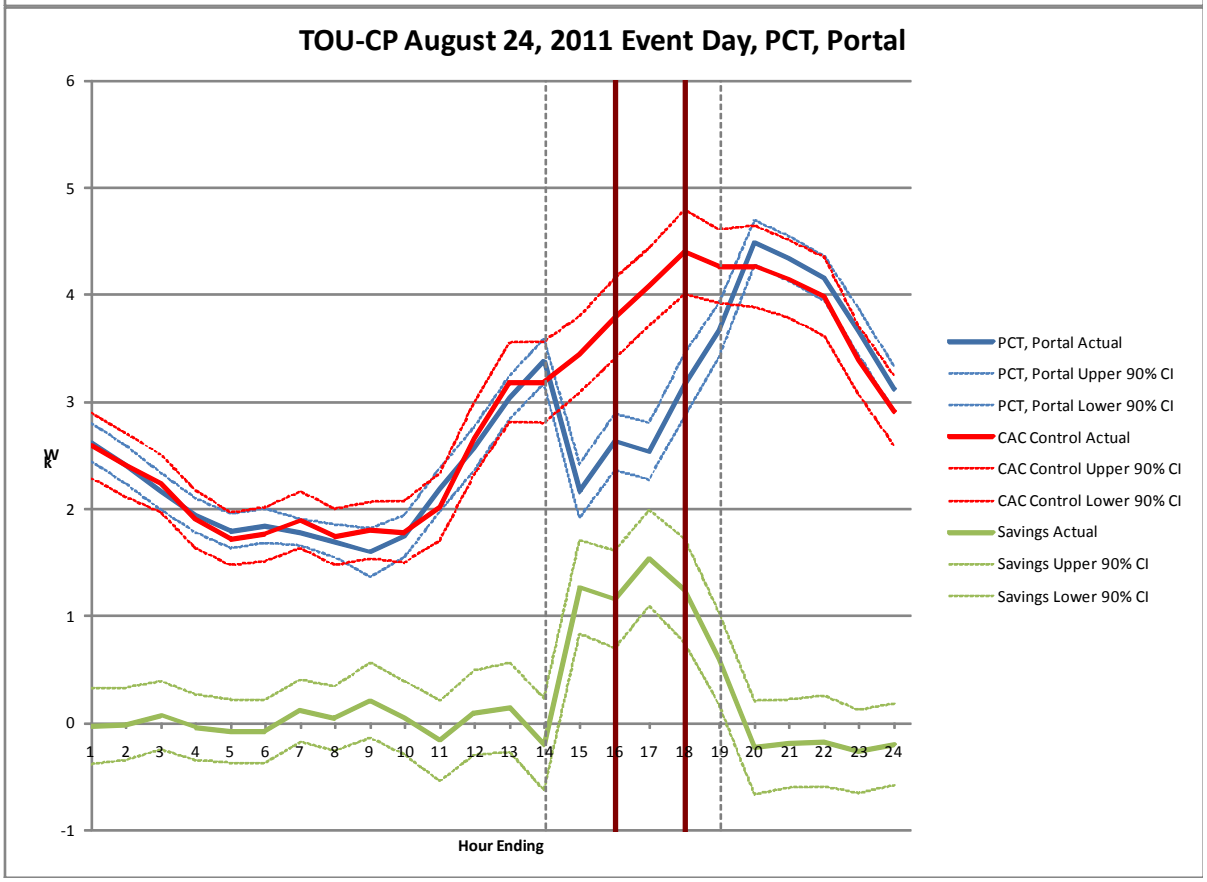

TOU-CP August 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

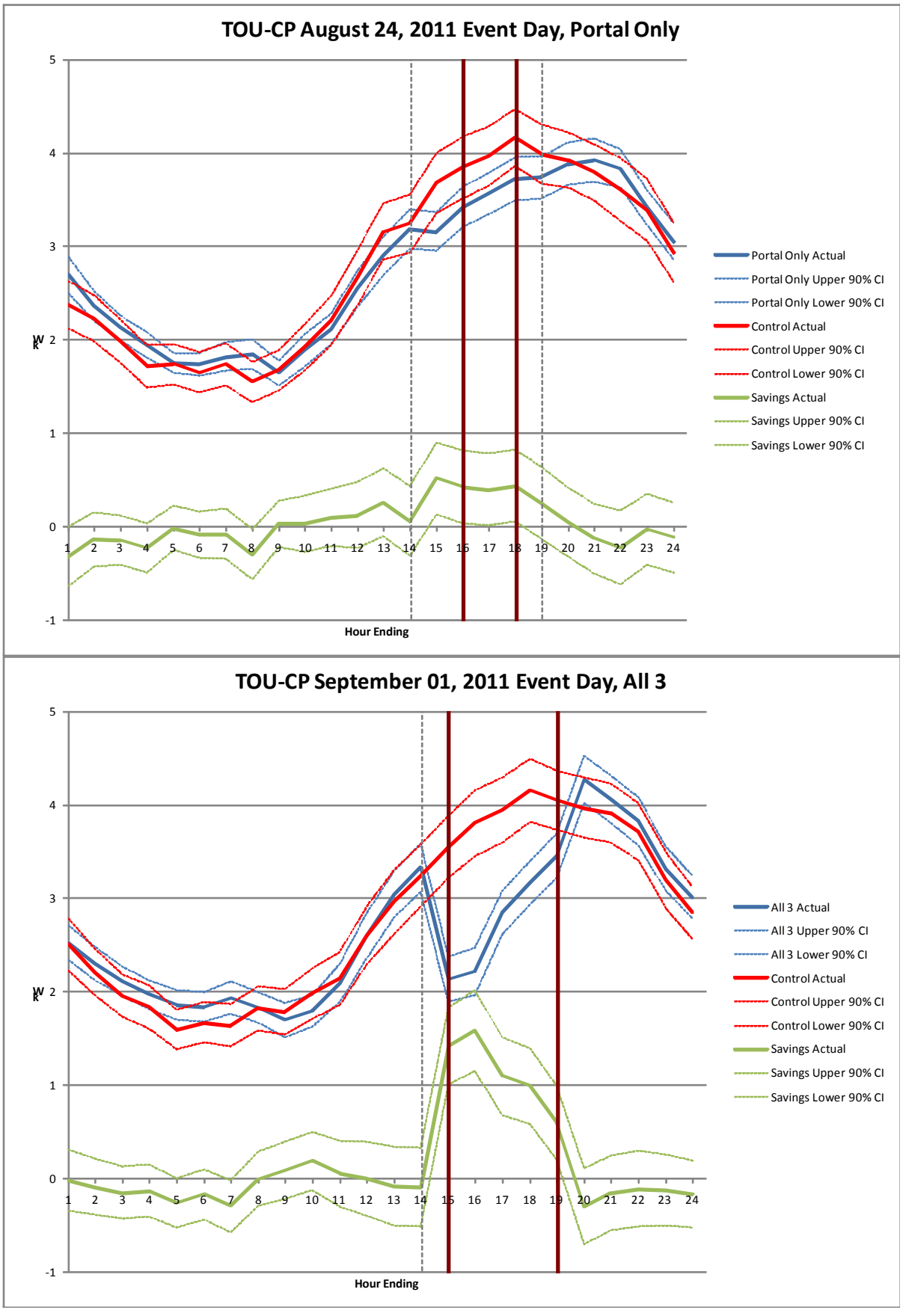

TOU-CP August 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 08, 2011 Event Day, Portal Only
6
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 24, 2011 Event Day, All 3
6
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 24, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 24, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP August 24, 2011 Event Day, Portal Only
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kW
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Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
TOU-CP September 01, 2011 Event Day, All 3
5
4
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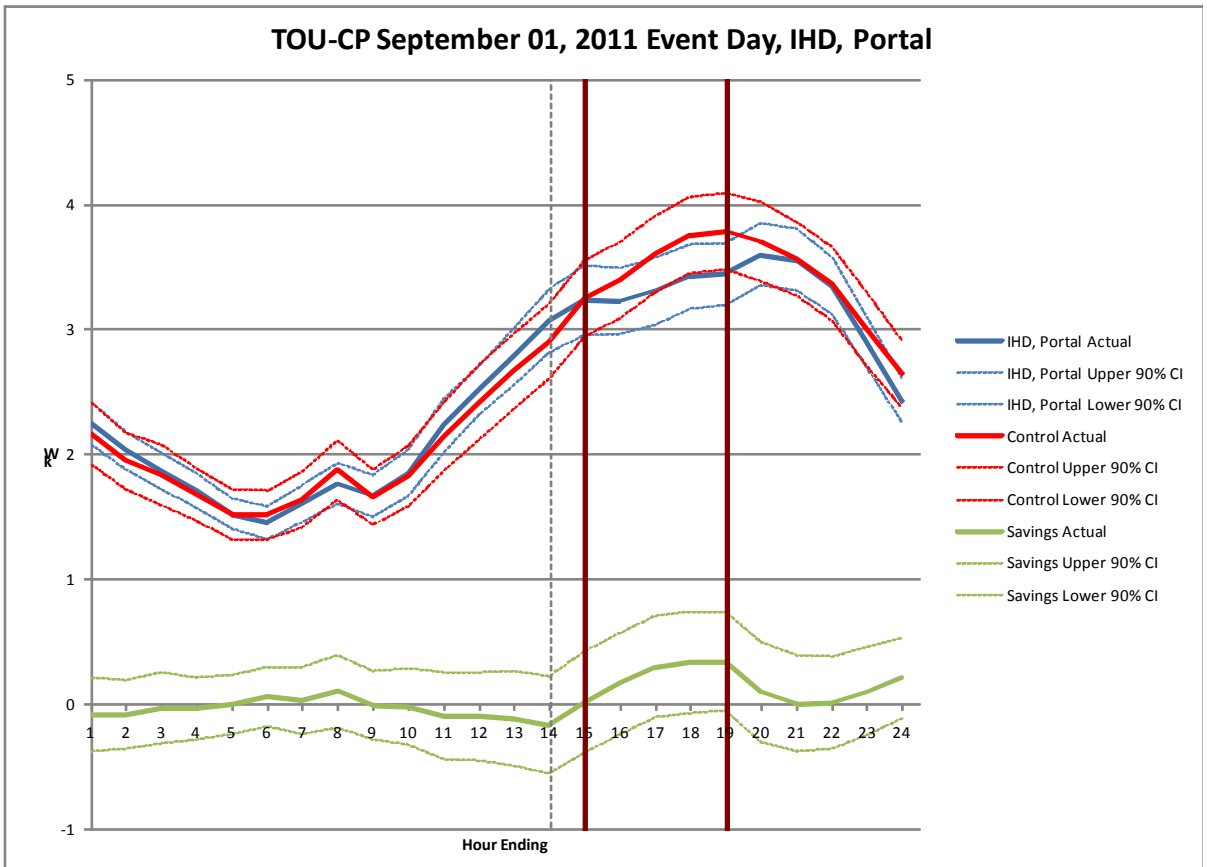
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 01, 2011 Event Day, IHD, Portal
kW
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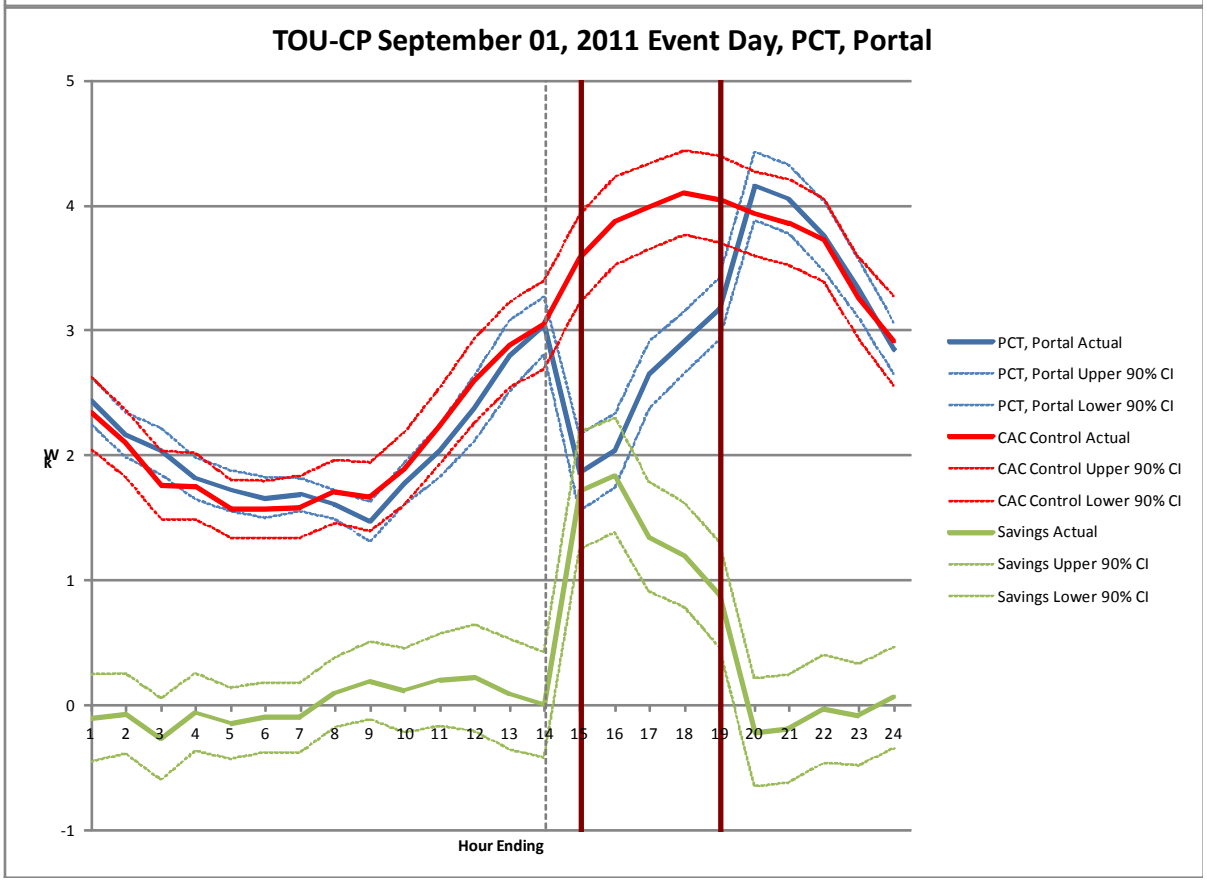
-1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 01, 2011 Event Day, PCT, Portal
kW
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-1
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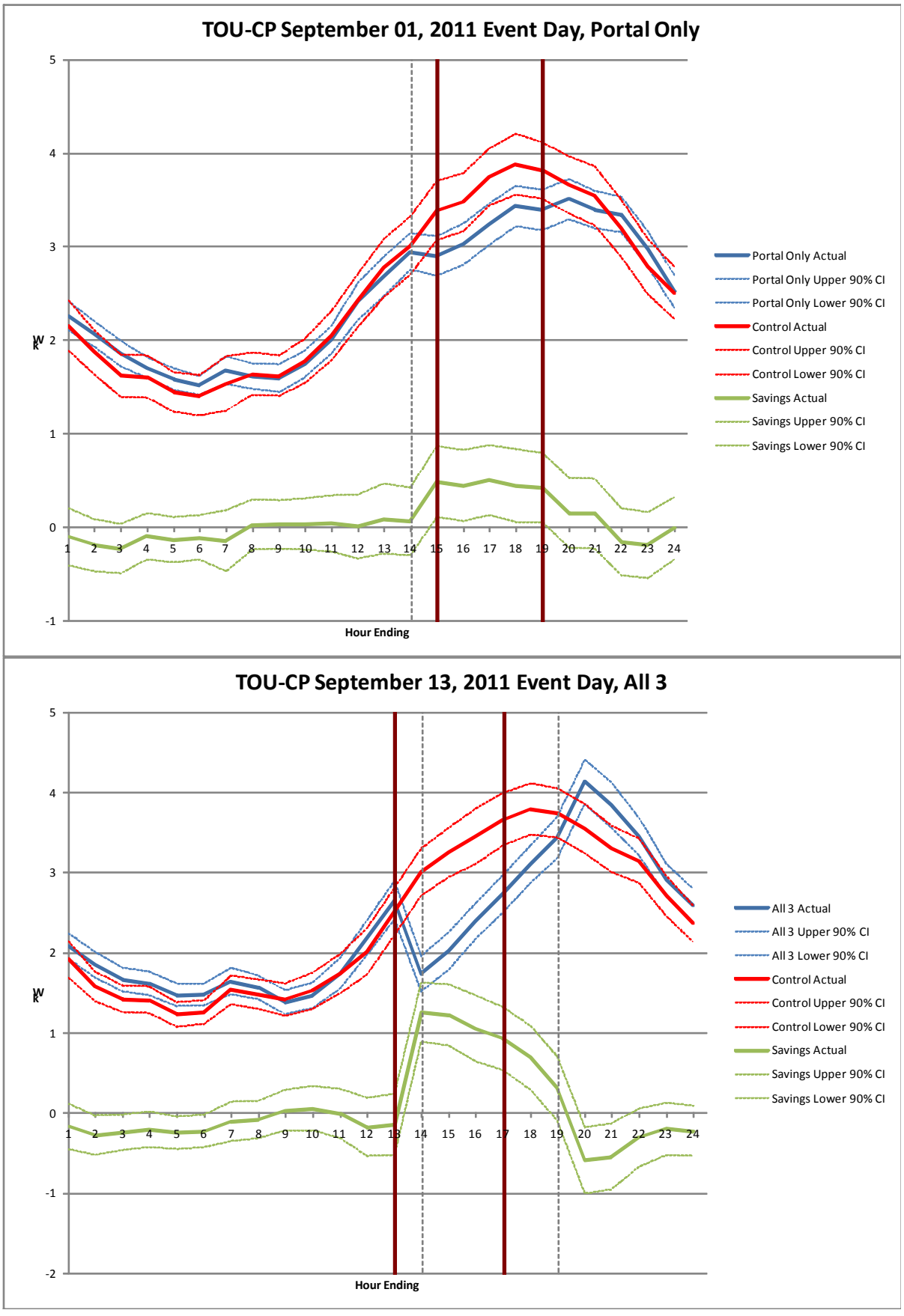
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 01, 2011 Event Day, Portal Only
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kW
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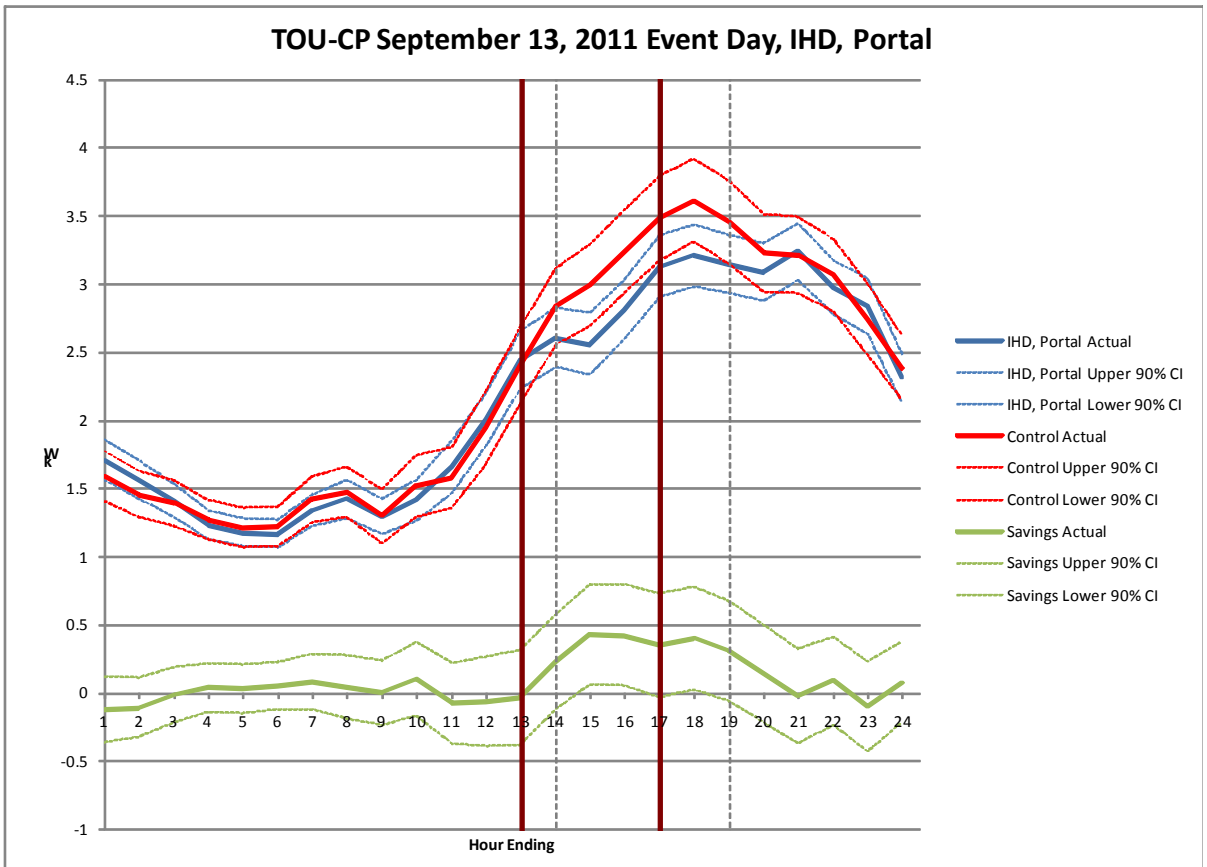
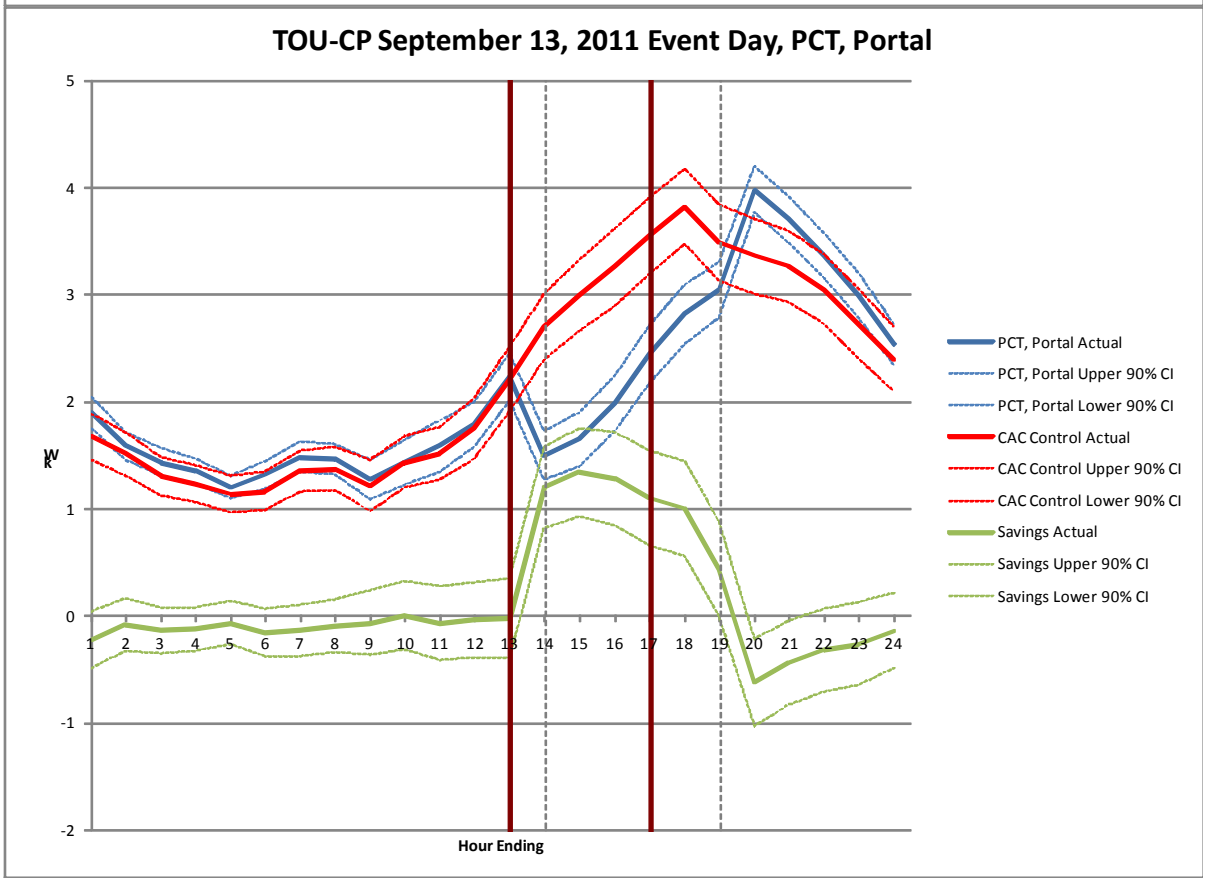
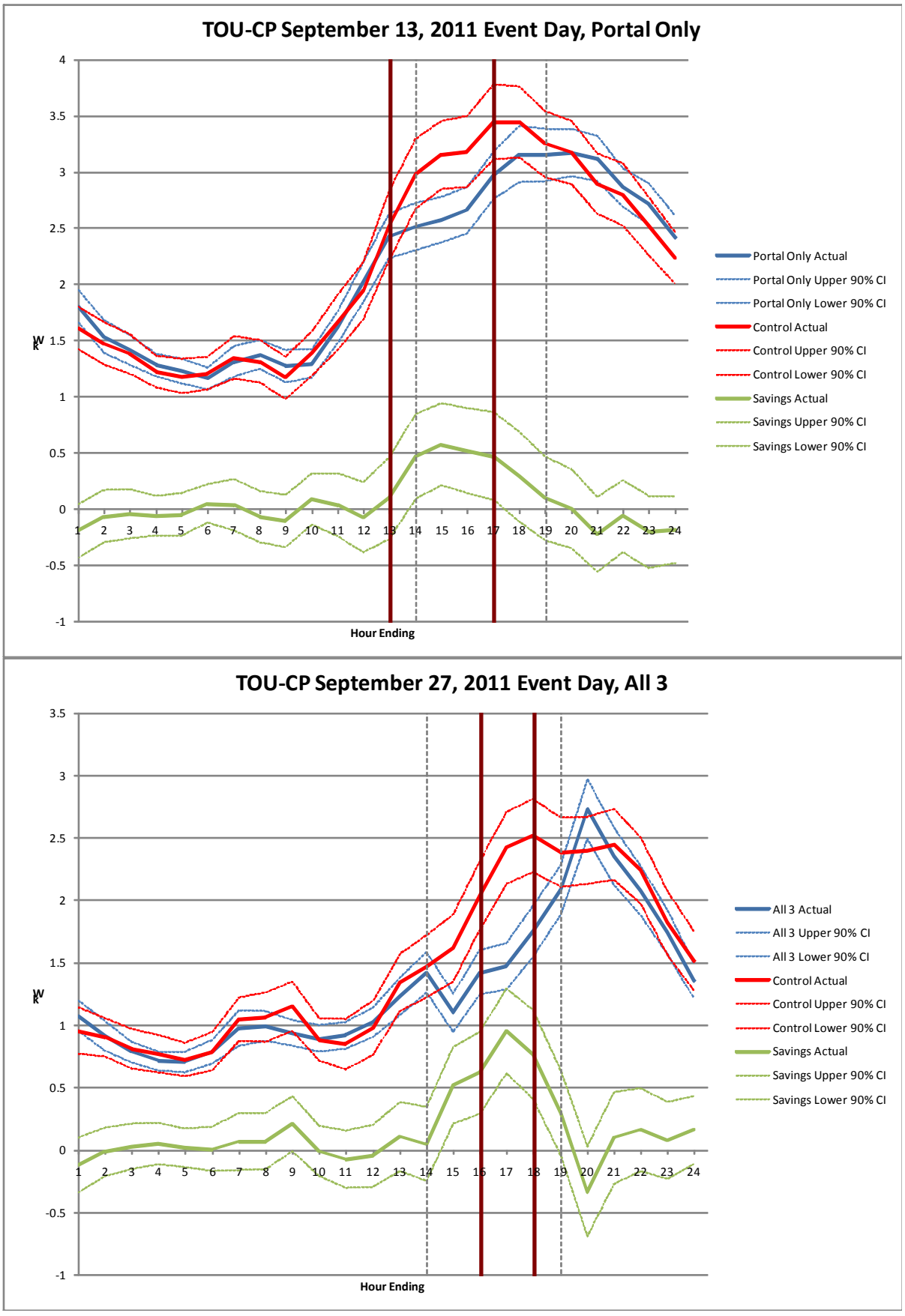
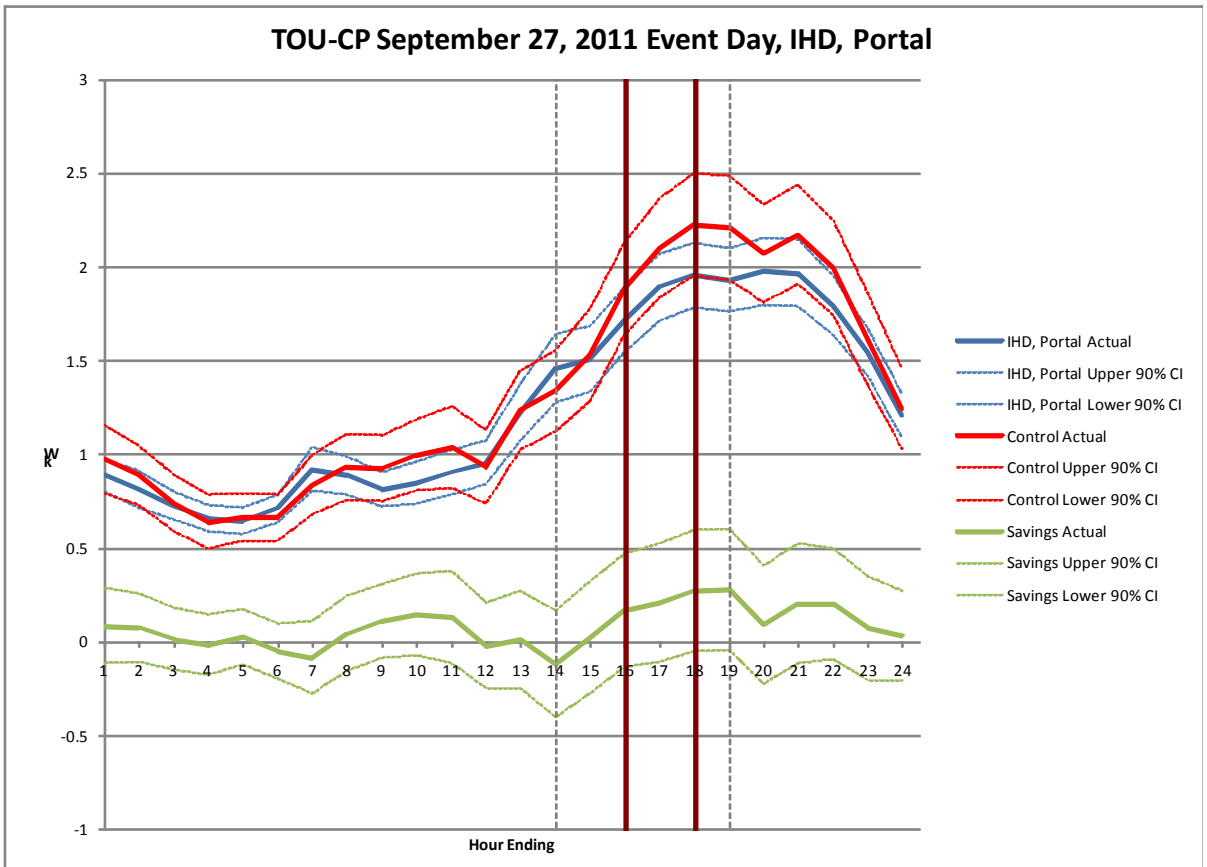
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
TOU-CP September 13, 2011 Event Day, All 3
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 13, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 13, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 13, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
TOU-CP September 27, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 27, 2011 Event Day, IHD, Portal
kW
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2.5
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1.5
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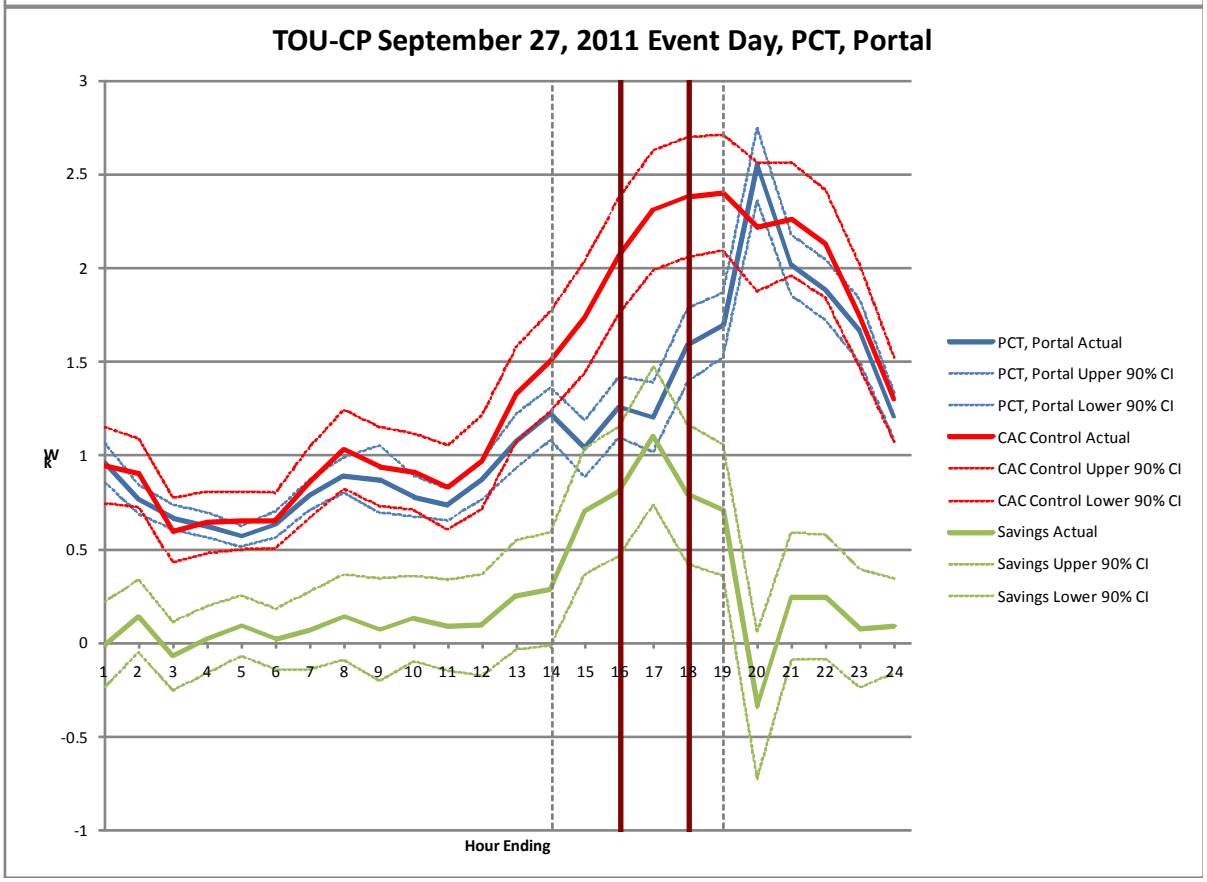
-0.5
-1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 27, 2011 Event Day, PCT, Portal
kW
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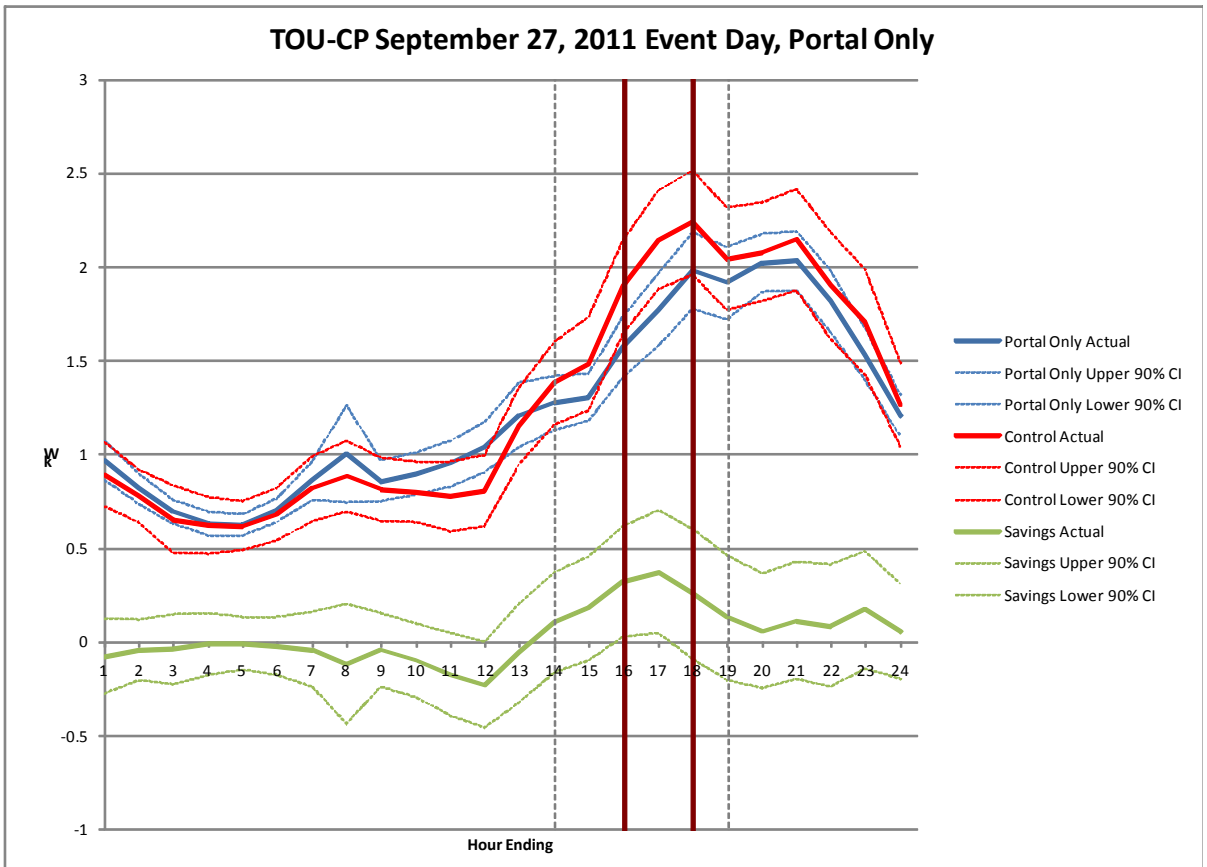
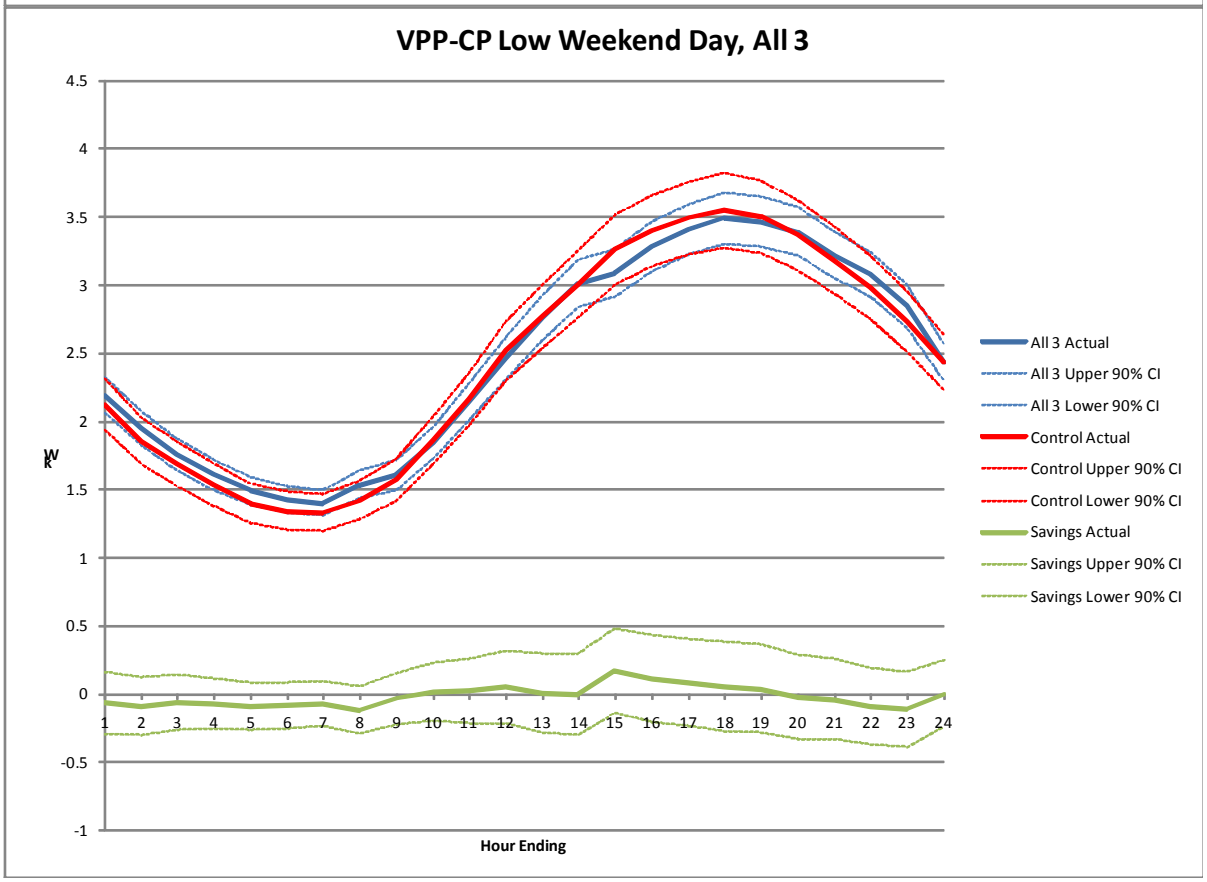
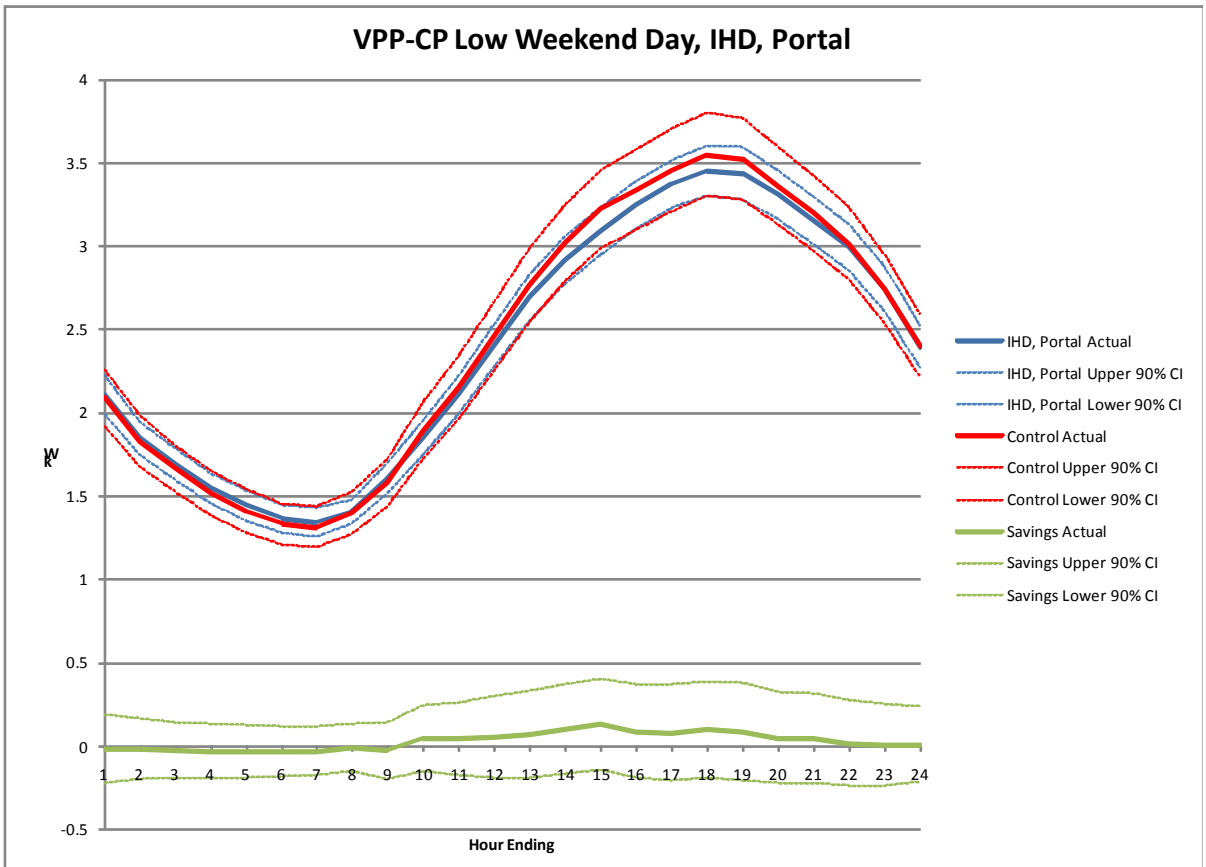
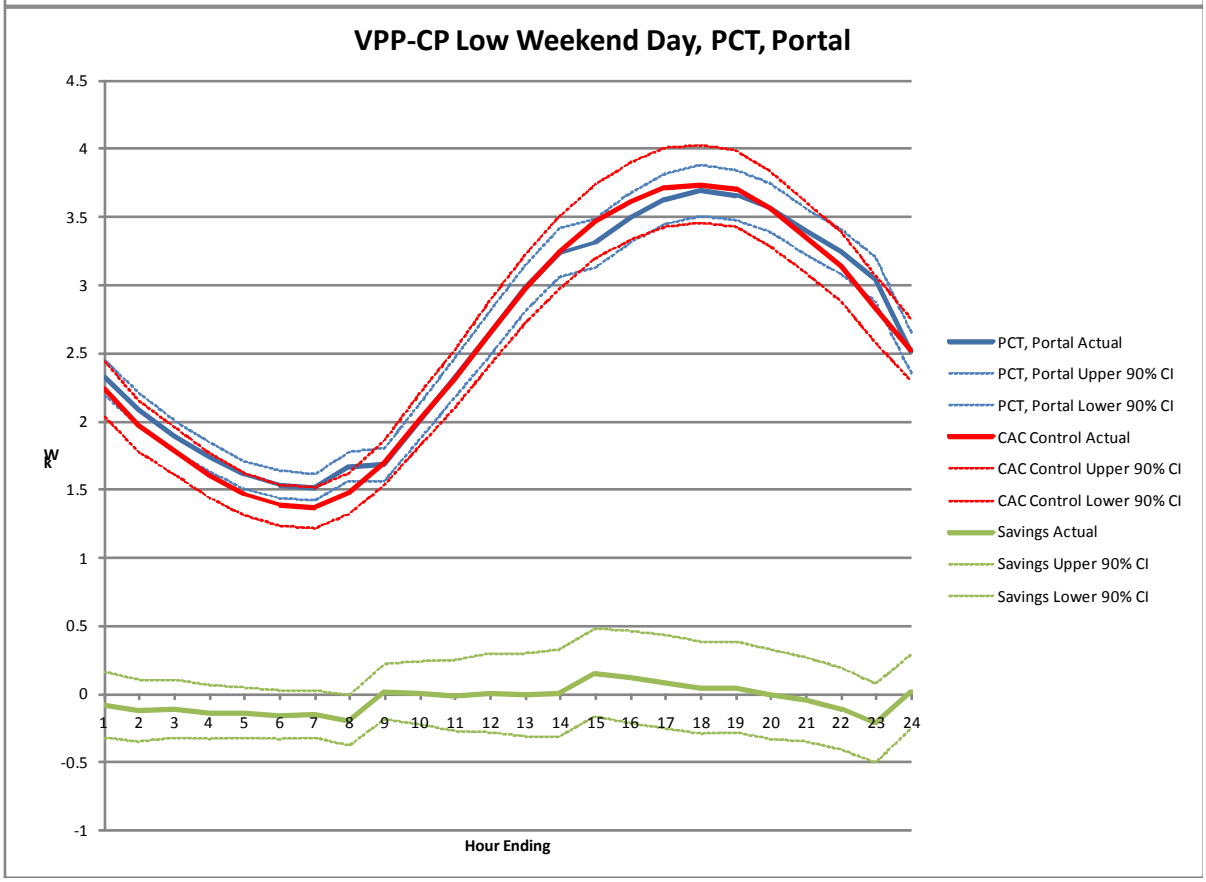
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 27, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekend Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekend Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekend Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
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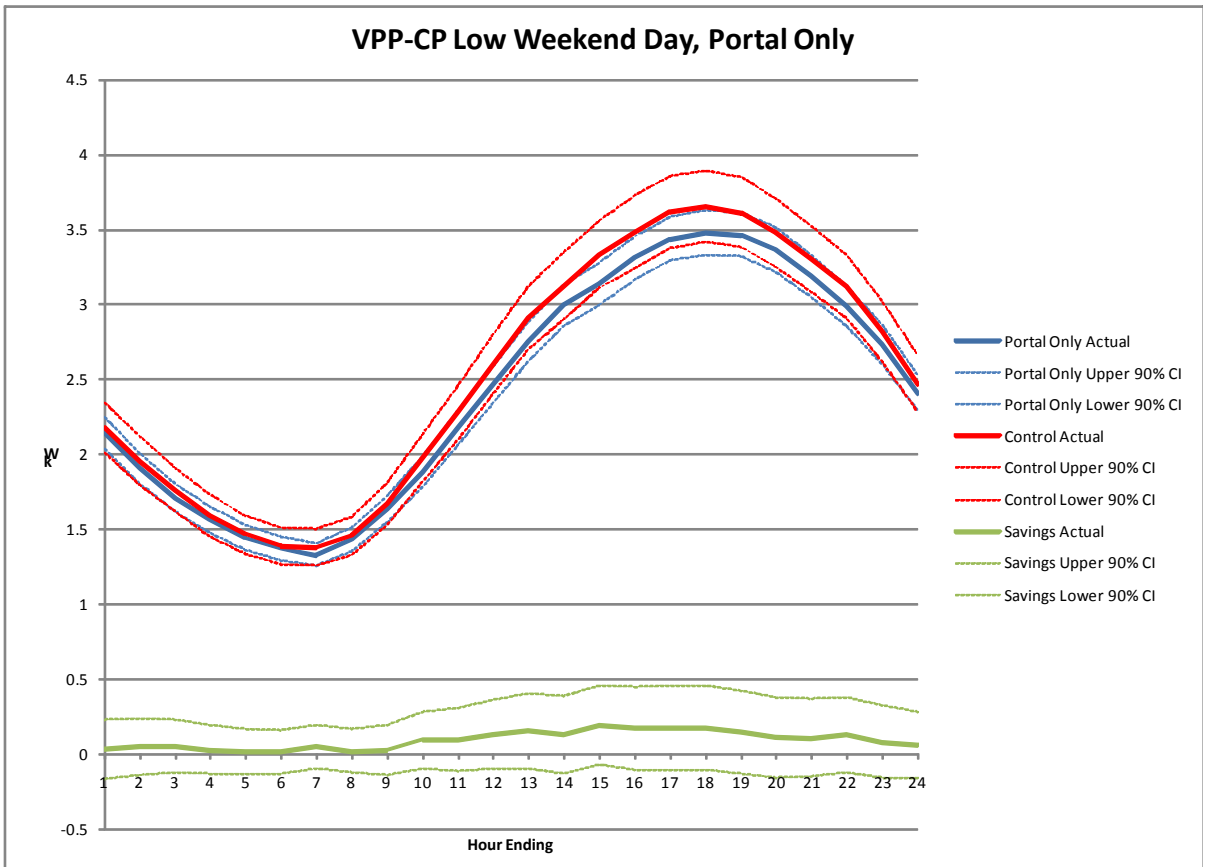
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekend Day, Portal Only
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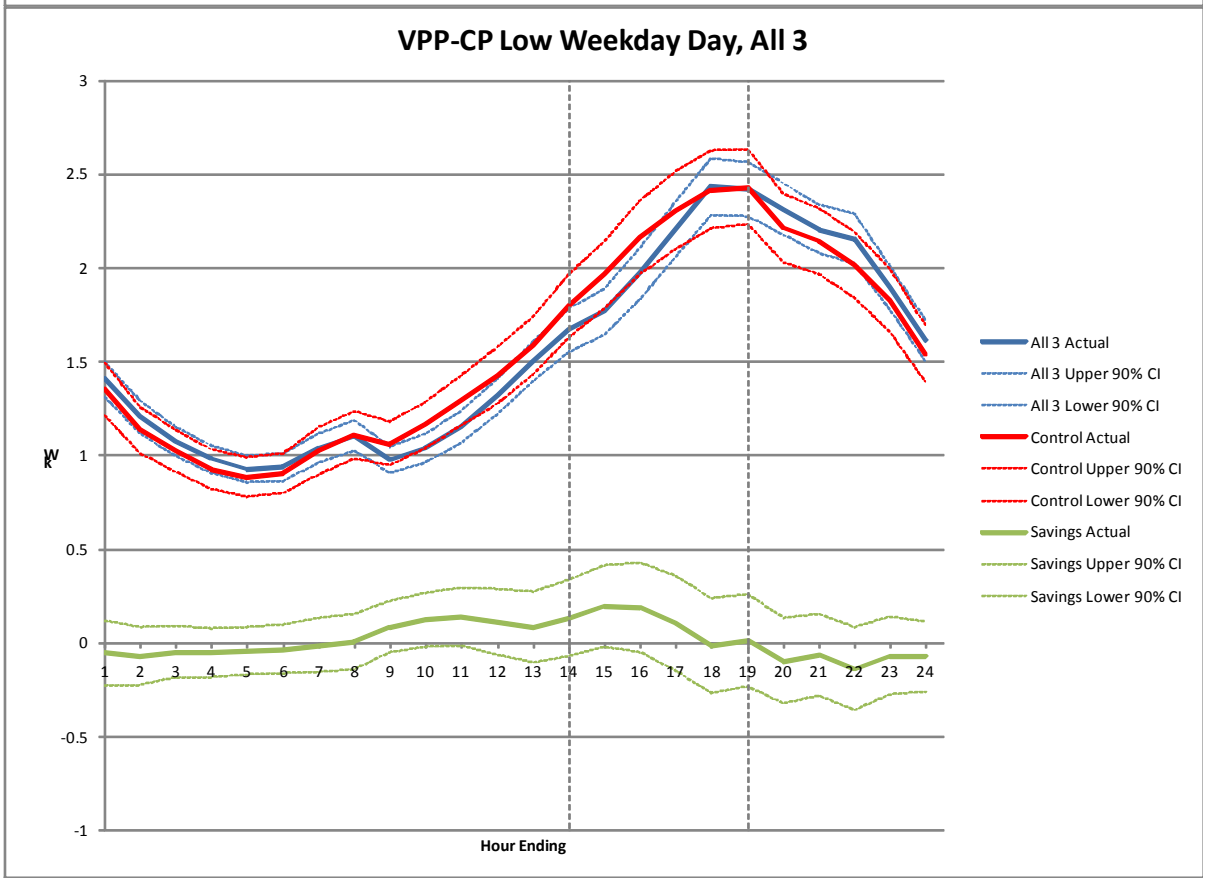
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekday Day, All 3
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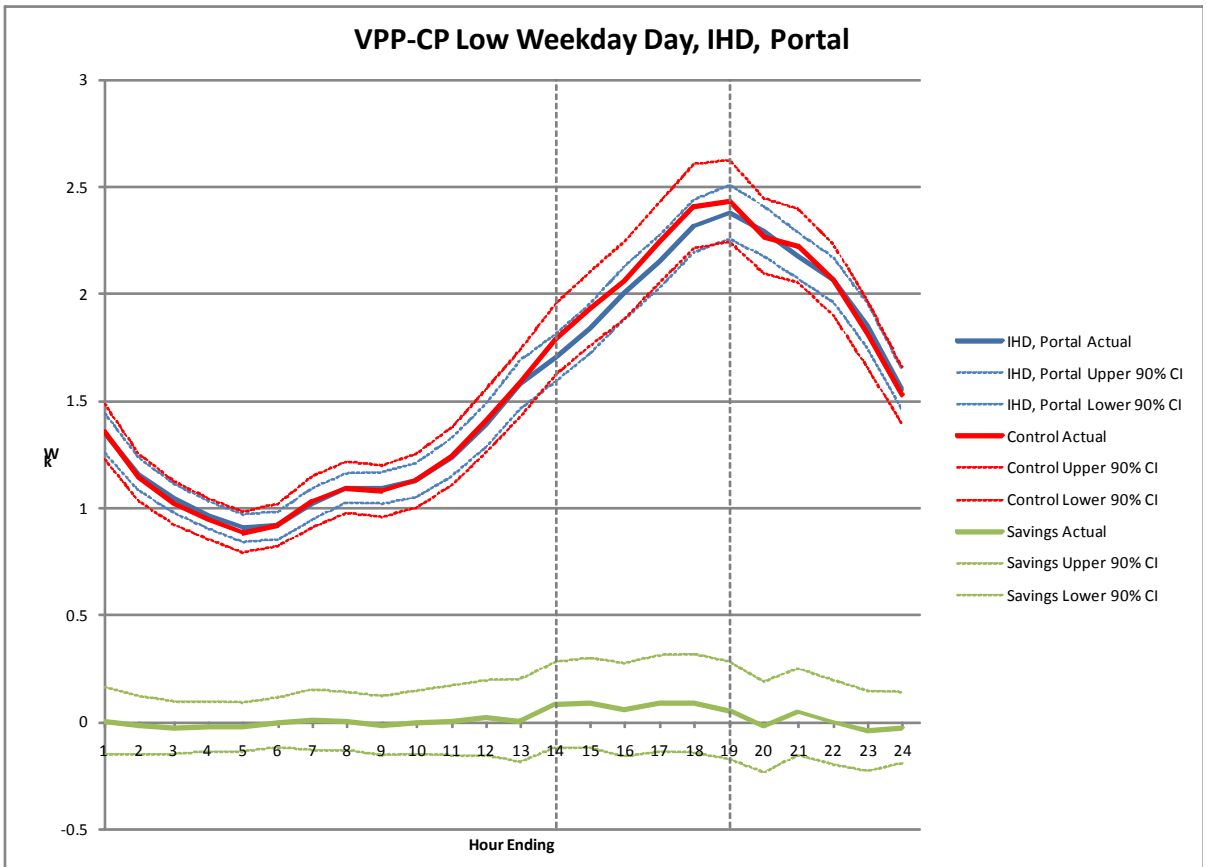
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekday Day, IHD, Portal
kW
3
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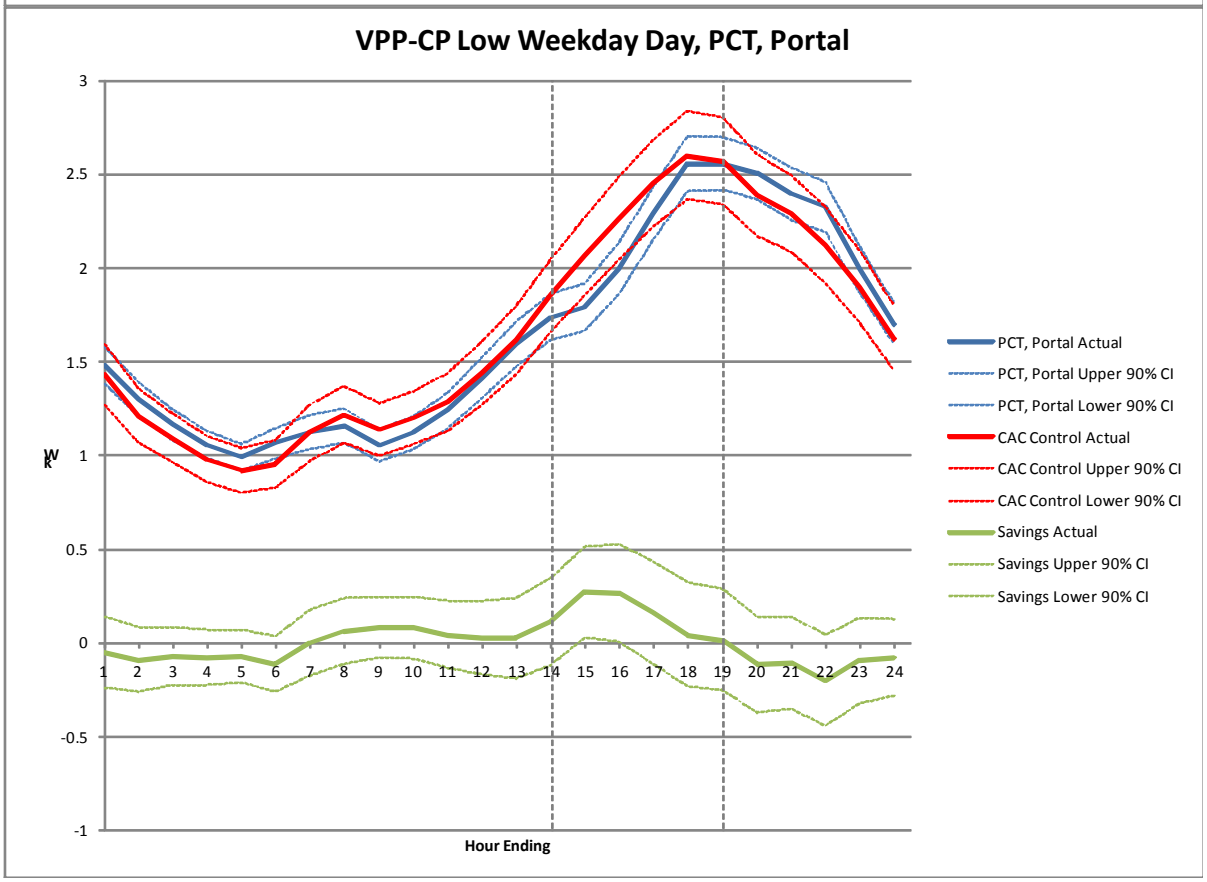
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekday Day, PCT, Portal
kW
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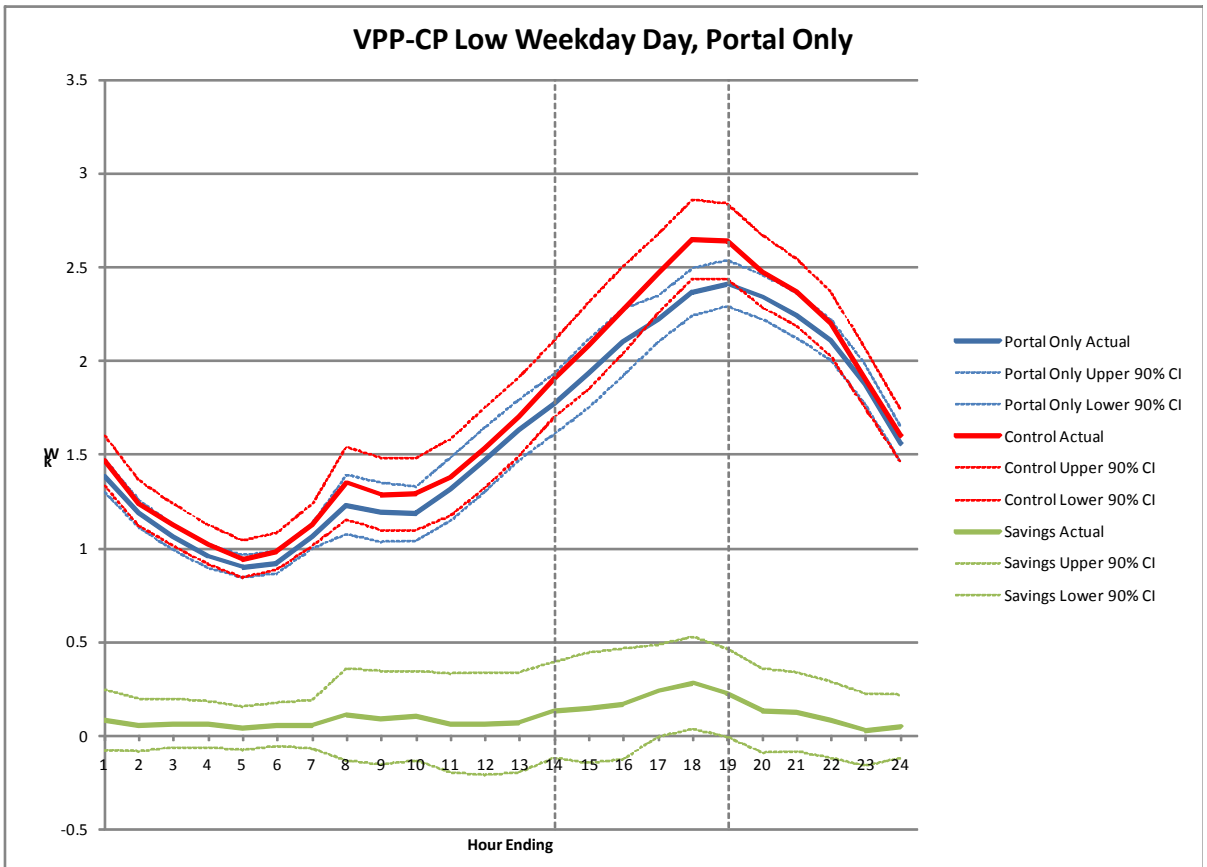
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekday Day, Portal Only
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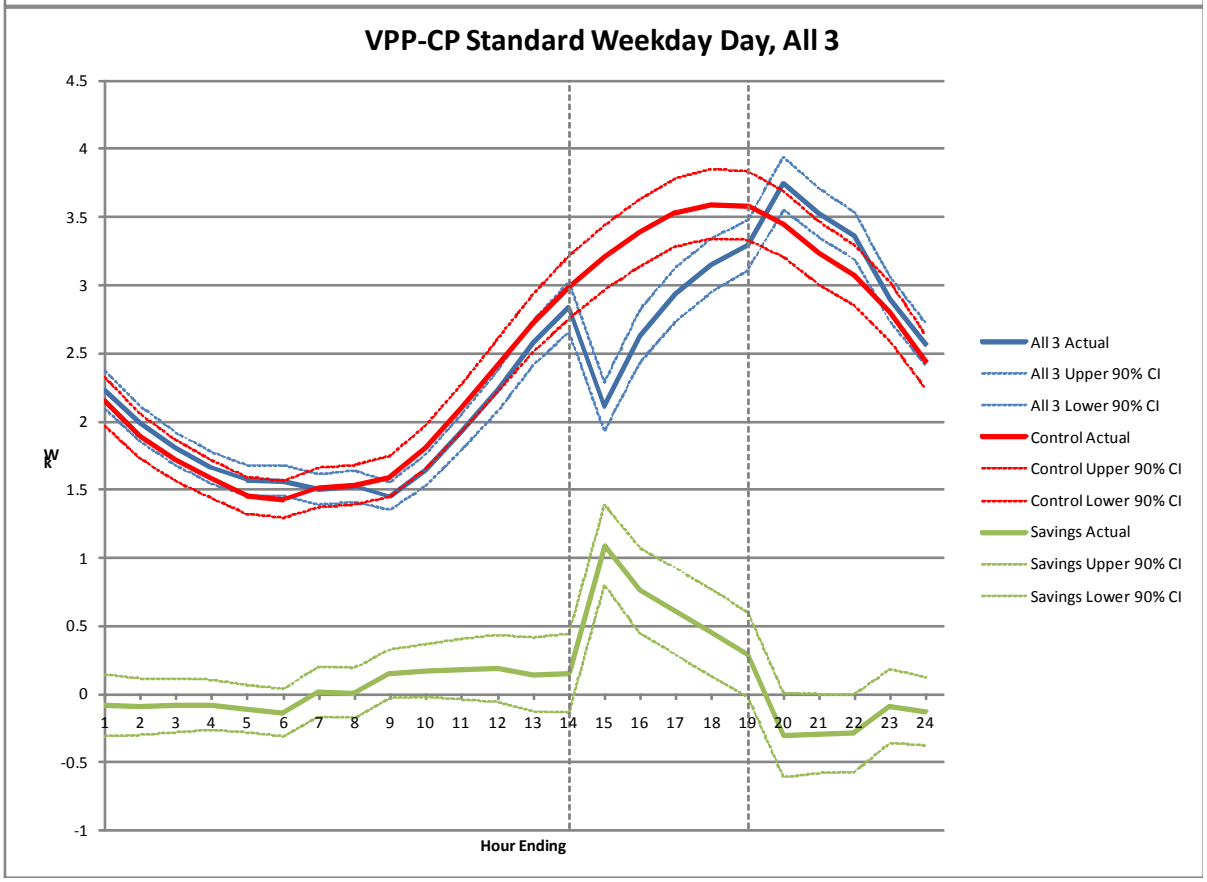
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Standard Weekday Day, All 3
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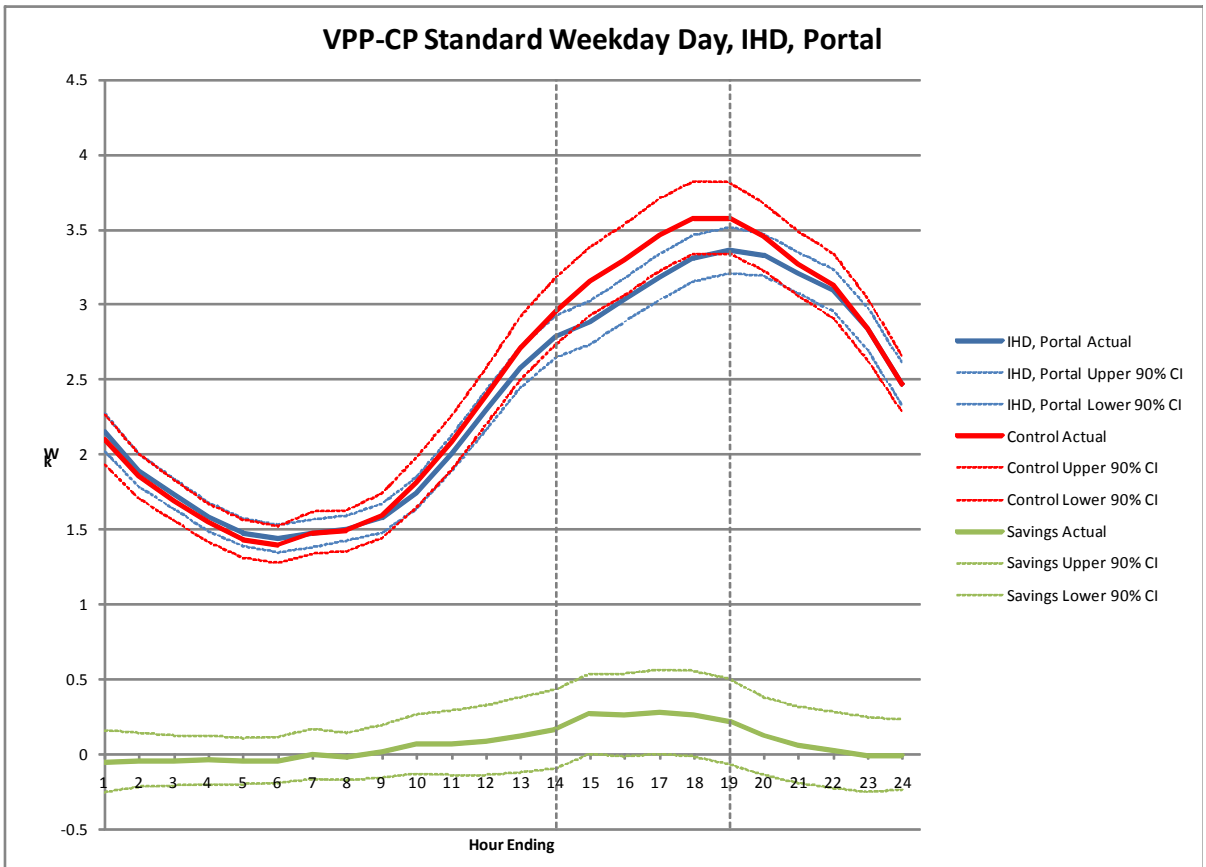
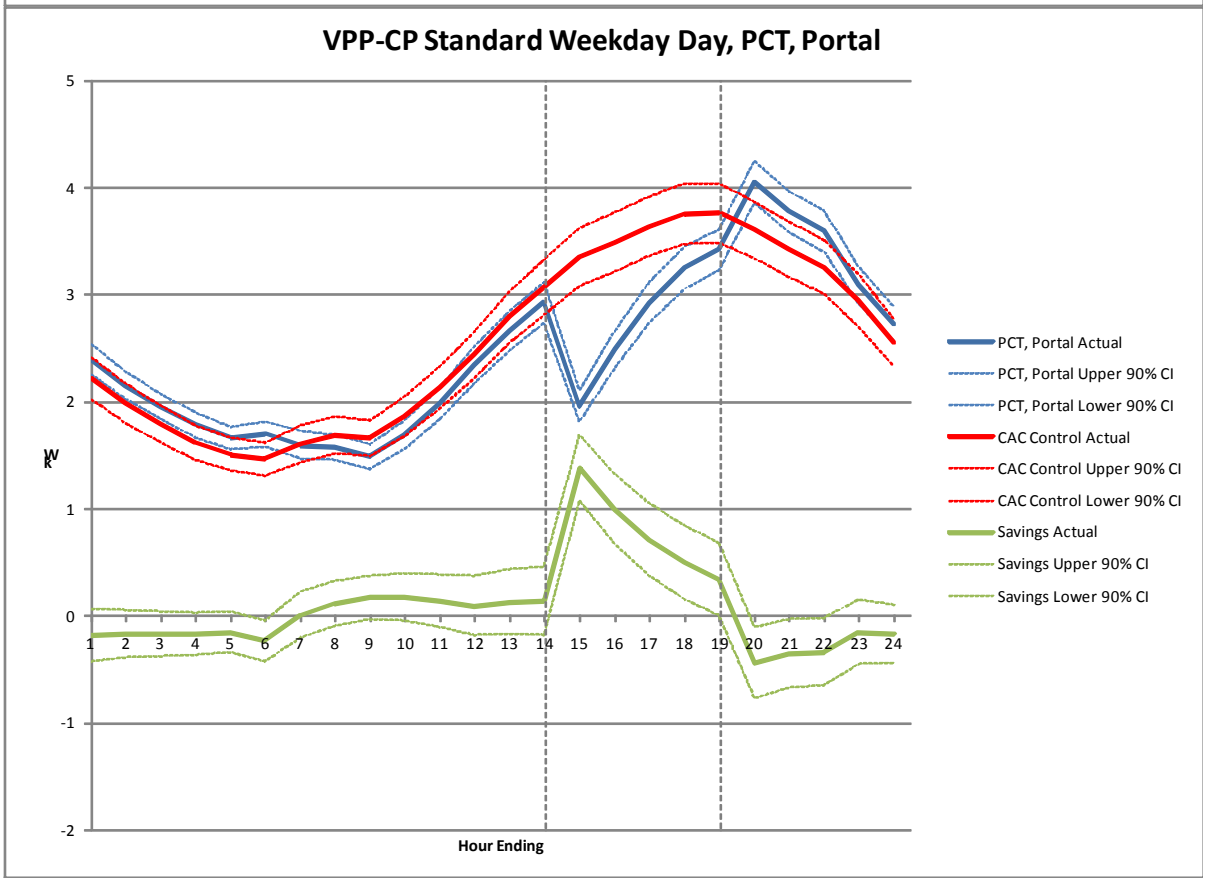
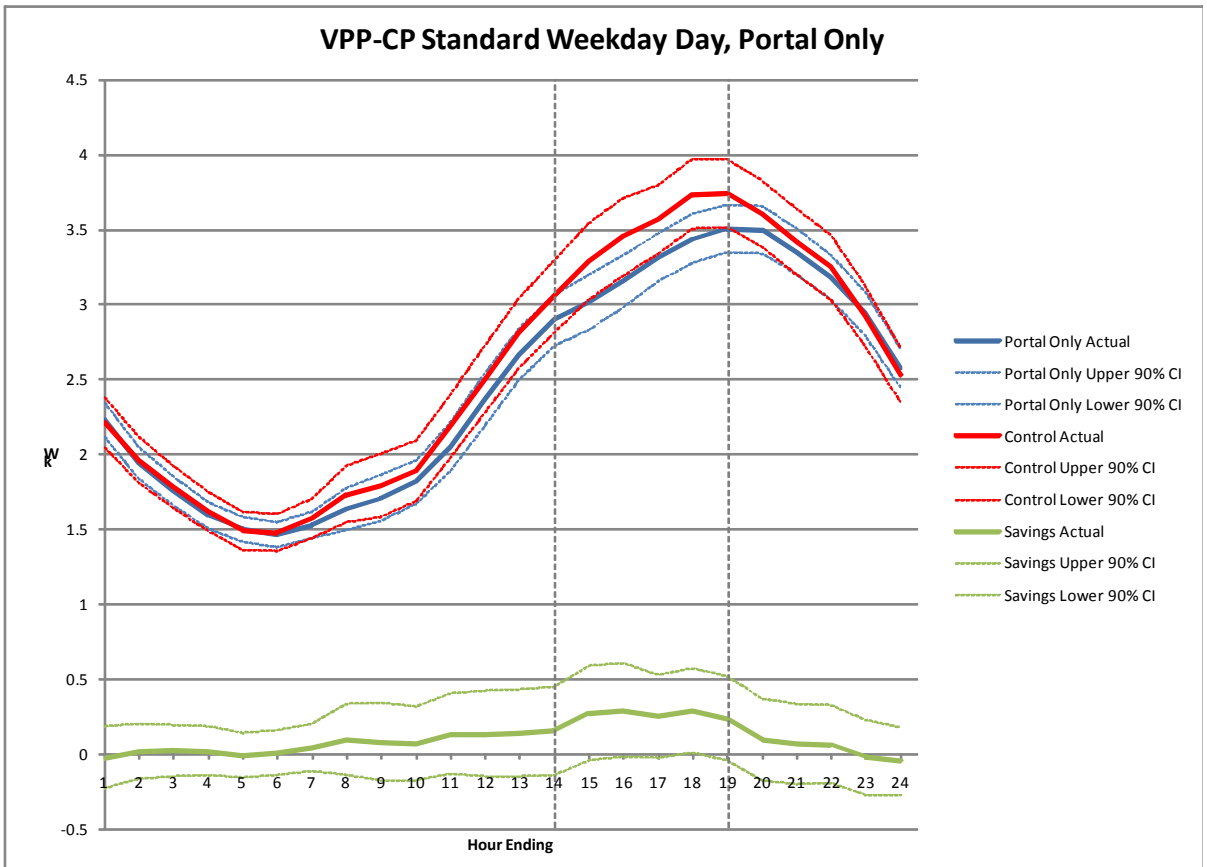
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Standard Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Standard Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Standard Weekday Day, Portal Only
4.5
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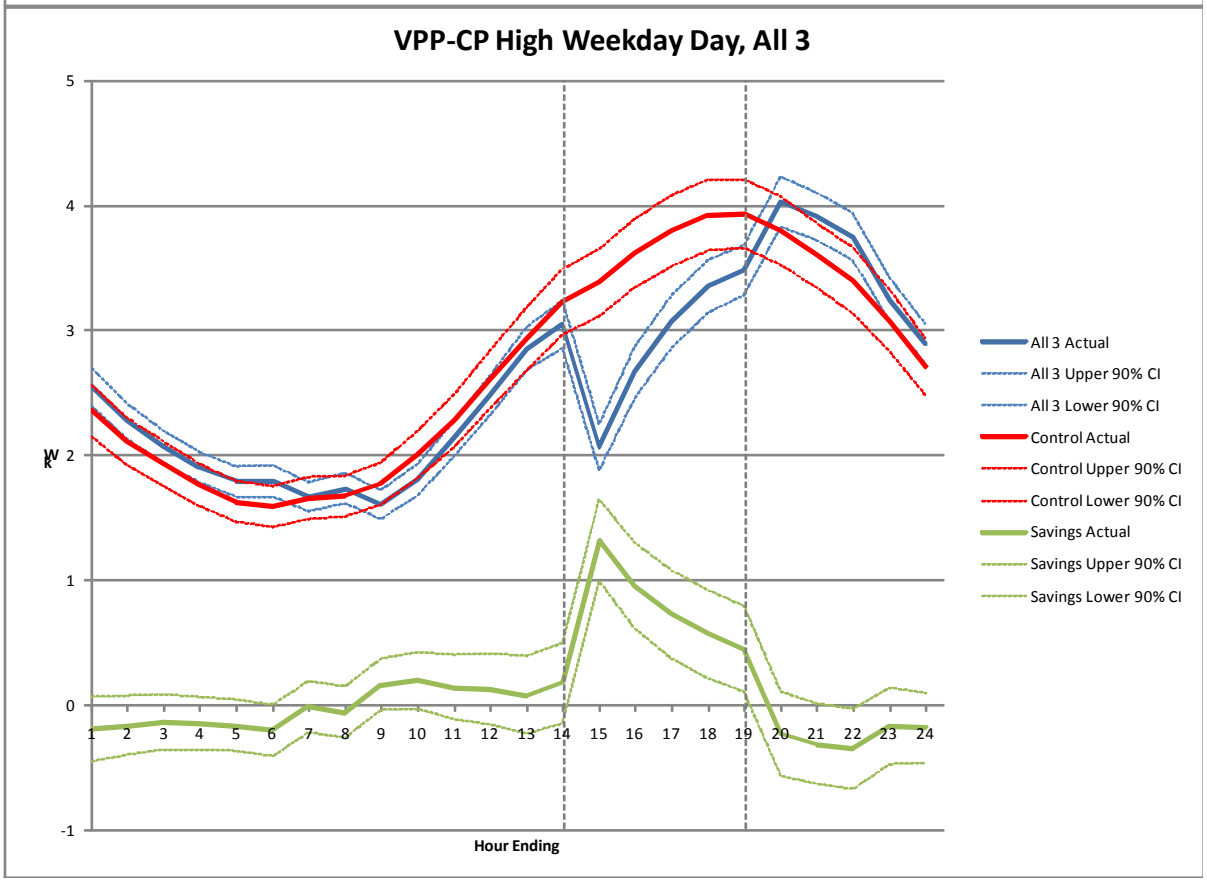
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP High Weekday Day, All 3
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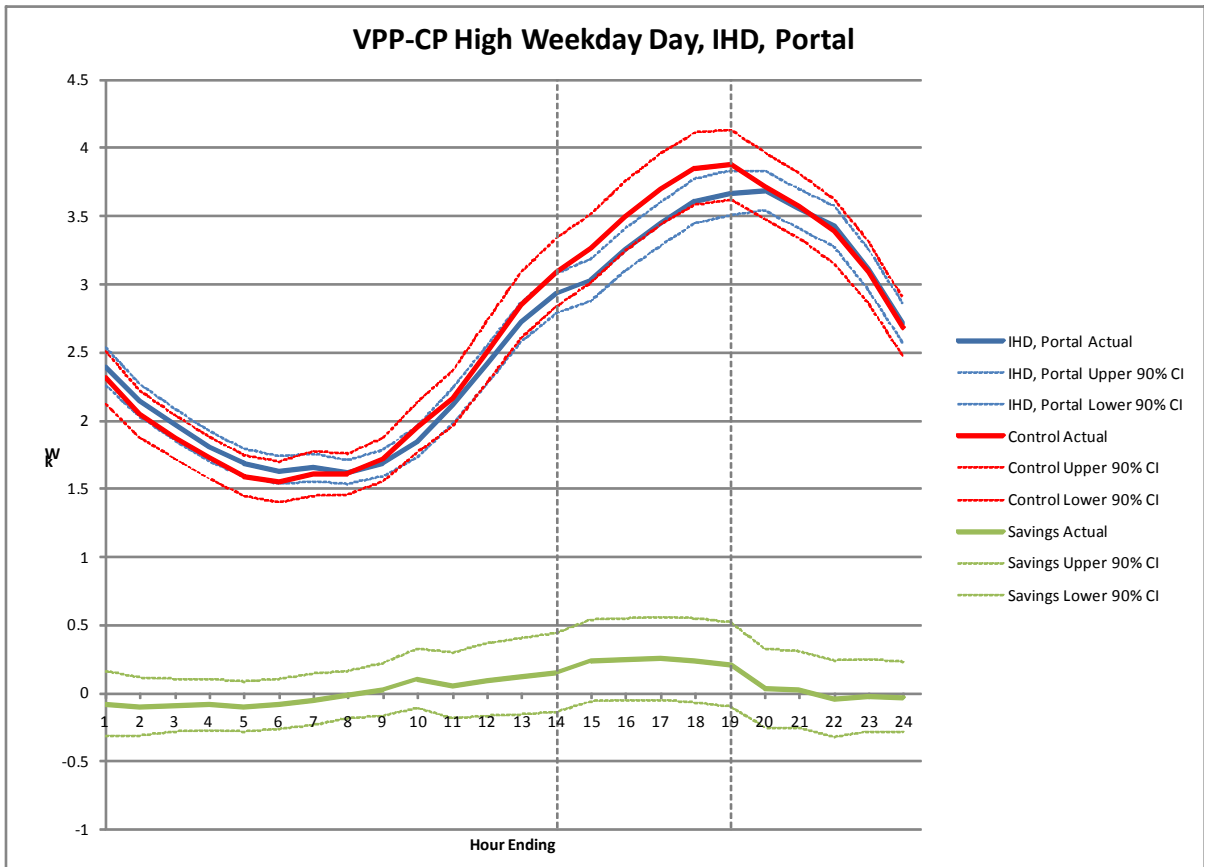
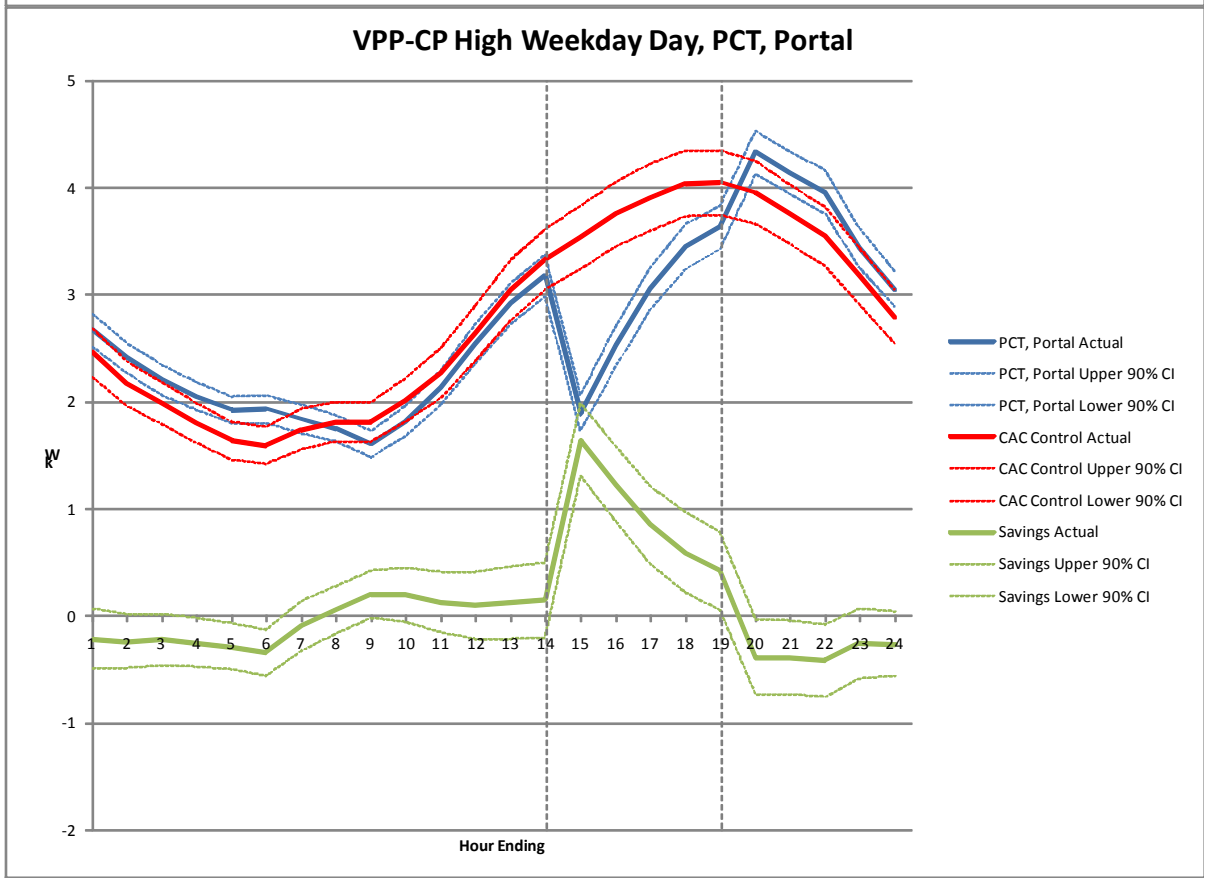
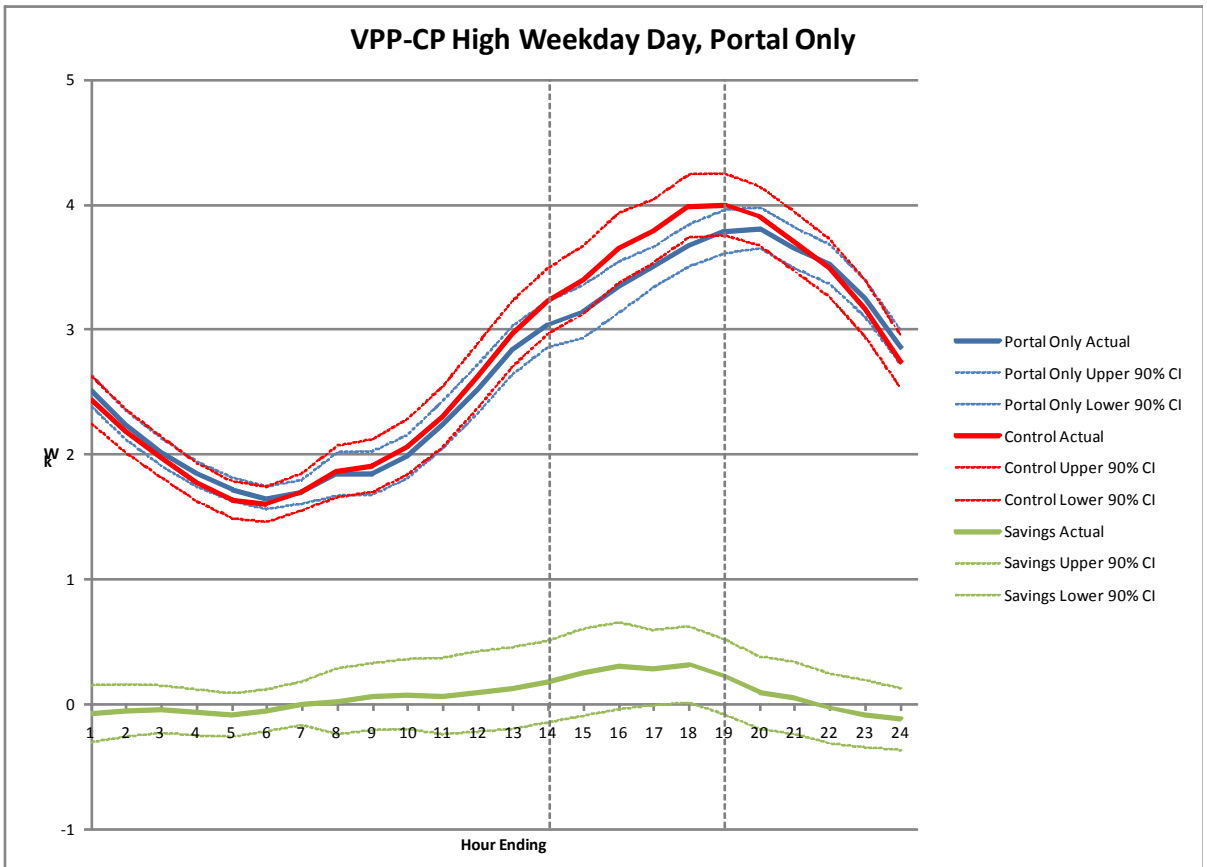
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP High Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP High Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP High Weekday Day, Portal Only
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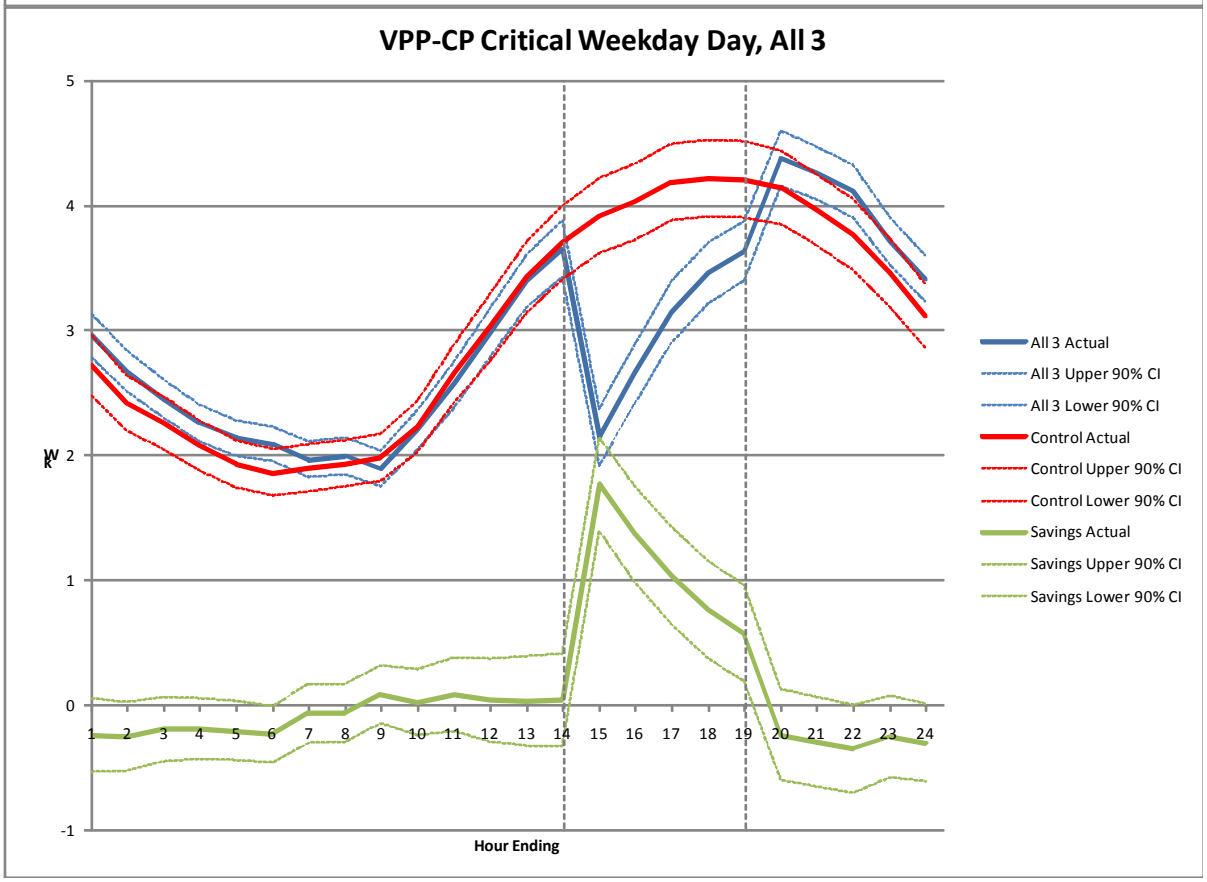
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Critical Weekday Day, All 3
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-1
kW
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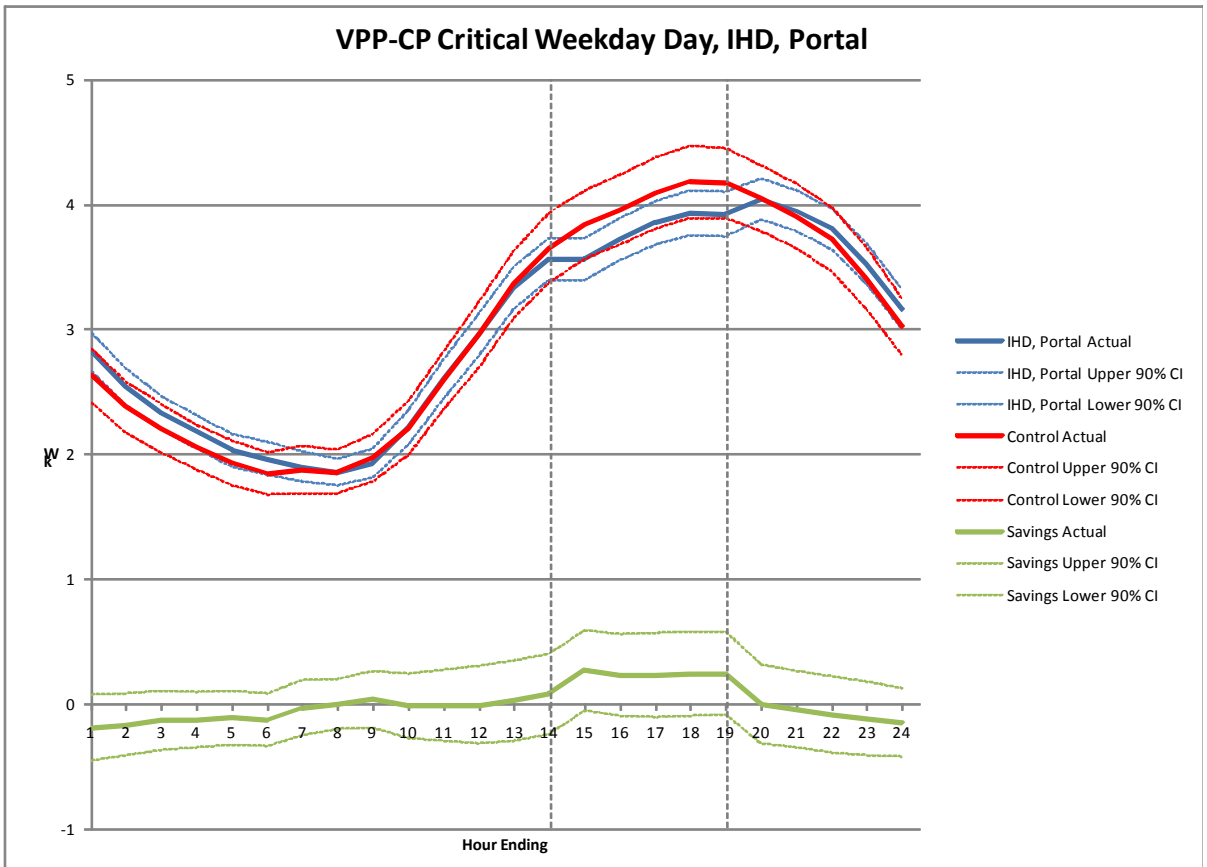
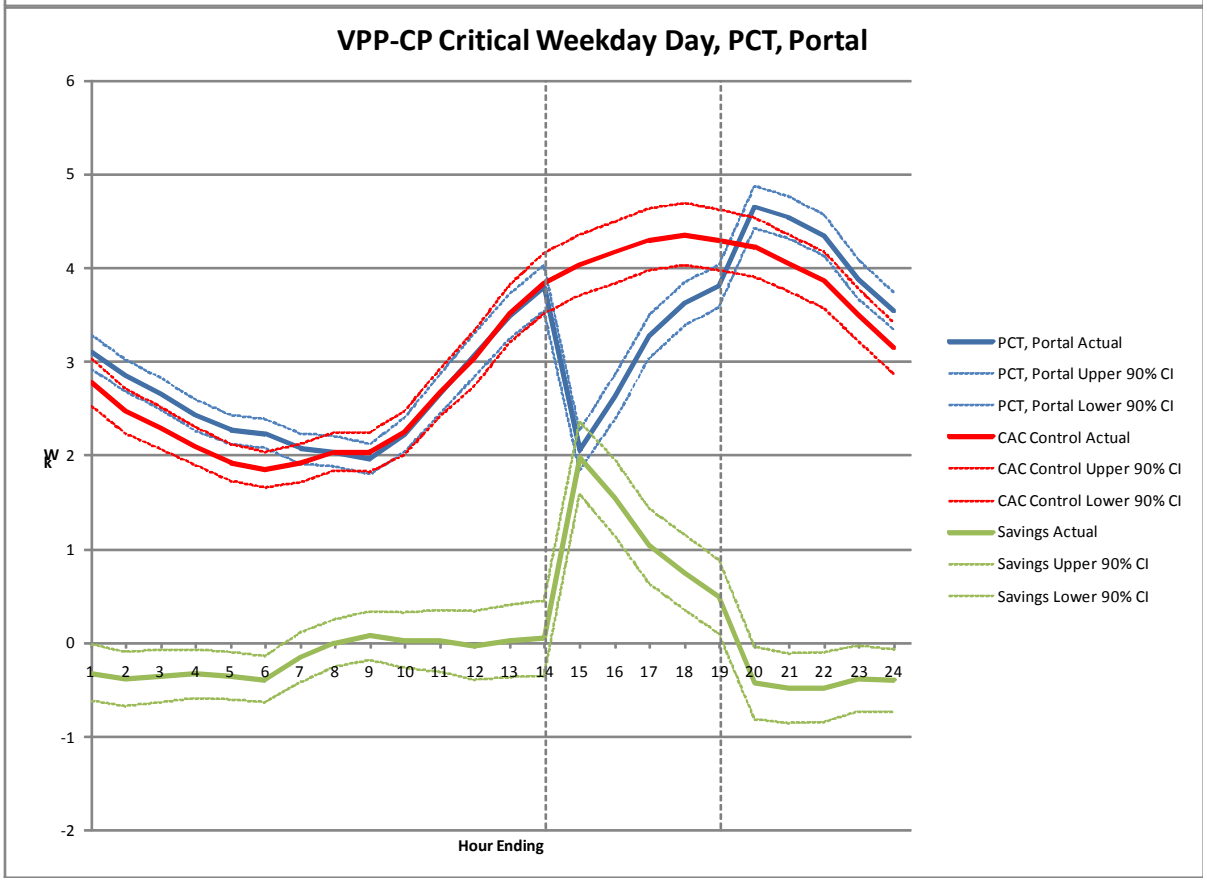
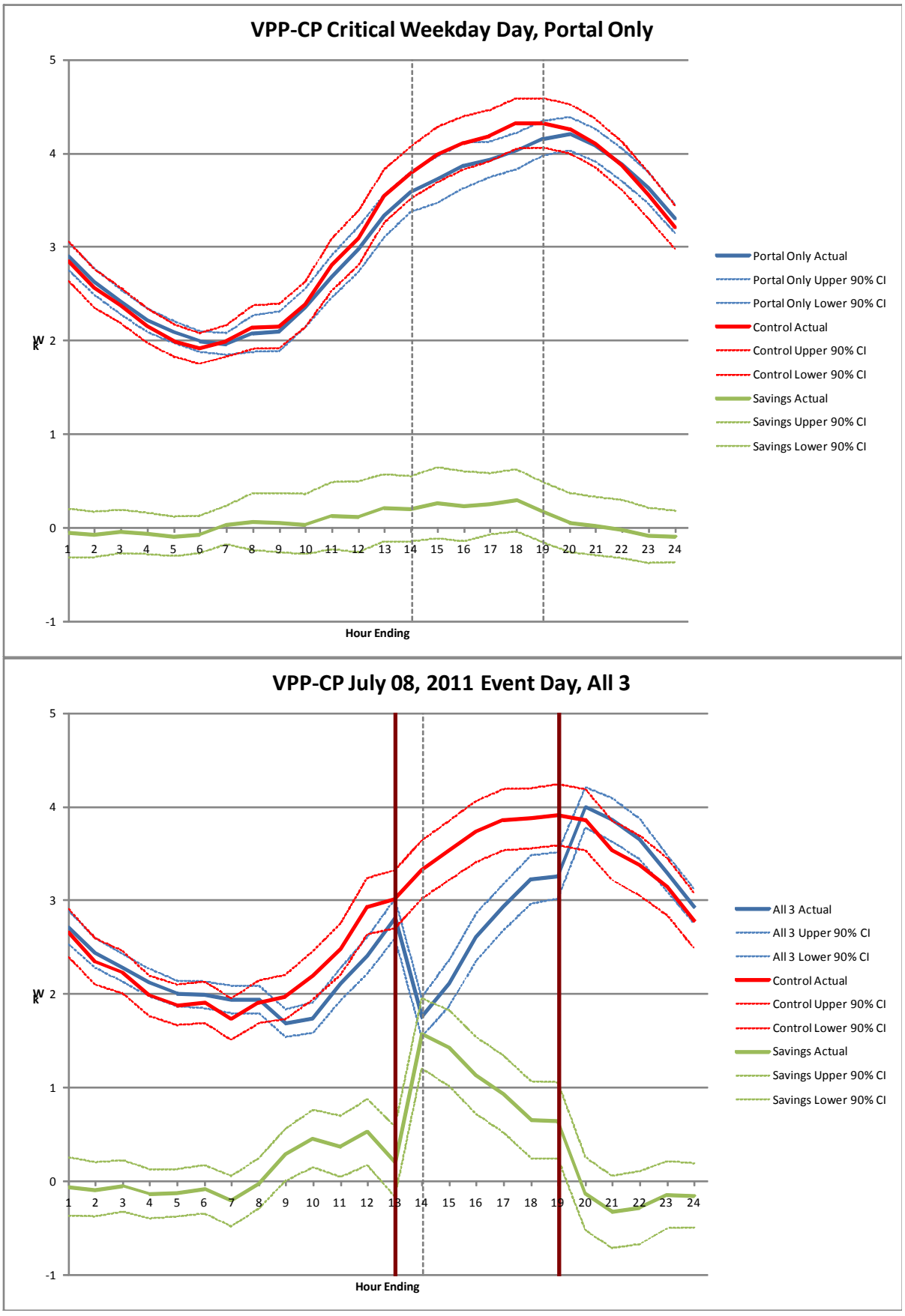
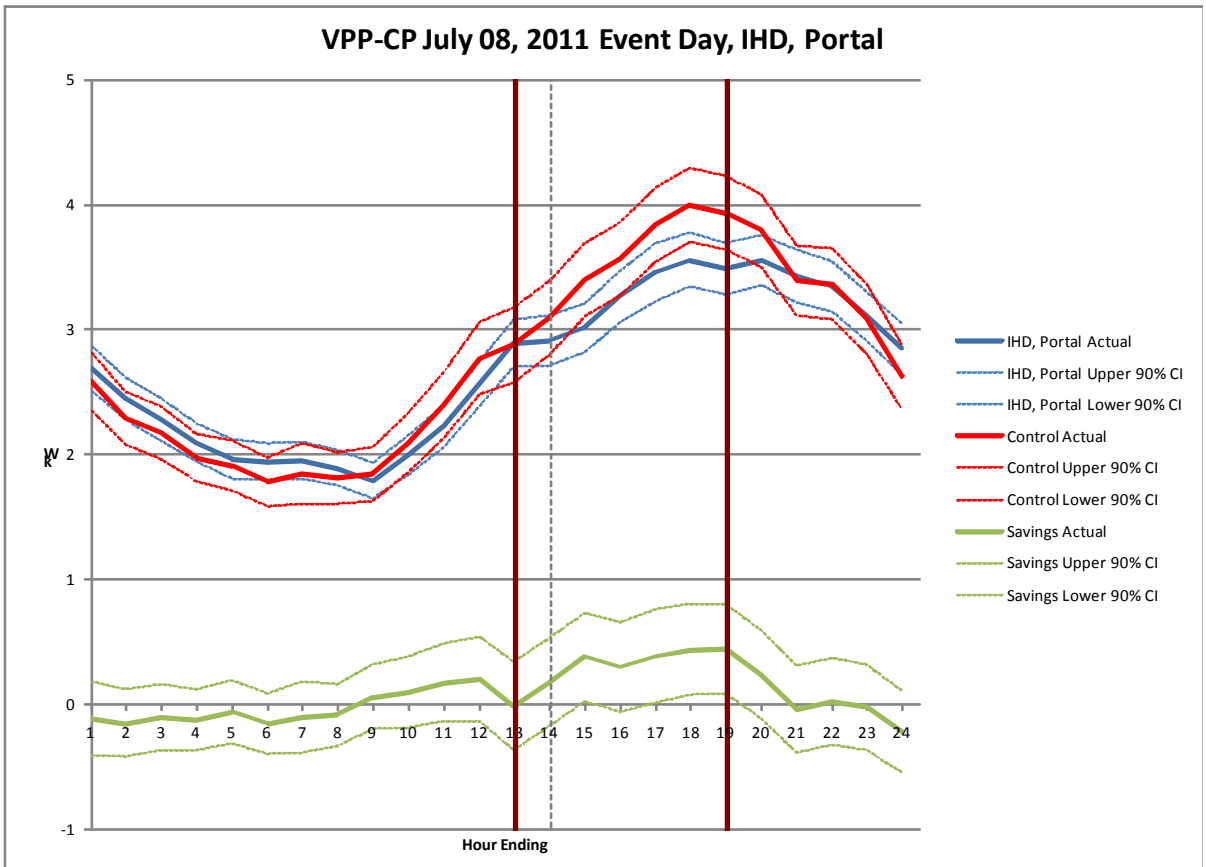
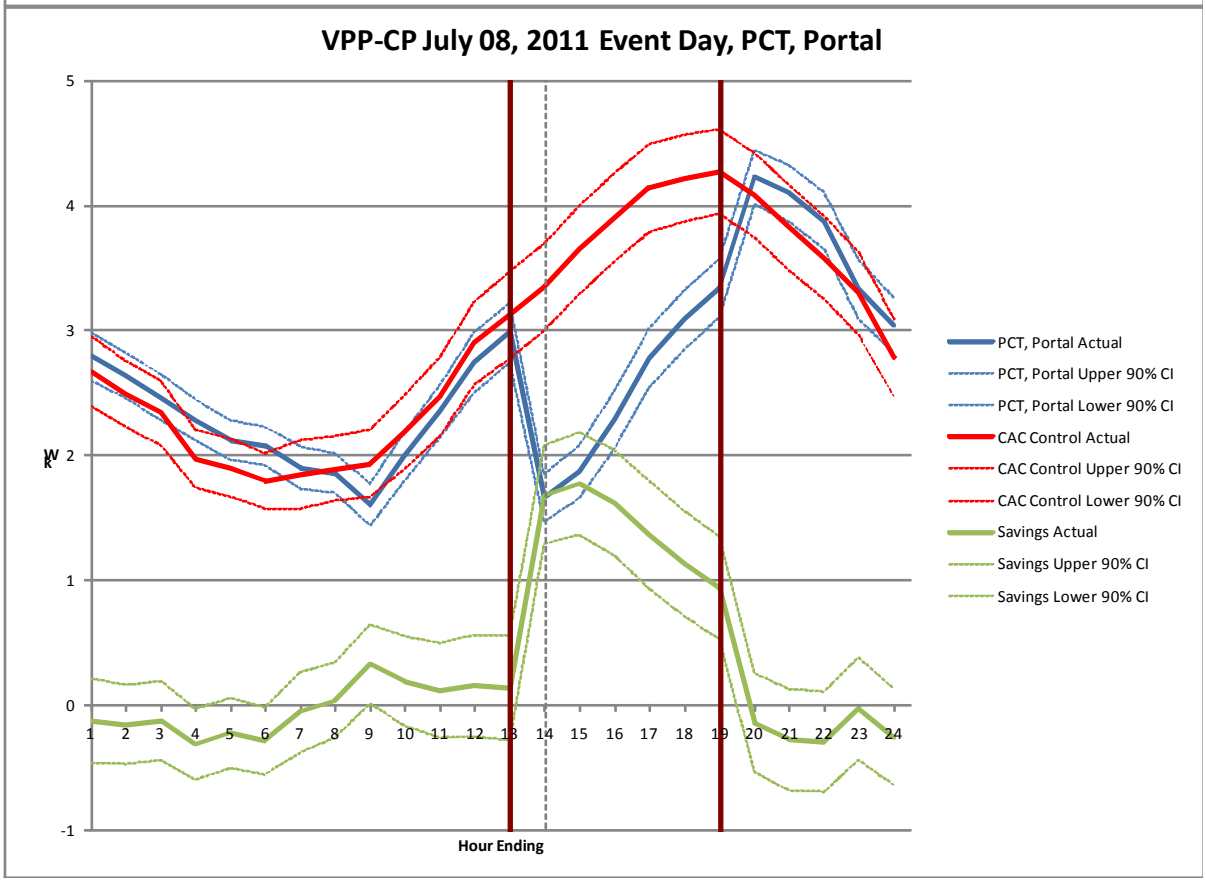
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

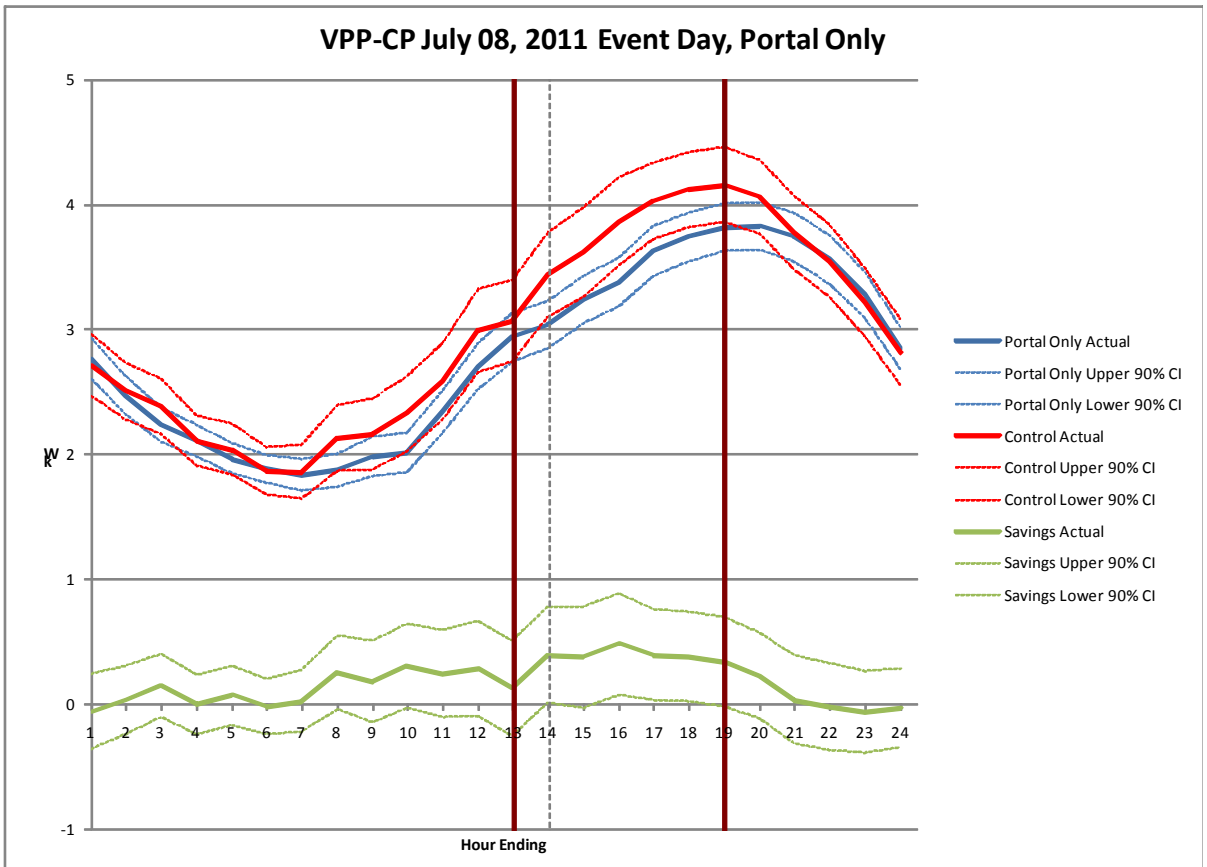

VPP-CP Critical Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

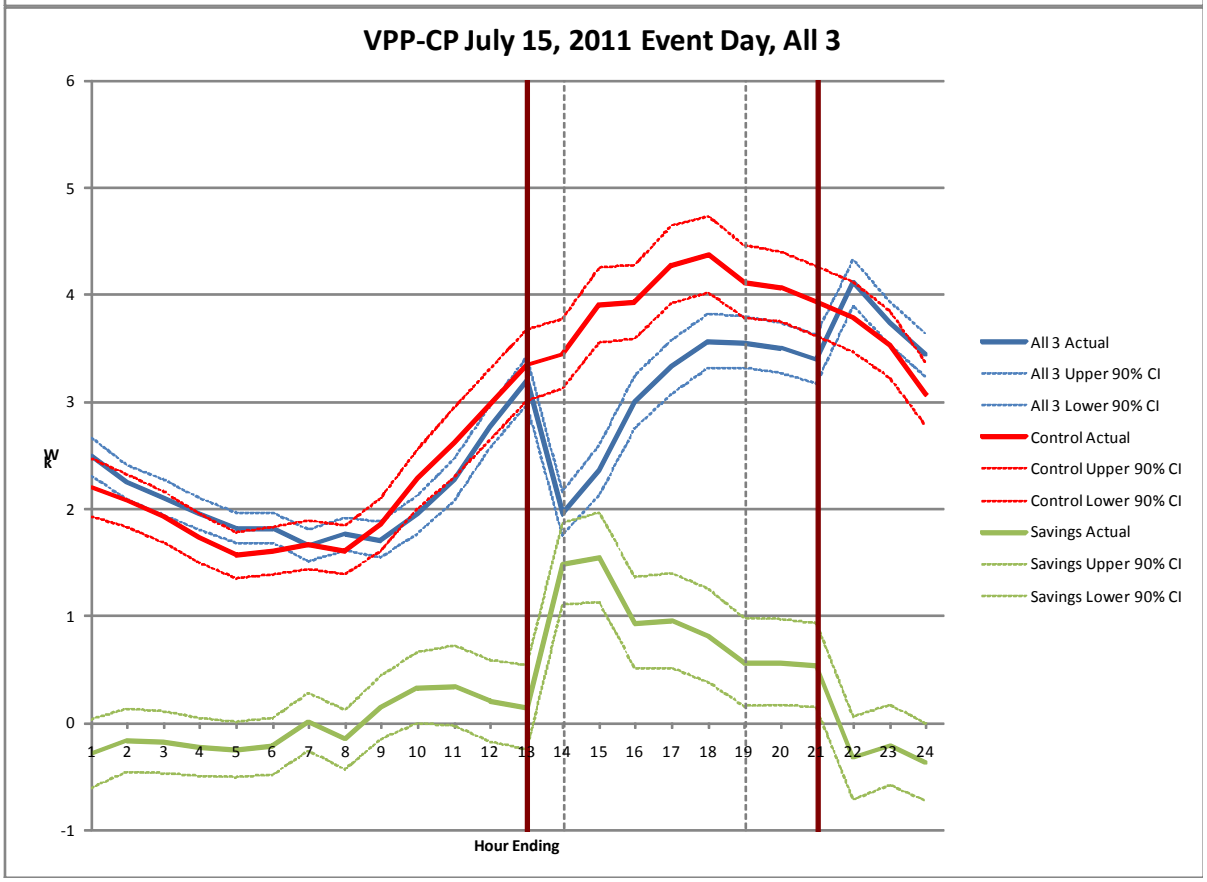

VPP-CP Critical Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

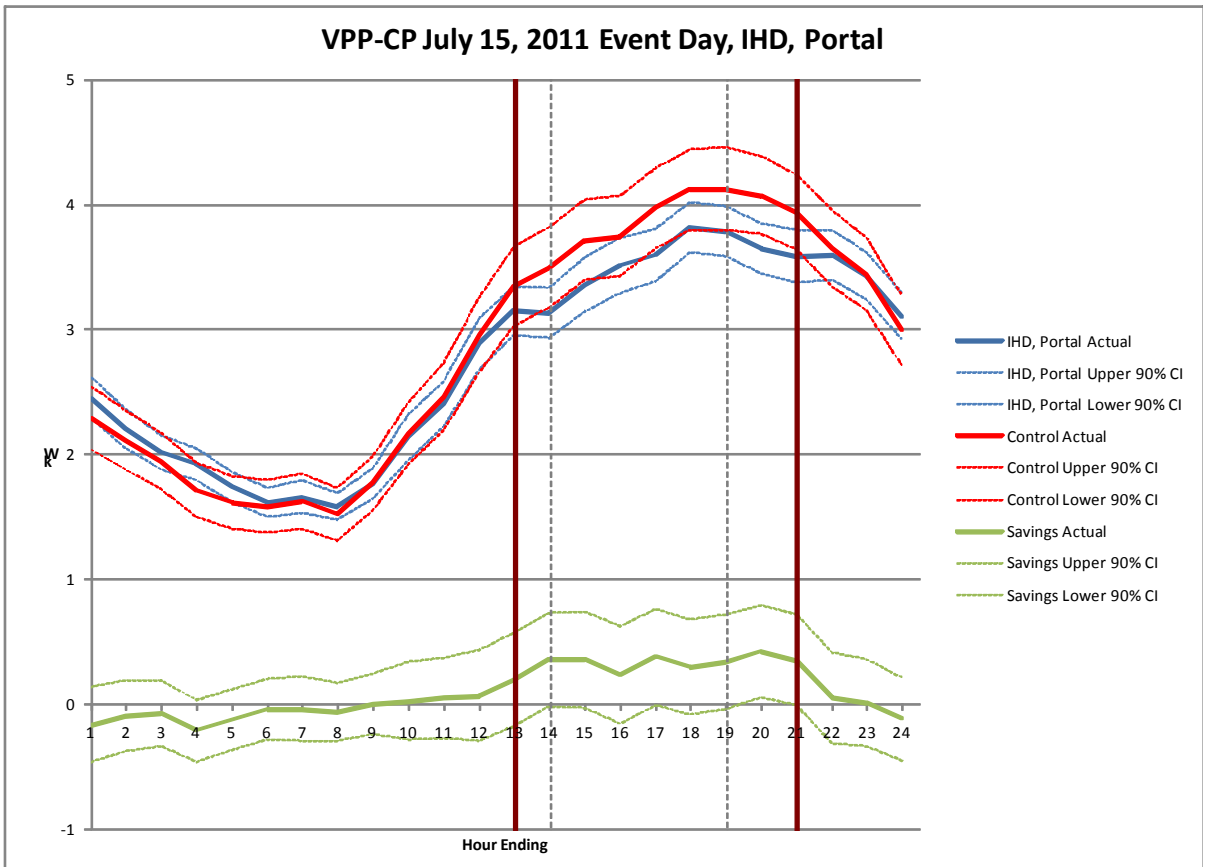

VPP-CP Critical Weekday Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
VPP-CP July 08, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

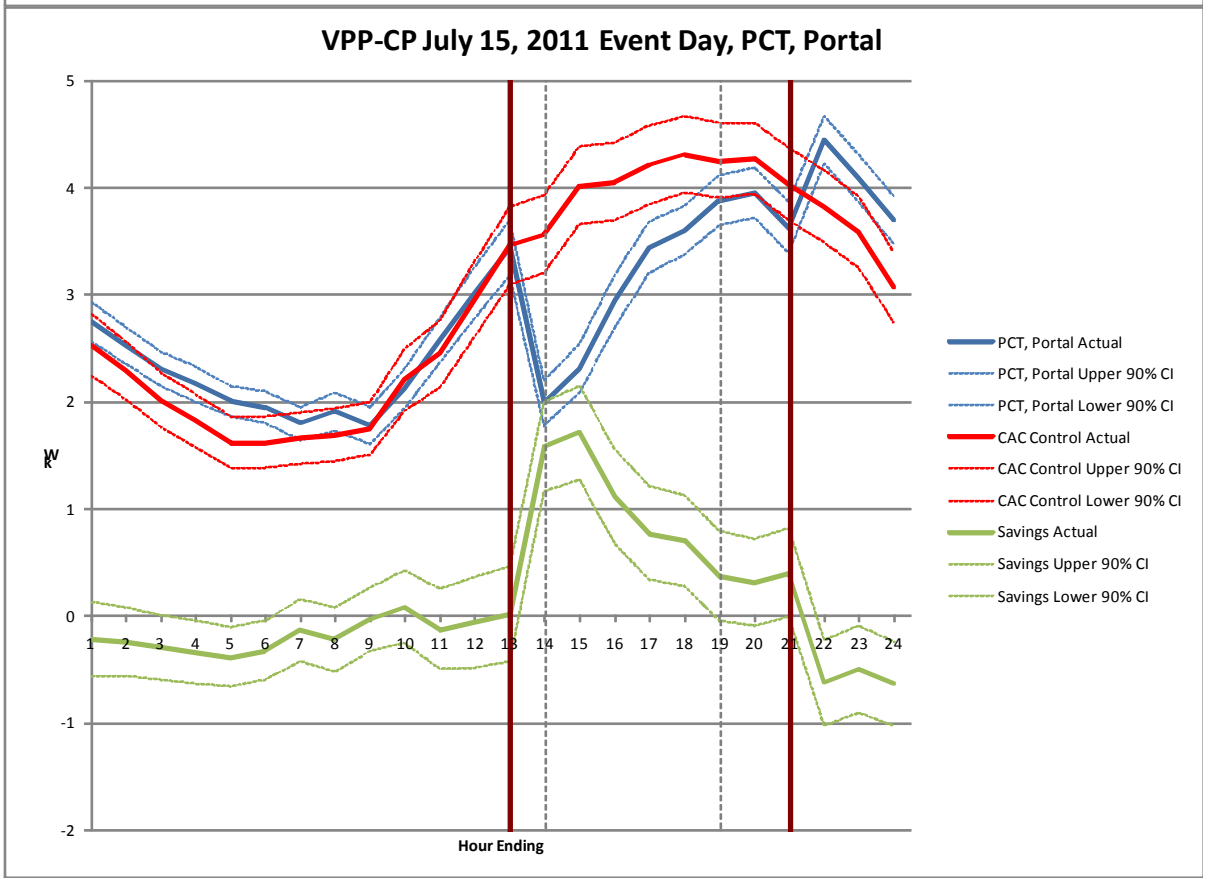

VPP-CP July 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

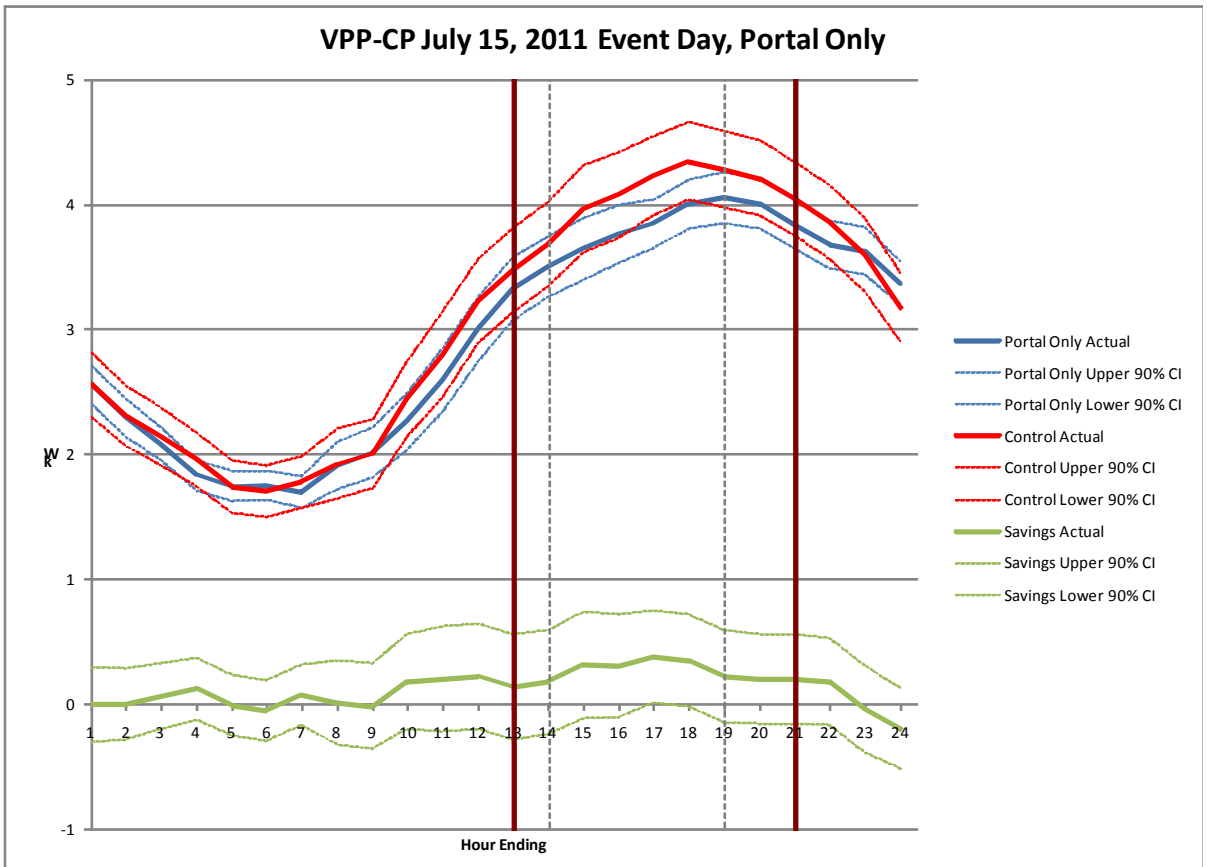

VPP-CP July 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

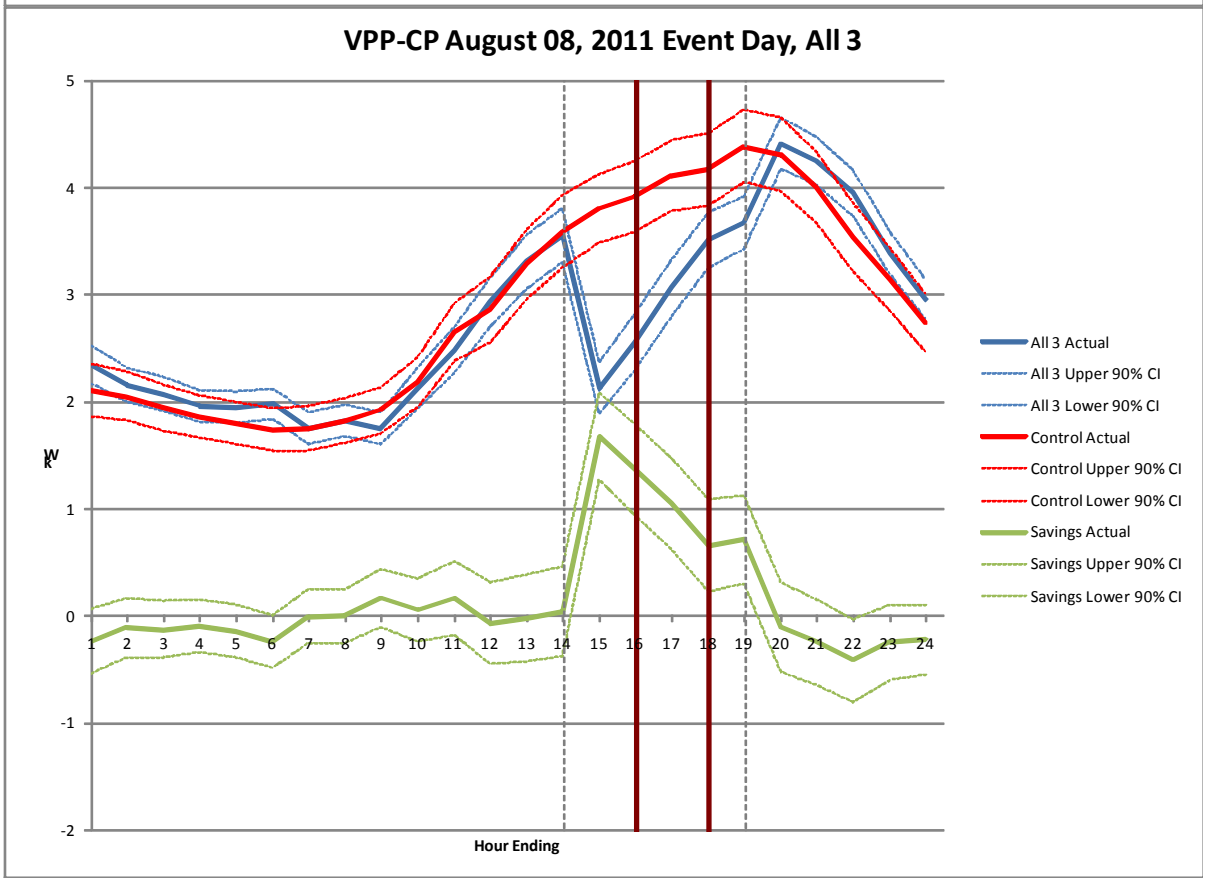

VPP-CP July 08, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

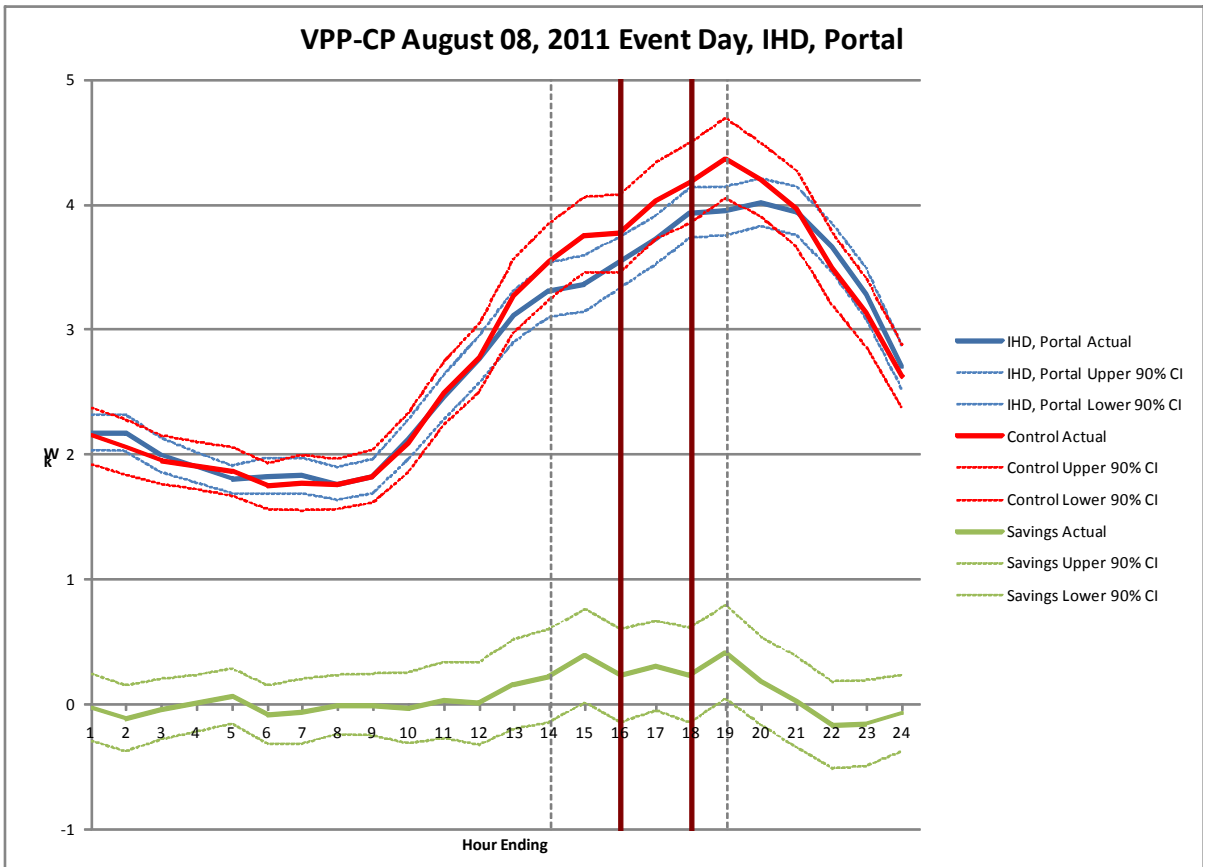

VPP-CP July 15, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

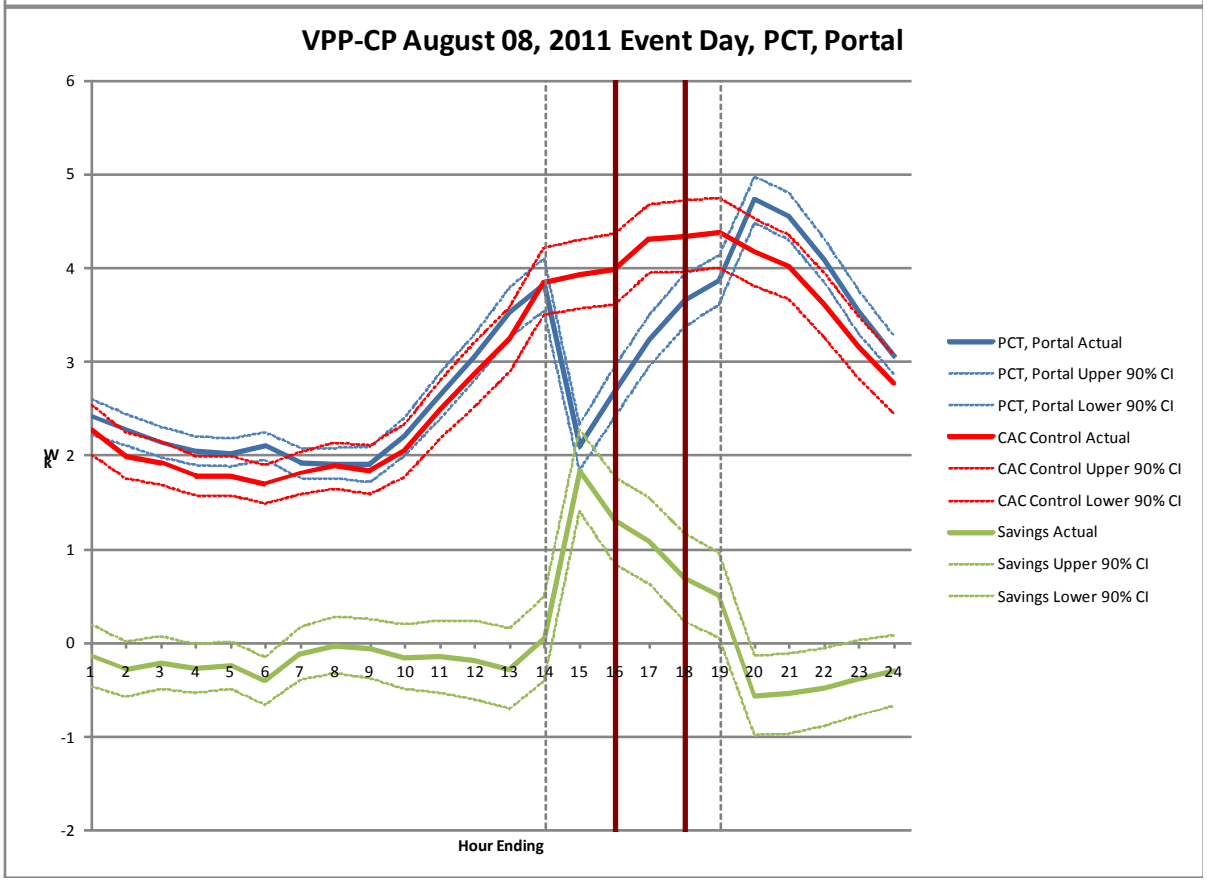

VPP-CP July 15, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

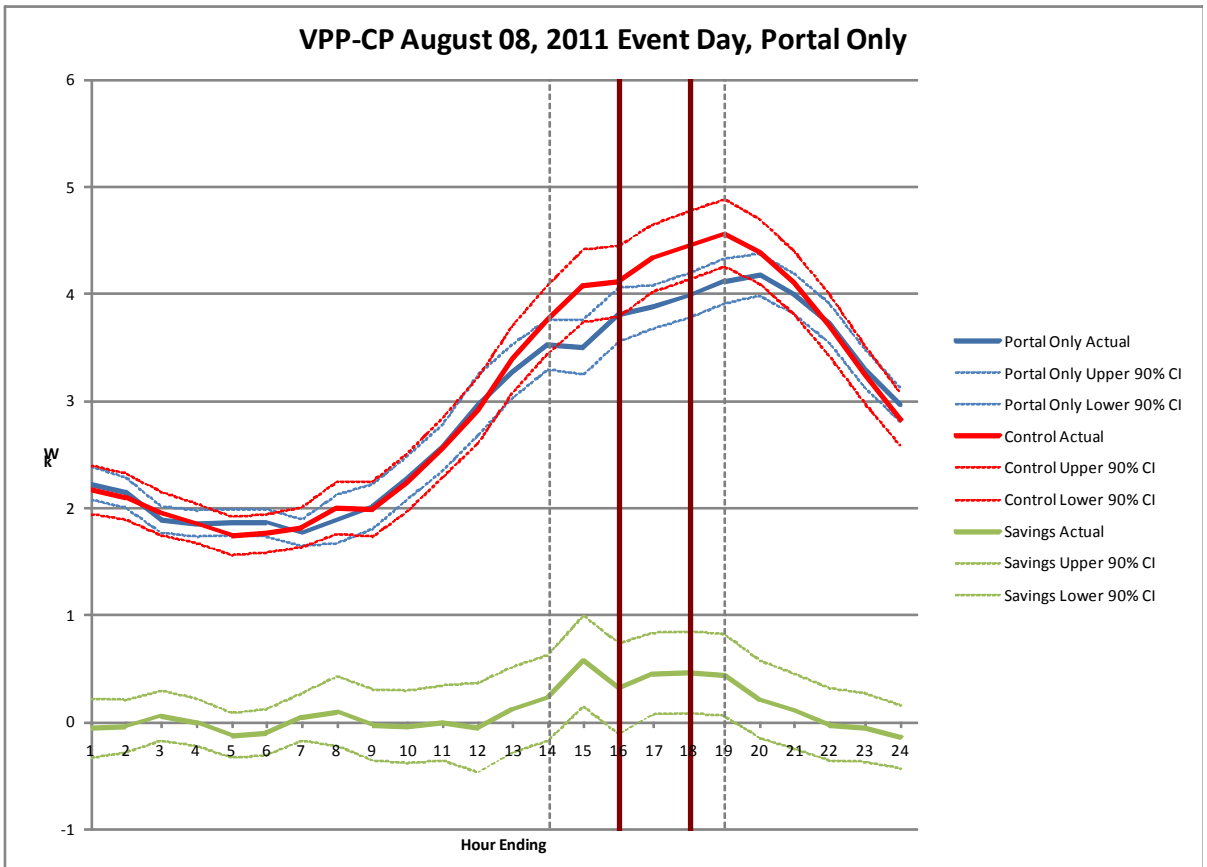

VPP-CP July 15, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

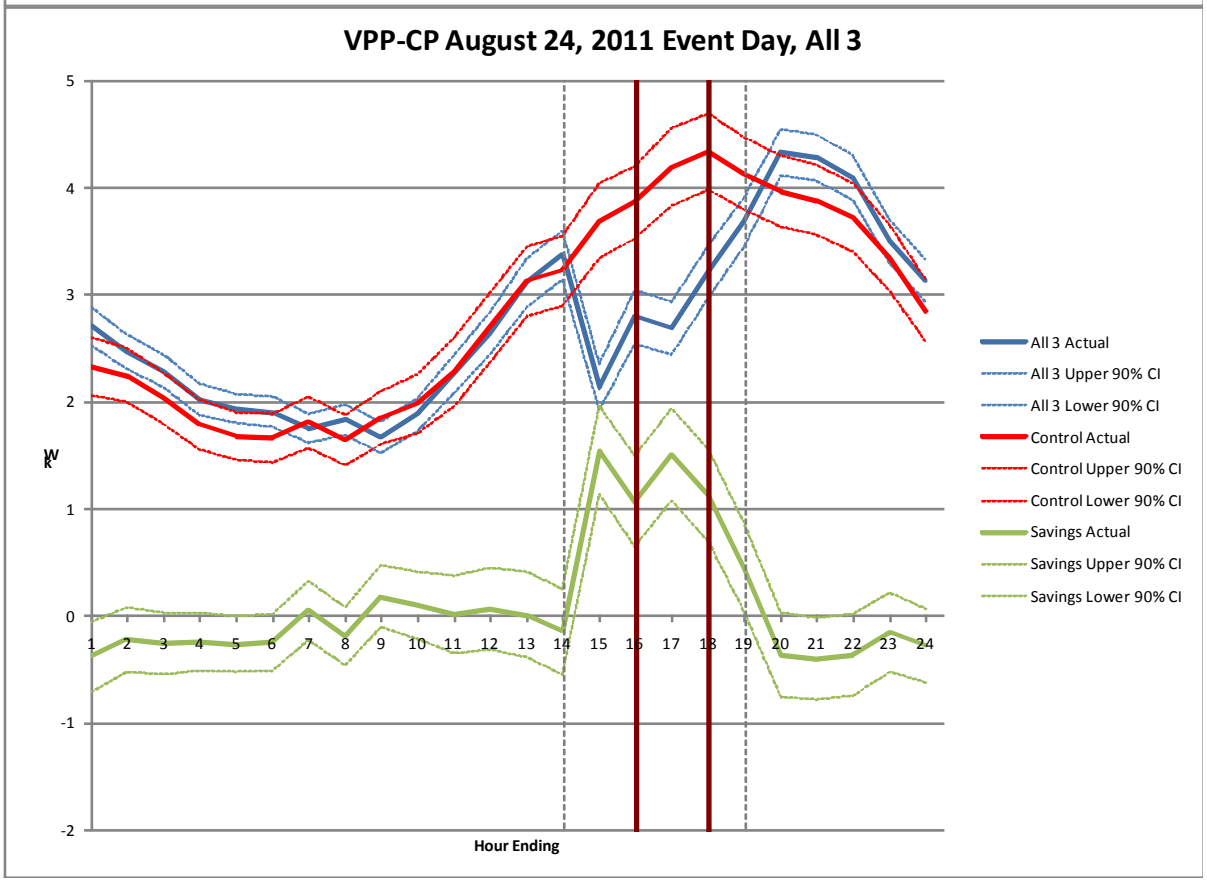

VPP-CP July 15, 2011 Event Day, Portal Only
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

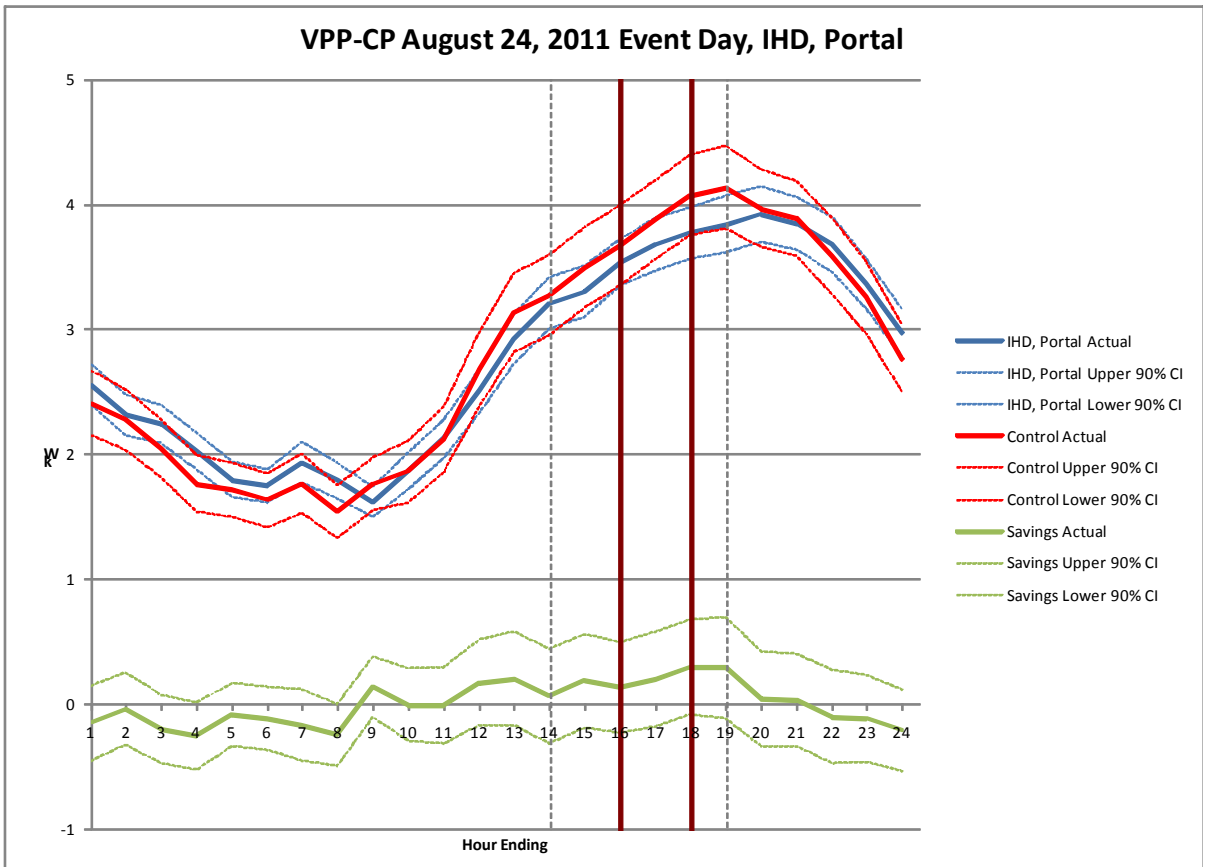

VPP-CP August 08, 2011 Event Day, All 3
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

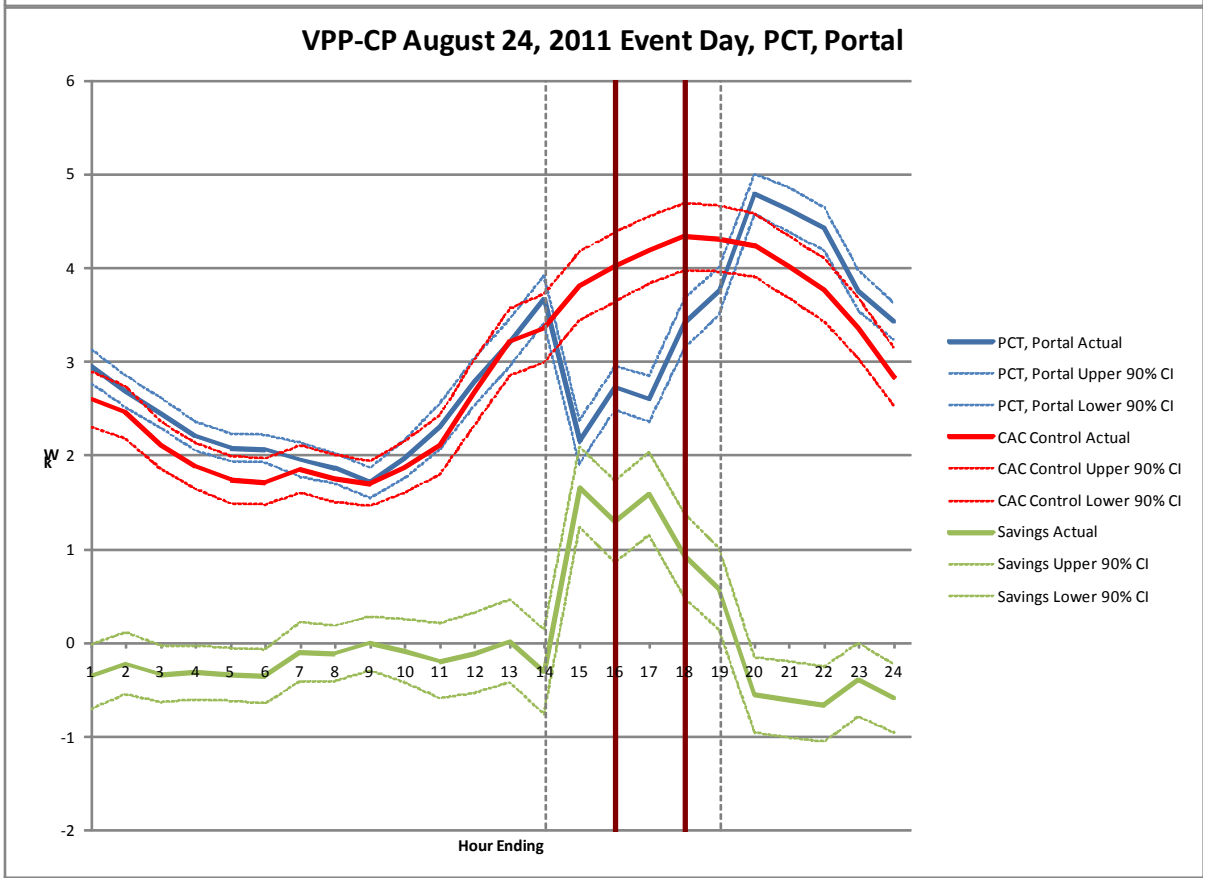

VPP-CP August 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

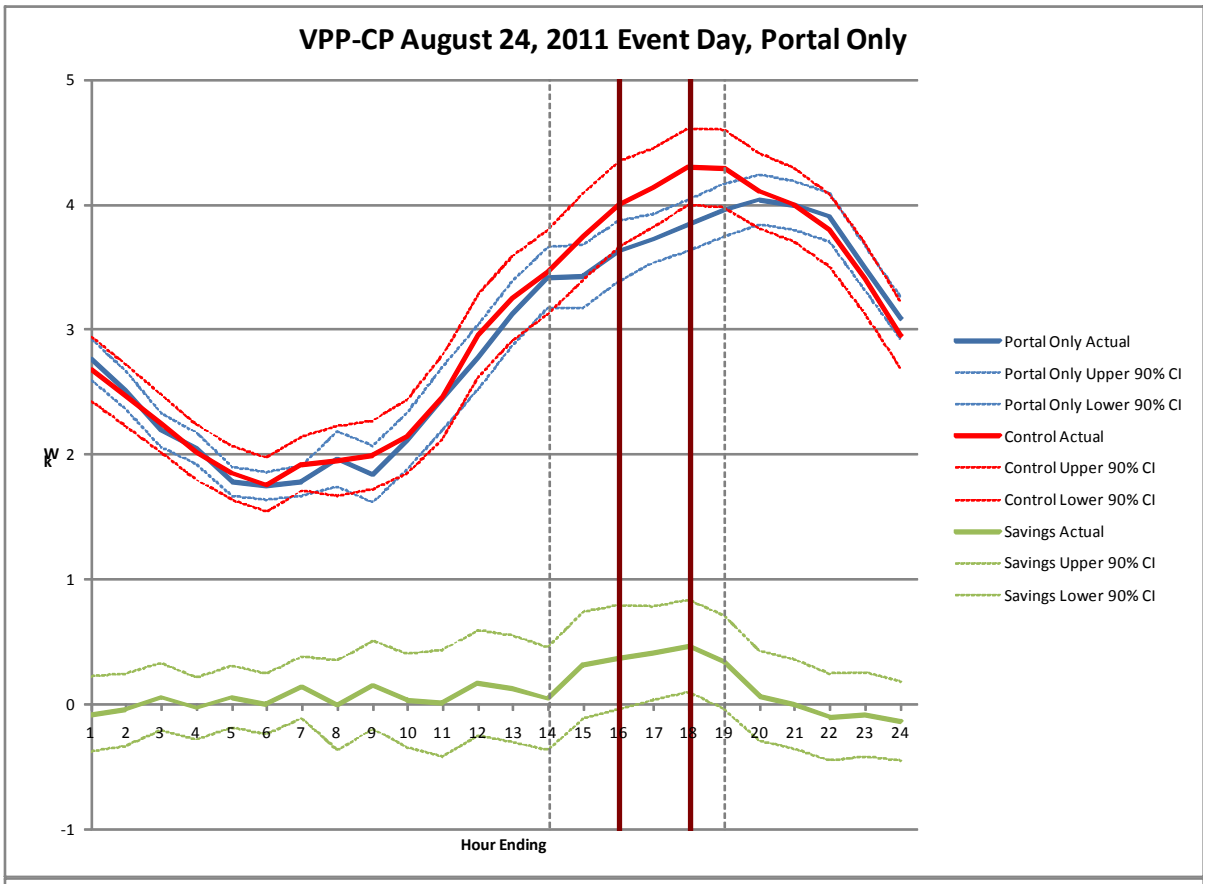

VPP-CP August 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

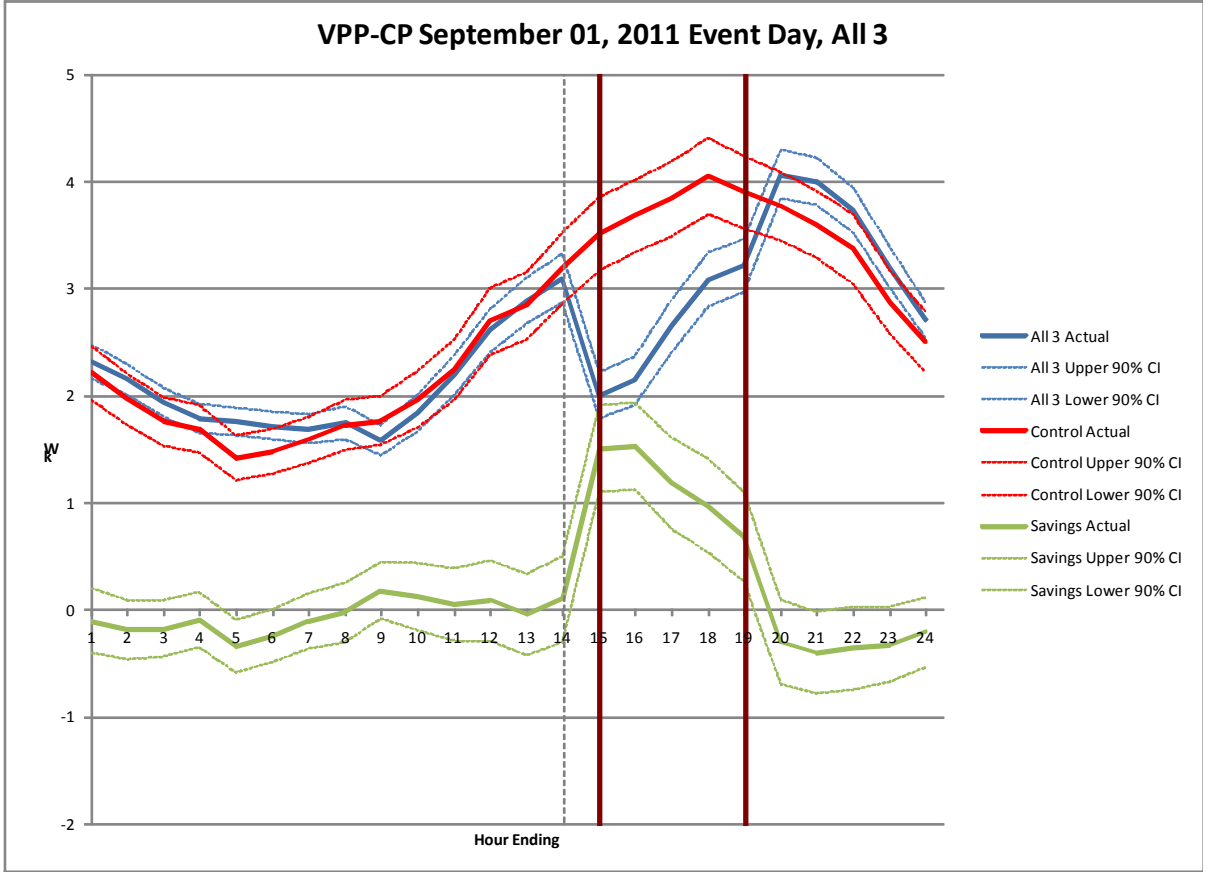

VPP-CP August 08, 2011 Event Day, Portal Only
6
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

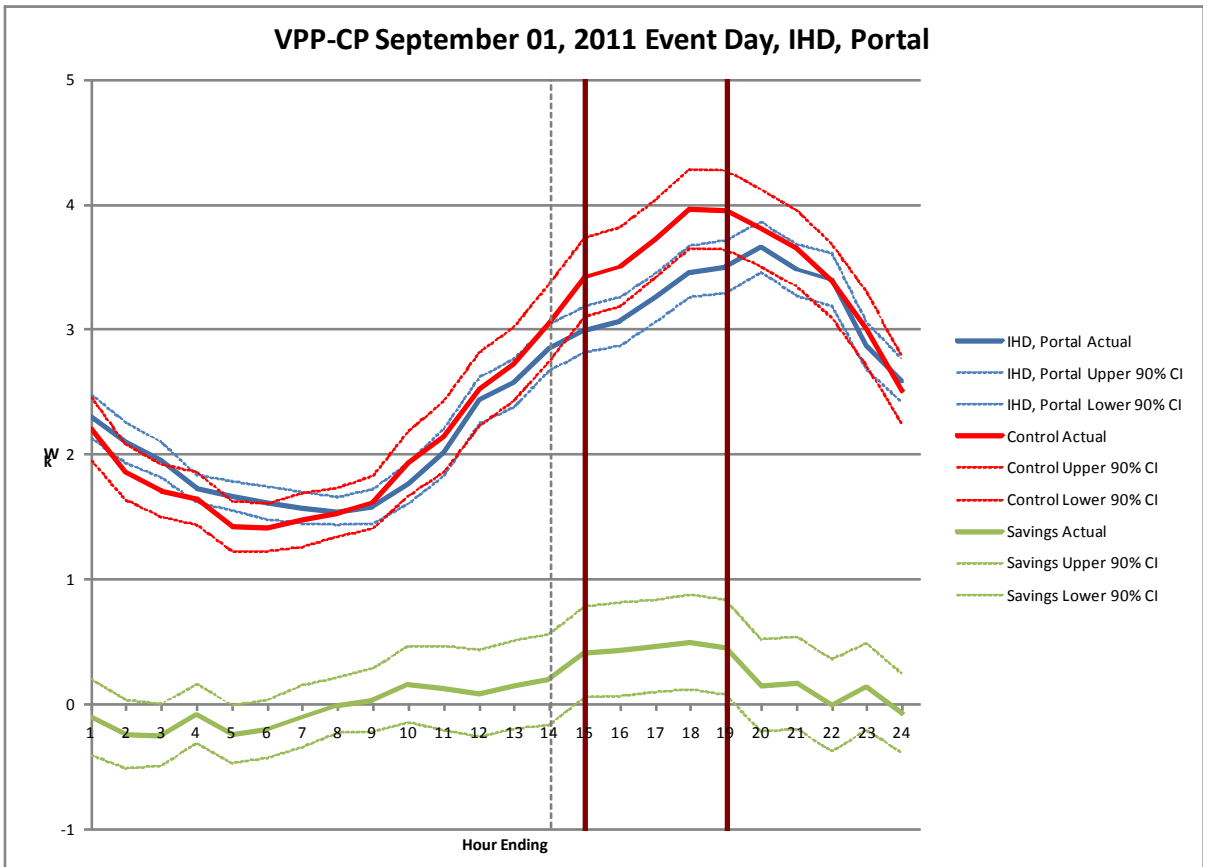

VPP-CP August 24, 2011 Event Day, All 3
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

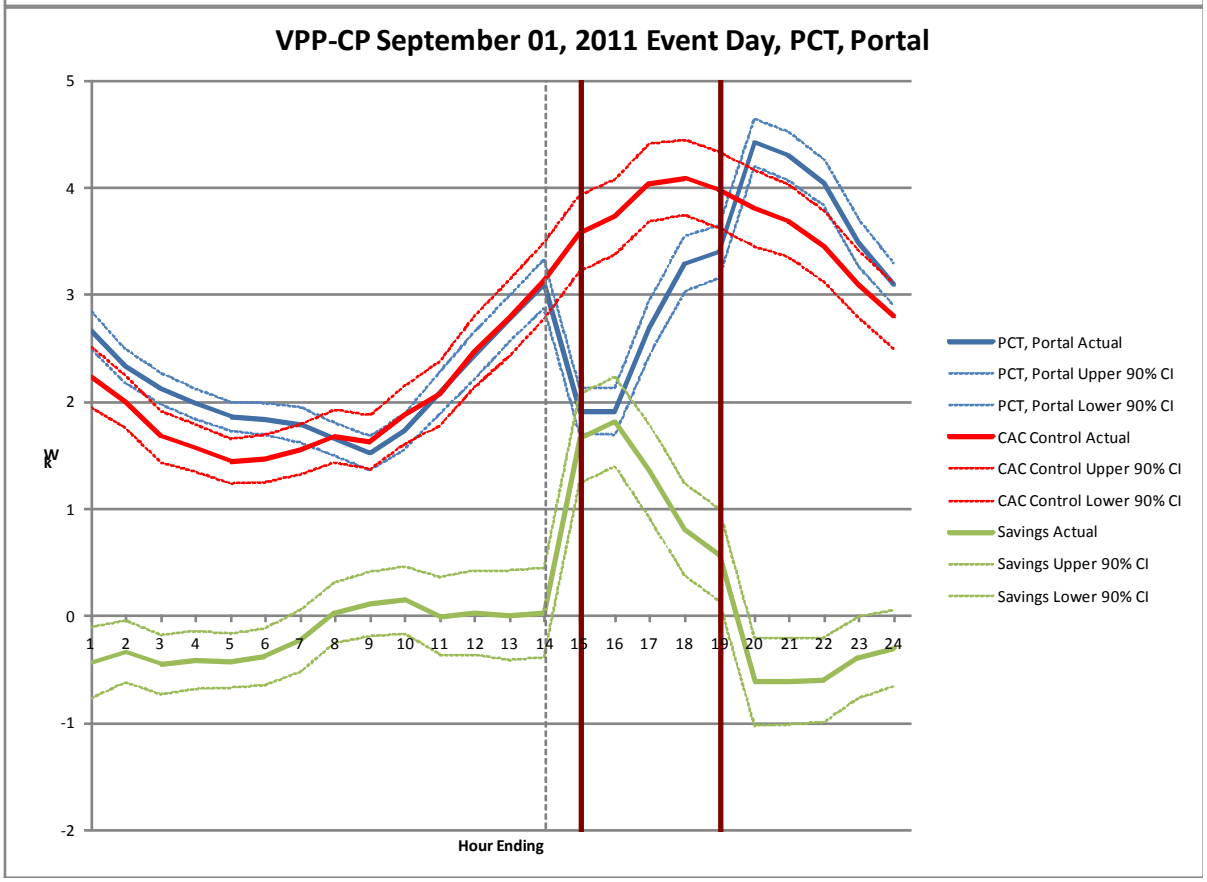

VPP-CP August 24, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

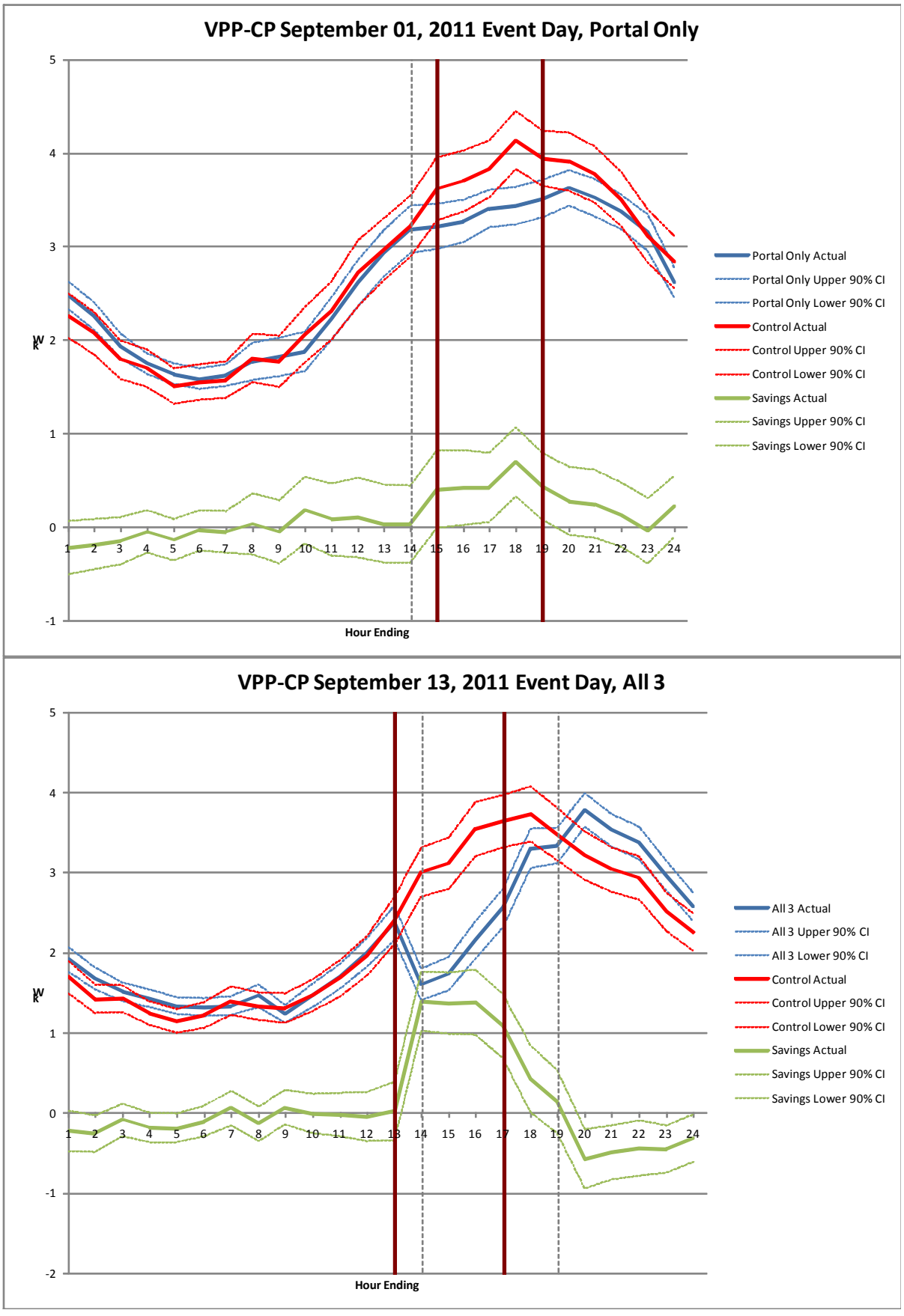

VPP-CP August 24, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

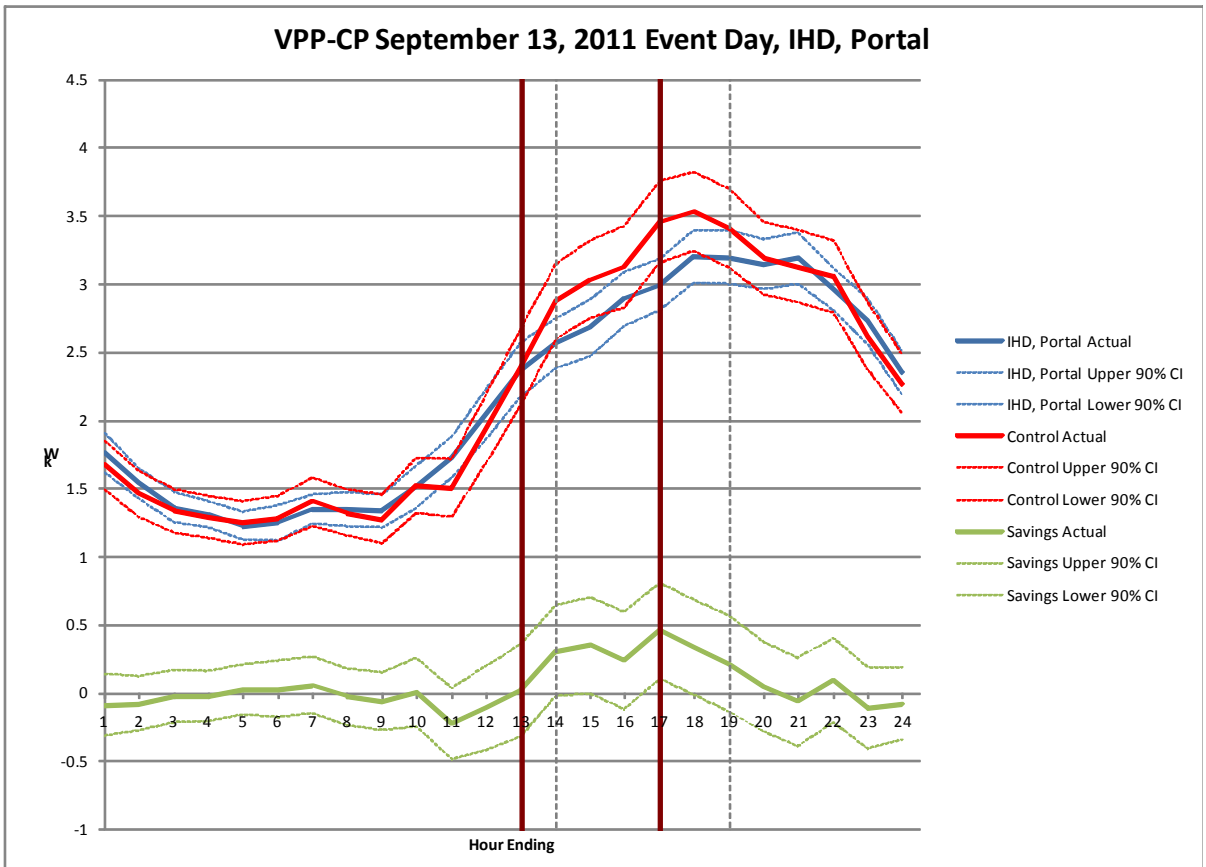

VPP-CP August 24, 2011 Event Day, Portal Only
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

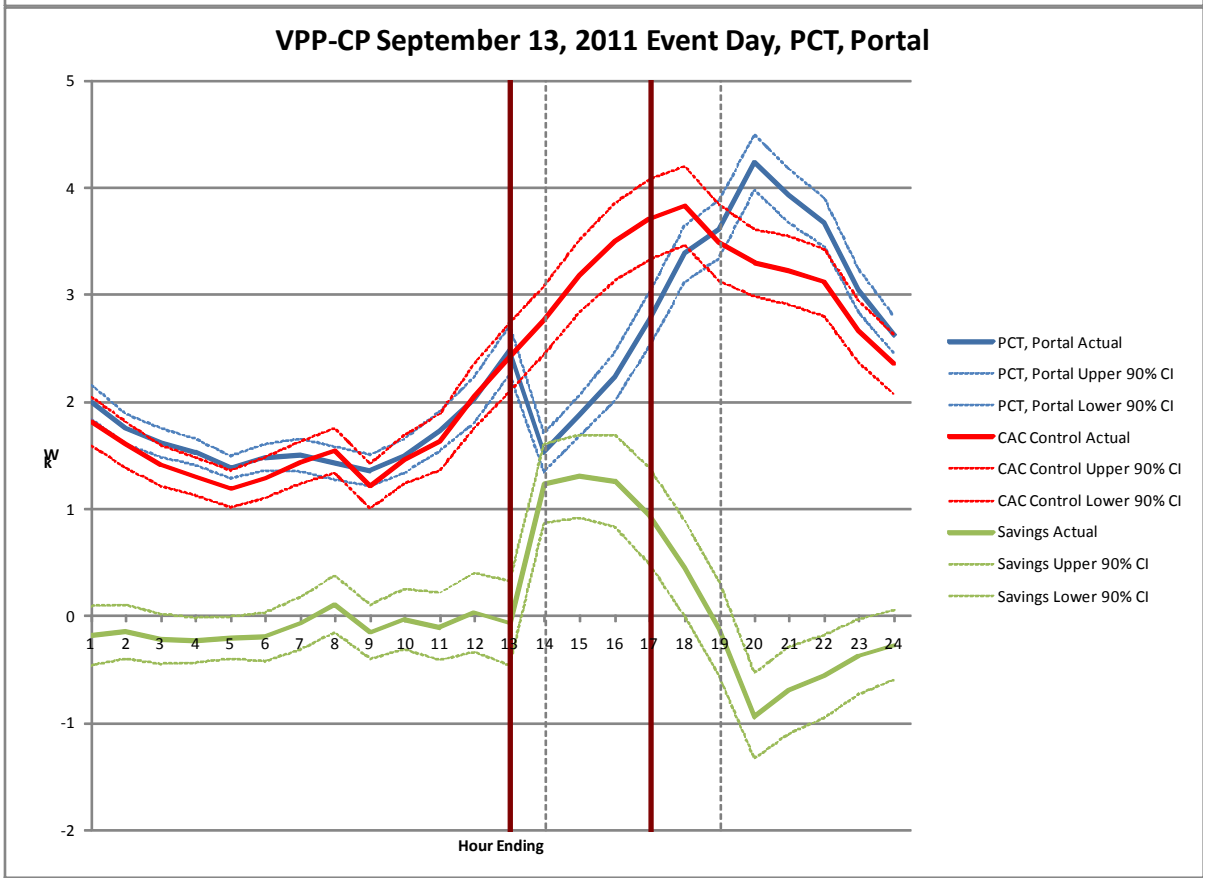

VPP-CP September 01, 2011 Event Day, All 3
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

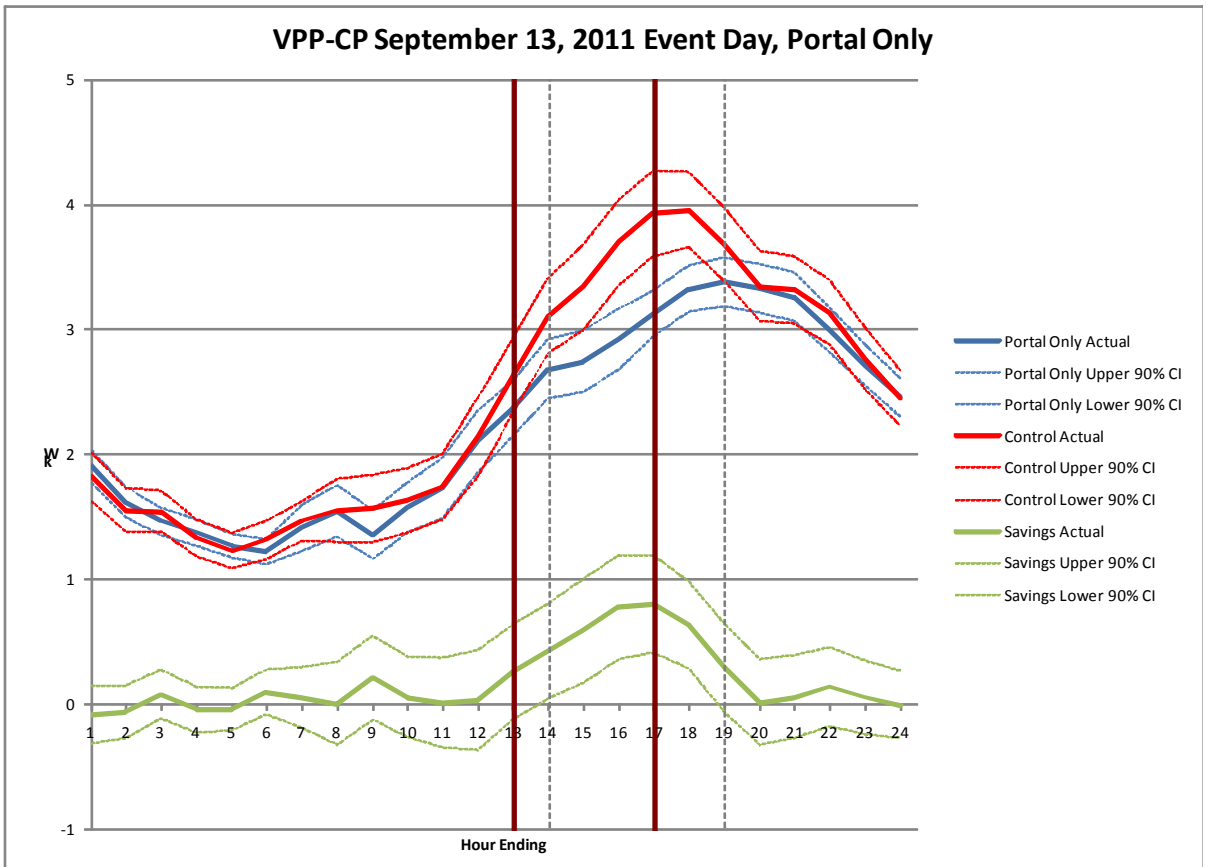

VPP-CP September 01, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

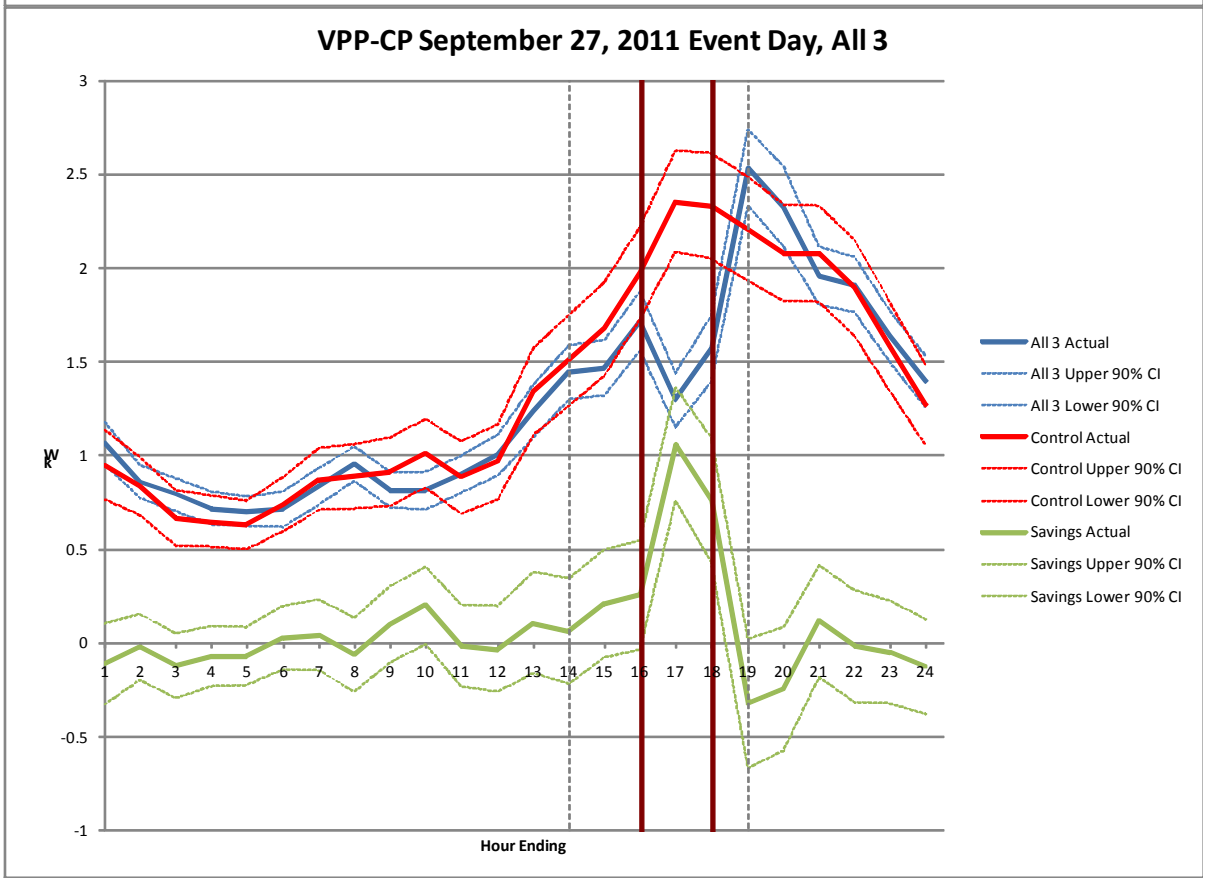

VPP-CP September 01, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

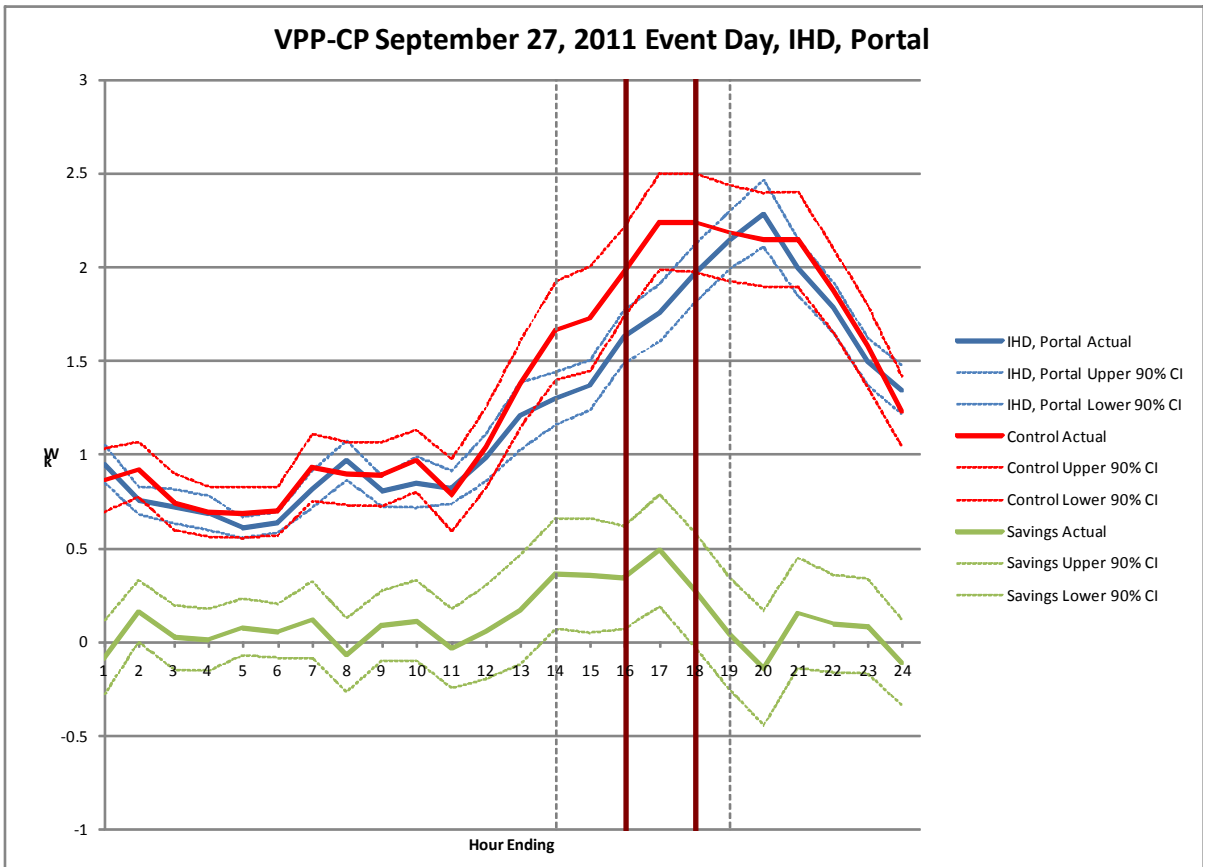

VPP-CP September 01, 2011 Event Day, Portal Only
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
VPP-CP September 13, 2011 Event Day, All 3
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

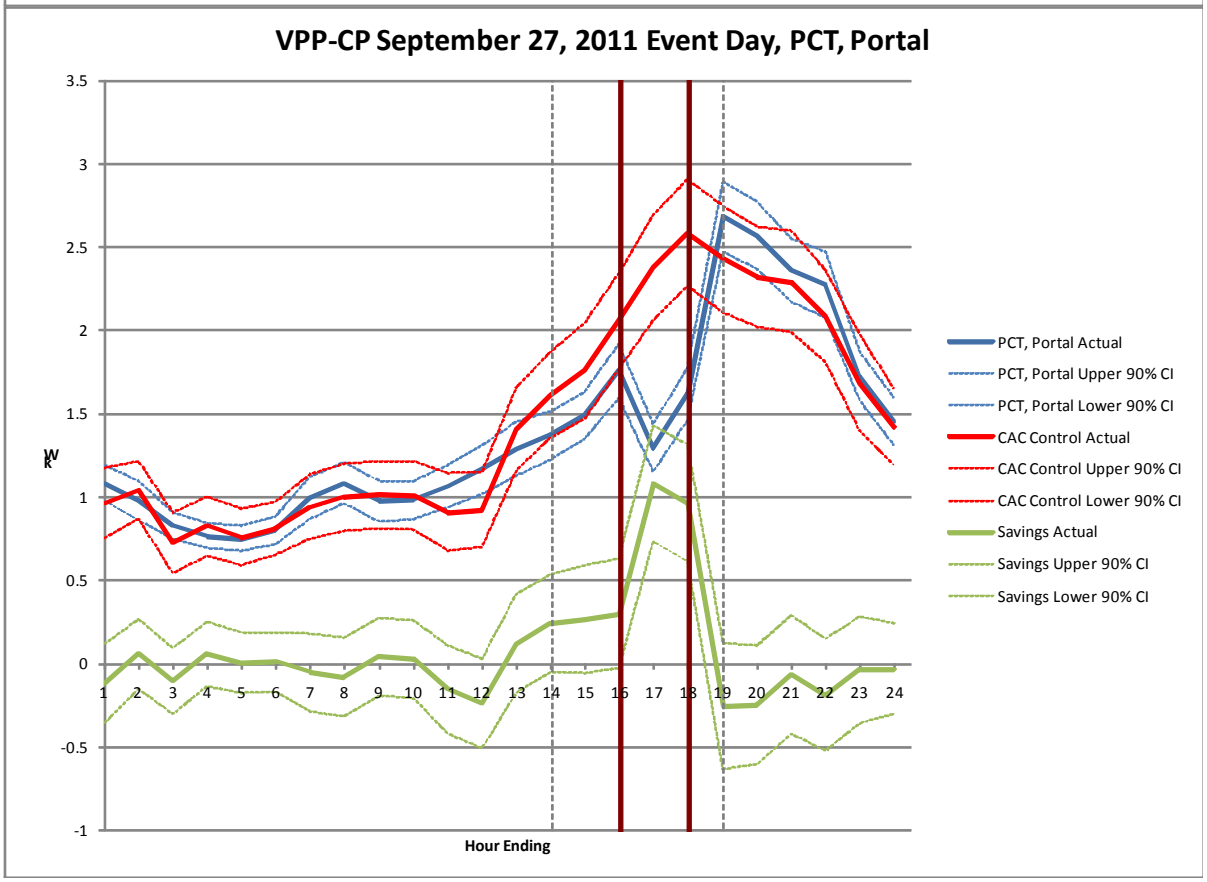

VPP-CP September 13, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

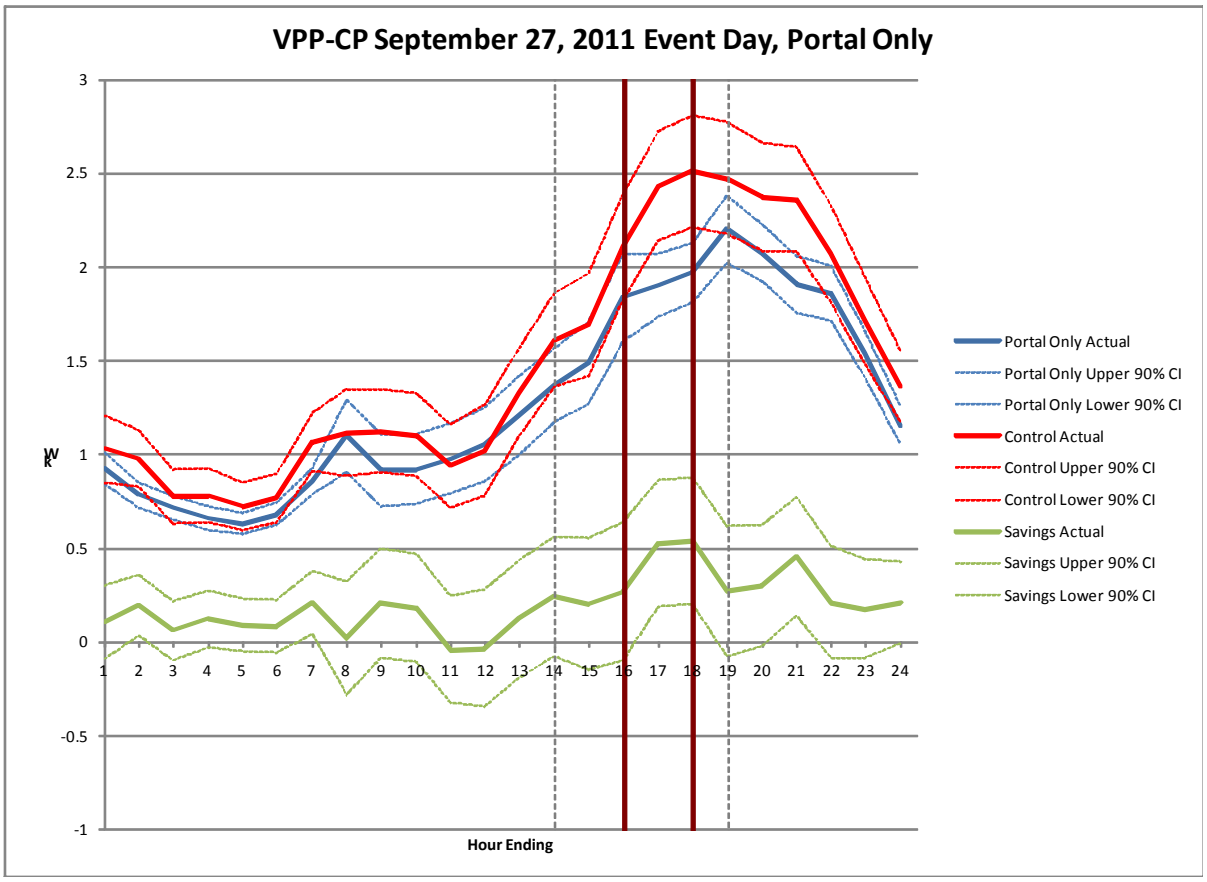

VPP-CP September 13, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 13, 2011 Event Day, Portal Only
5
4
3
2
1
0
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 27, 2011 Event Day, All 3
3
2.5
2
1.5
1
0.5
0
-0.5
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

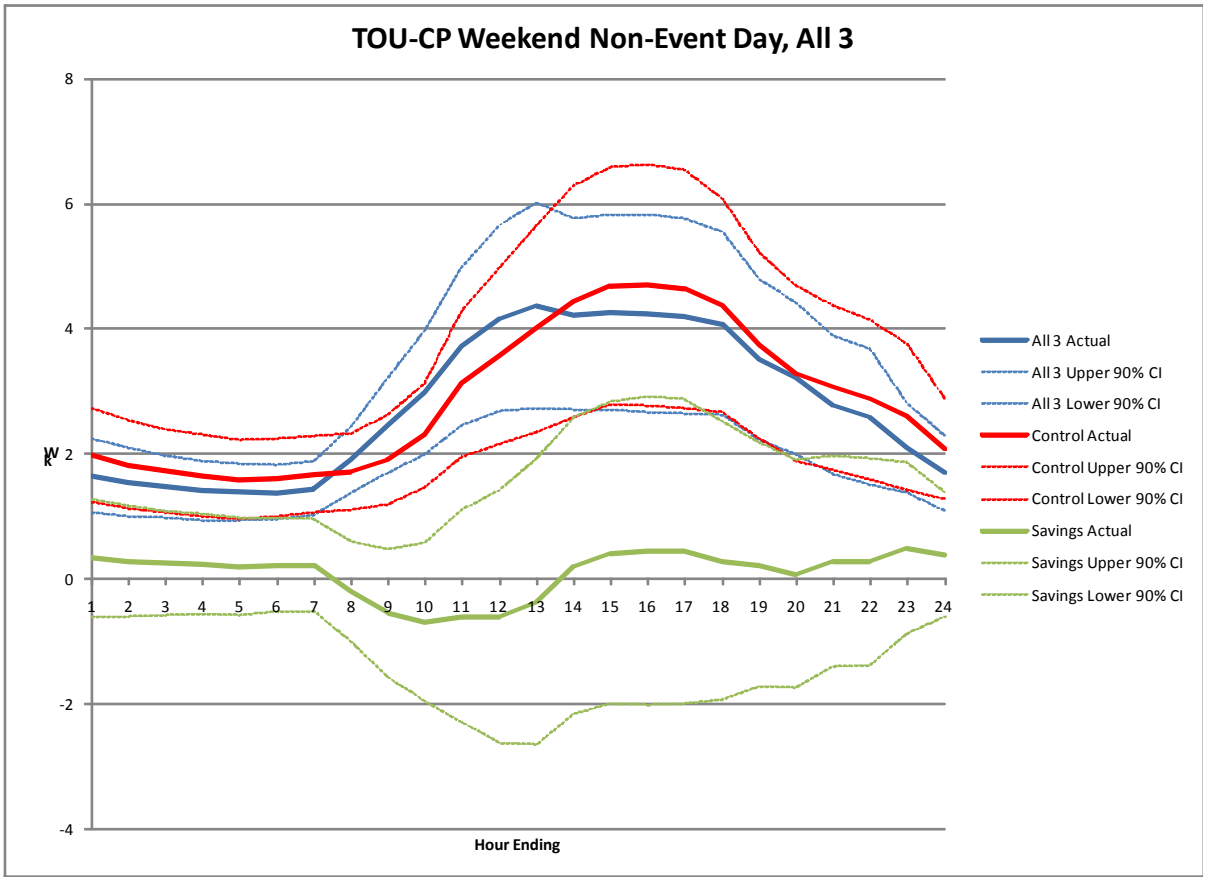

VPP-CP September 27, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

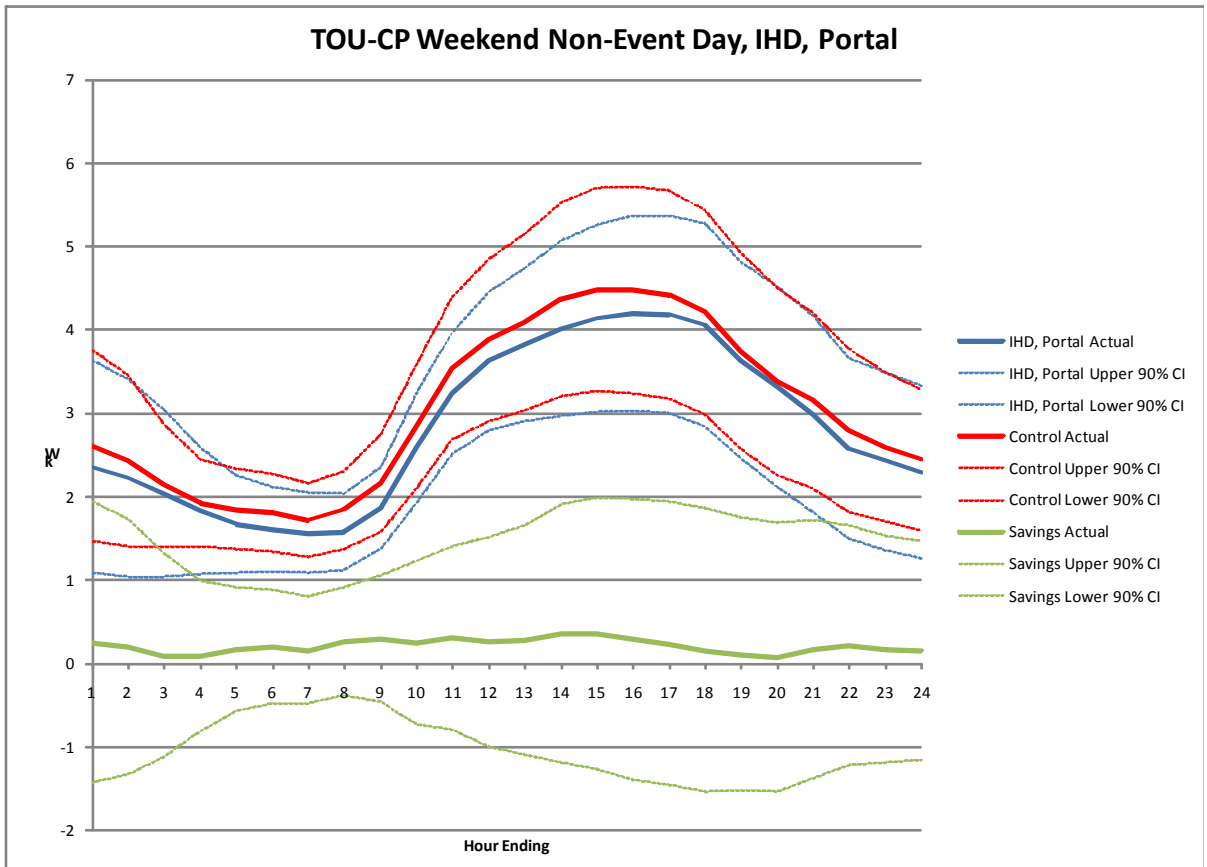

VPP-CP September 27, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

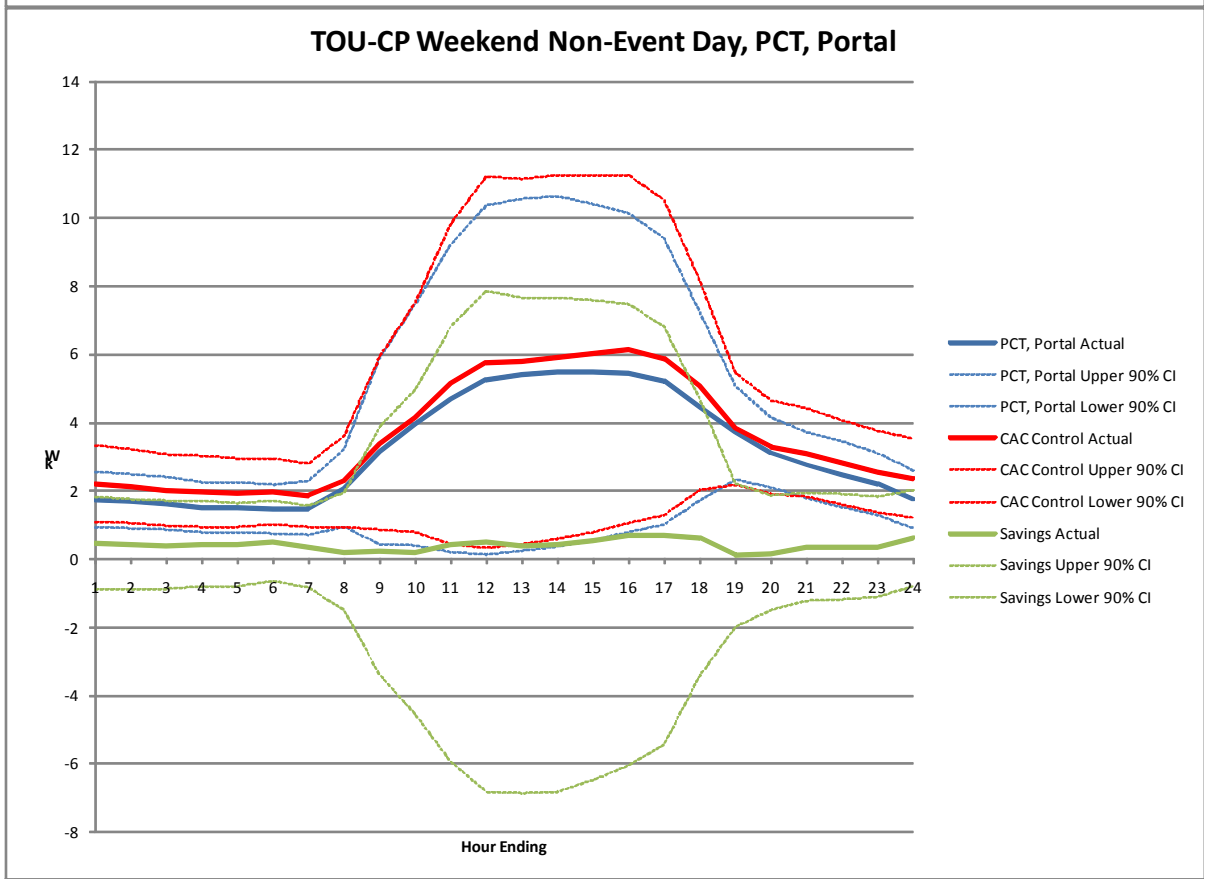

VPP-CP September 27, 2011 Event Day, Portal Only
3
2.5
2
1.5
1
0.5
0
-0.5
-1
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

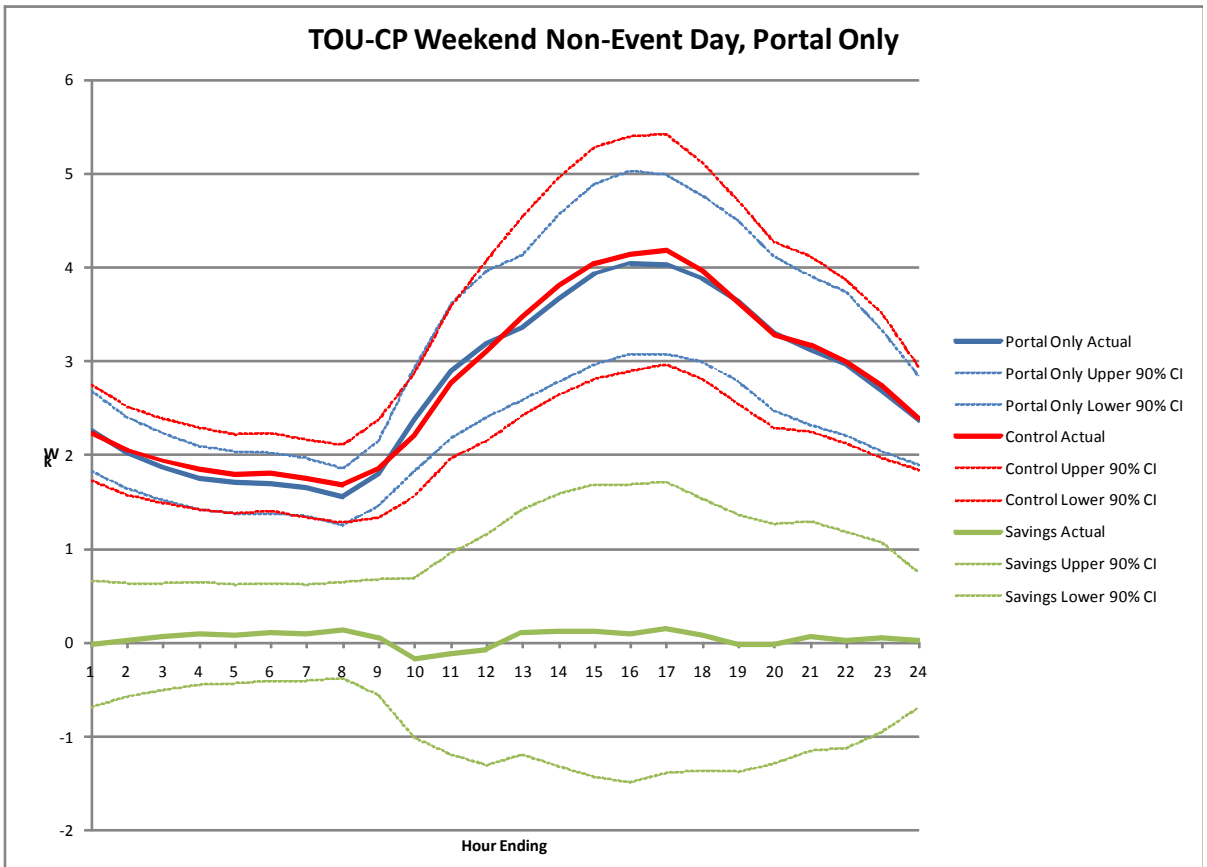
APPENDIX E- INDIVIDUAL LOAD SHAPES: SECOND YEAR RECRUITS - COMMERCIAL

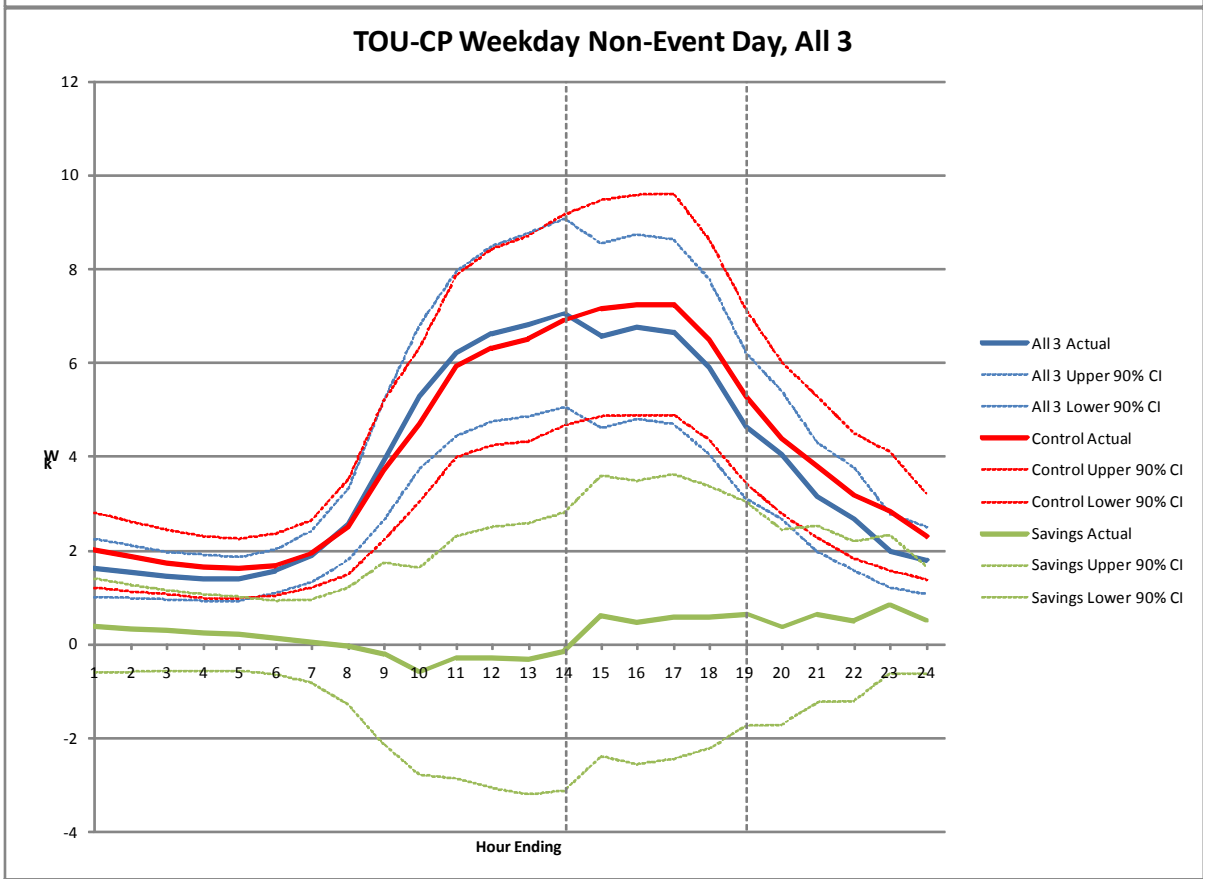
The following Appendix E graphs compare the estimated second year recruits commercial participant load shapes to the estimated control group load shapes for each of the 21 day types for each of the four enabling technology options: Portal Only; IHD, Portal; PCT, Portal; and All 3. A third line, the estimated savings, which is the difference between the control group and participant shapes, is shown in green. Each of the shapes is surrounded by dashed lines indicating the 90% confidence intervals. When the 90% confidence interval on the savings estimate does not include zero, the savings are statistically significant. This appendix contains 84 graphs.

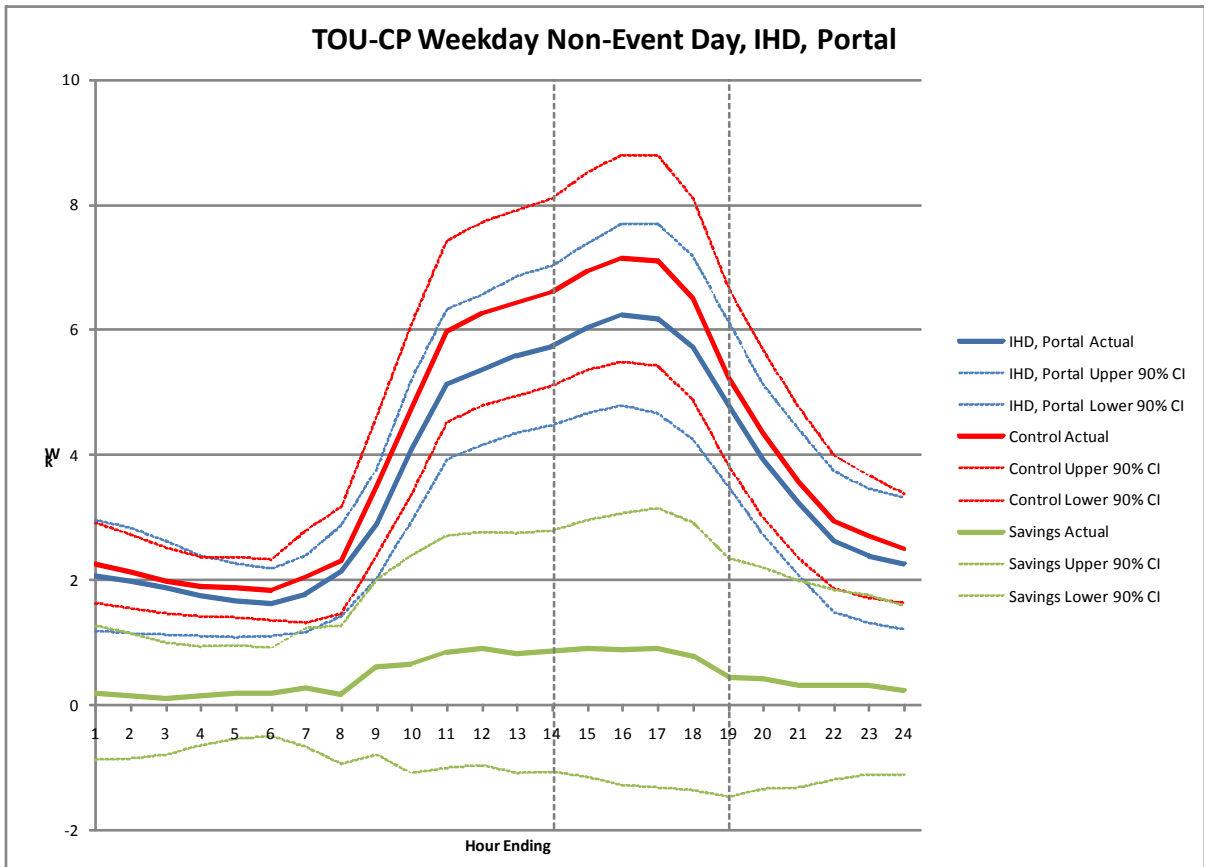


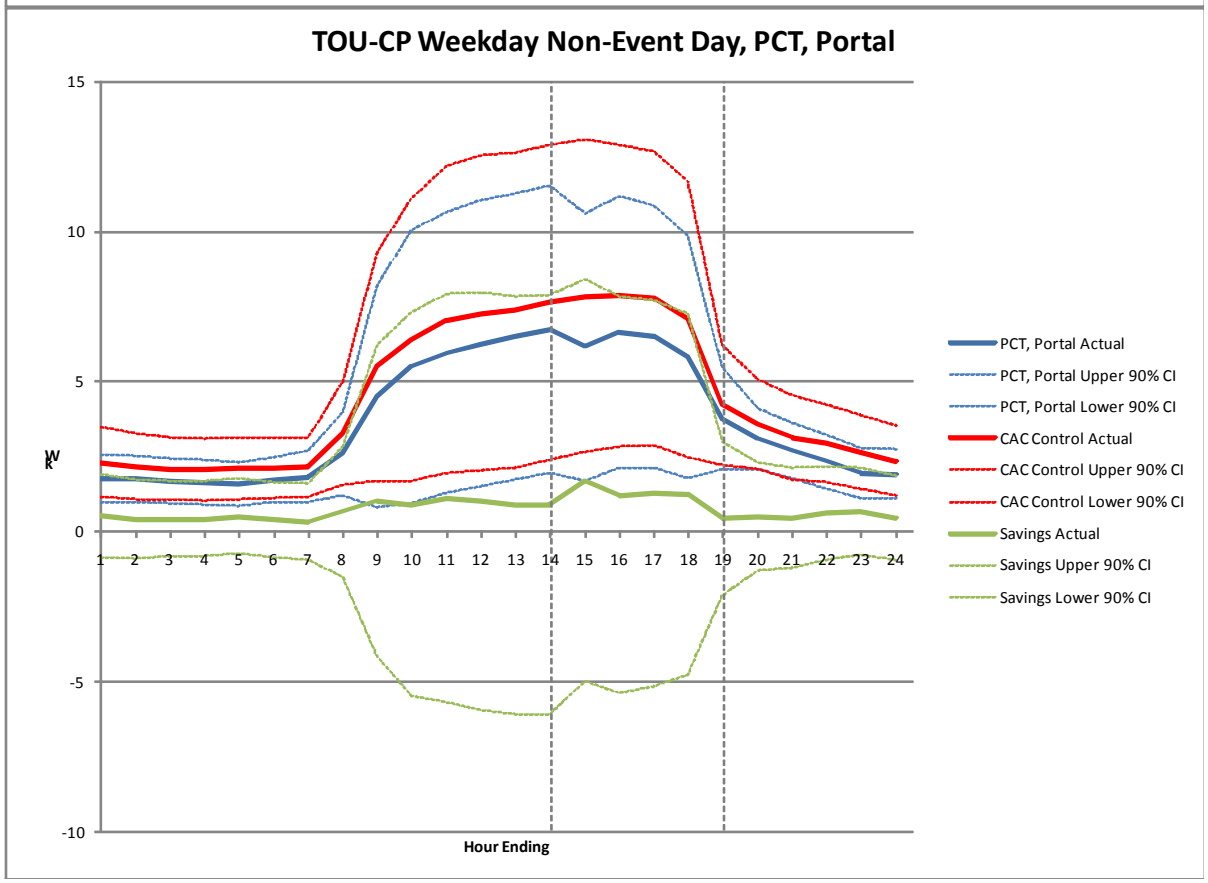

TOU-CP Weekend Non-Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

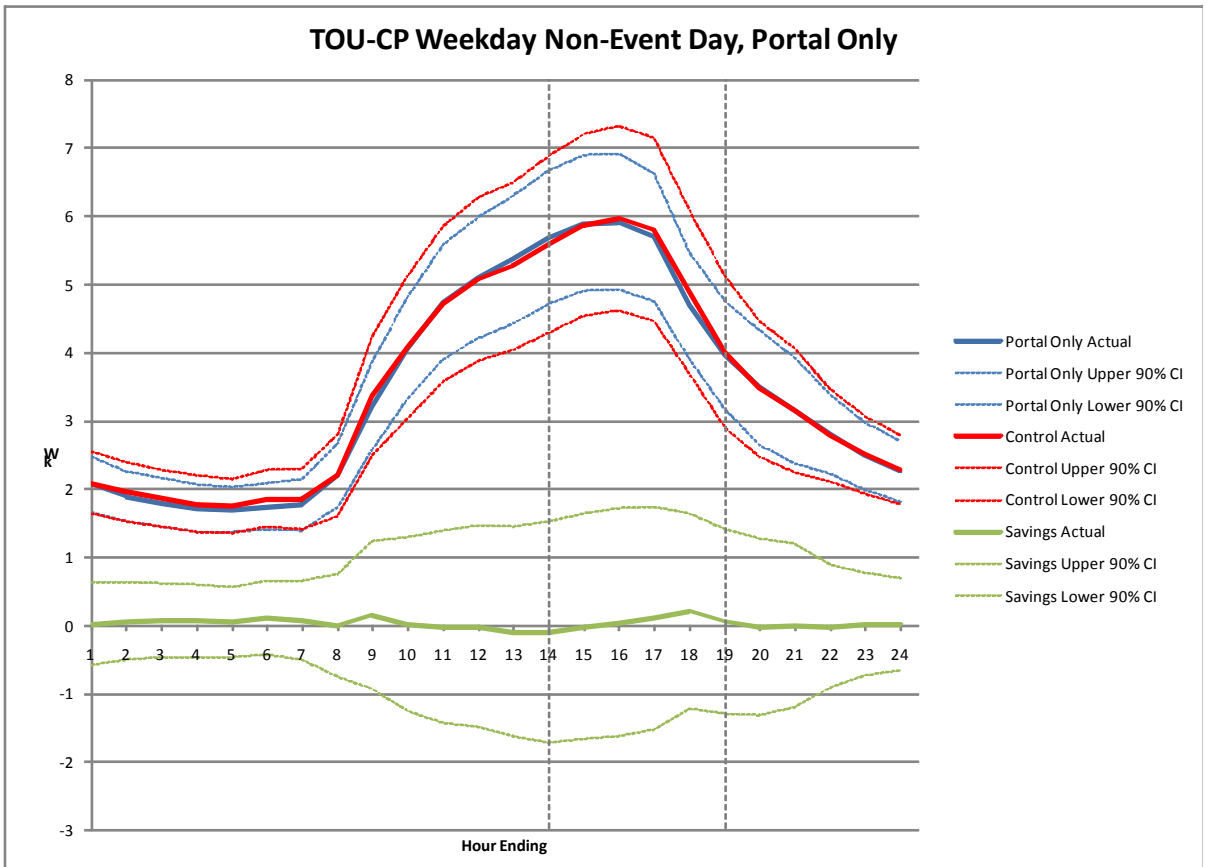

TOU-CP Weekend Non-Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

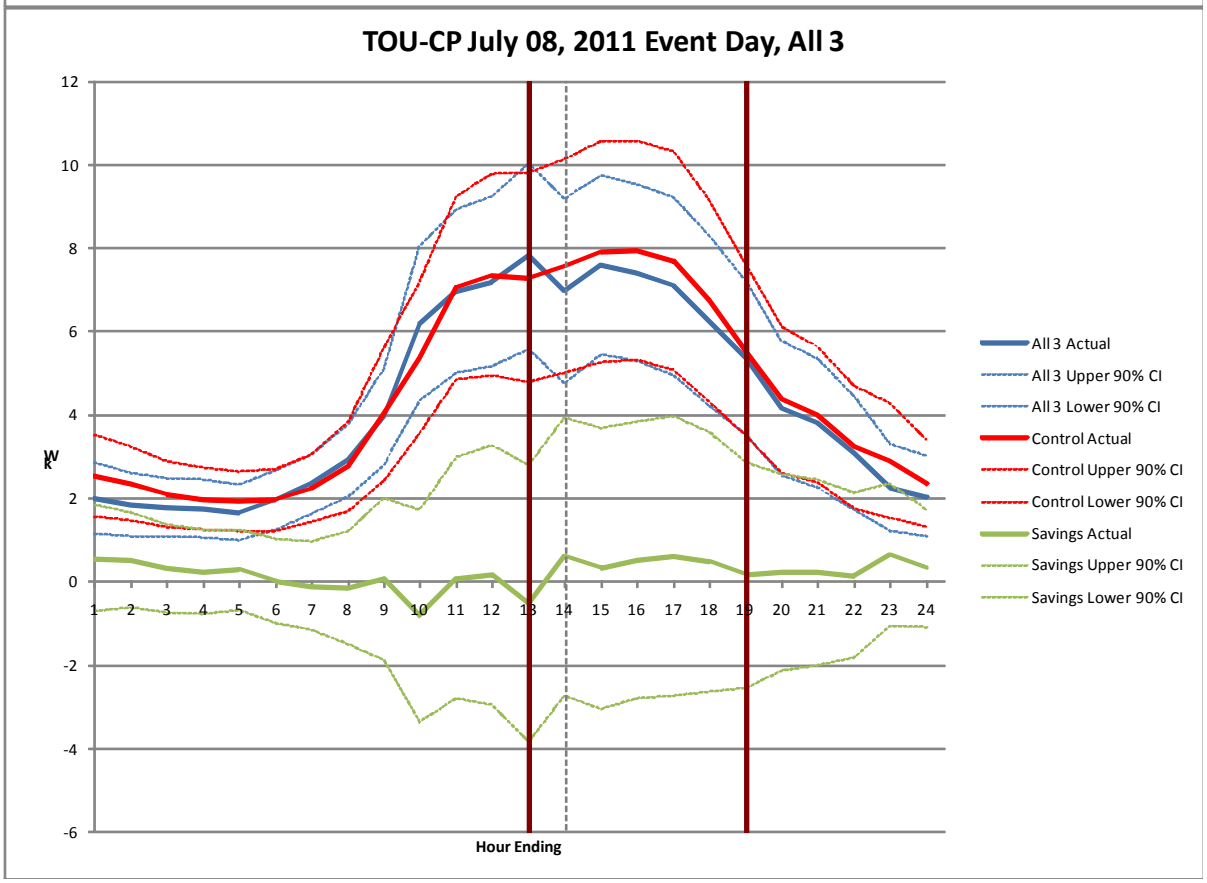

TOU-CP Weekend Non-Event Day, Portal Only
6
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

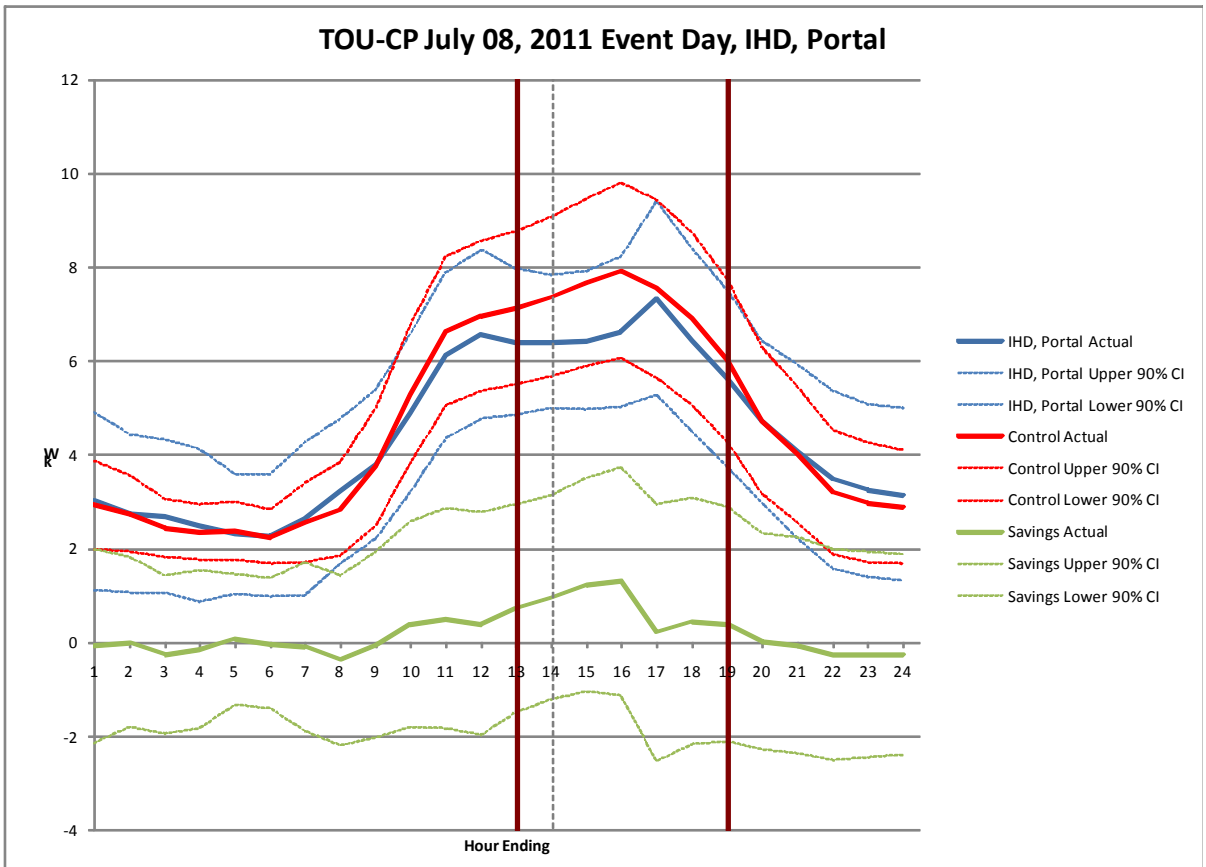

TOU-CP Weekday Non-Event Day, All 3
12
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

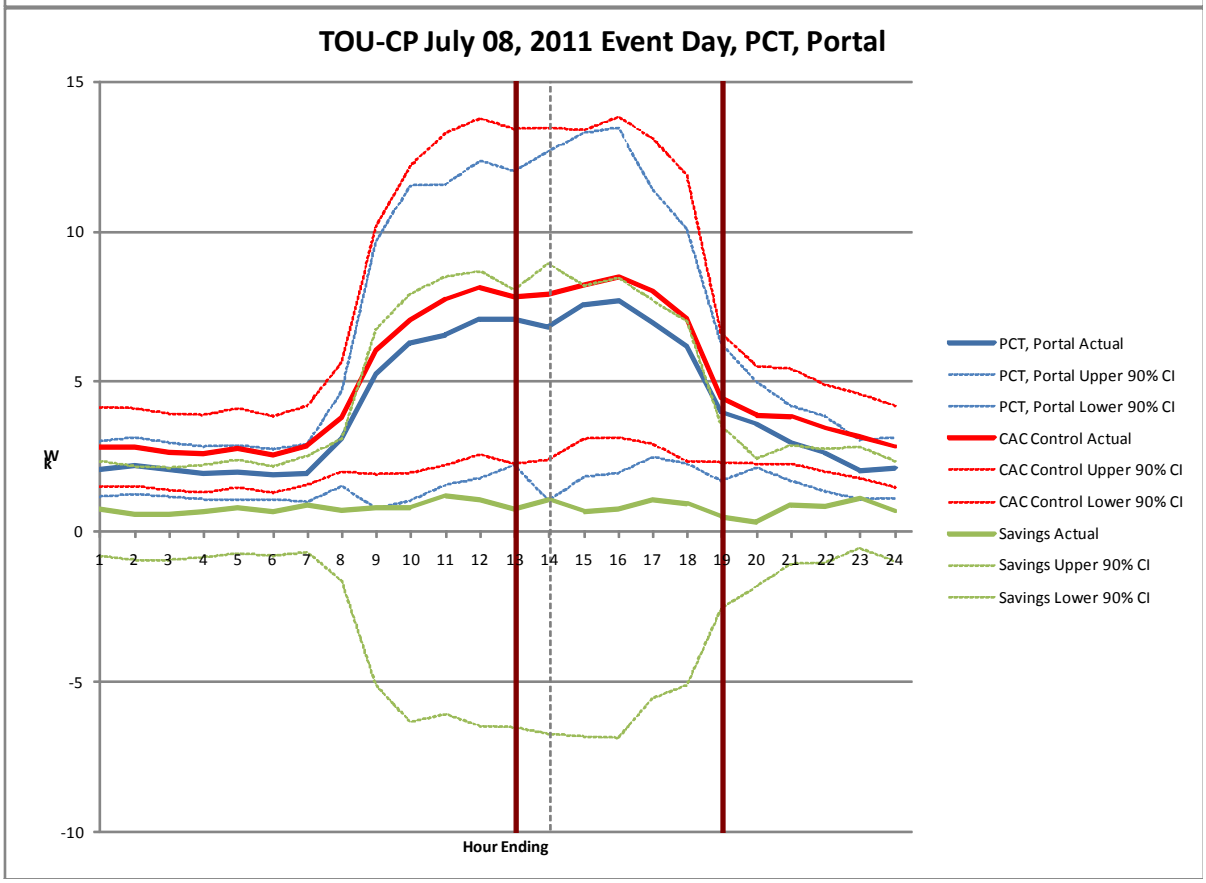

TOU-CP Weekday Non-Event Day, IHD, Portal
10
8
6
4
2
0
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

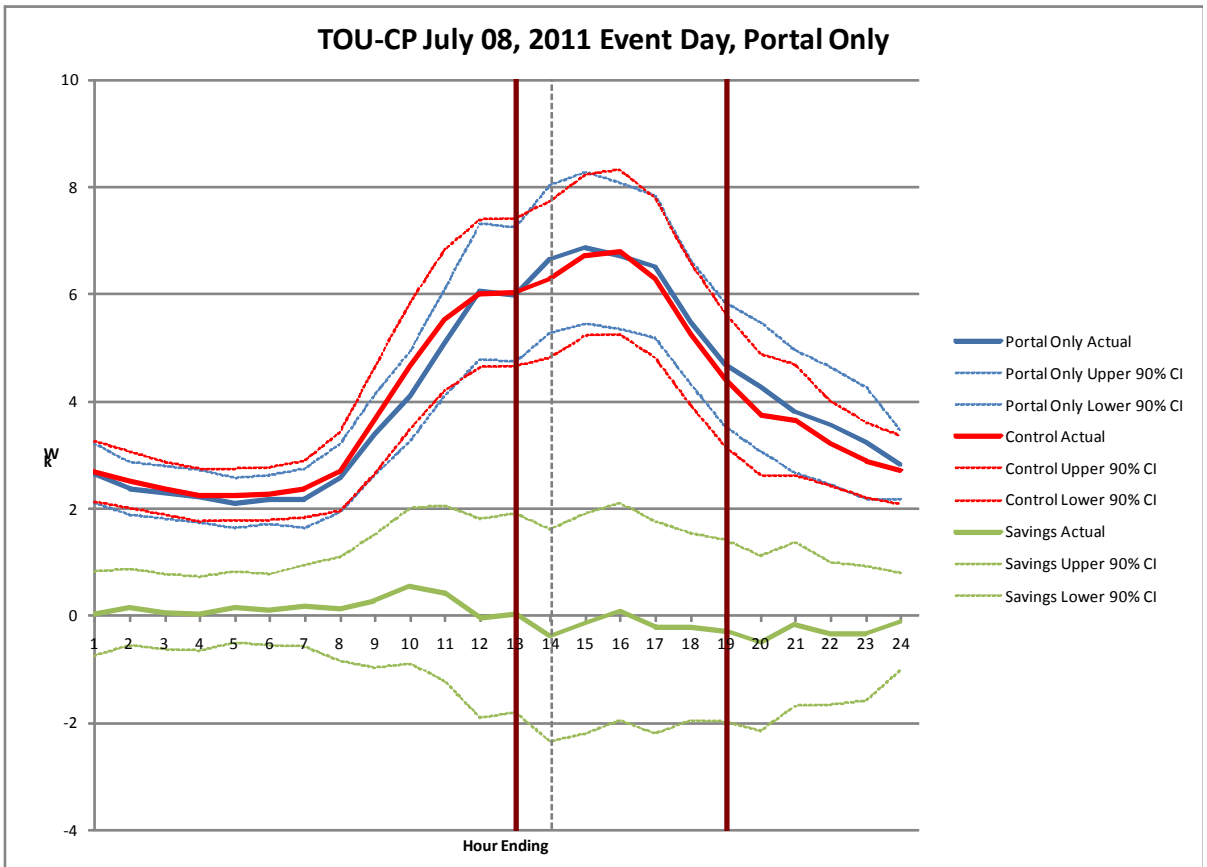

TOU-CP Weekday Non-Event Day, PCT, Portal
15
10
5
0
-5
-10
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

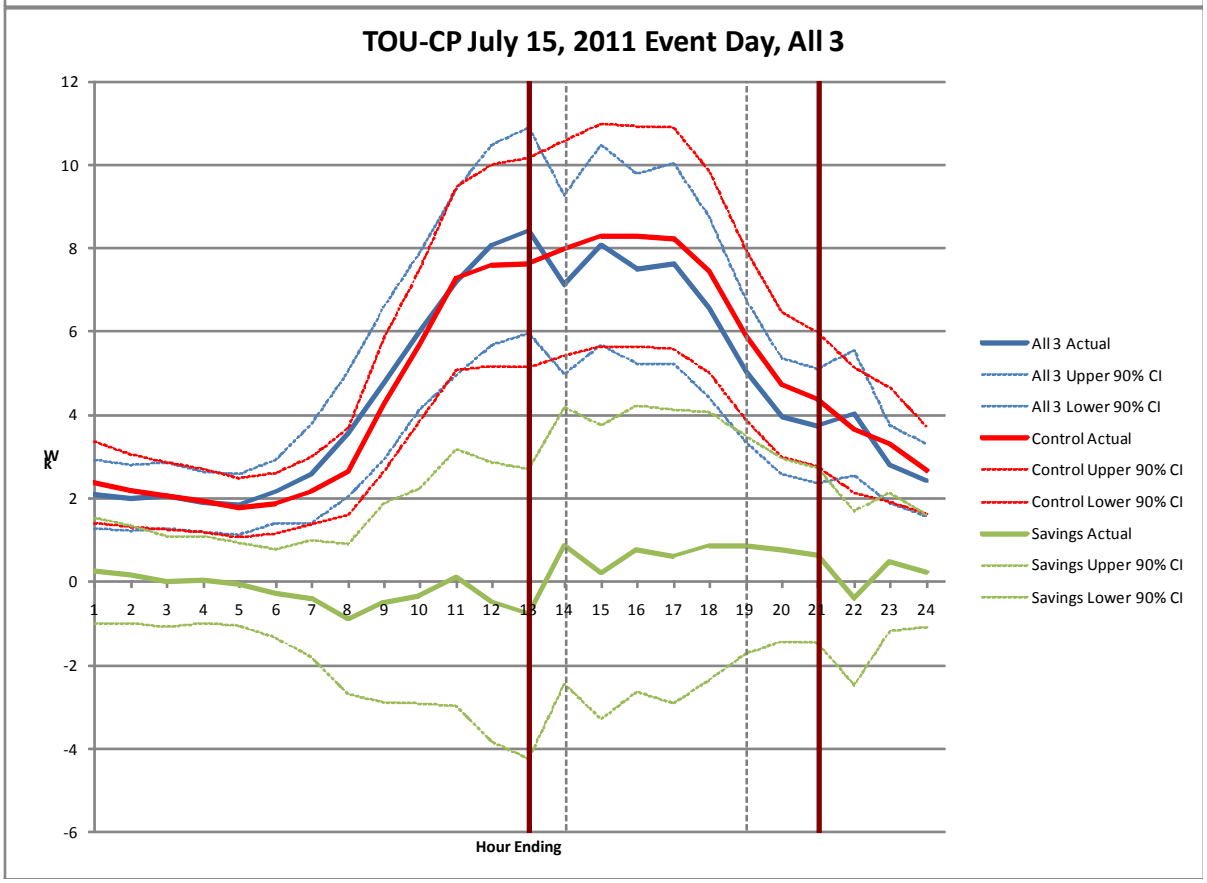

TOU-CP Weekday Non-Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

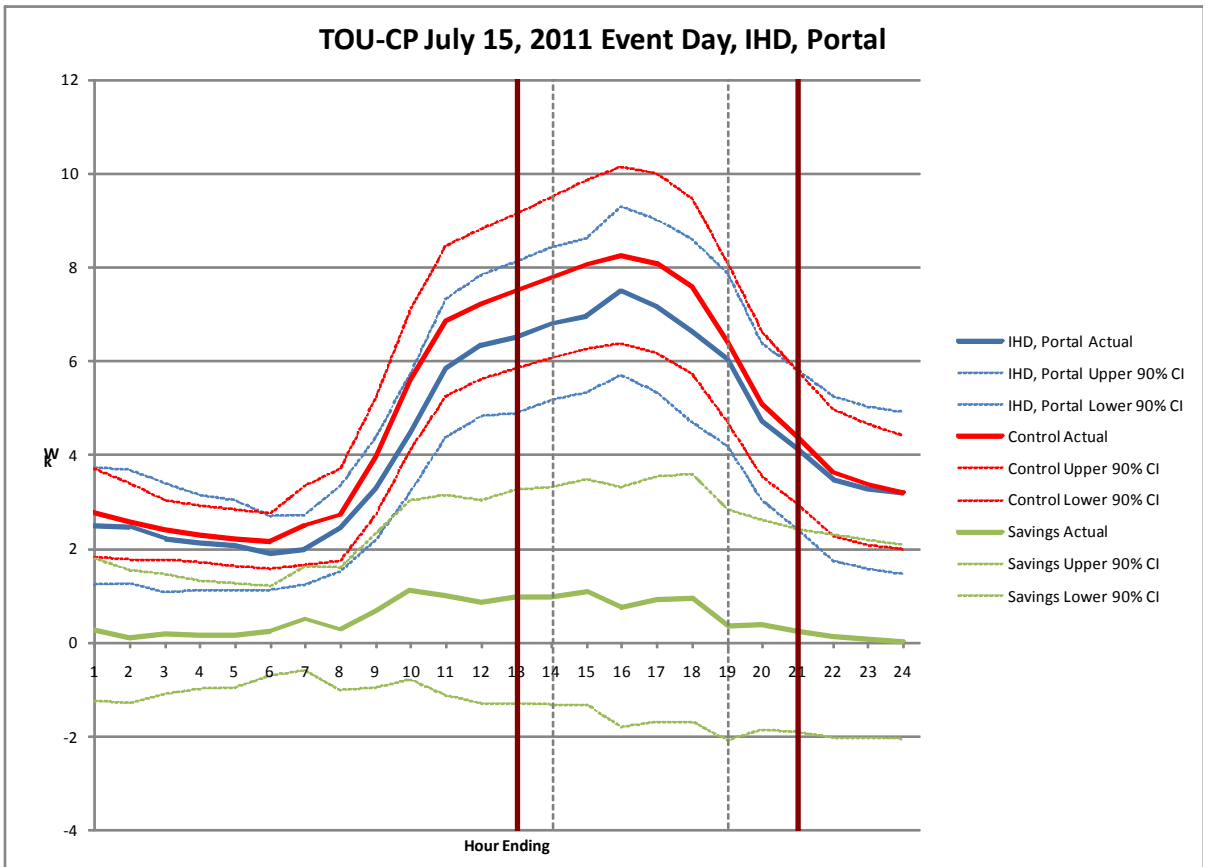

TOU-CP July 08, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

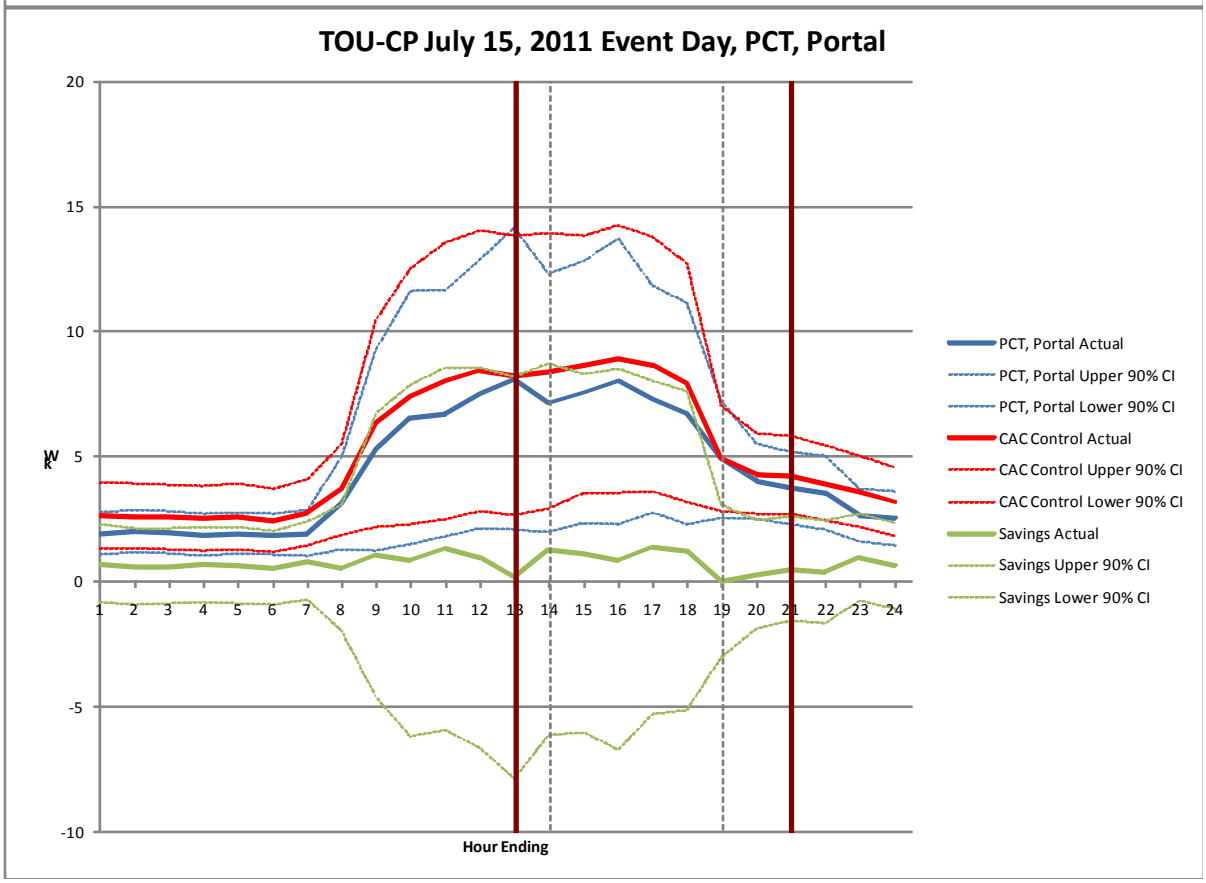

TOU-CP July 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

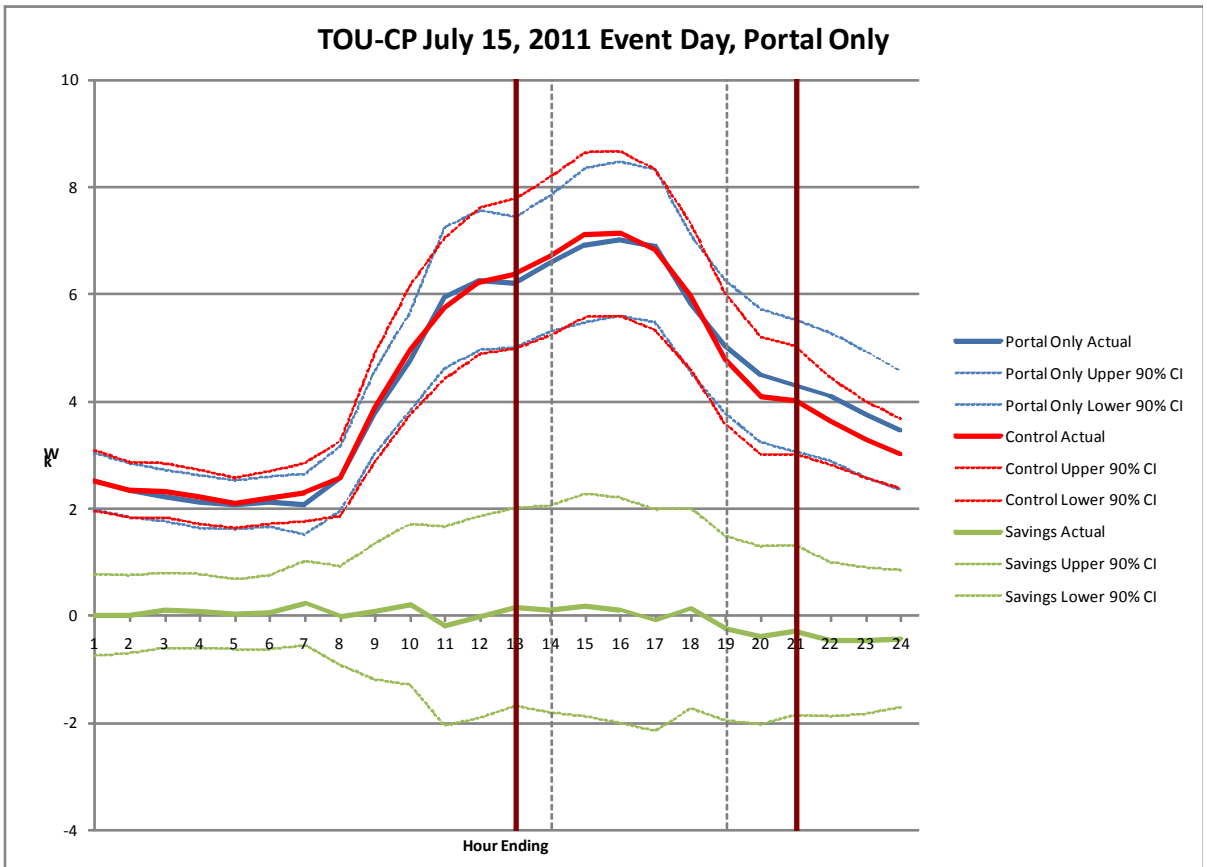

TOU-CP July 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

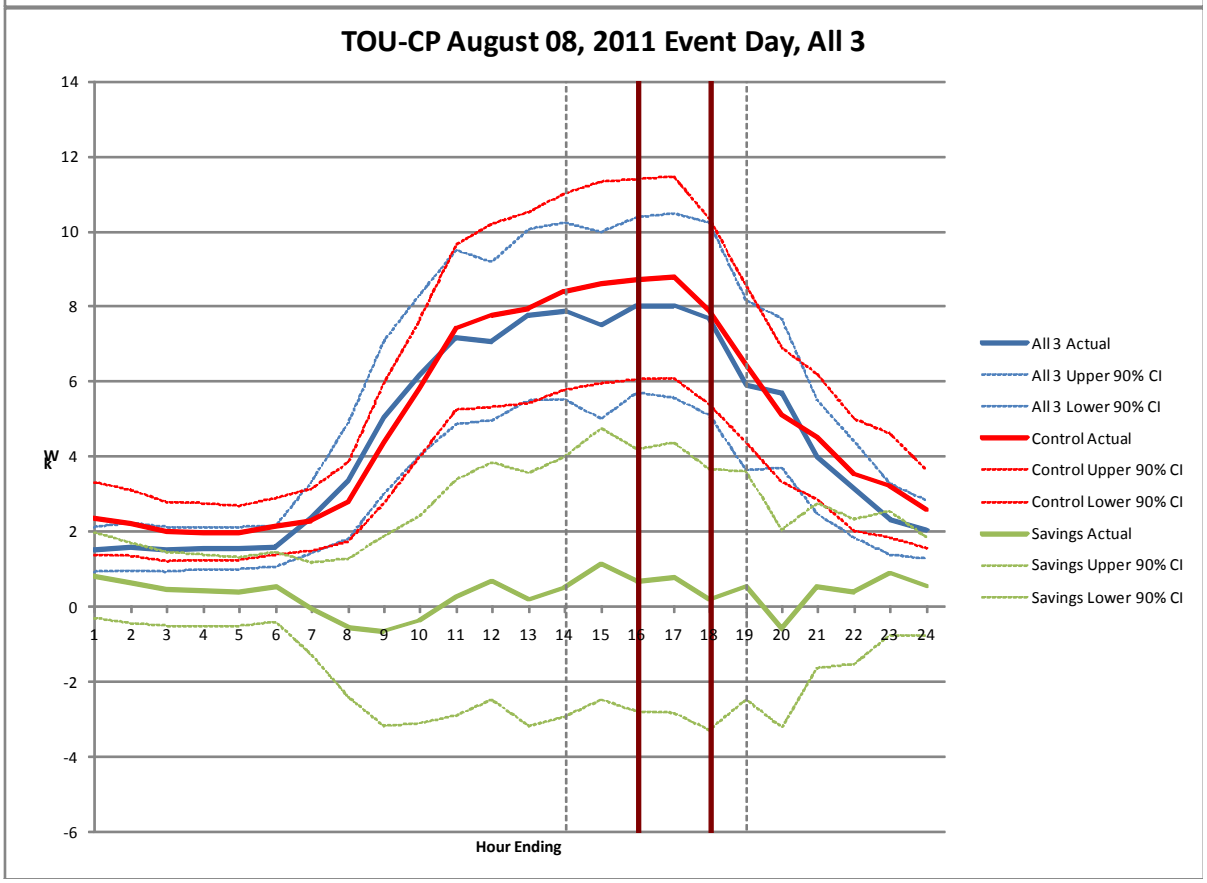

TOU-CP July 08, 2011 Event Day, Portal Only
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

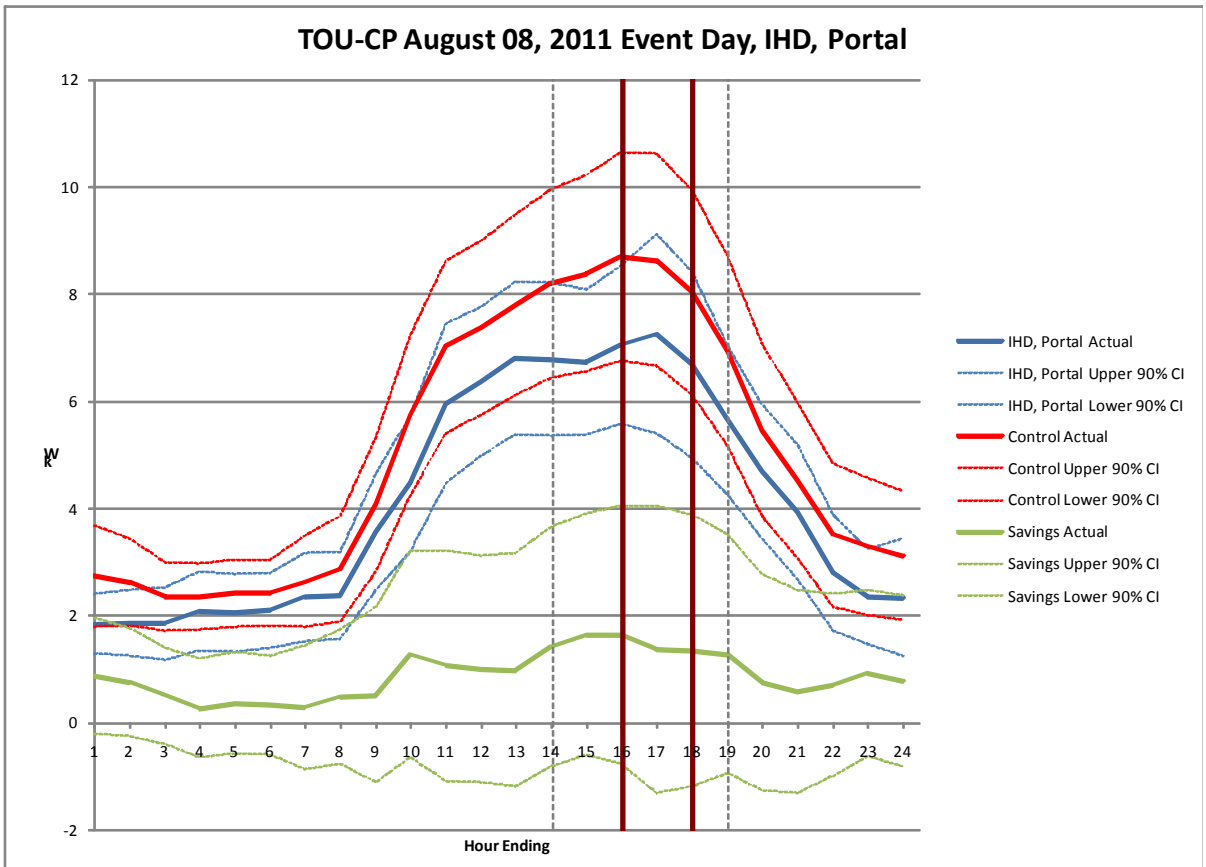

TOU-CP July 15, 2011 Event Day, All 3
12
10
8
6
4
2
0
-2
-4
-6
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

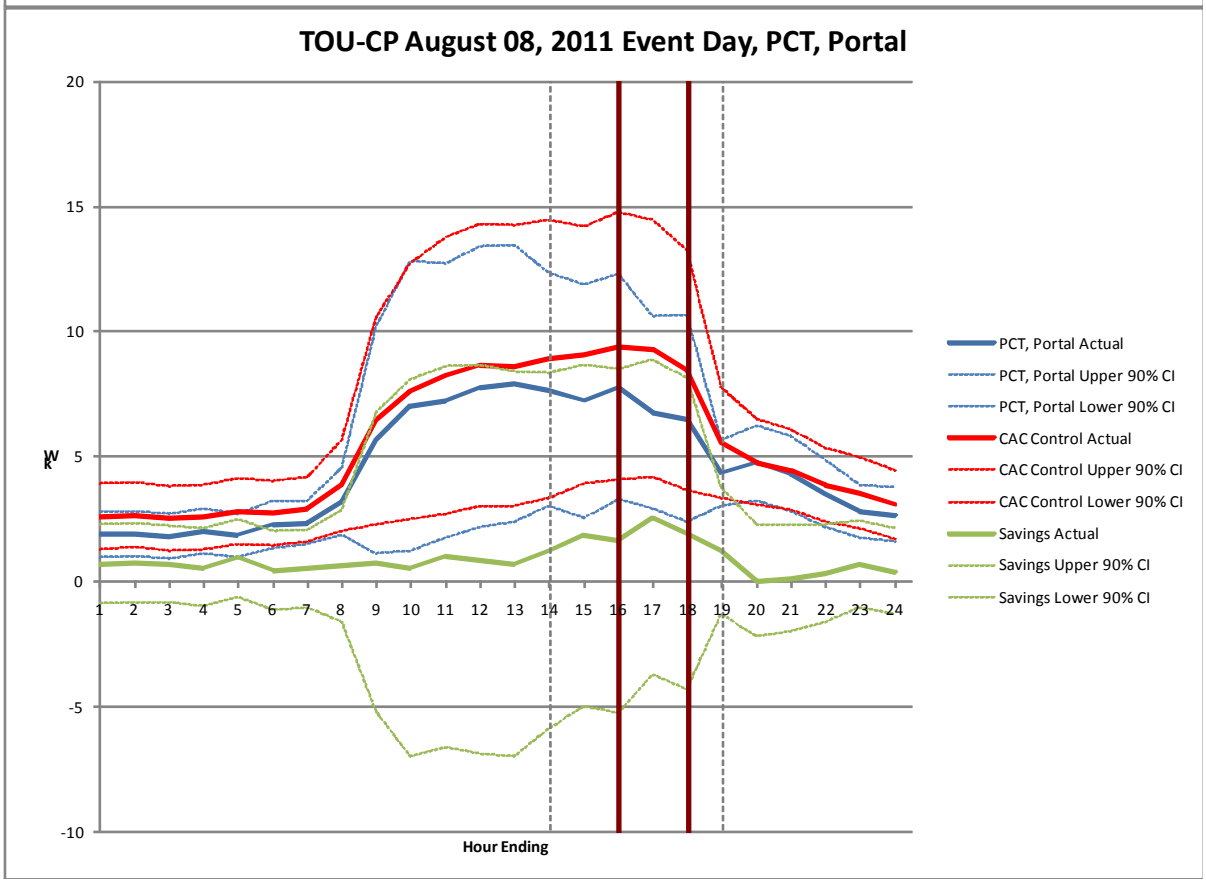

TOU-CP July 15, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

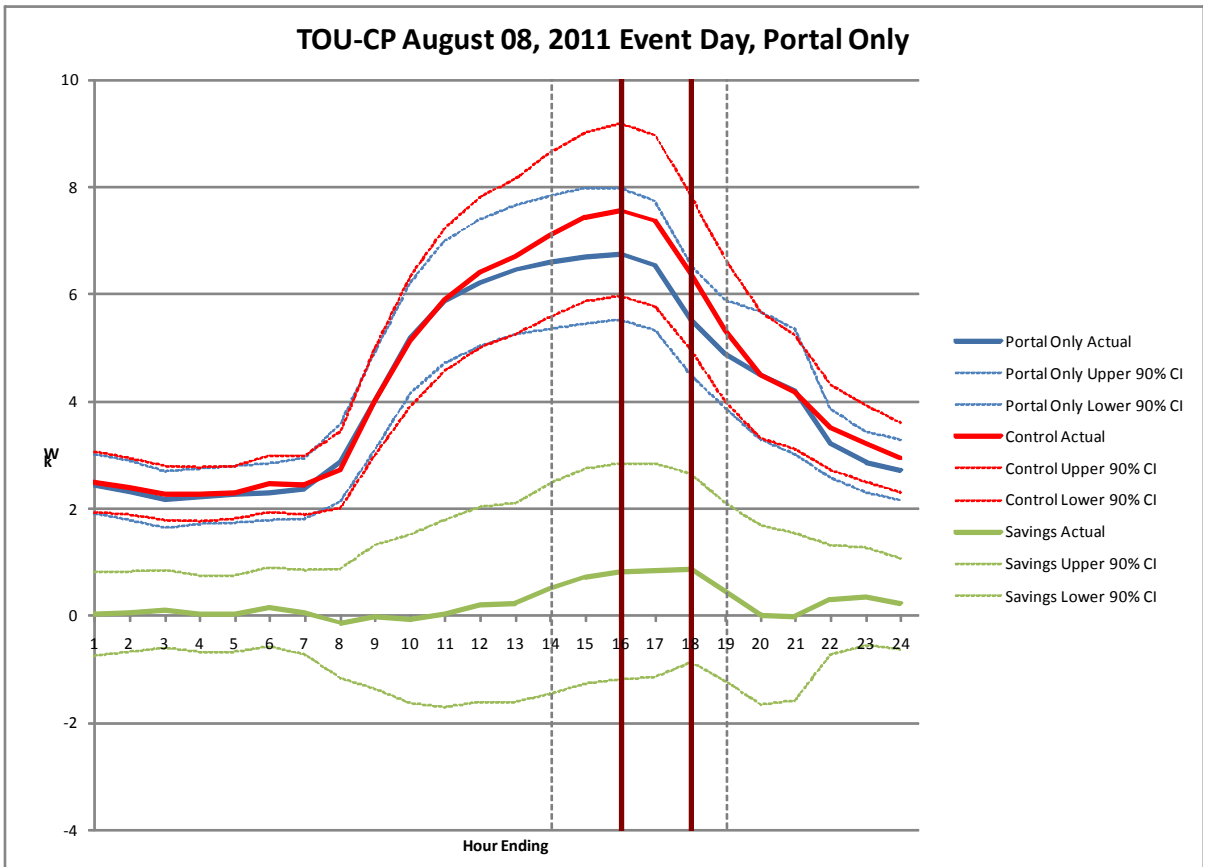

TOU-CP July 15, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

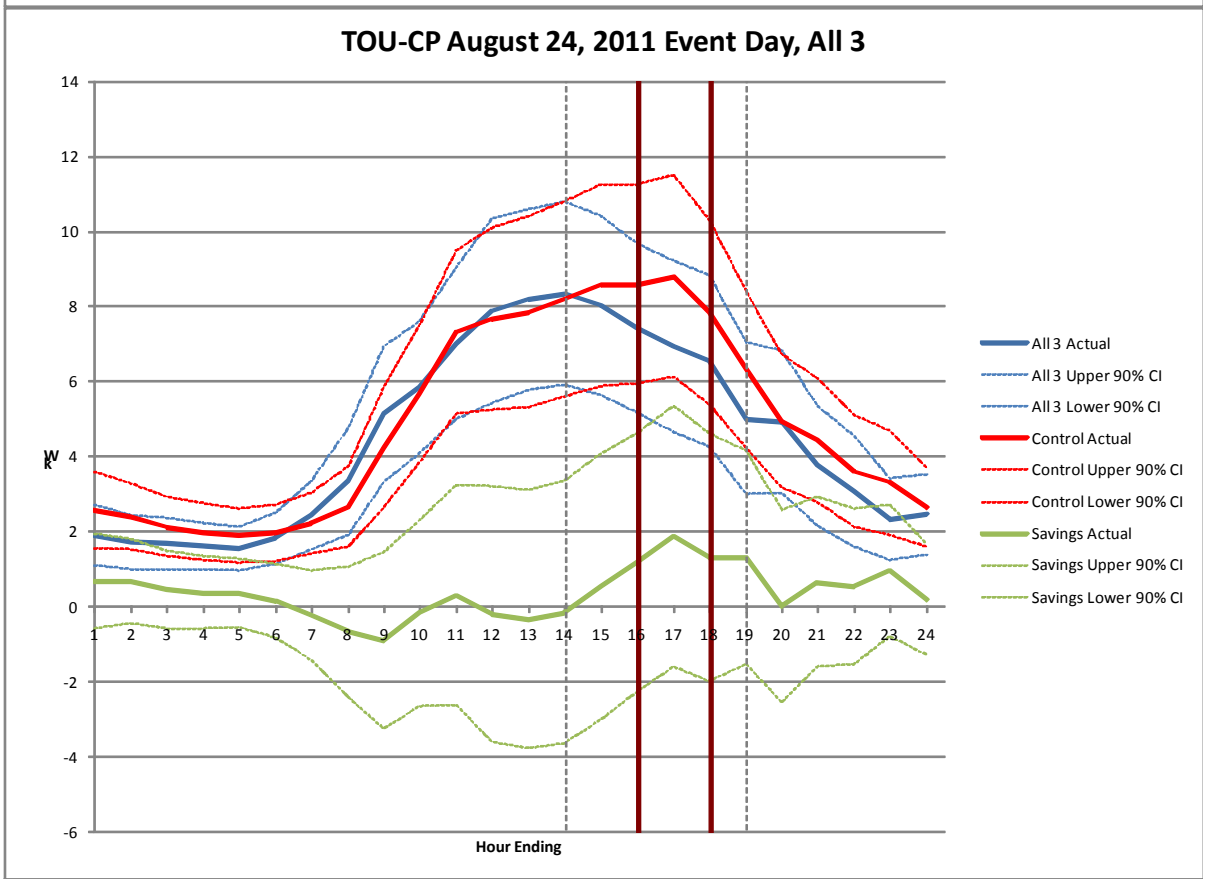

TOU-CP July 15, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

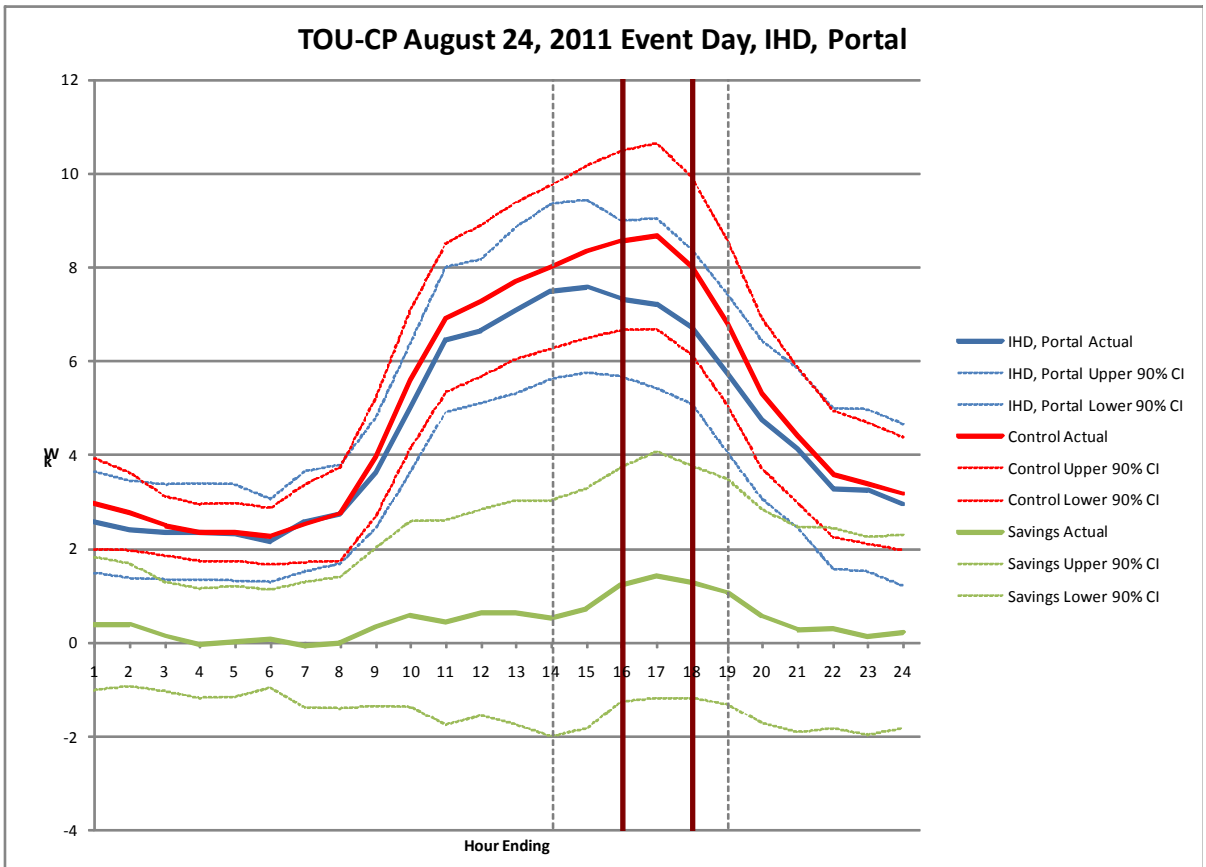

TOU-CP August 08, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

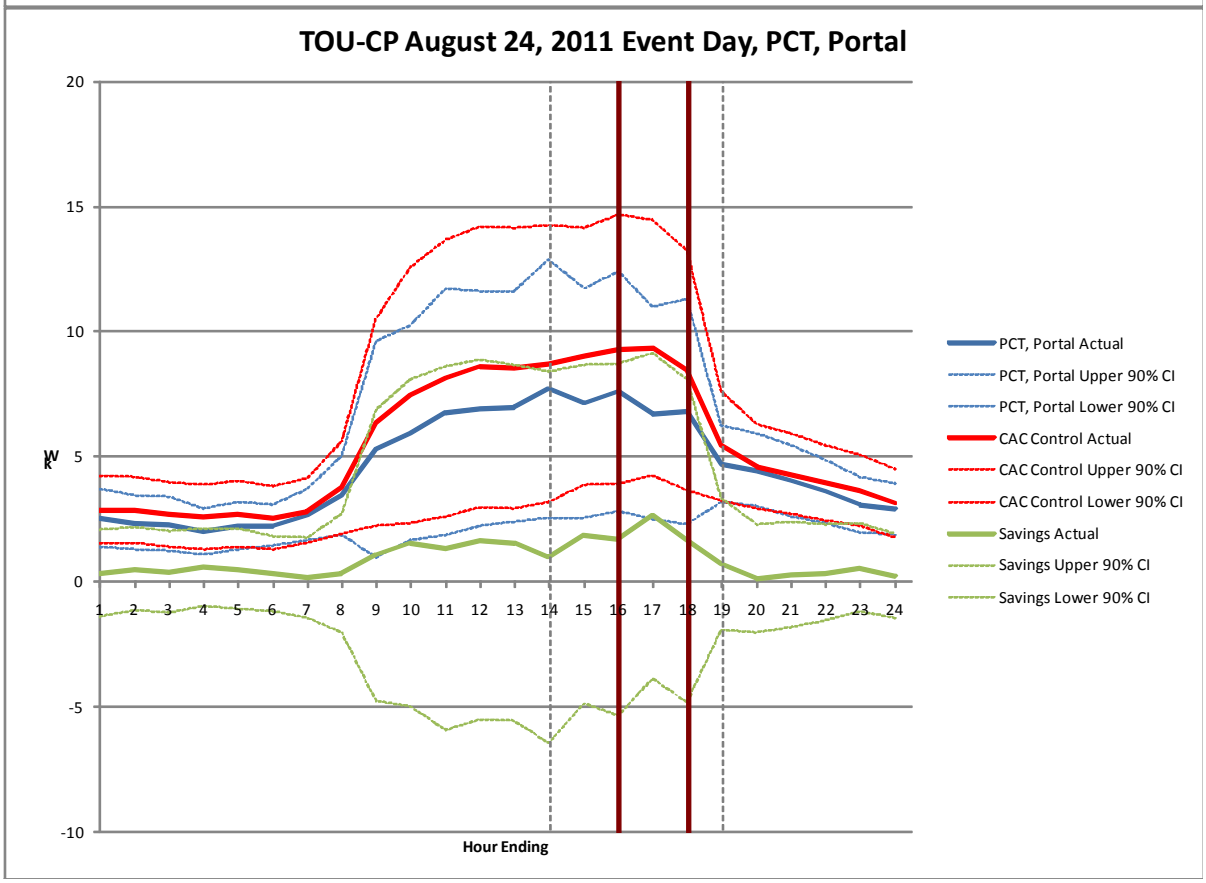

TOU-CP August 08, 2011 Event Day, IHD, Portal
12
10
8
6
4
2
0
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

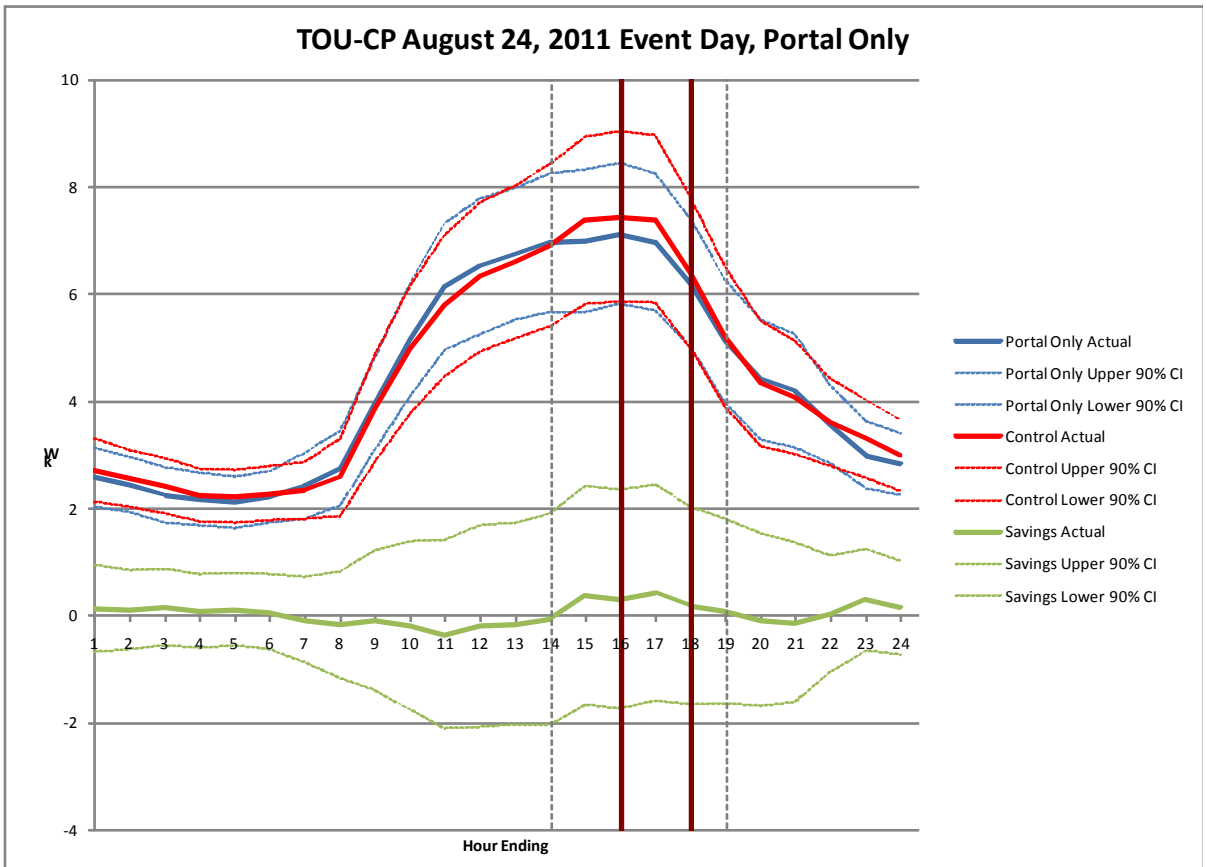

TOU-CP August 08, 2011 Event Day, PCT, Portal
20
15
10
5
0
-5
-10
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

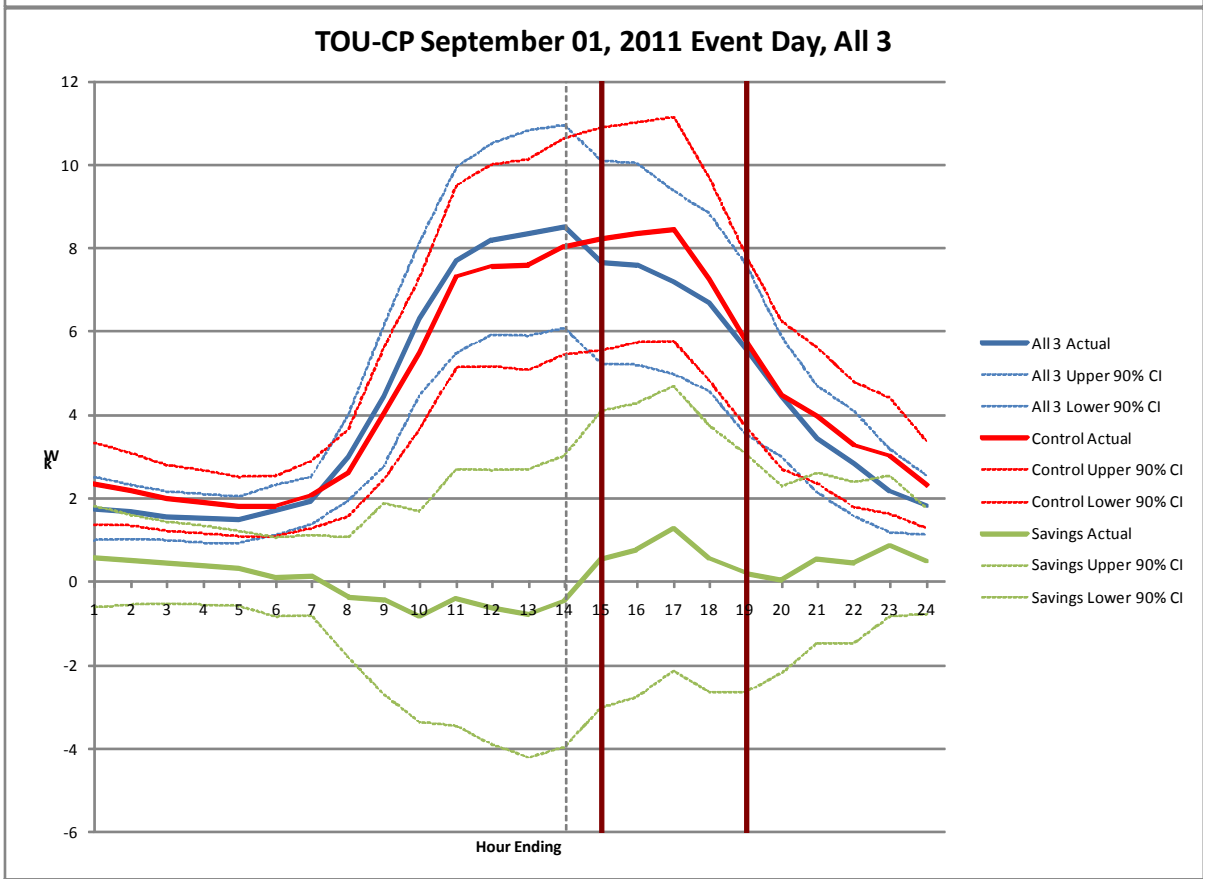

TOU-CP August 08, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

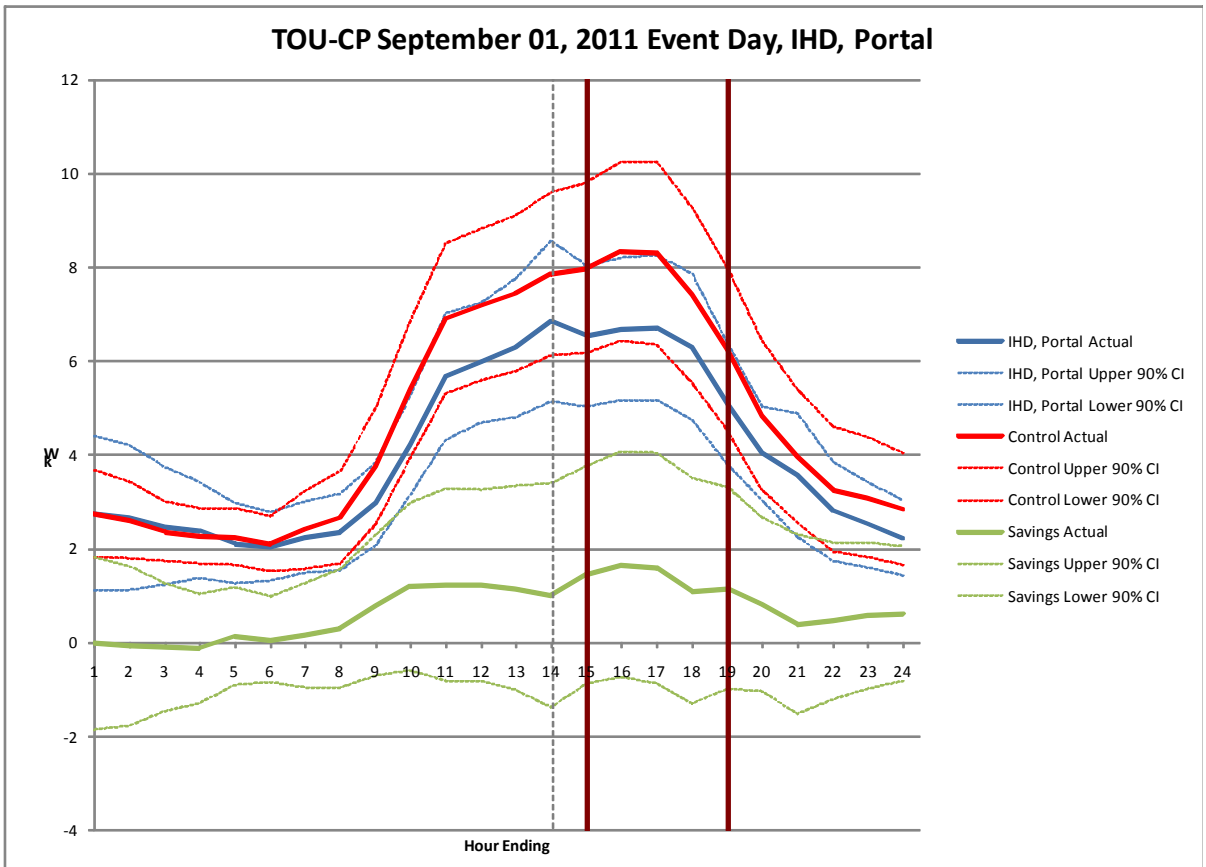

TOU-CP August 24, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

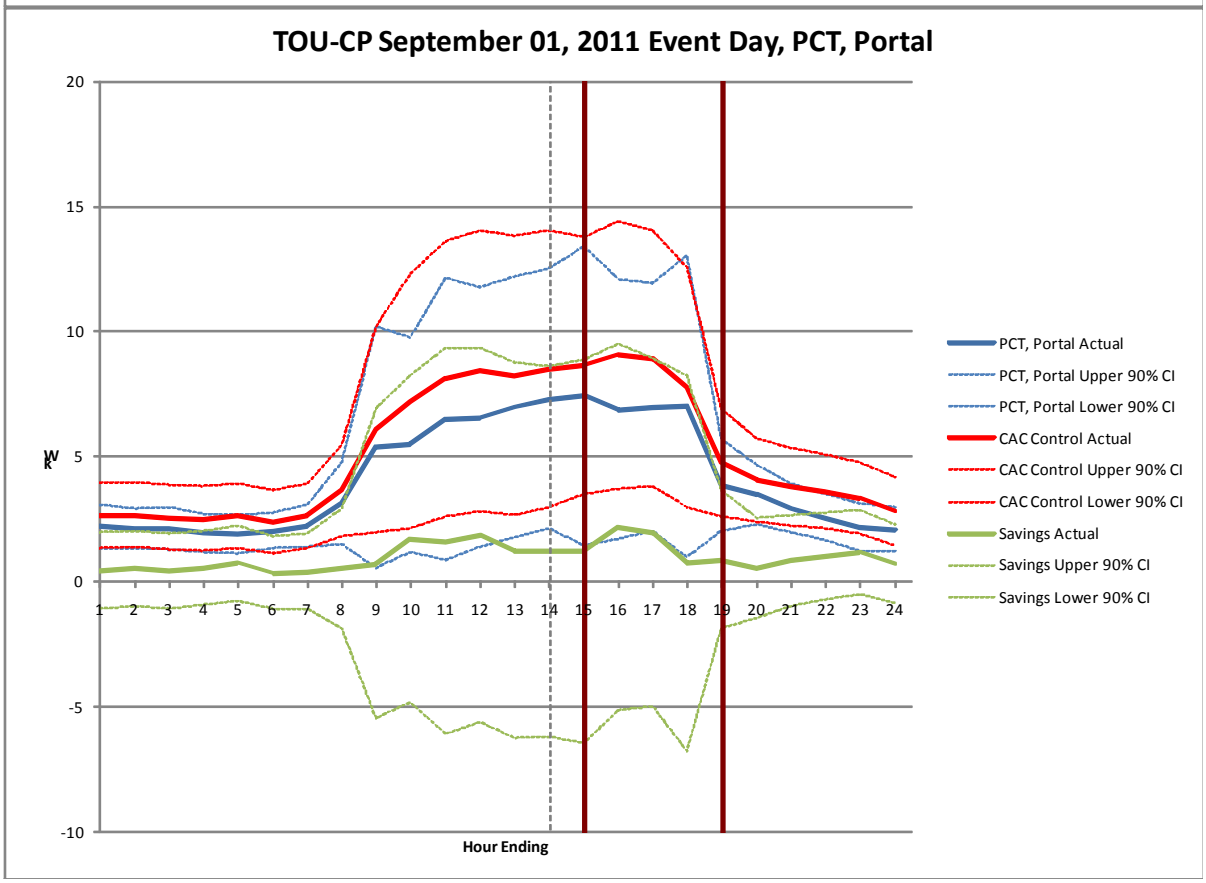

TOU-CP August 24, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

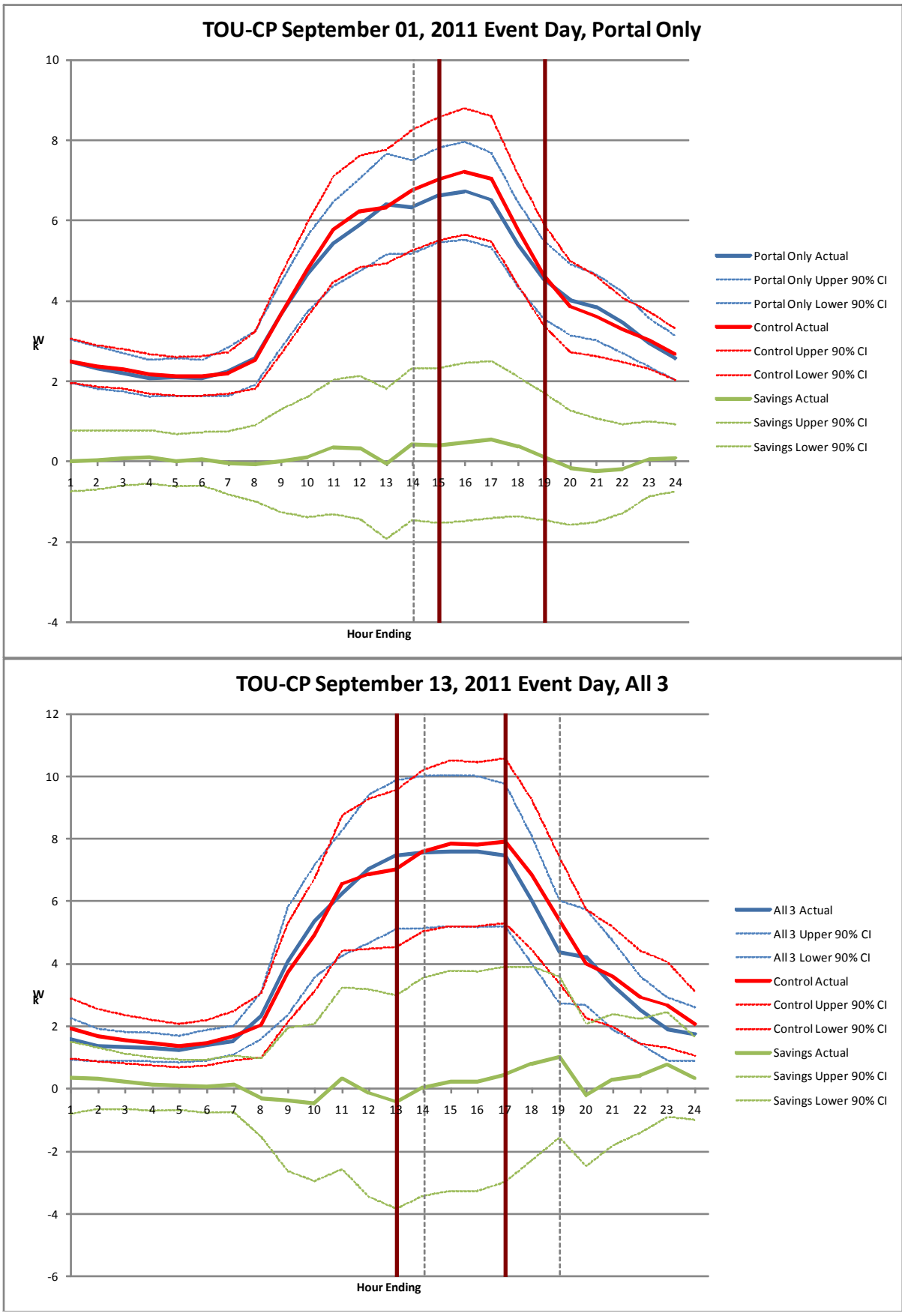

TOU-CP August 24, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

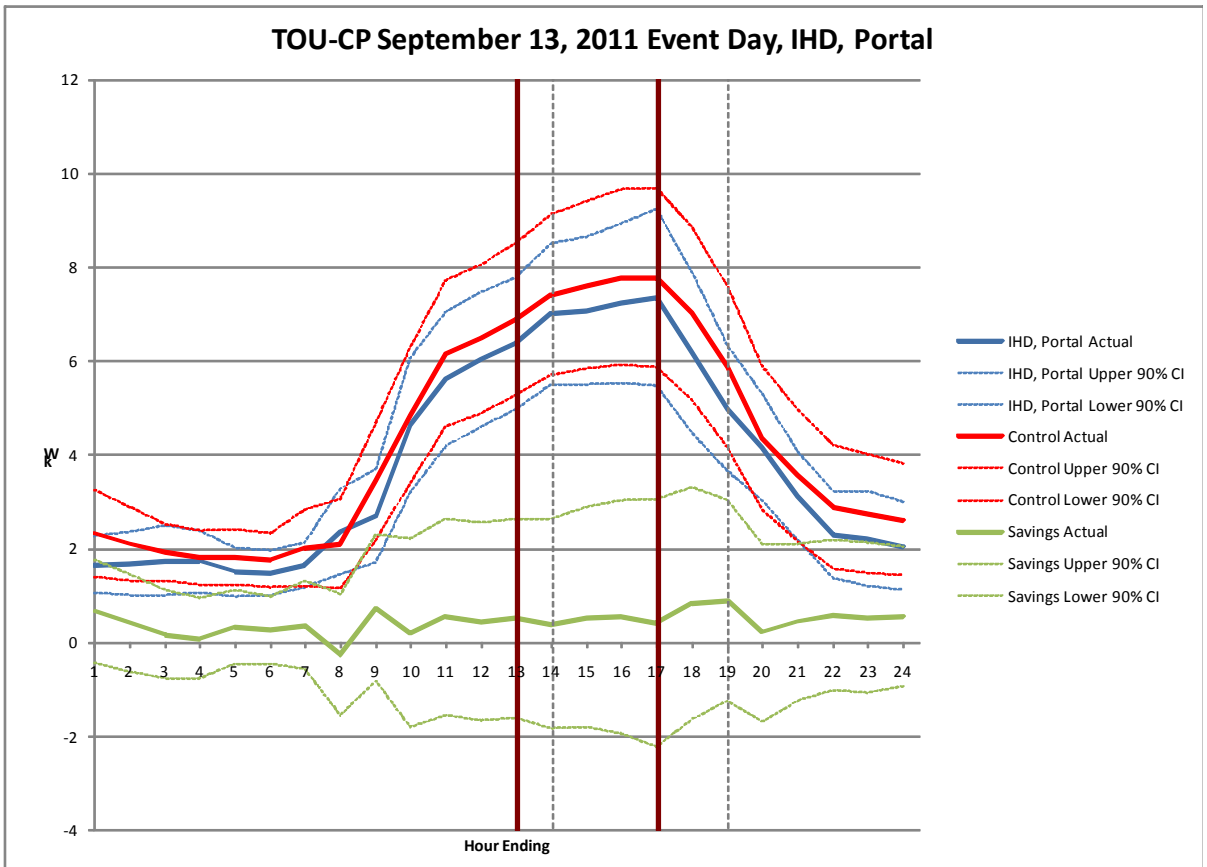

TOU-CP August 24, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

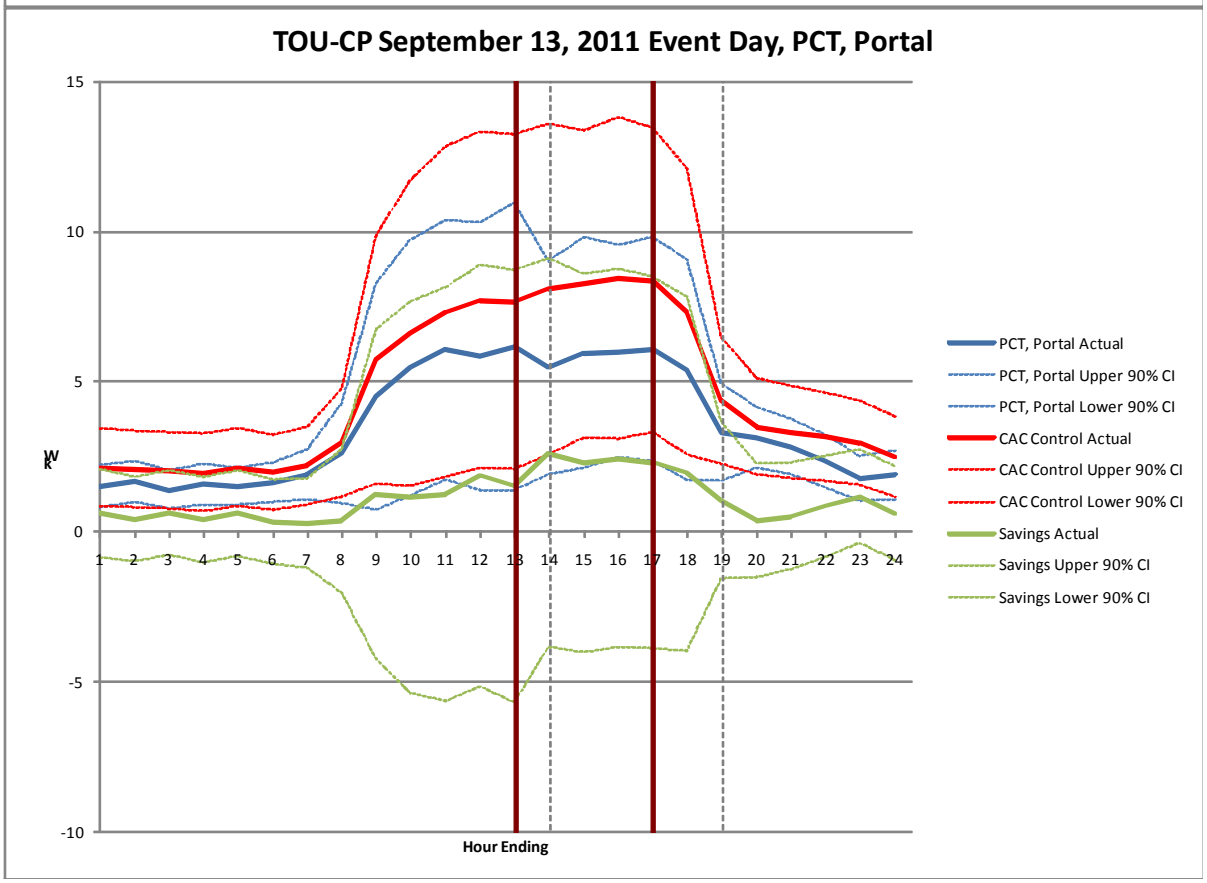

TOU-CP September 01, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

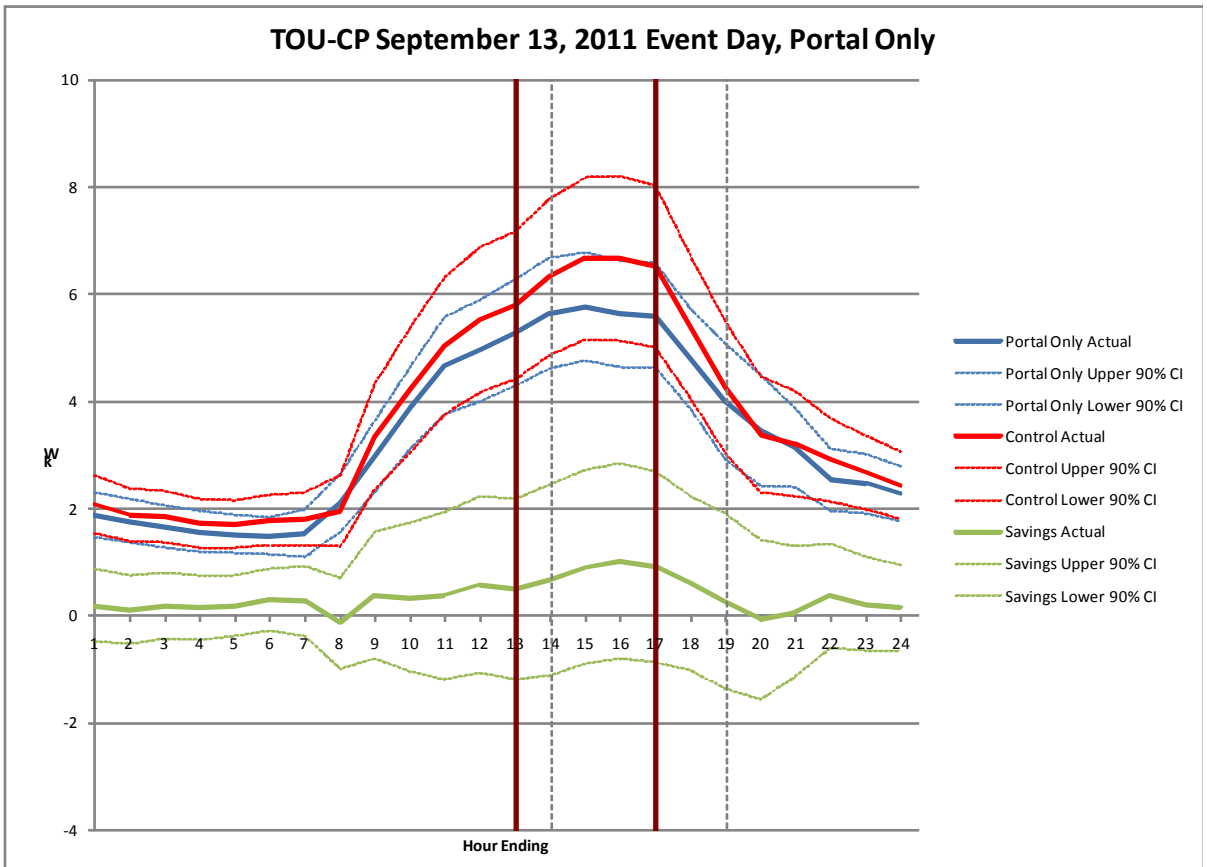

TOU-CP September 01, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

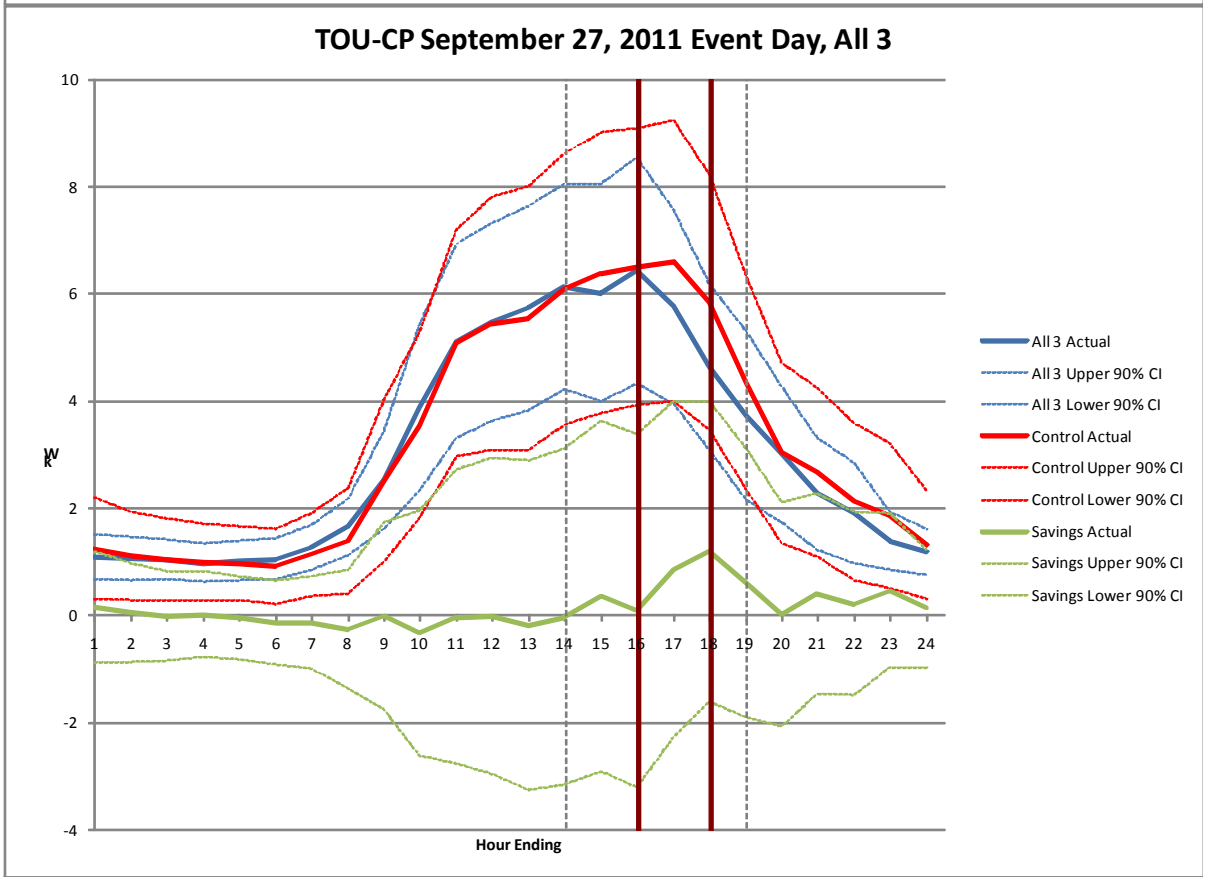

TOU-CP September 01, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

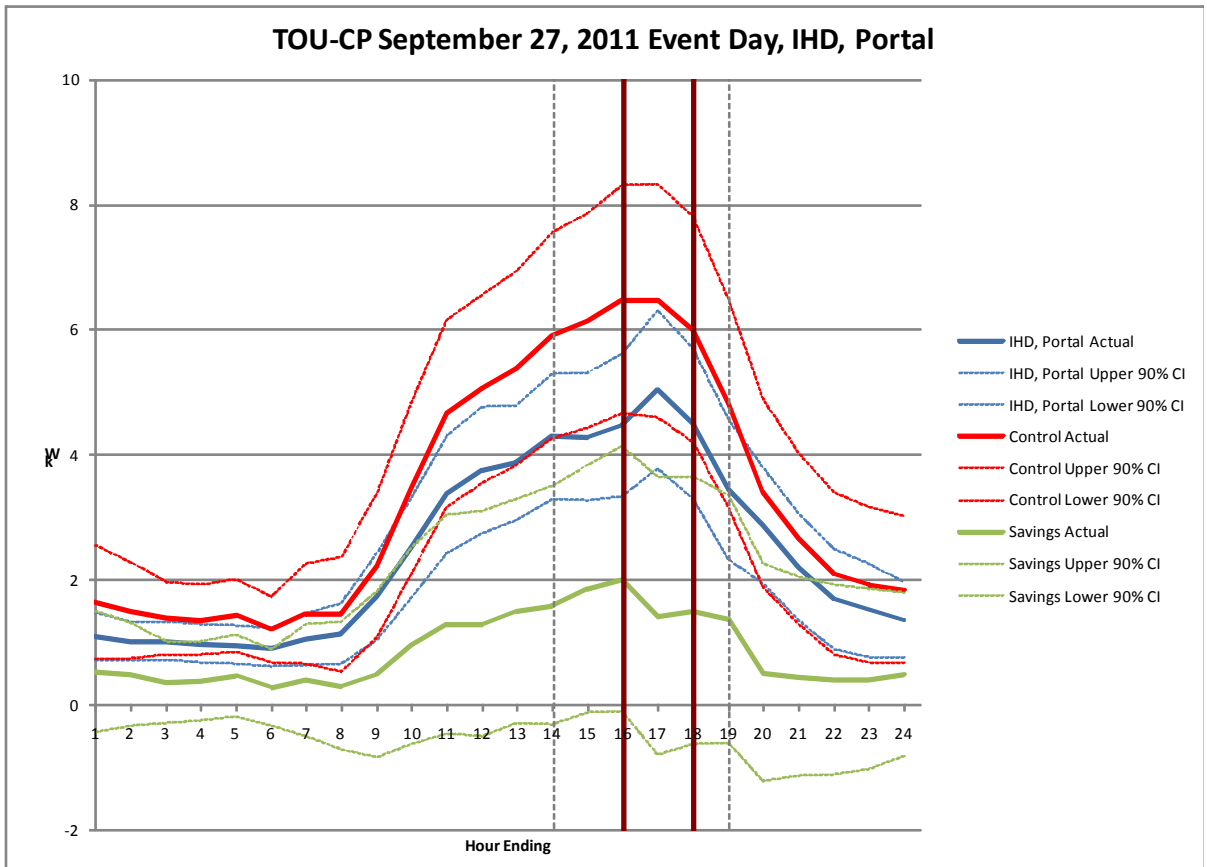

TOU-CP September 01, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
TOU-CP September 13, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

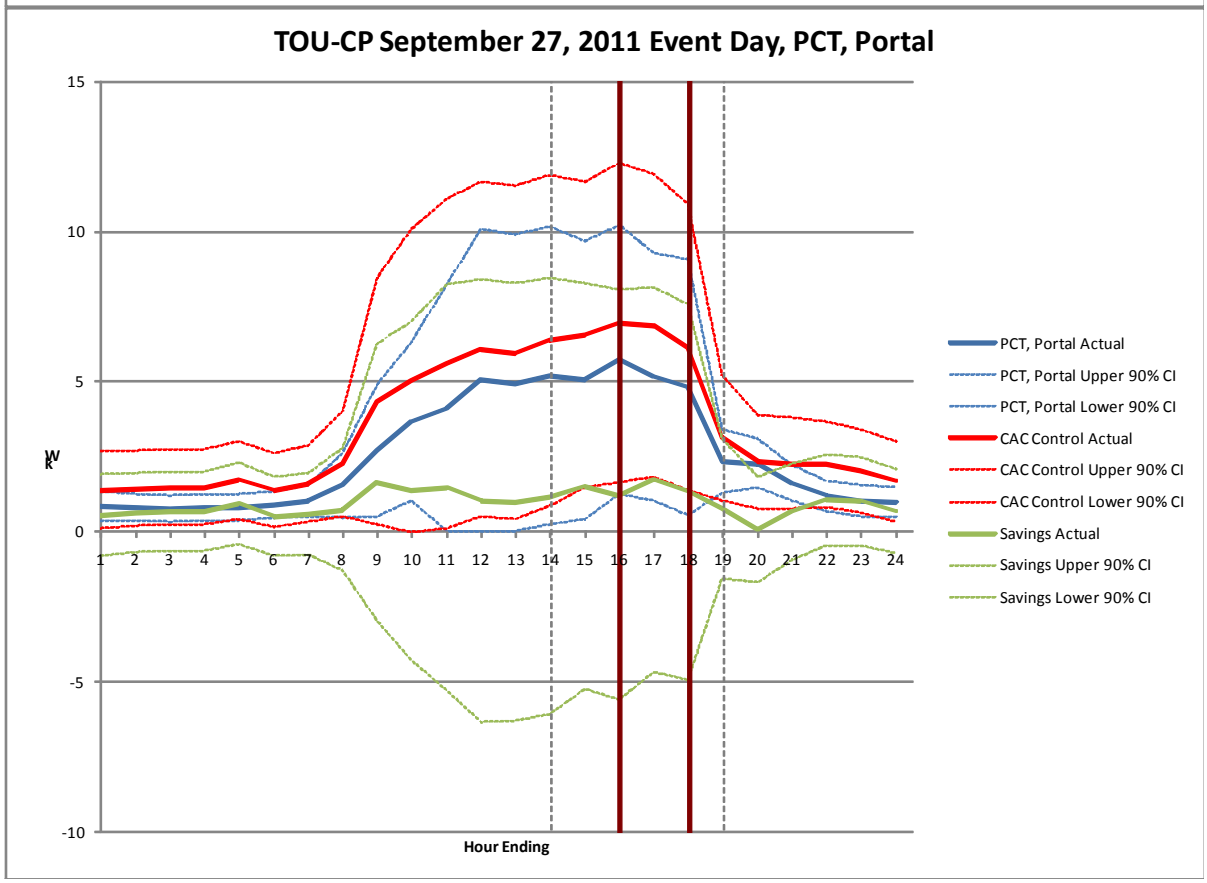

TOU-CP September 13, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

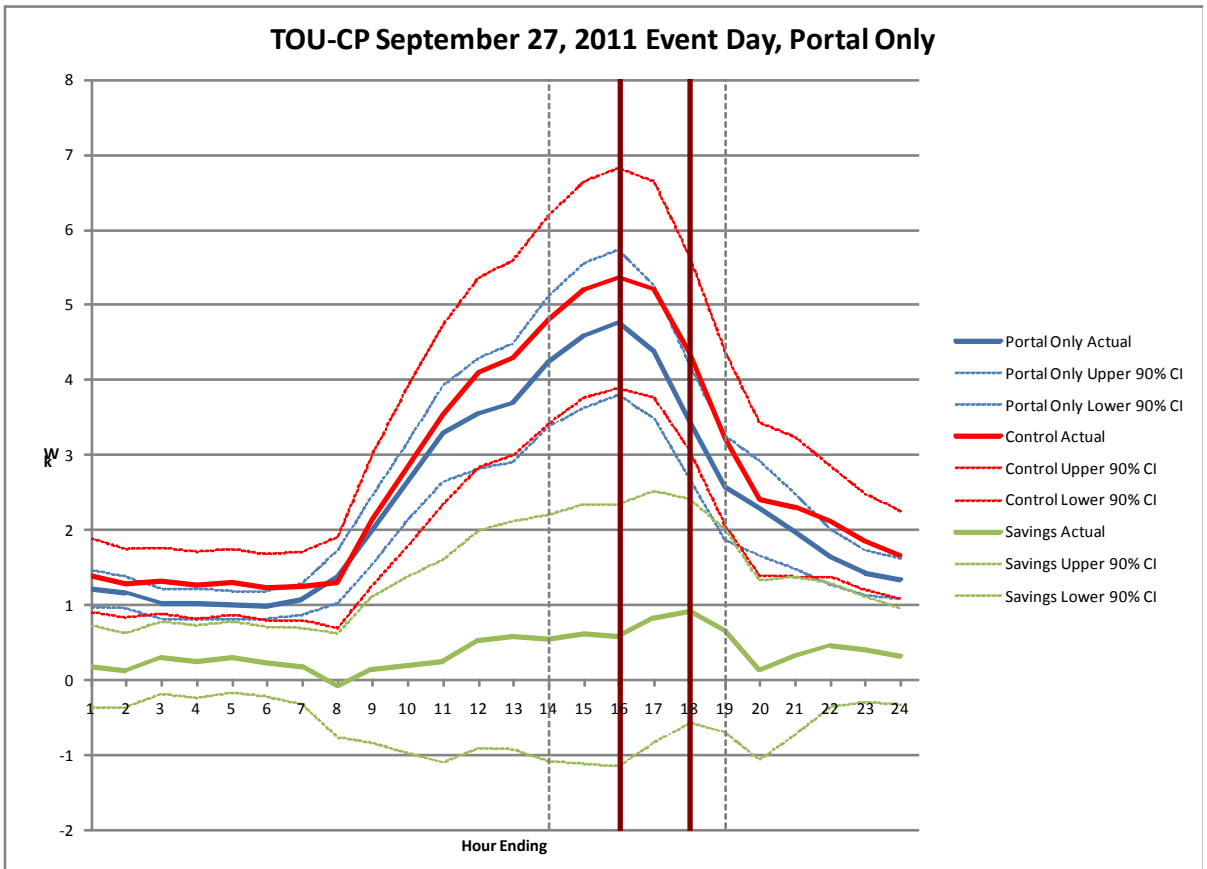

TOU-CP September 13, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

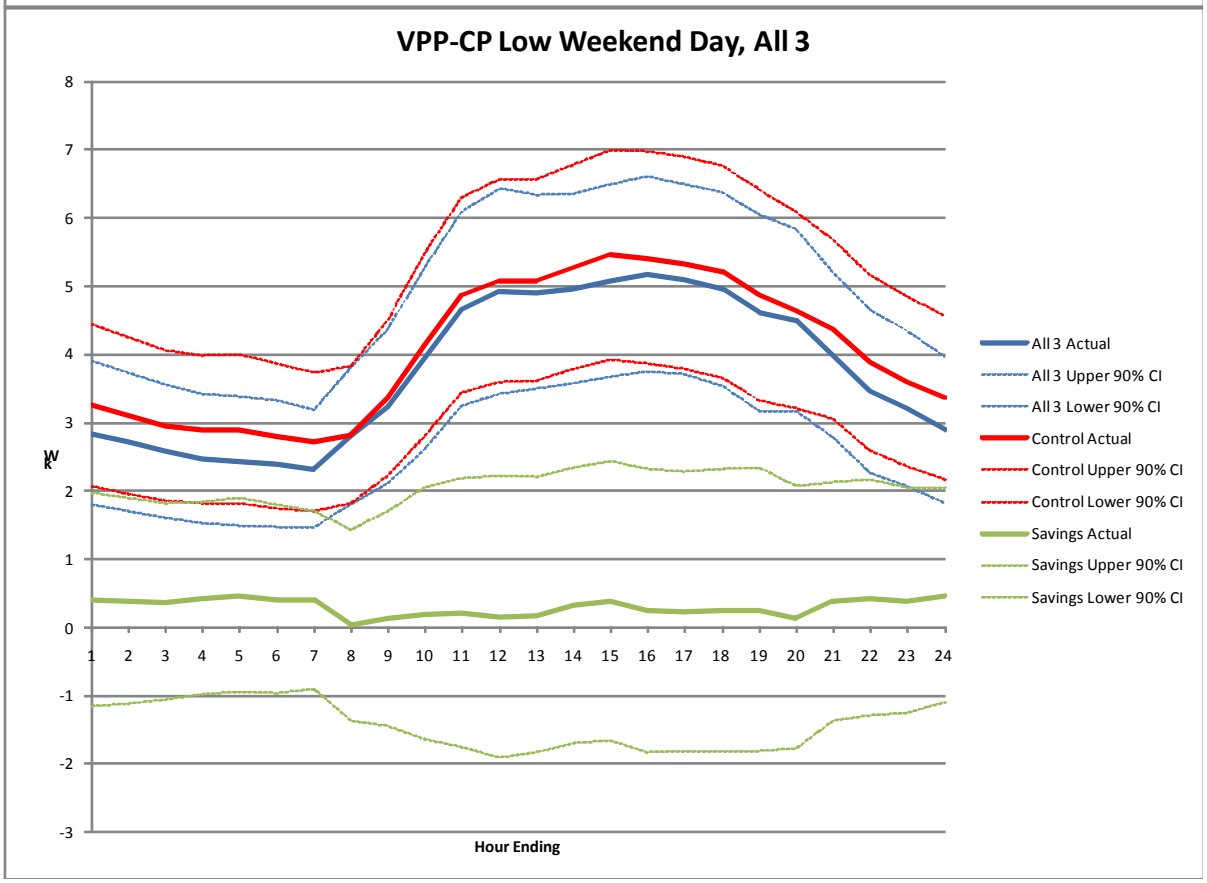

TOU-CP September 13, 2011 Event Day, Portal Only
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

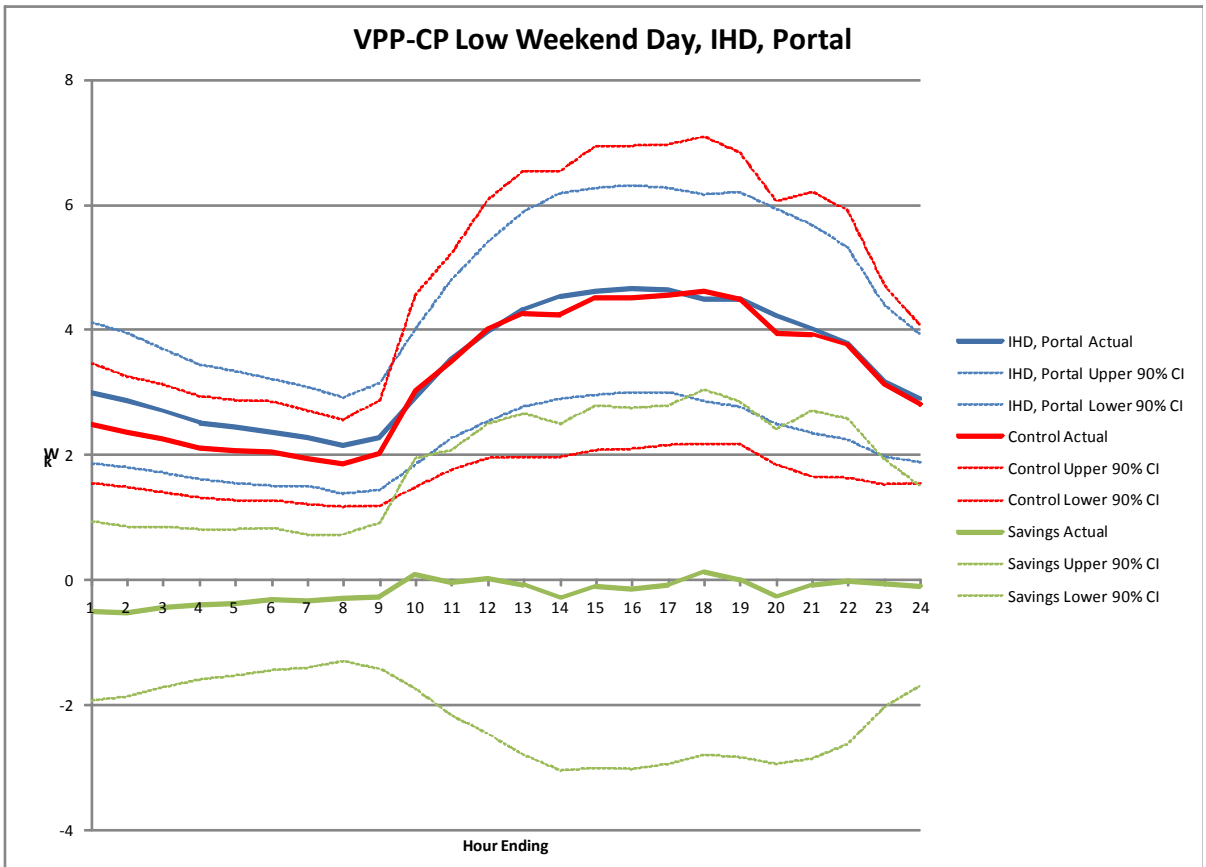

TOU-CP September 27, 2011 Event Day, All 3
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

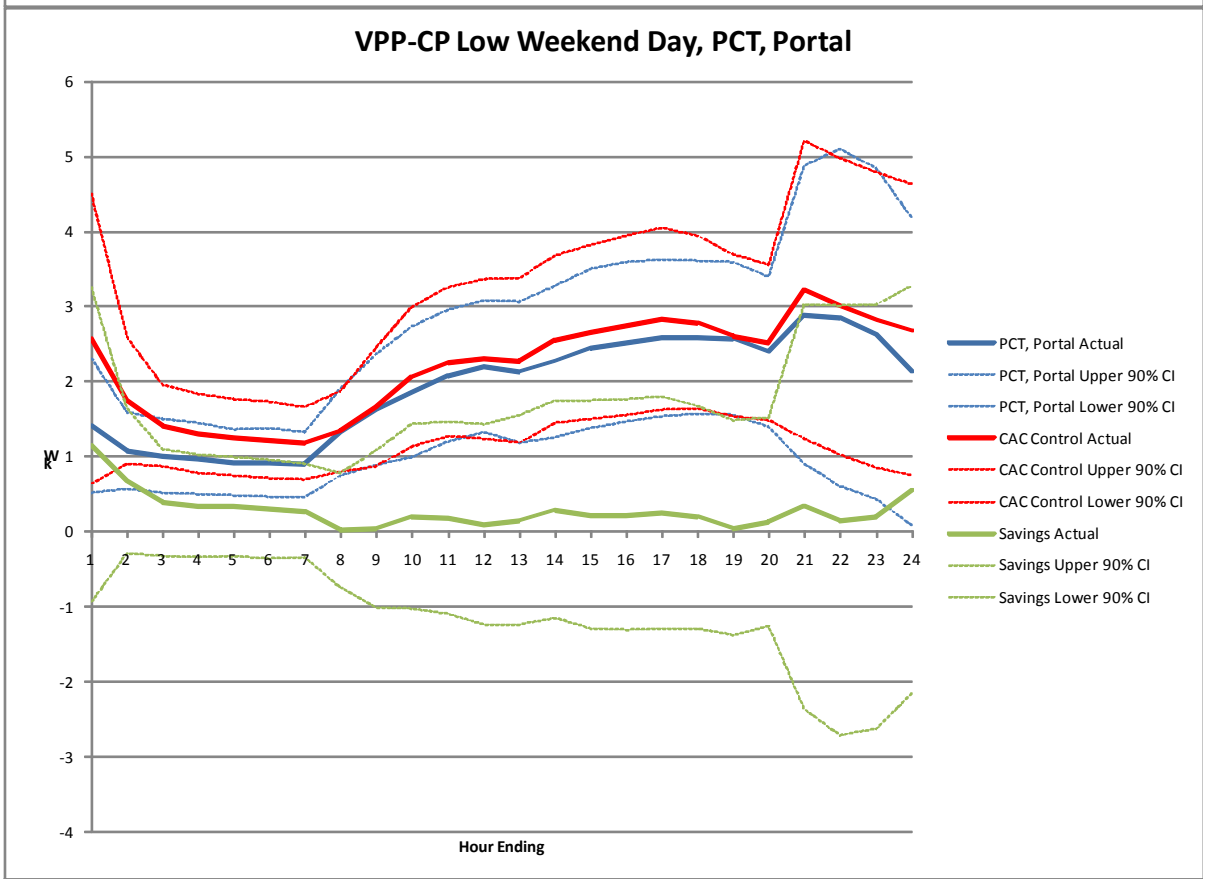

TOU-CP September 27, 2011 Event Day, IHD, Portal
10
8
6
4
2
0
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

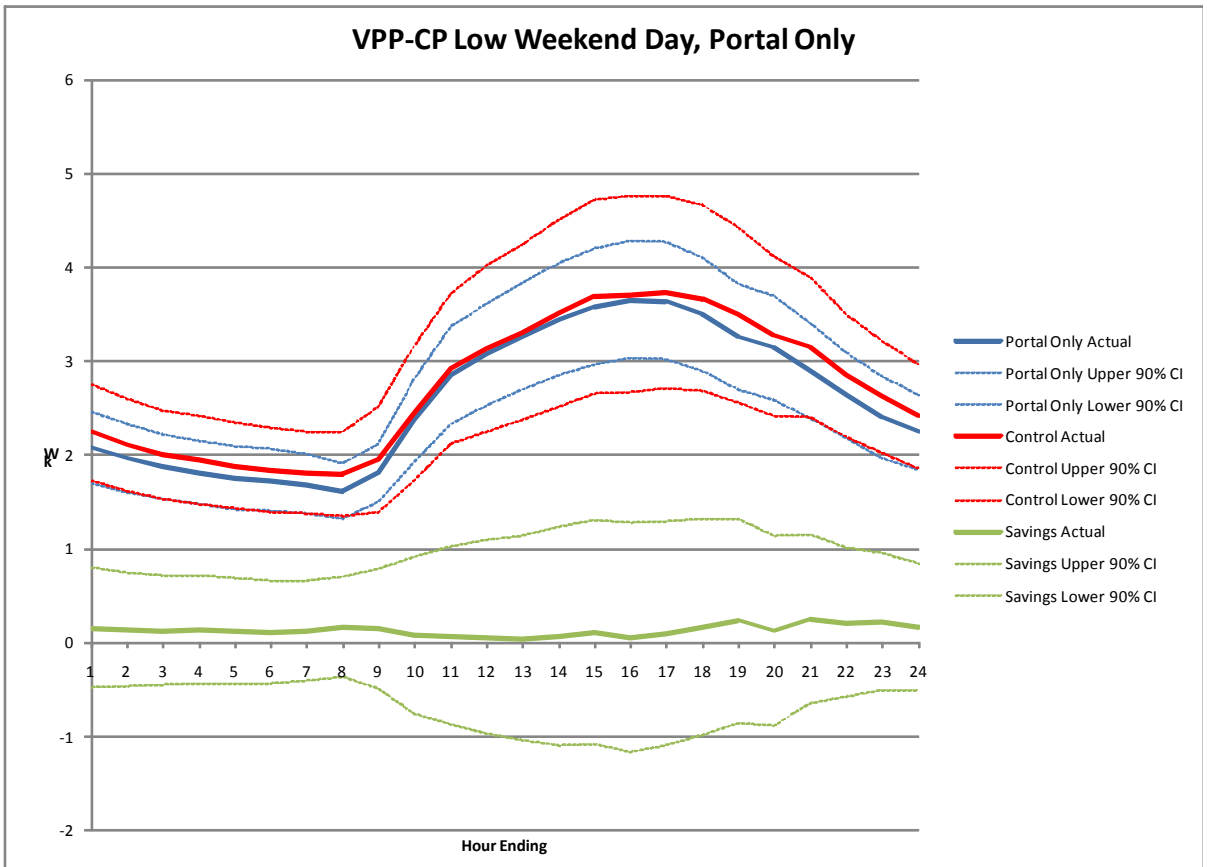

TOU-CP September 27, 2011 Event Day, PCT, Portal
15
10
5
0
-5
-10
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


TOU-CP September 27, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekend Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekend Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekend Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekend Day, Portal Only
6
5
4
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1
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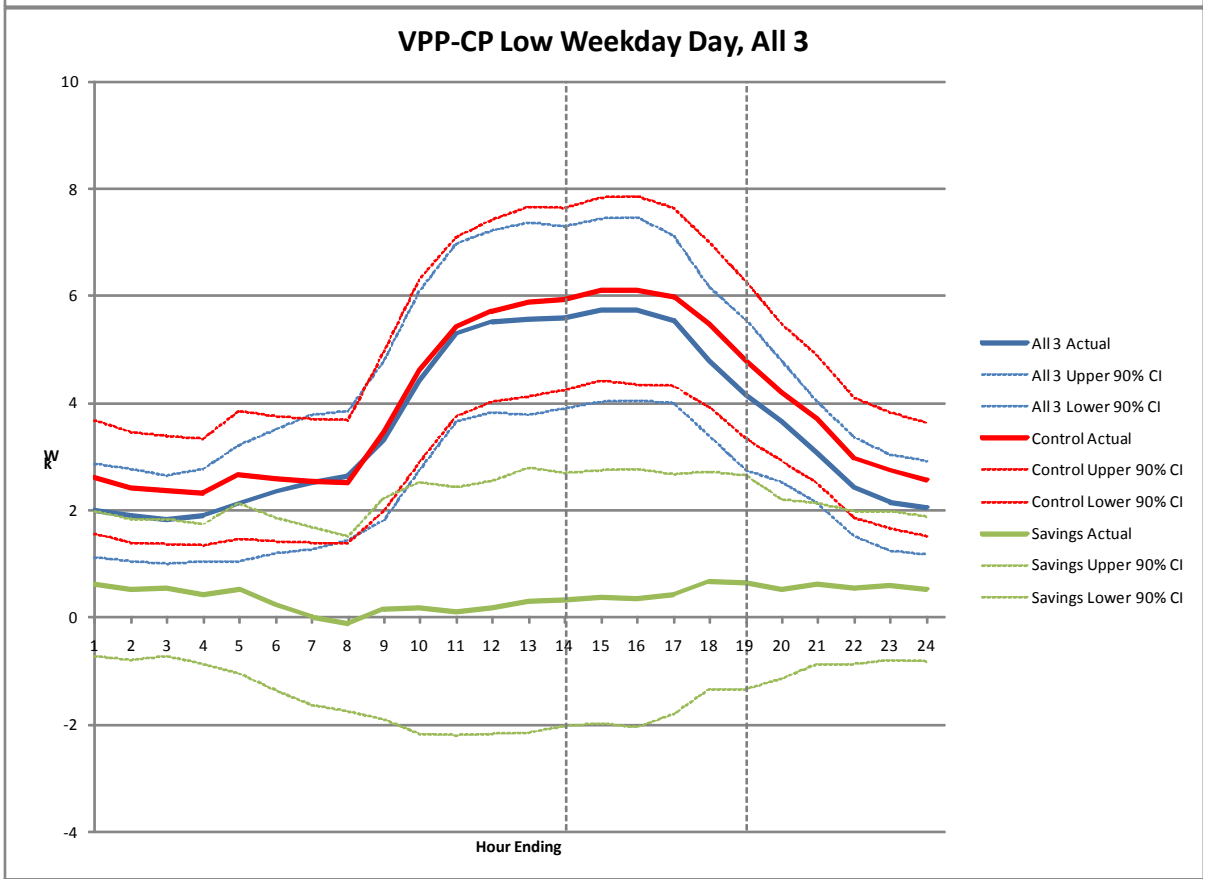
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP Low Weekday Day, All 3
10
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6
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2
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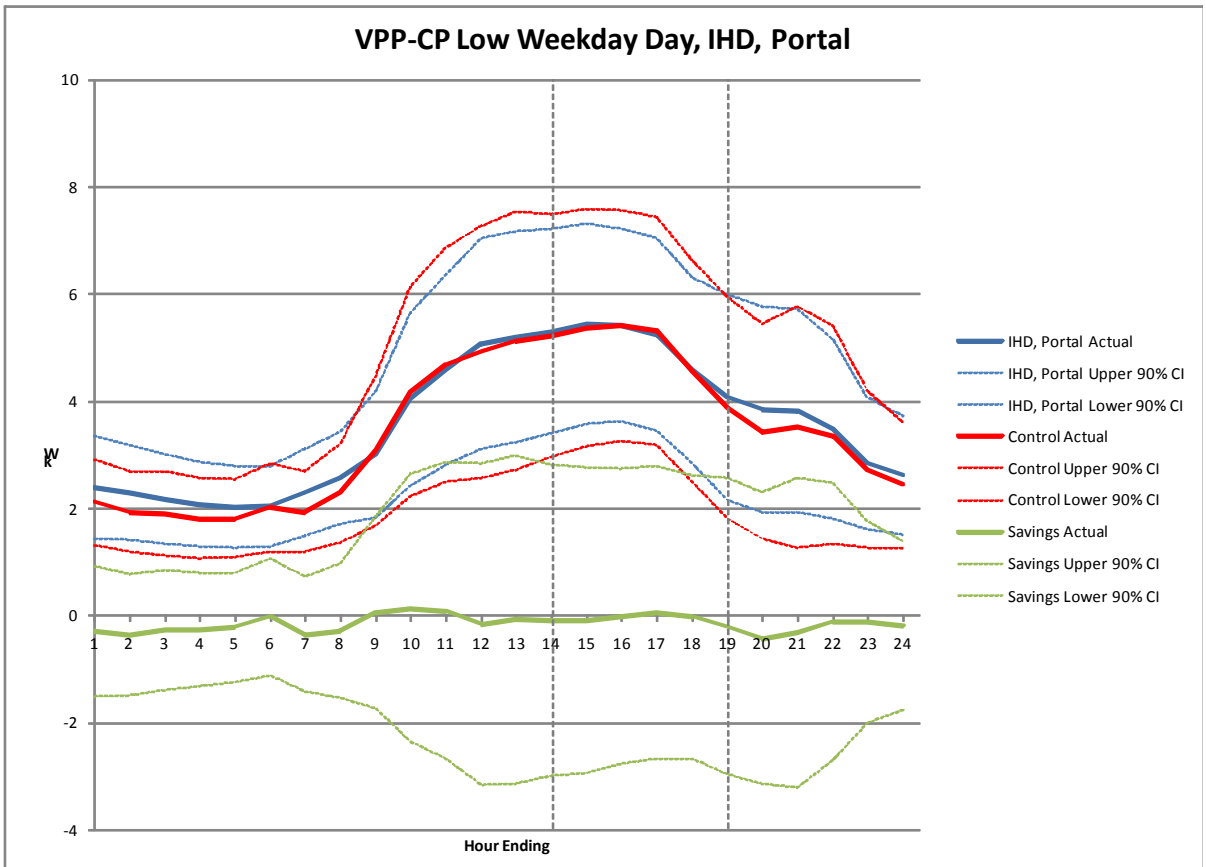
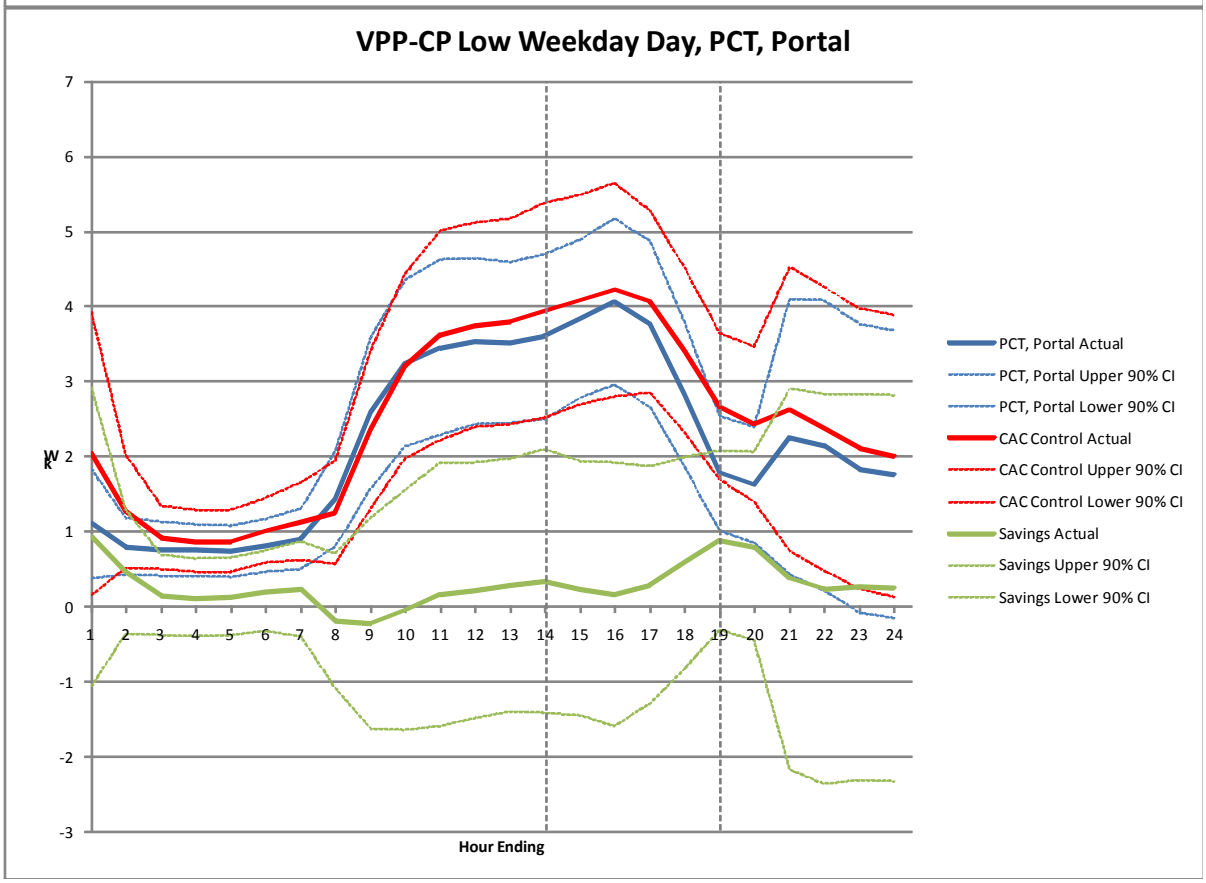
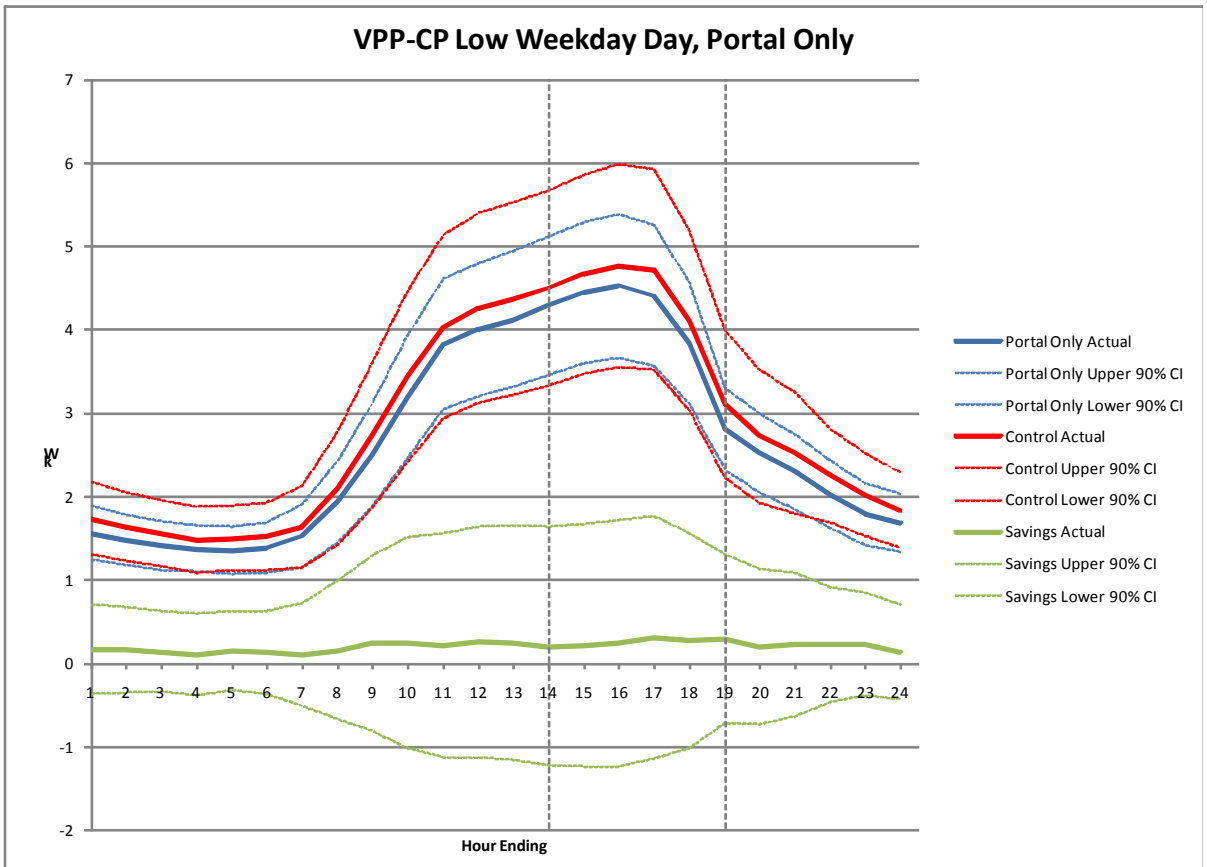
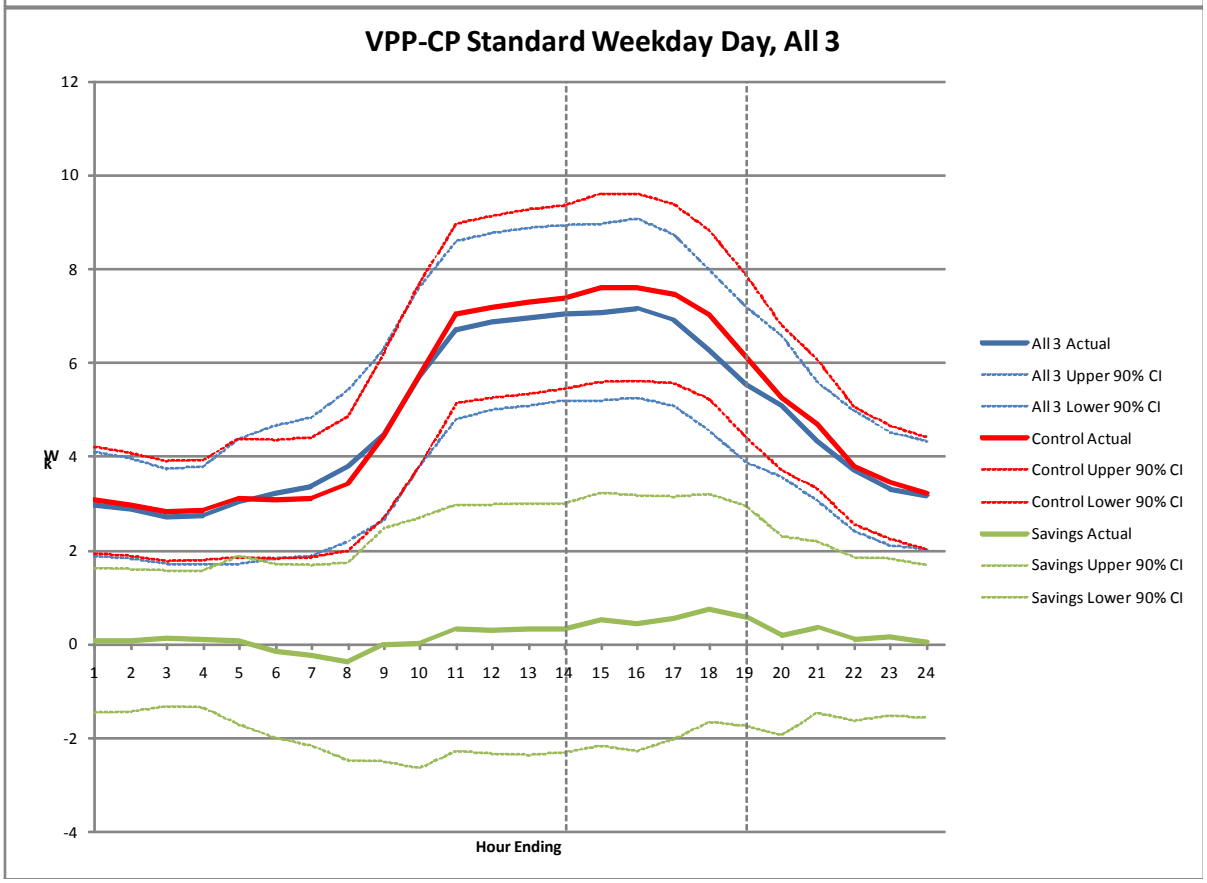
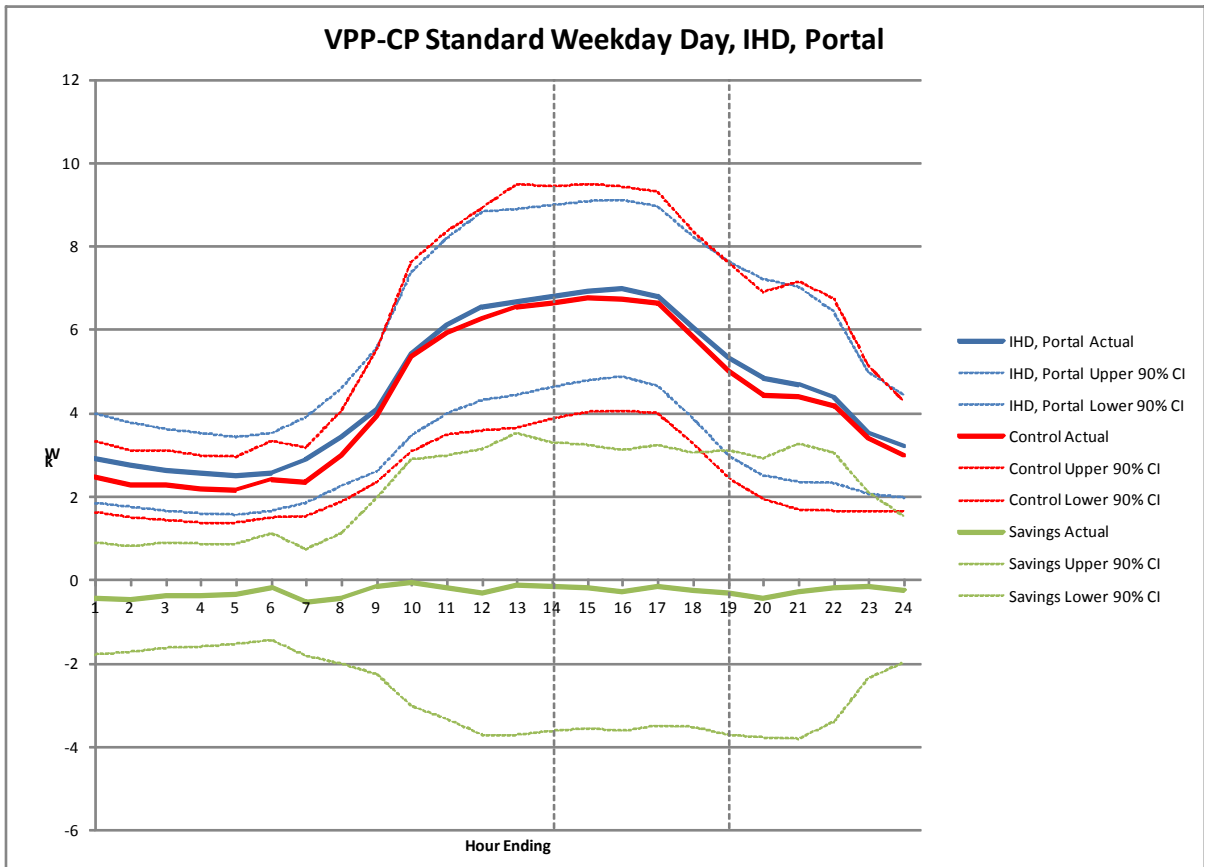
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

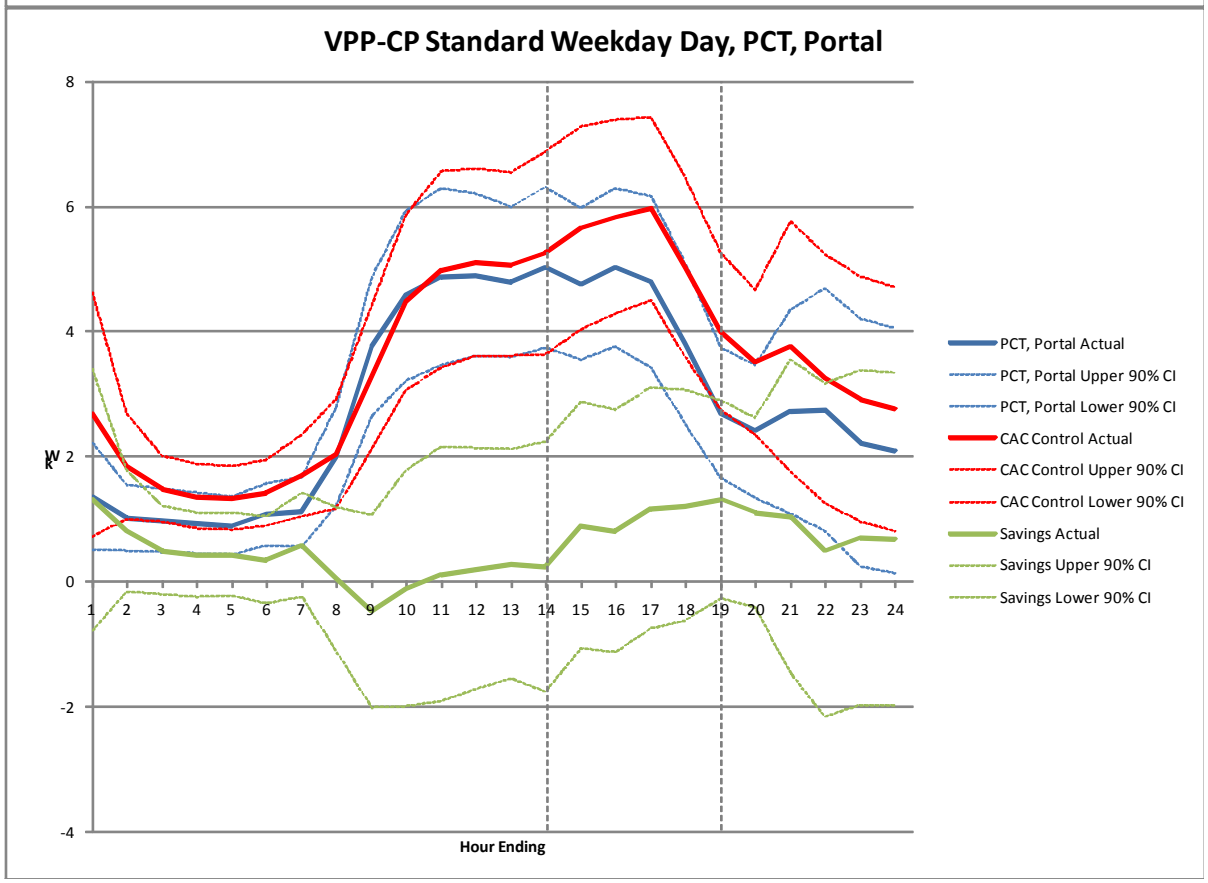

VPP-CP Low Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

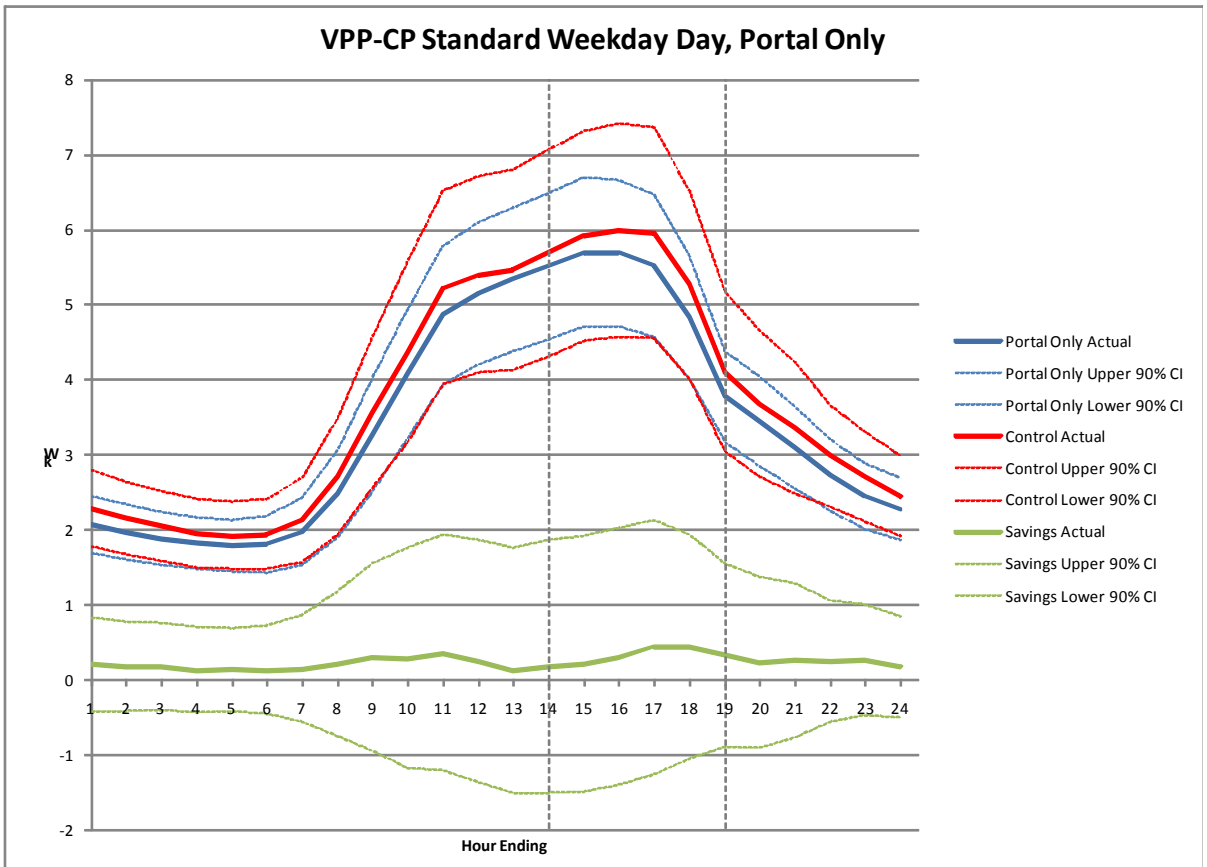

VPP-CP Low Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

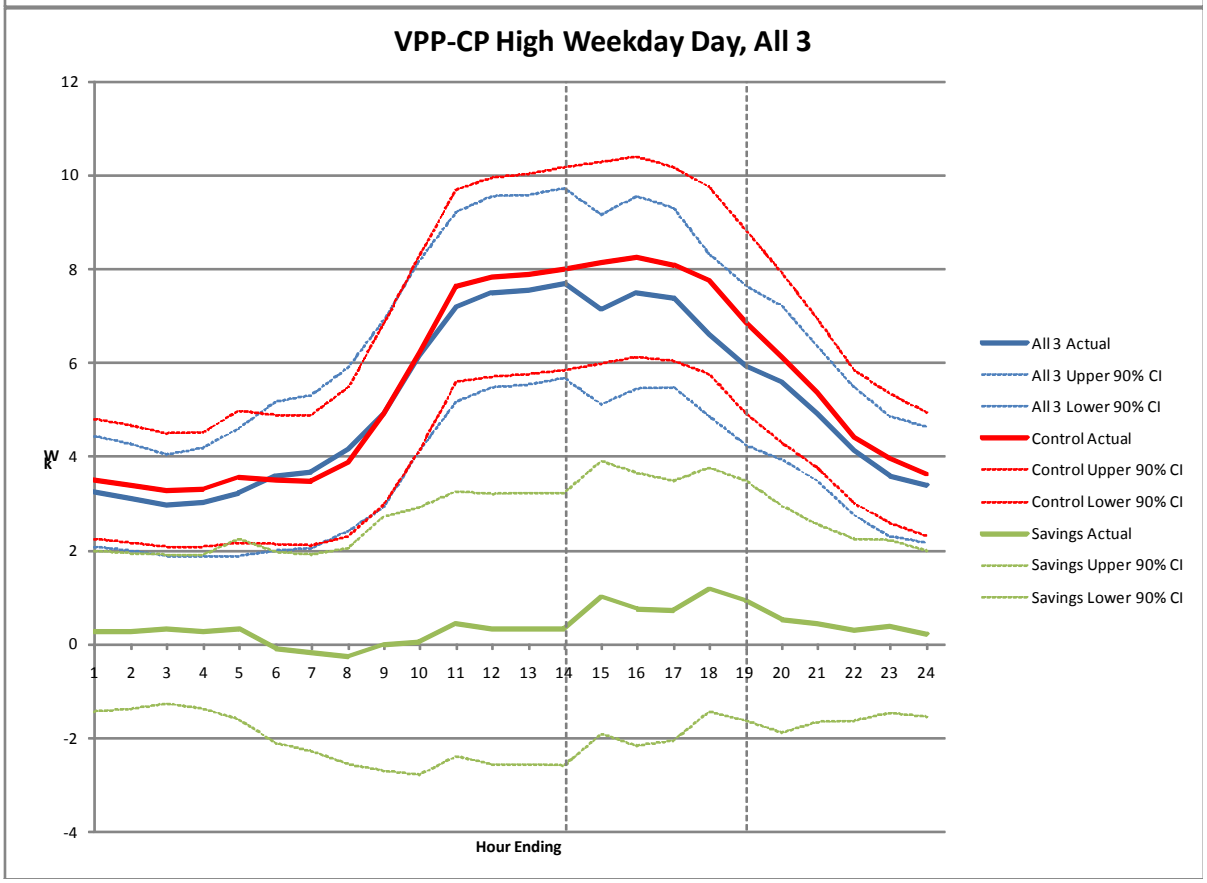

VPP-CP Low Weekday Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

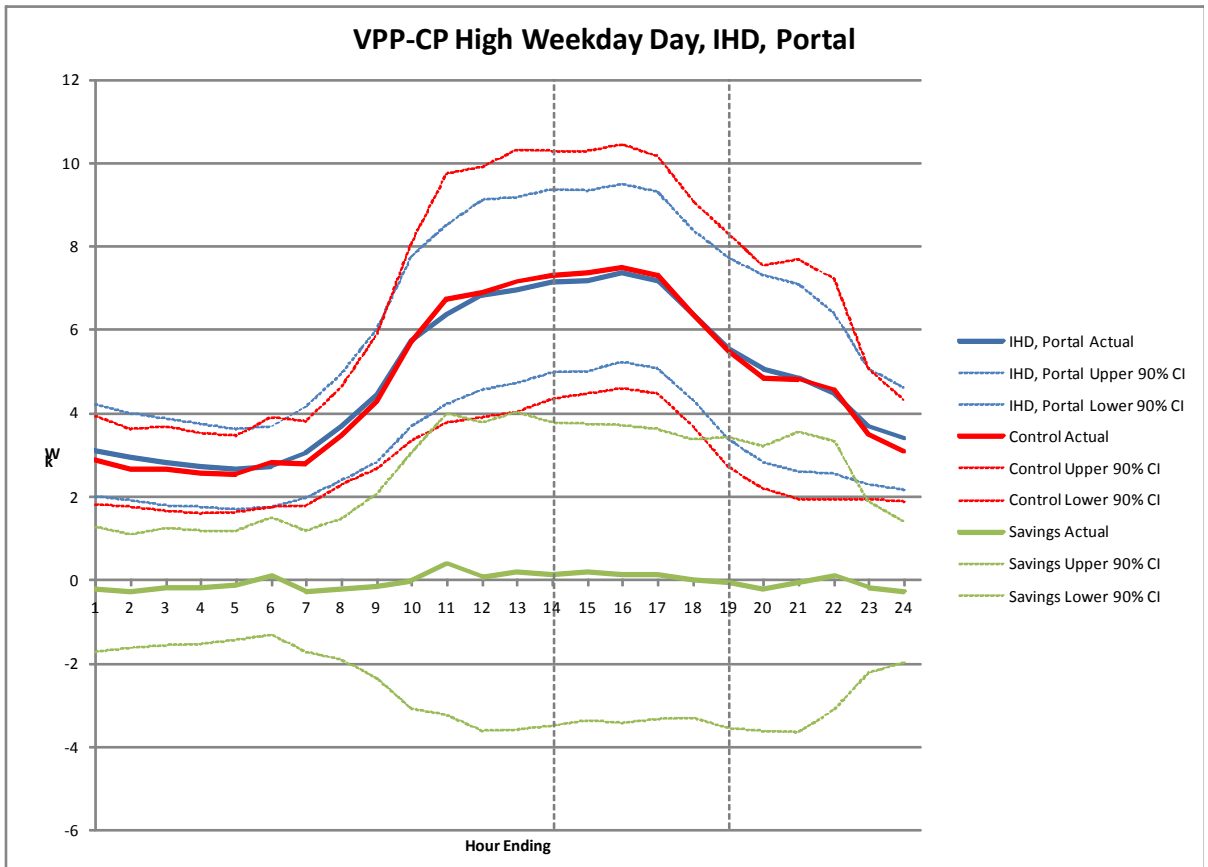

VPP-CP Standard Weekday Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

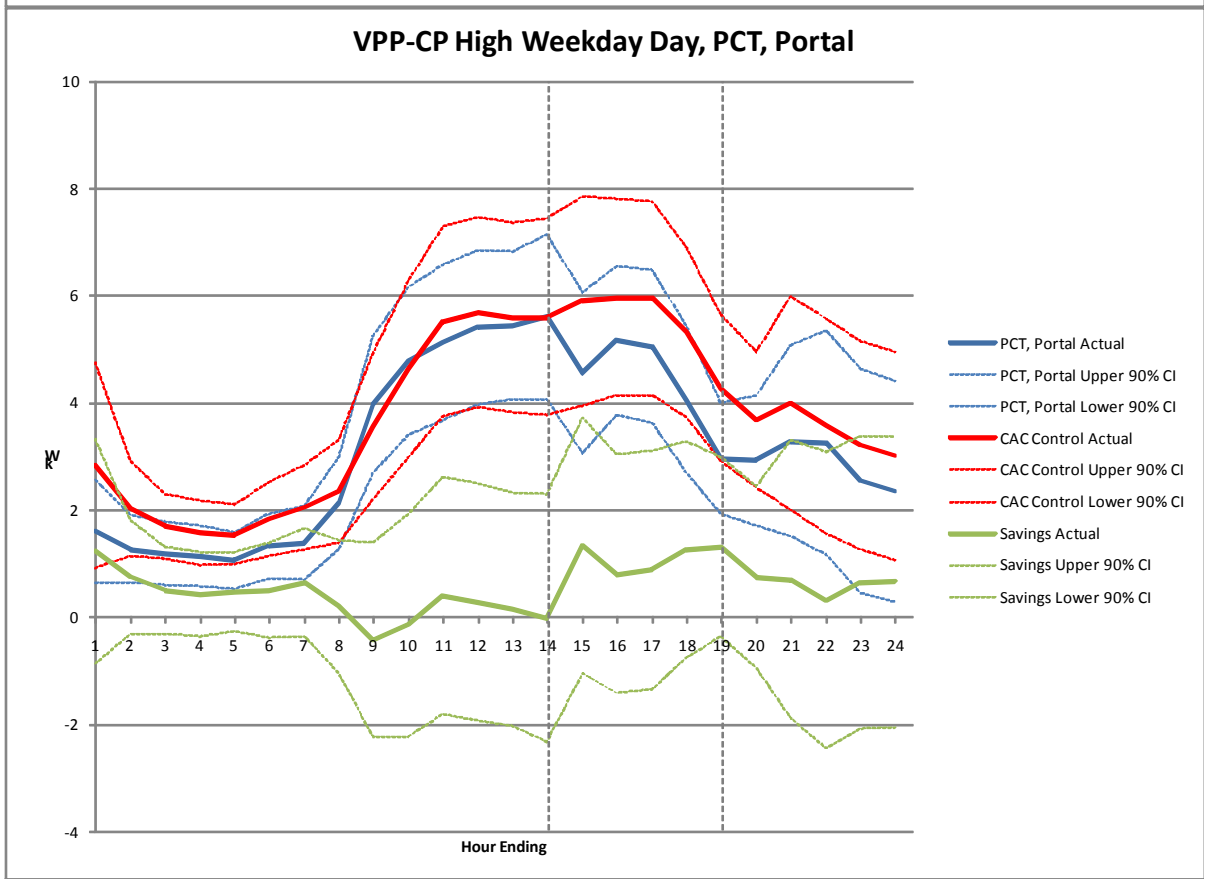

VPP-CP Standard Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

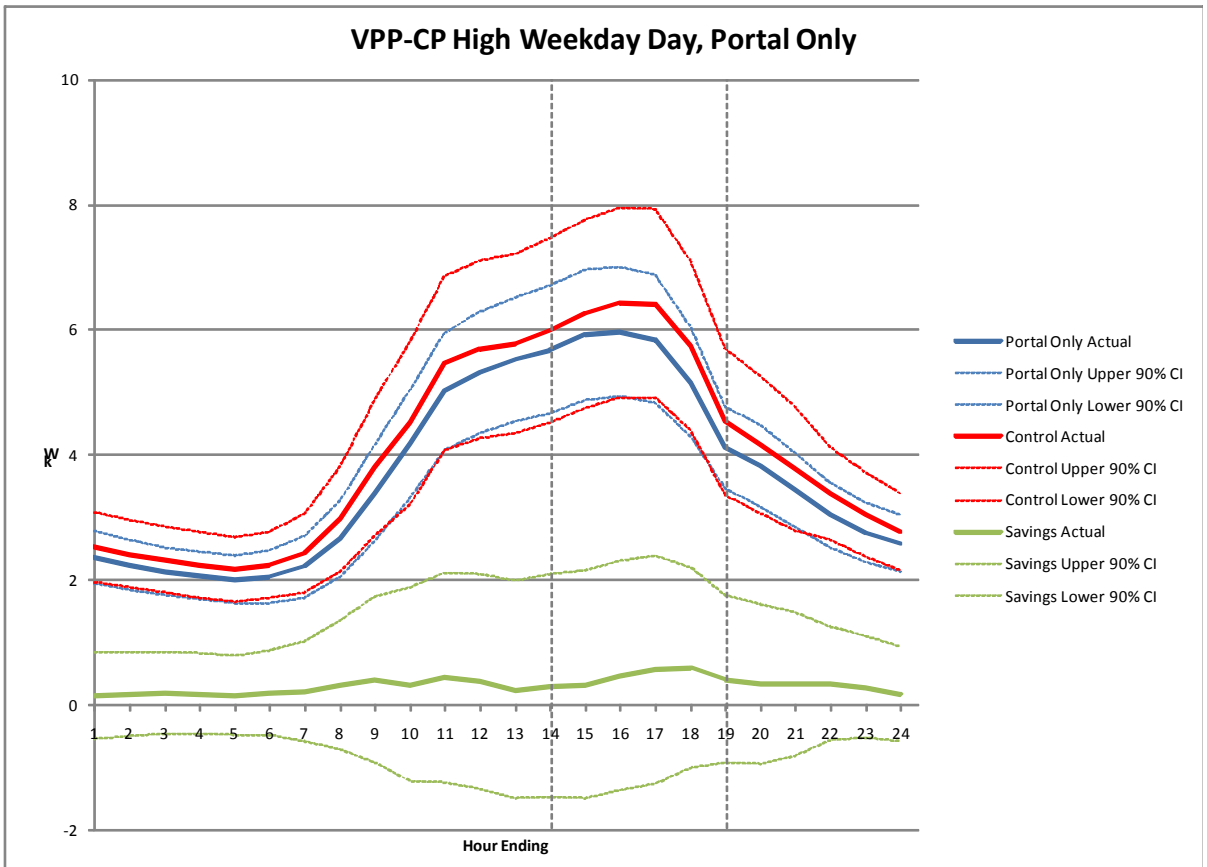

VPP-CP Standard Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

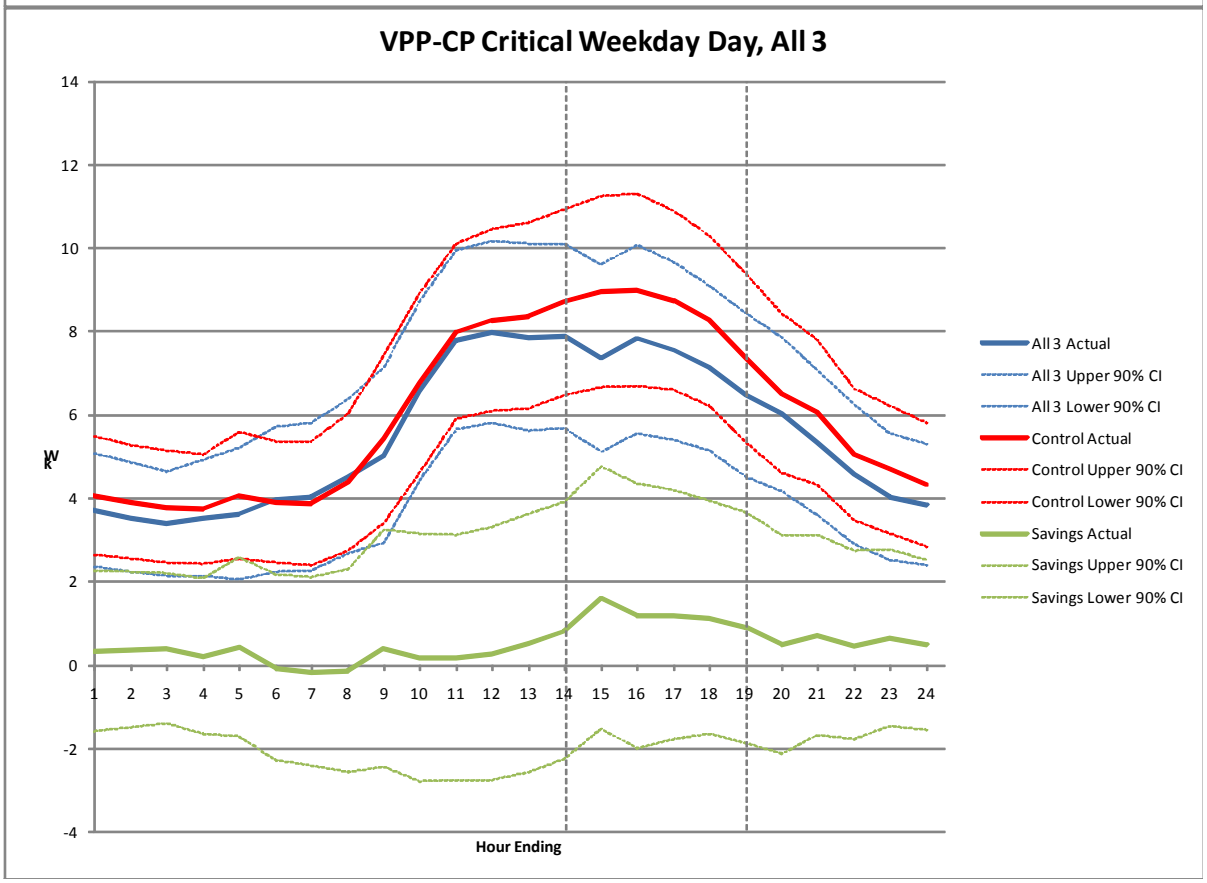

VPP-CP Standard Weekday Day, Portal Only
8
7
6
5
4
3
2
1
0
-1
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

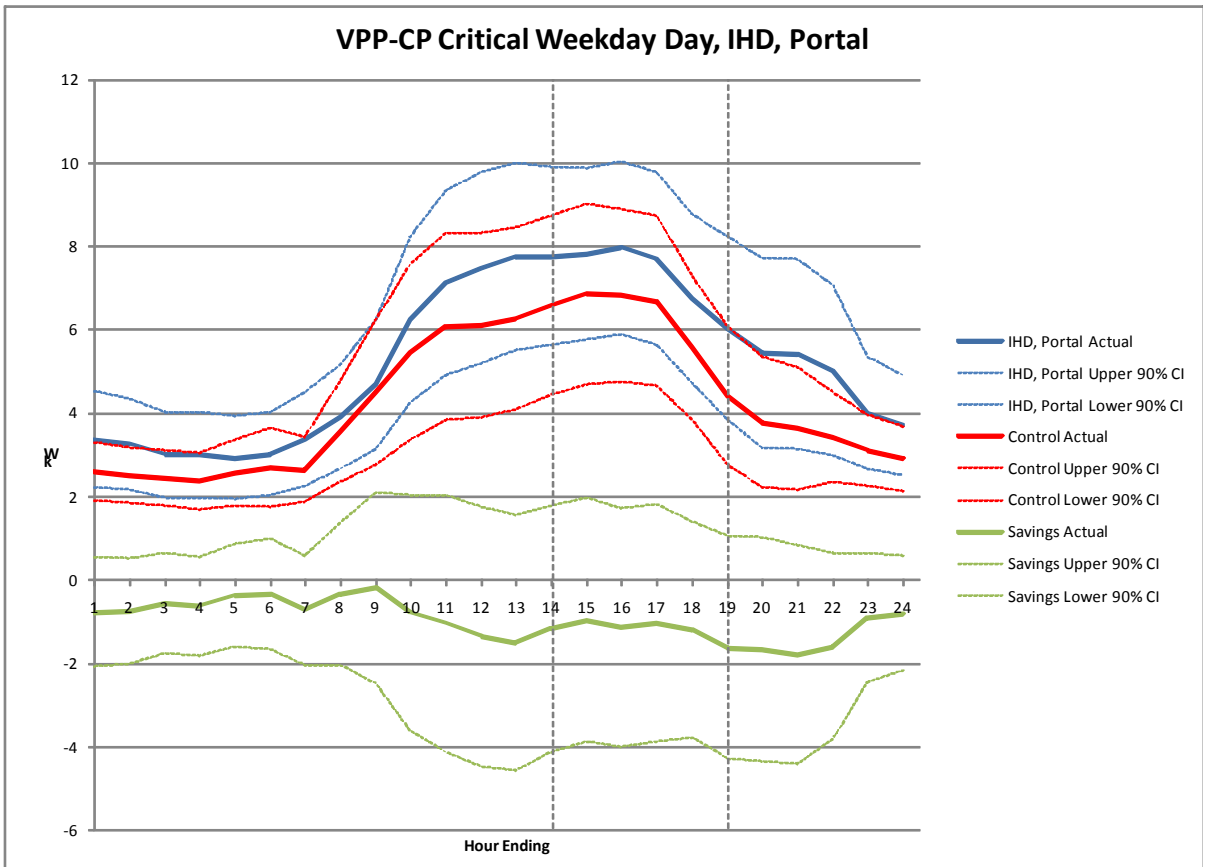

VPP-CP High Weekday Day, All 3
12
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

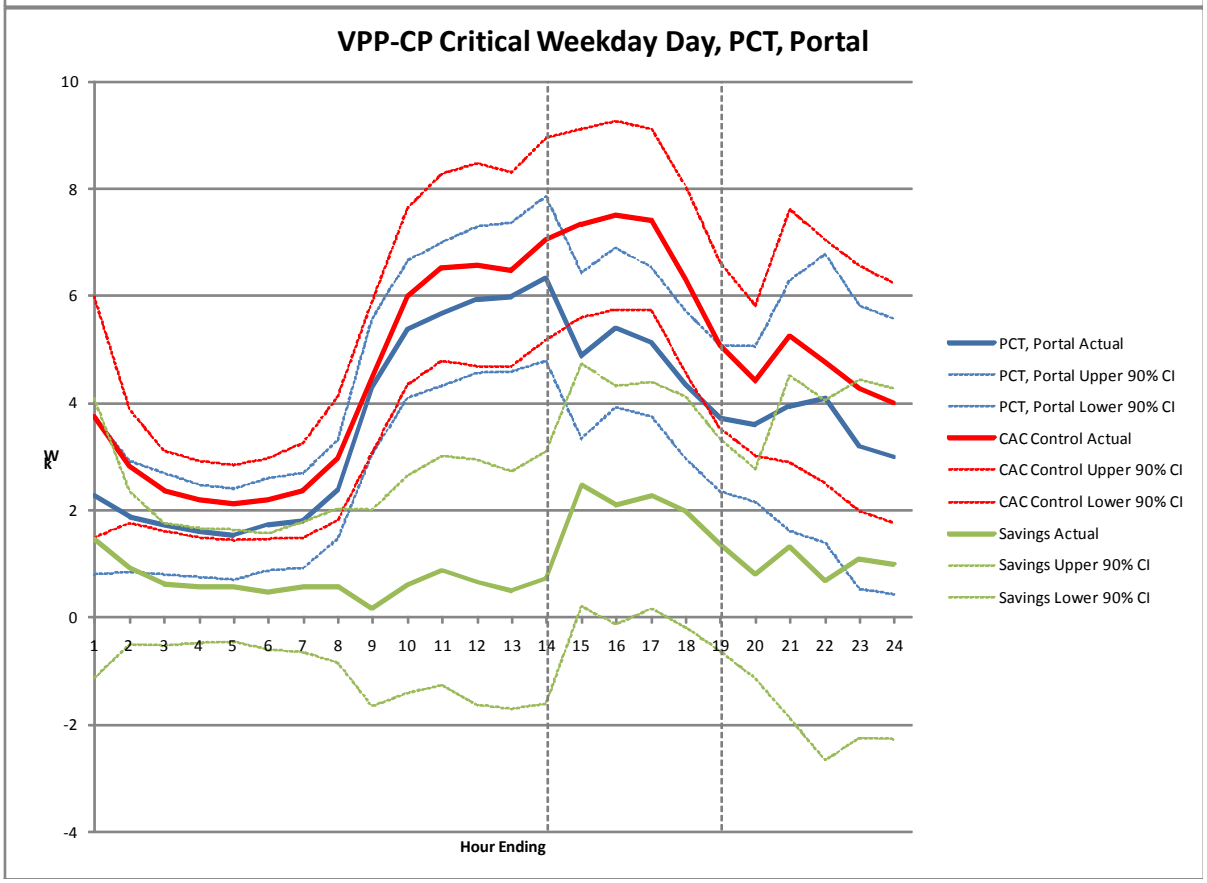

VPP-CP High Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

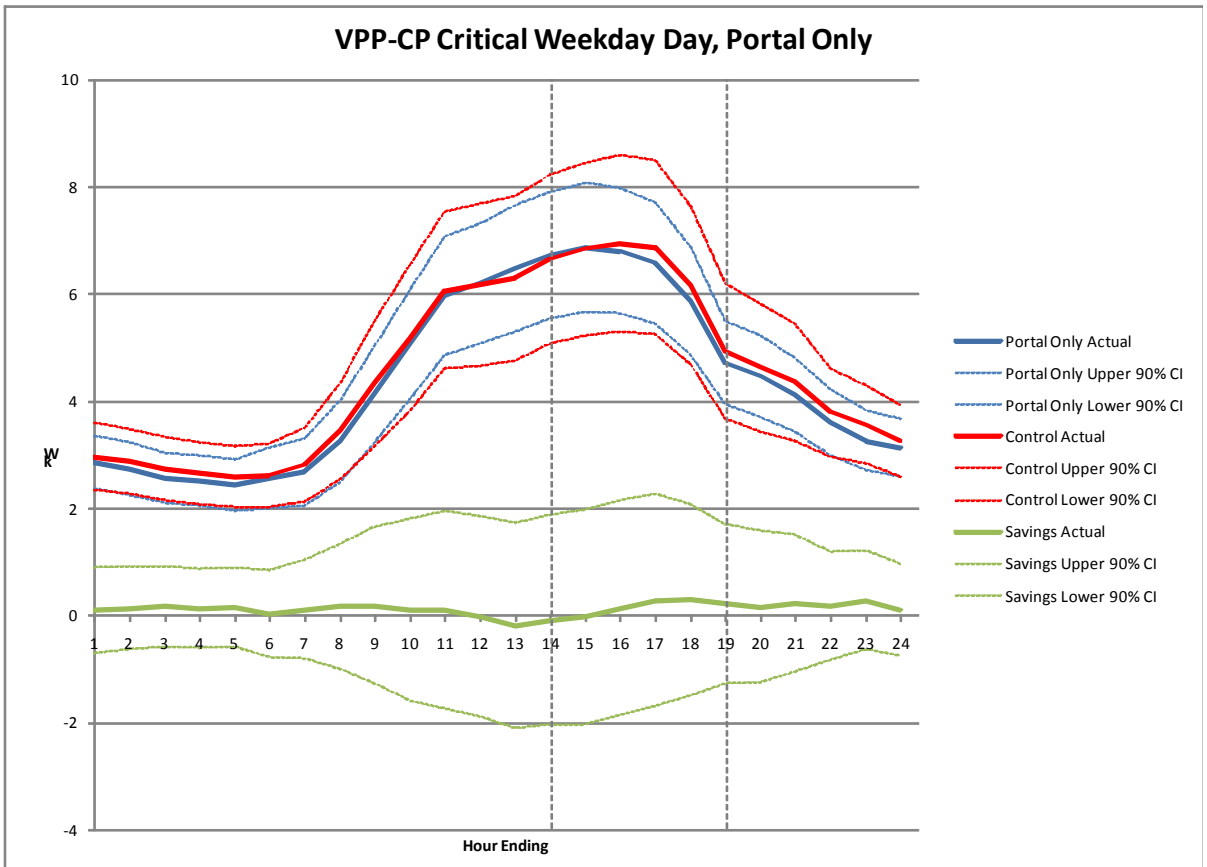

VPP-CP High Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

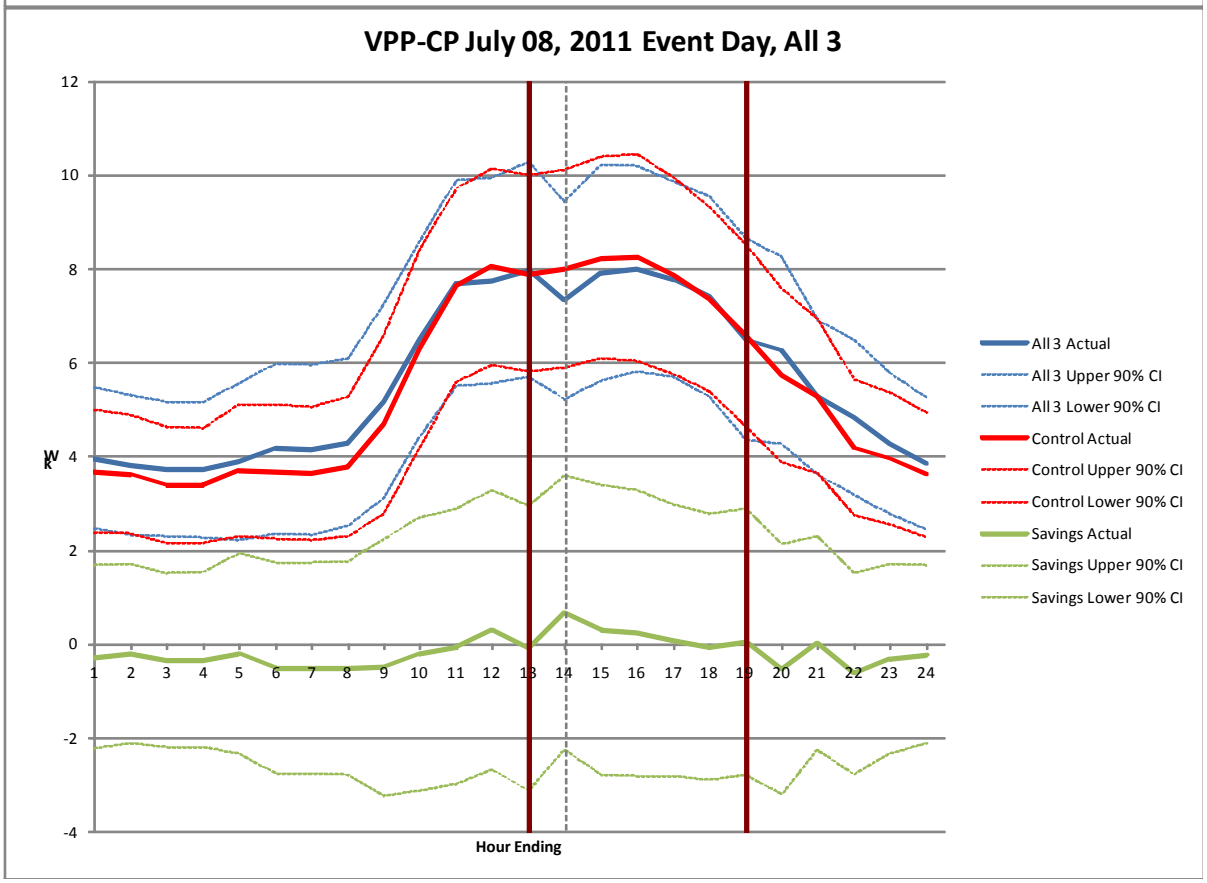

VPP-CP High Weekday Day, Portal Only
10
8
6
4
2
0
-2
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

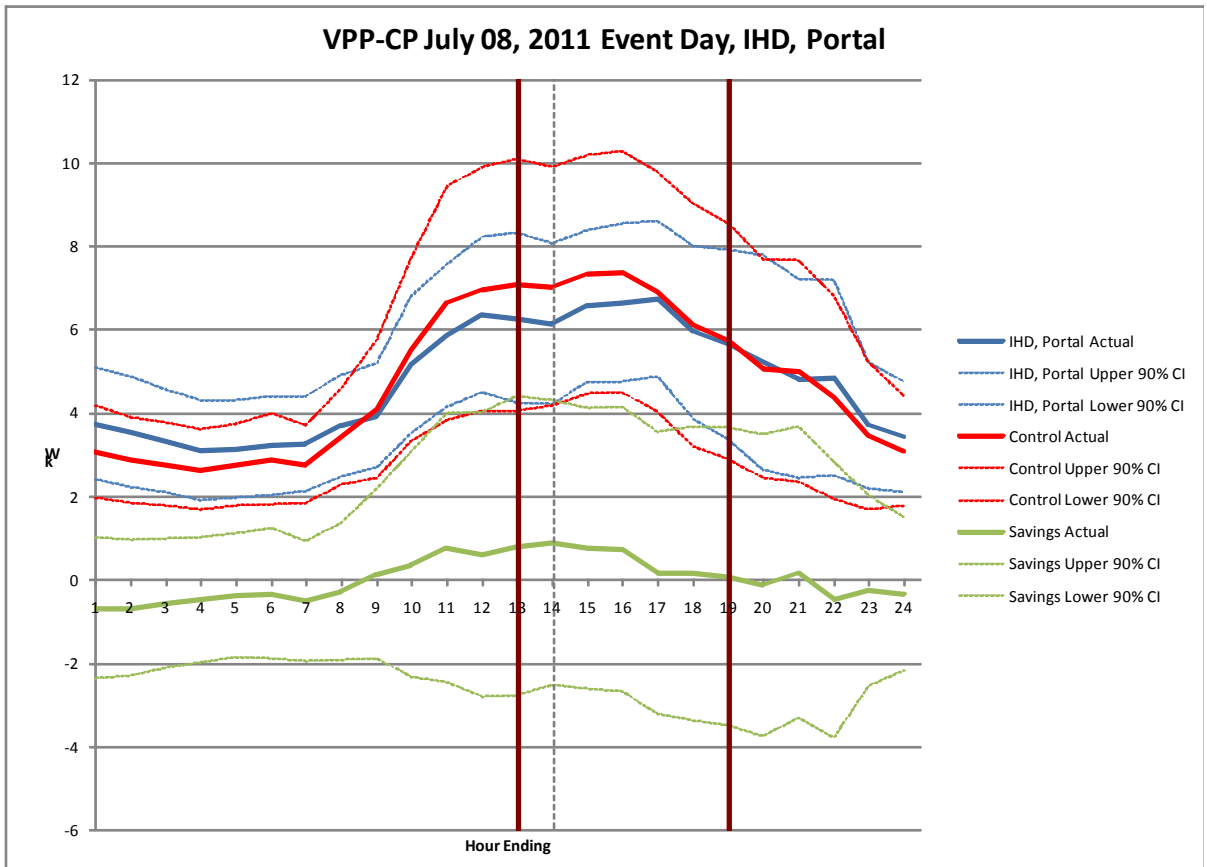

VPP-CP Critical Weekday Day, All 3
14
12
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

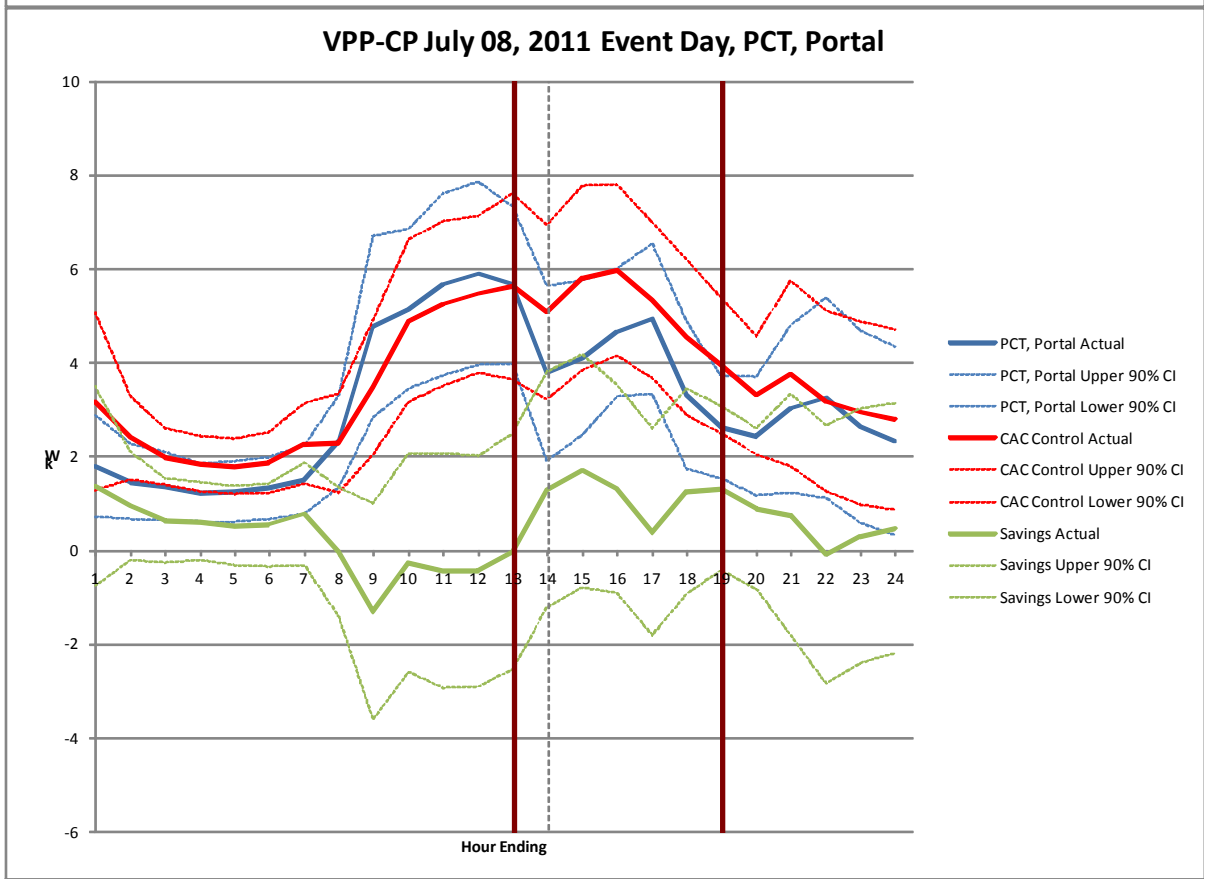

VPP-CP Critical Weekday Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

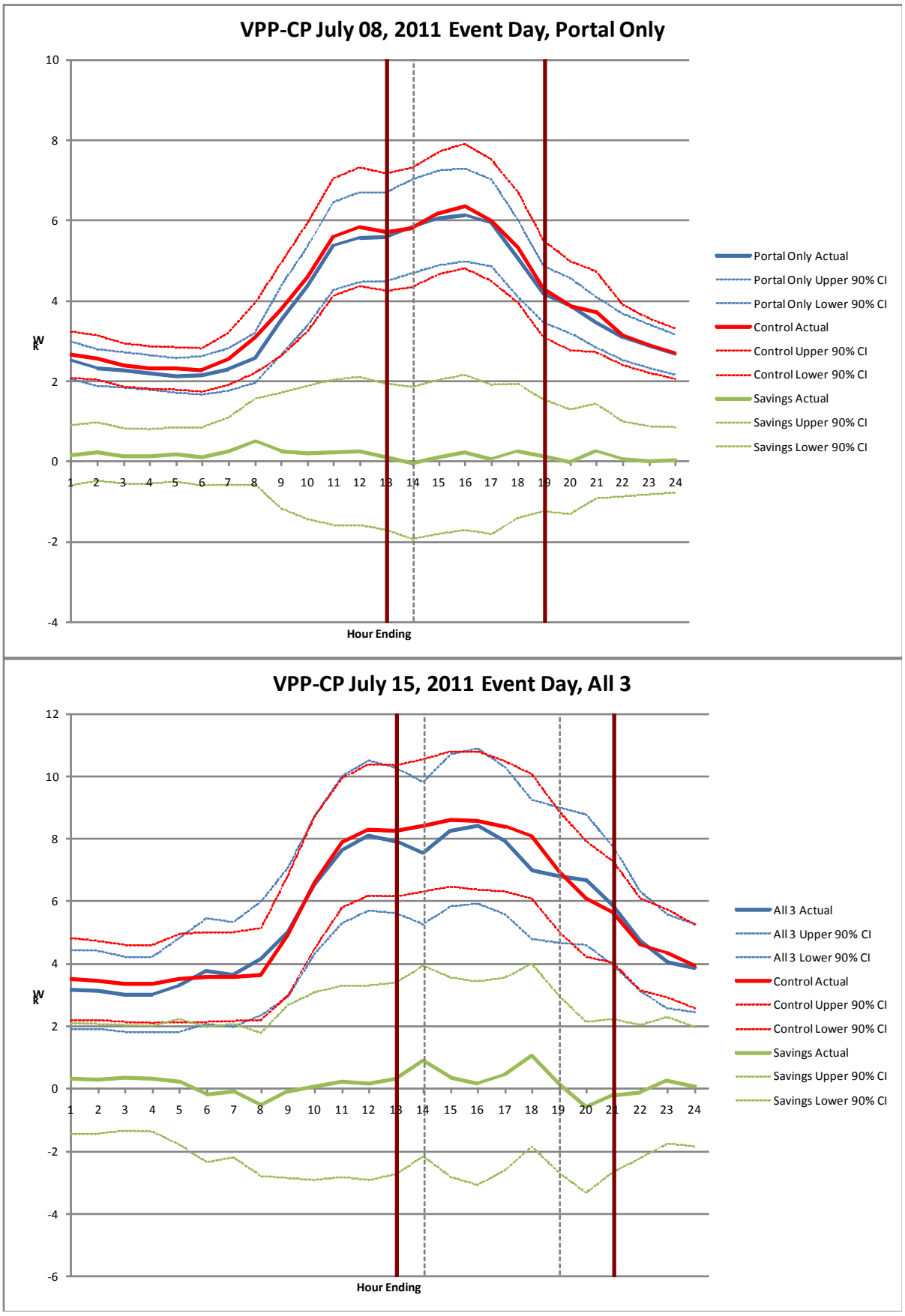

VPP-CP Critical Weekday Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

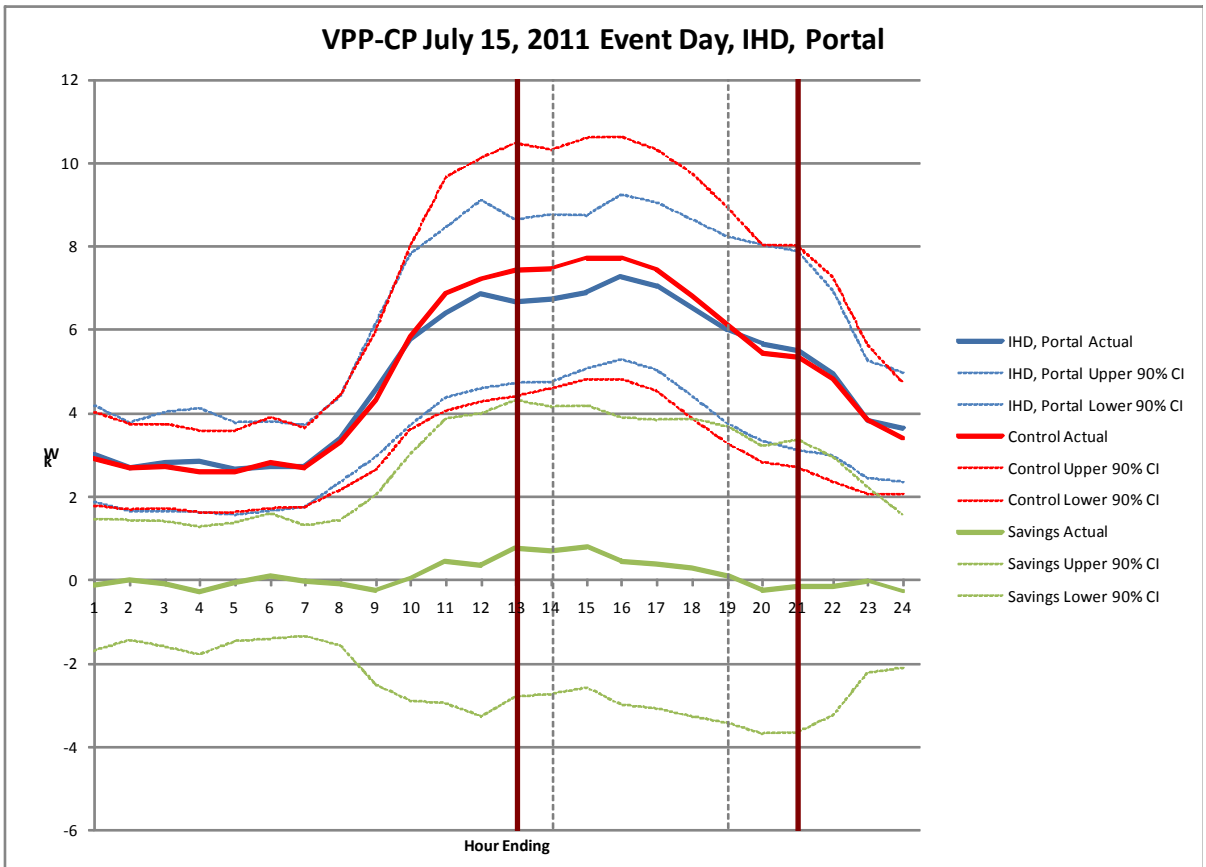

VPP-CP Critical Weekday Day, Portal Only
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

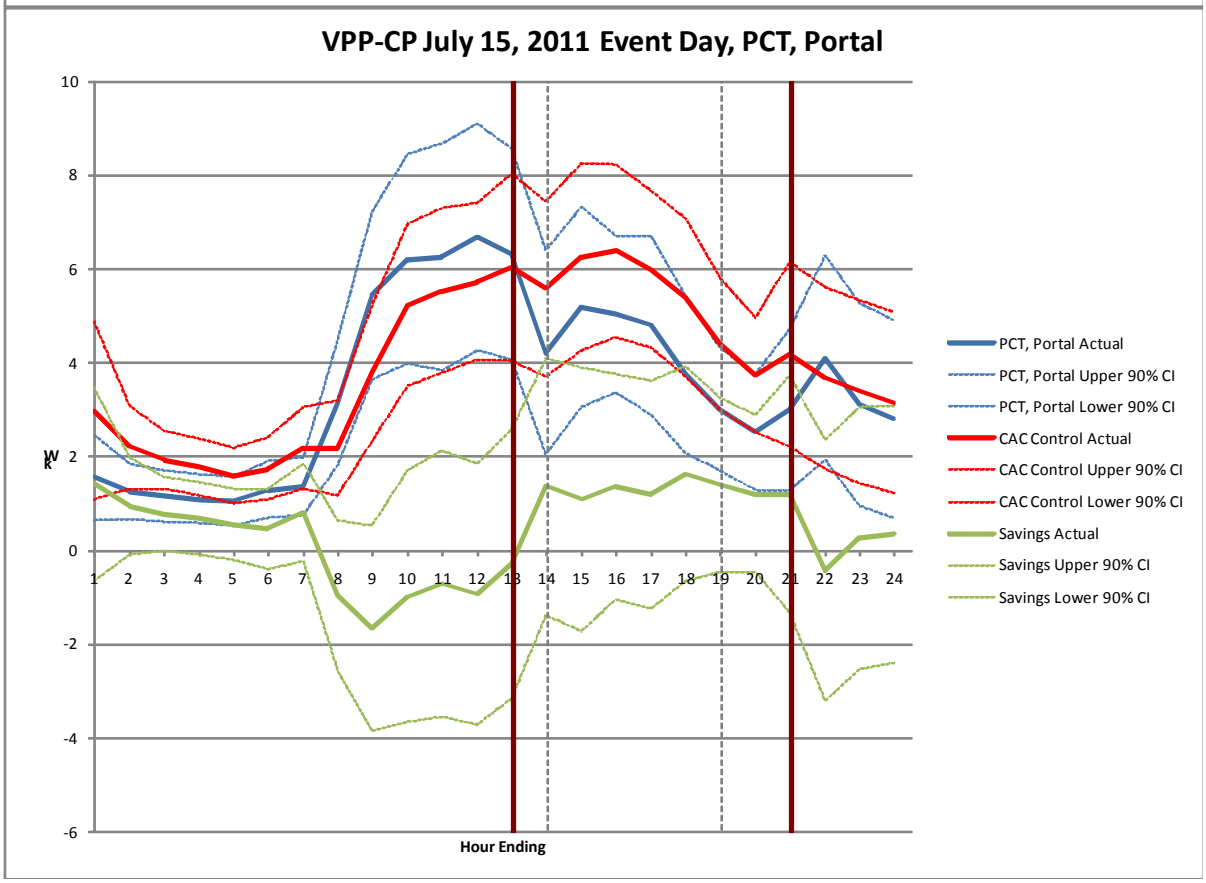

VPP-CP July 08, 2011 Event Day, All 3
12
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

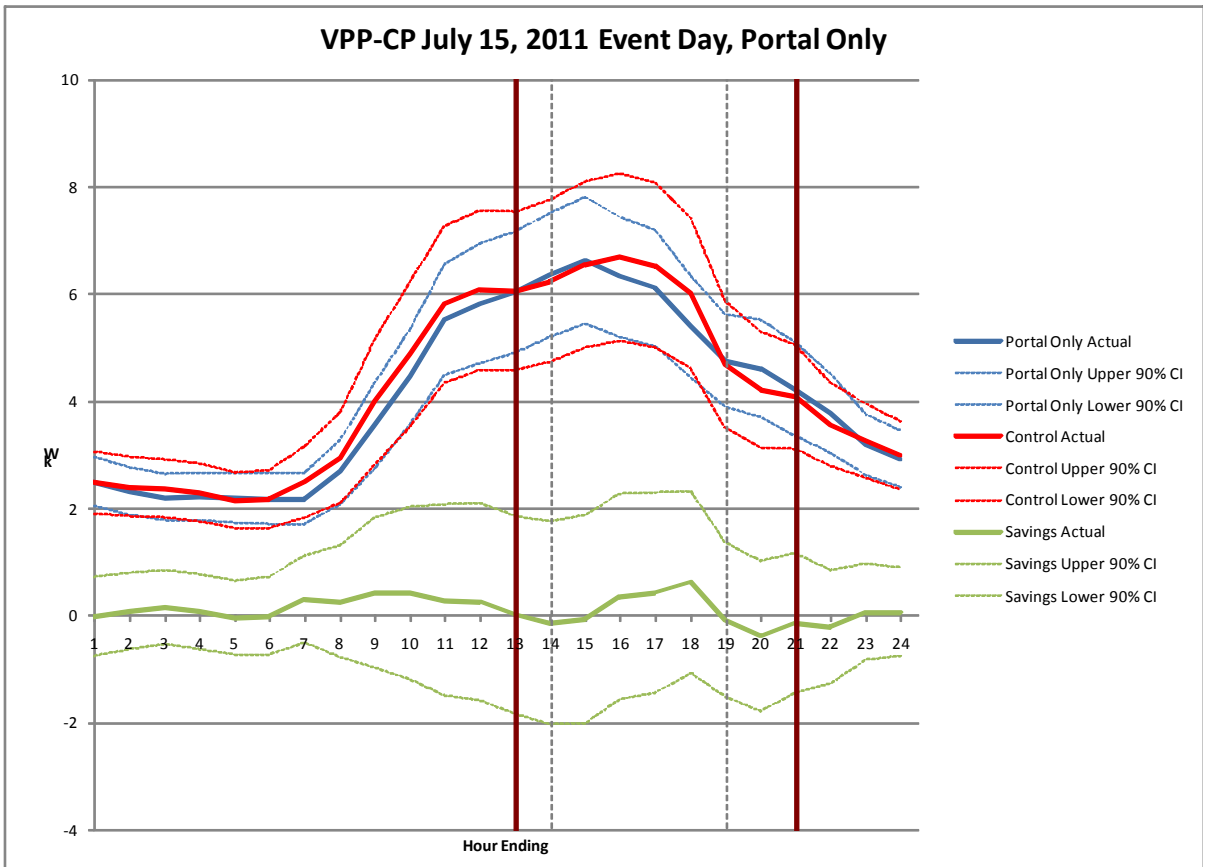

VPP-CP July 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

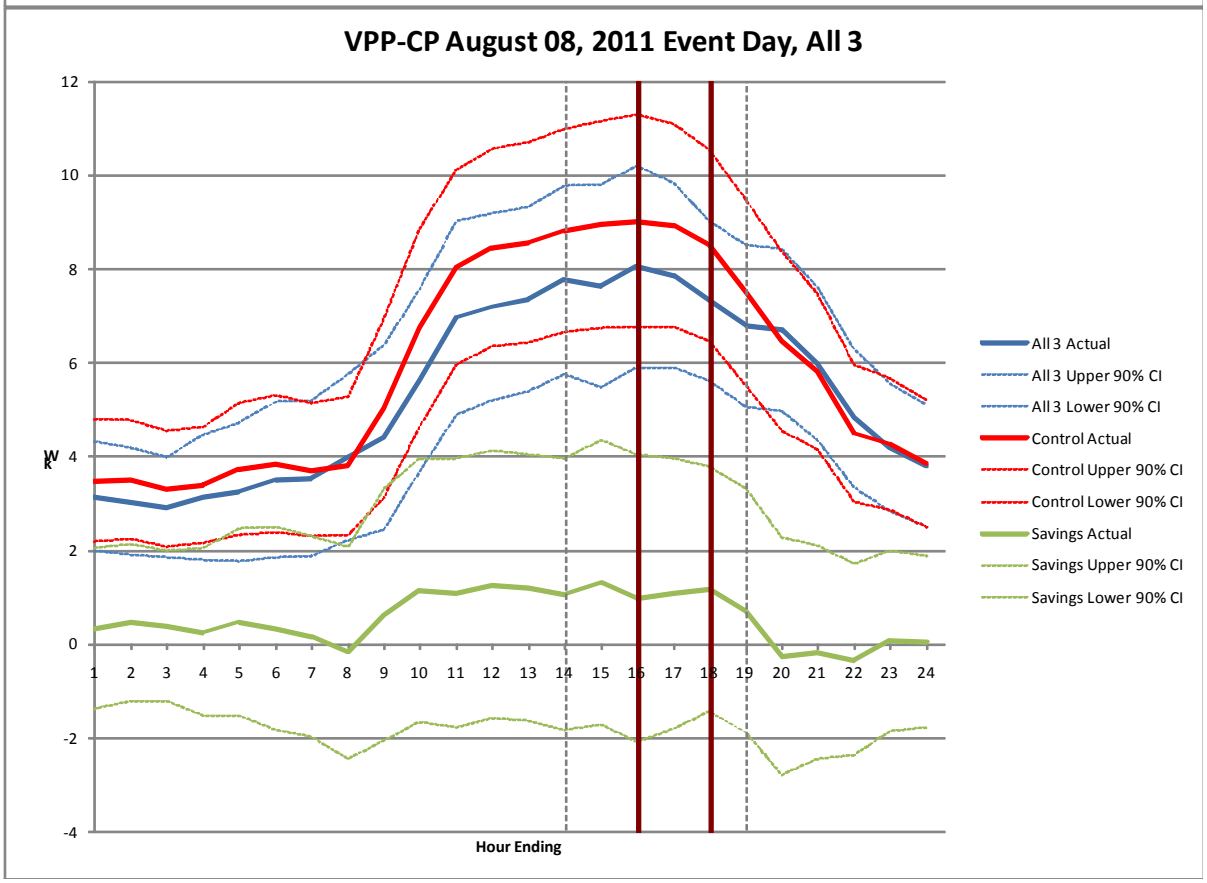

VPP-CP July 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

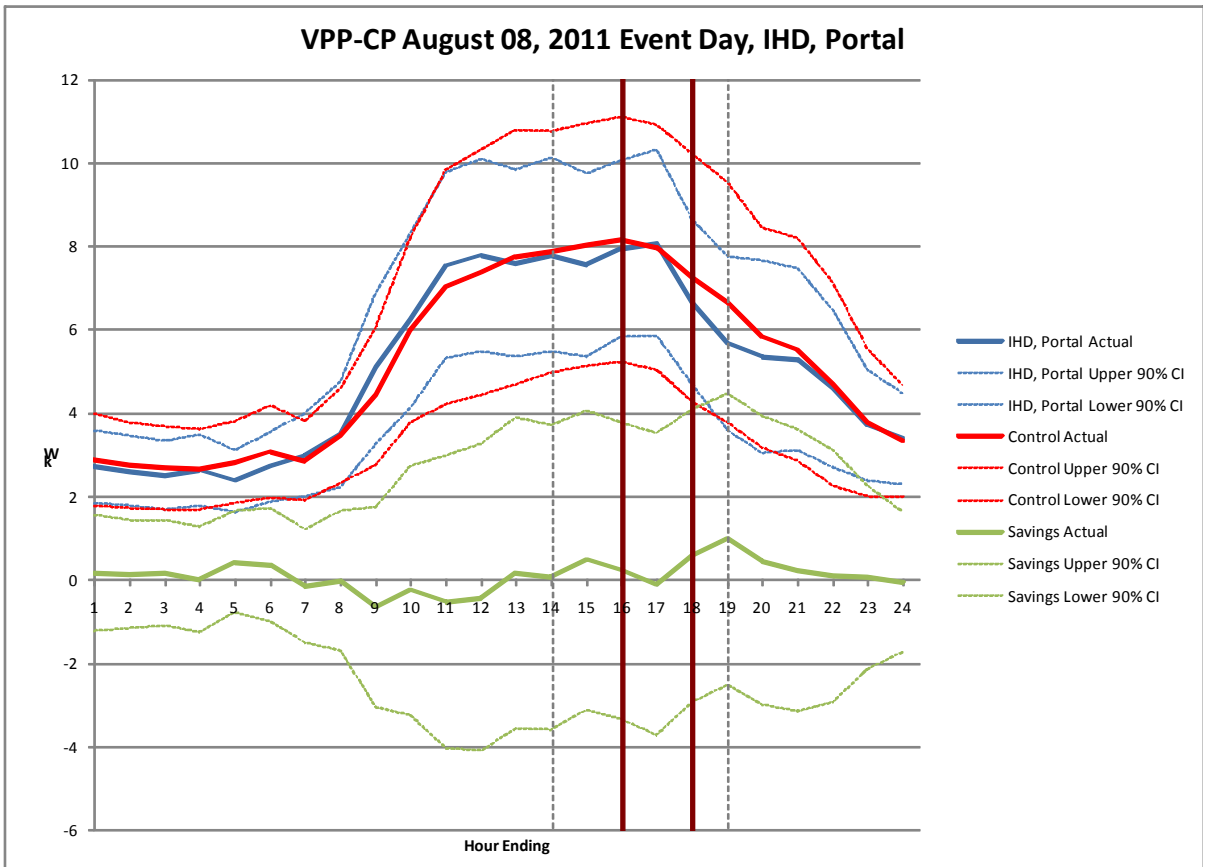

VPP-CP July 08, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
VPP-CP July 15, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

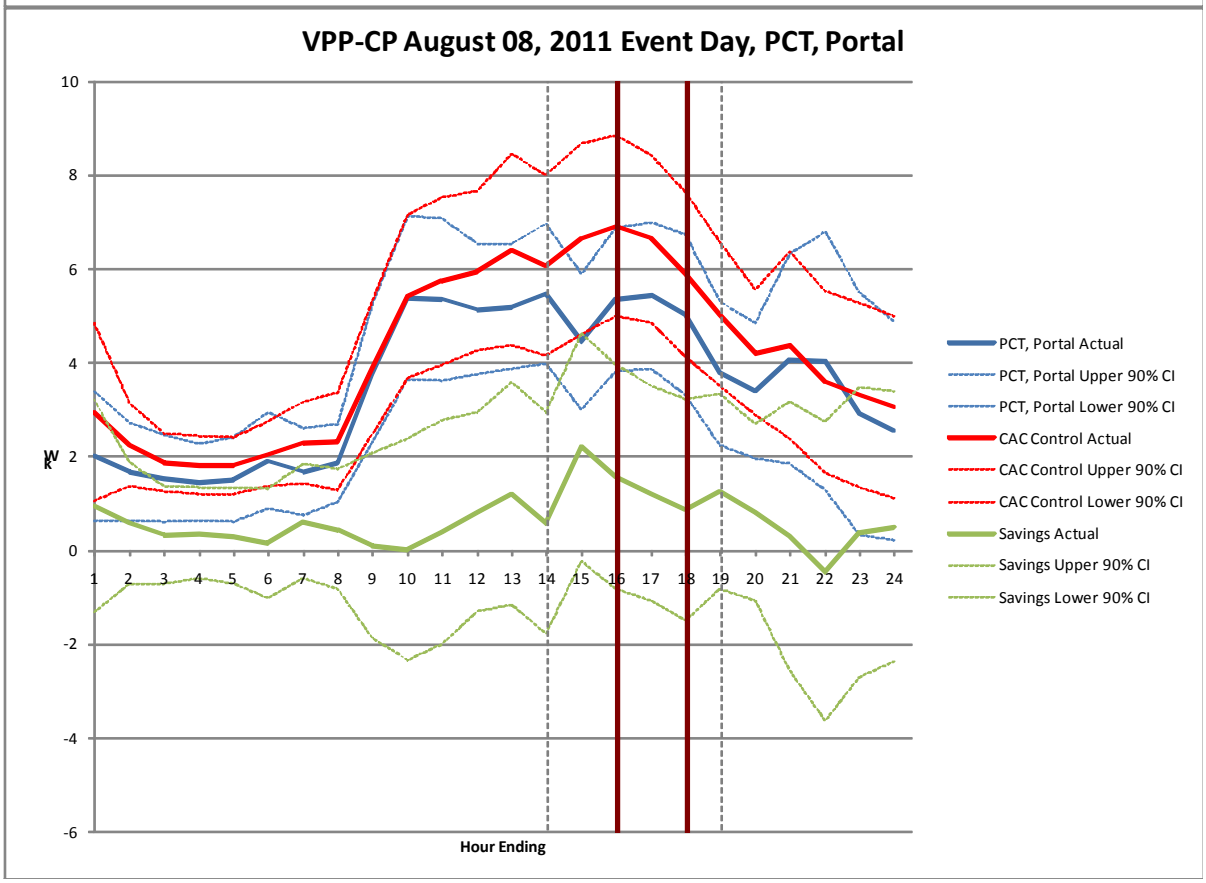

VPP-CP July 15, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

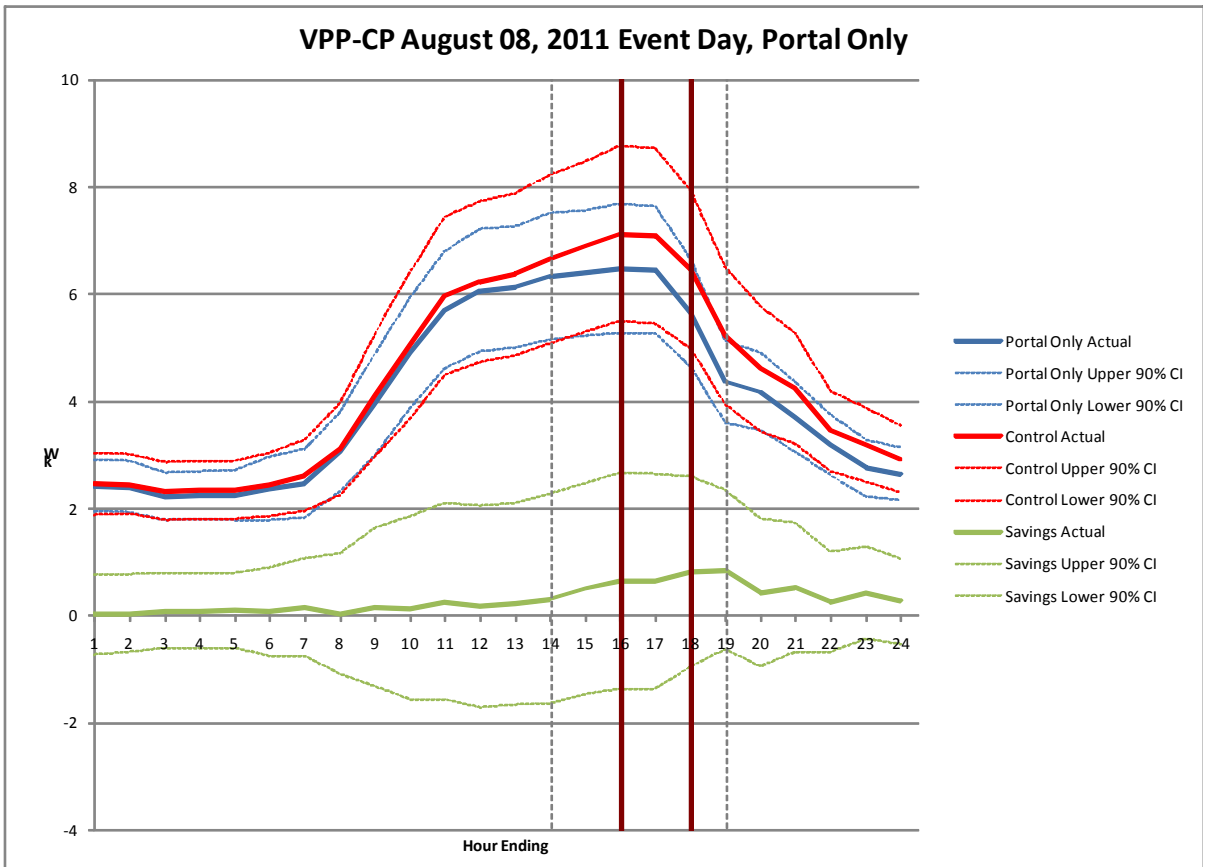

VPP-CP July 15, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

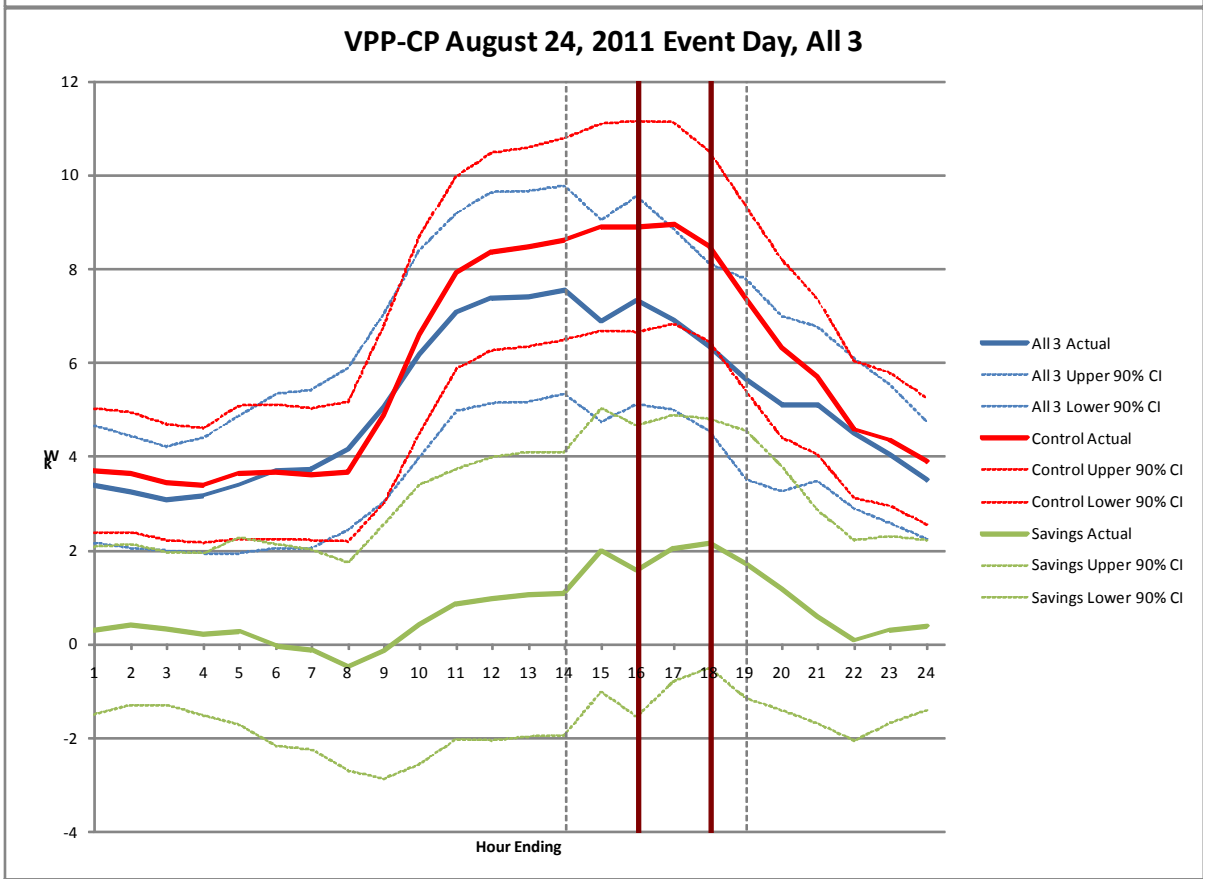

VPP-CP July 15, 2011 Event Day, Portal Only
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

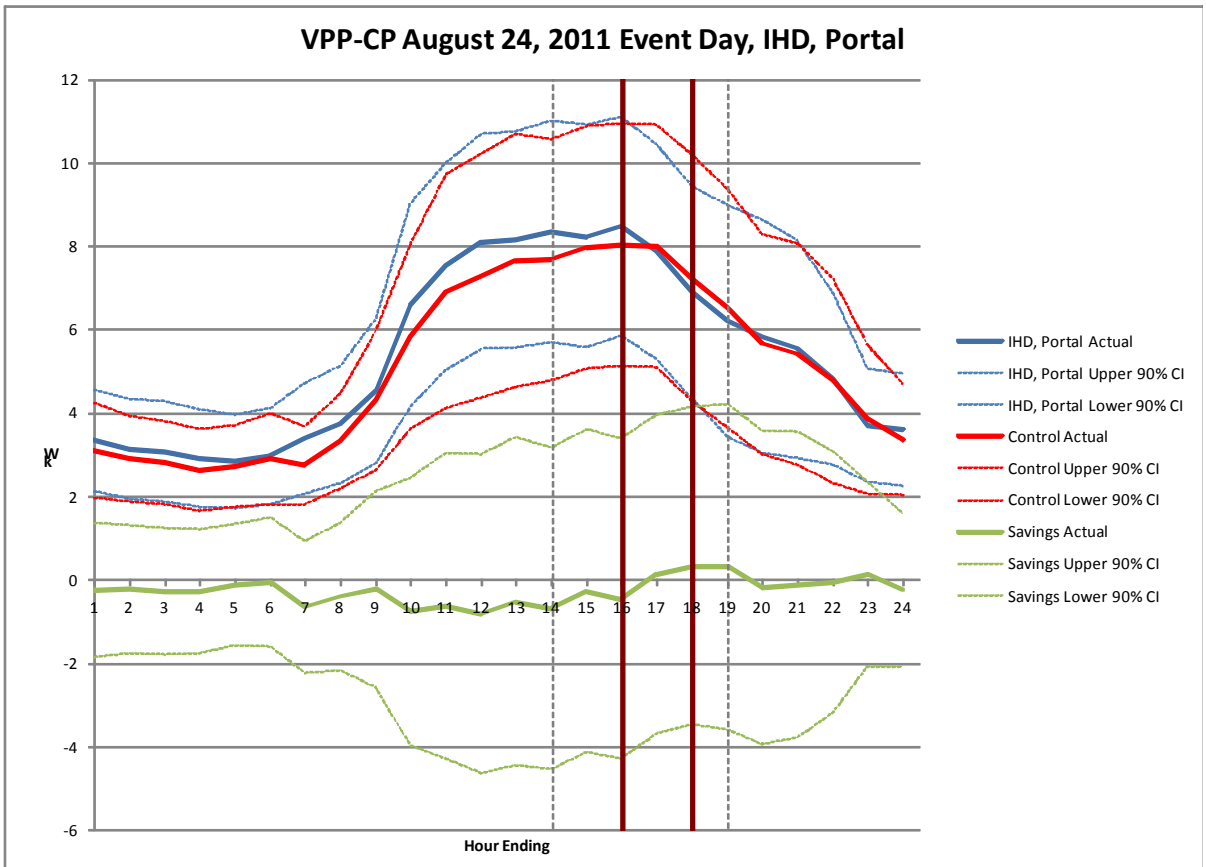

VPP-CP August 08, 2011 Event Day, All 3
12
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

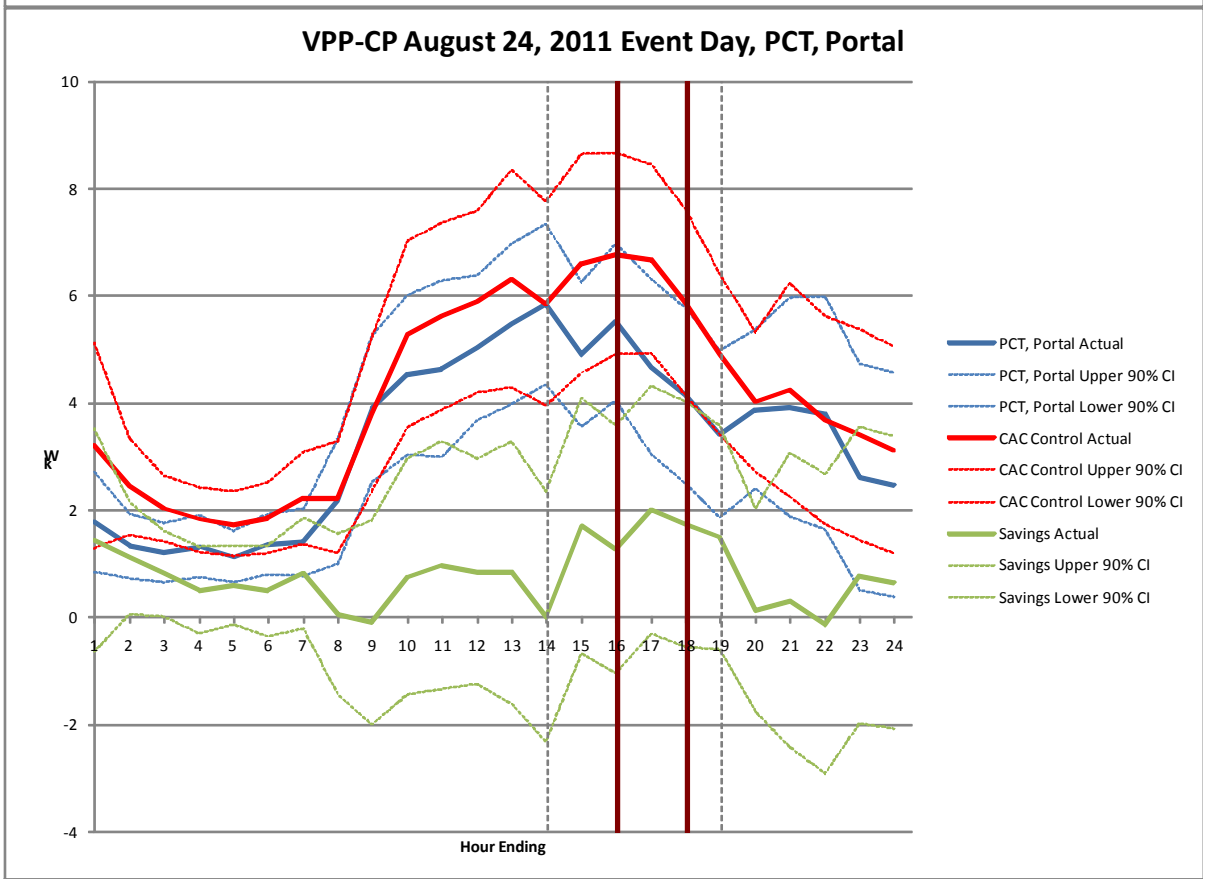

VPP-CP August 08, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

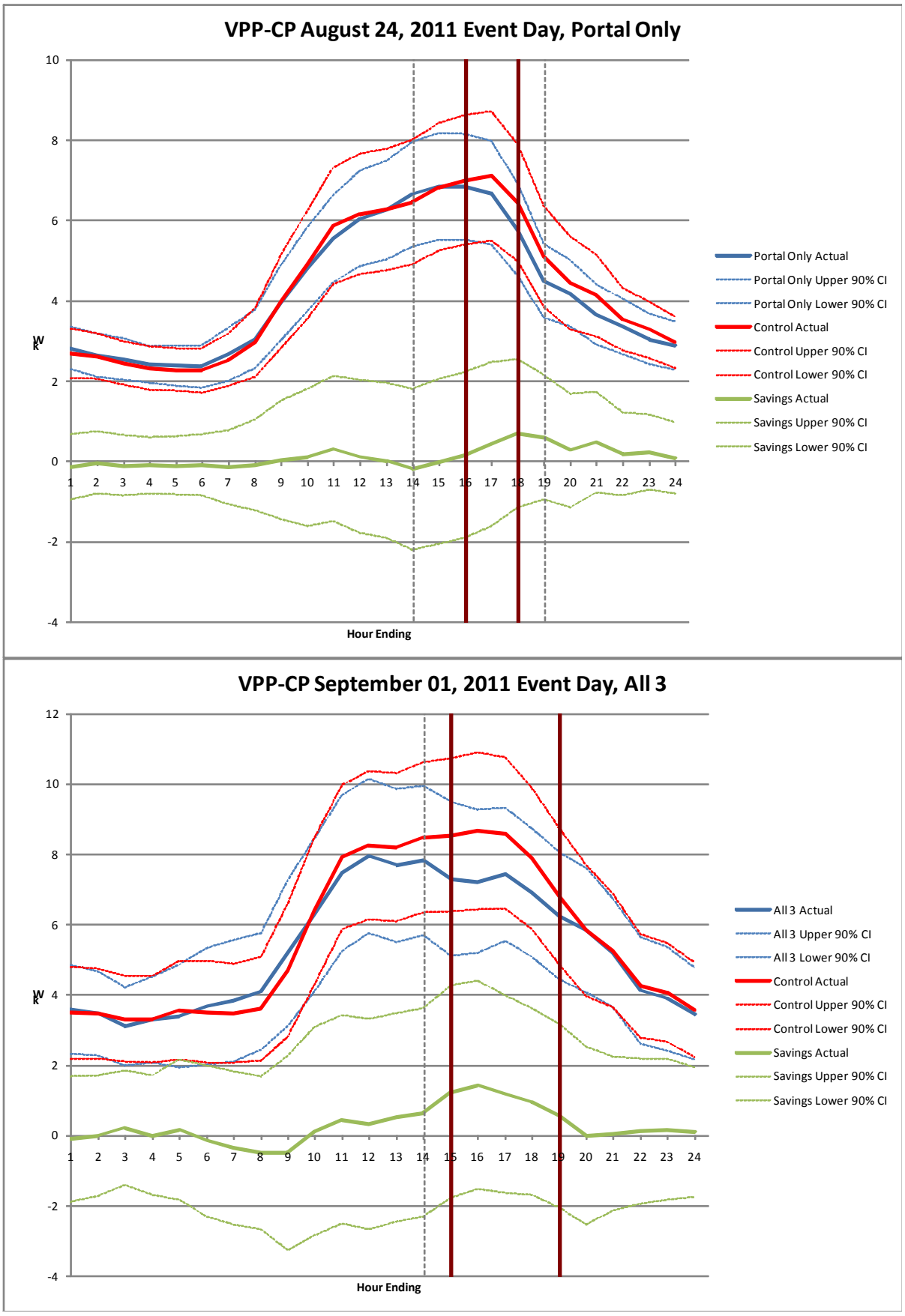

VPP-CP August 08, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

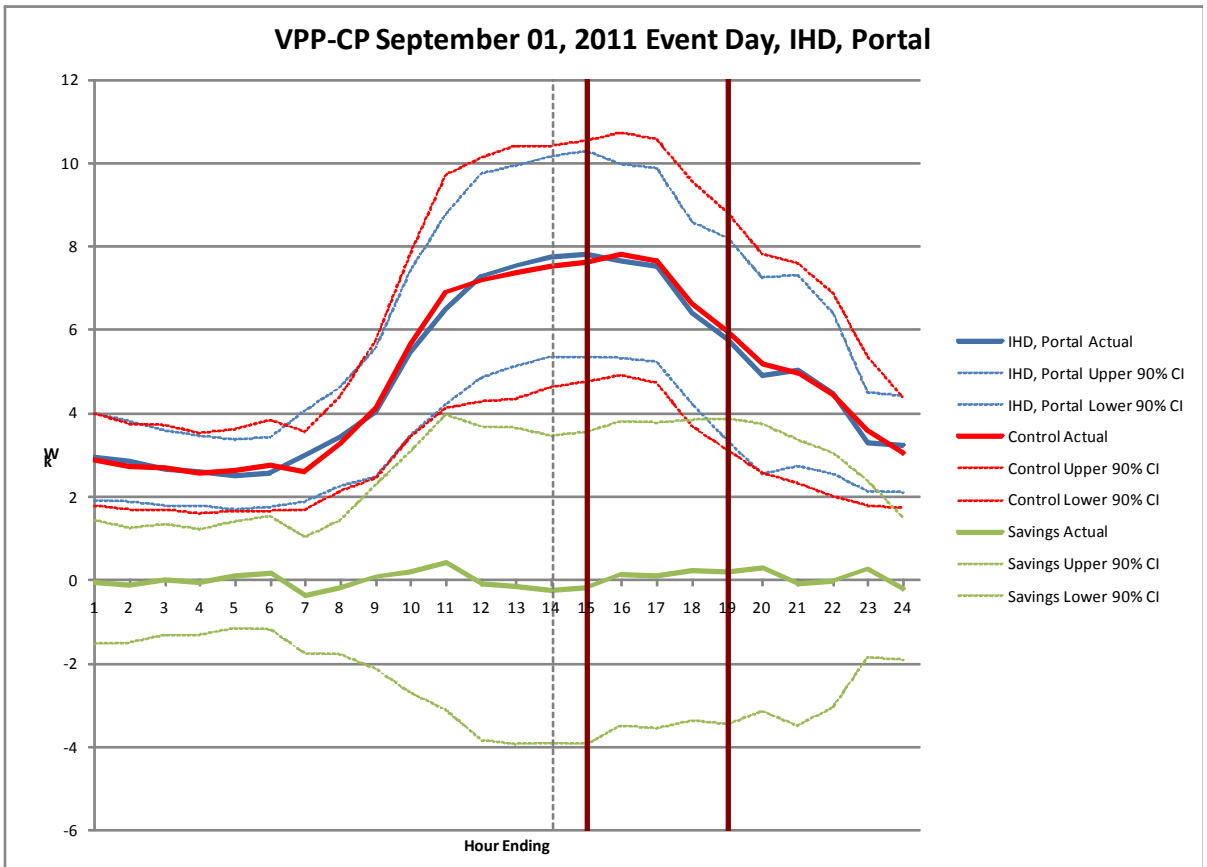

VPP-CP August 08, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

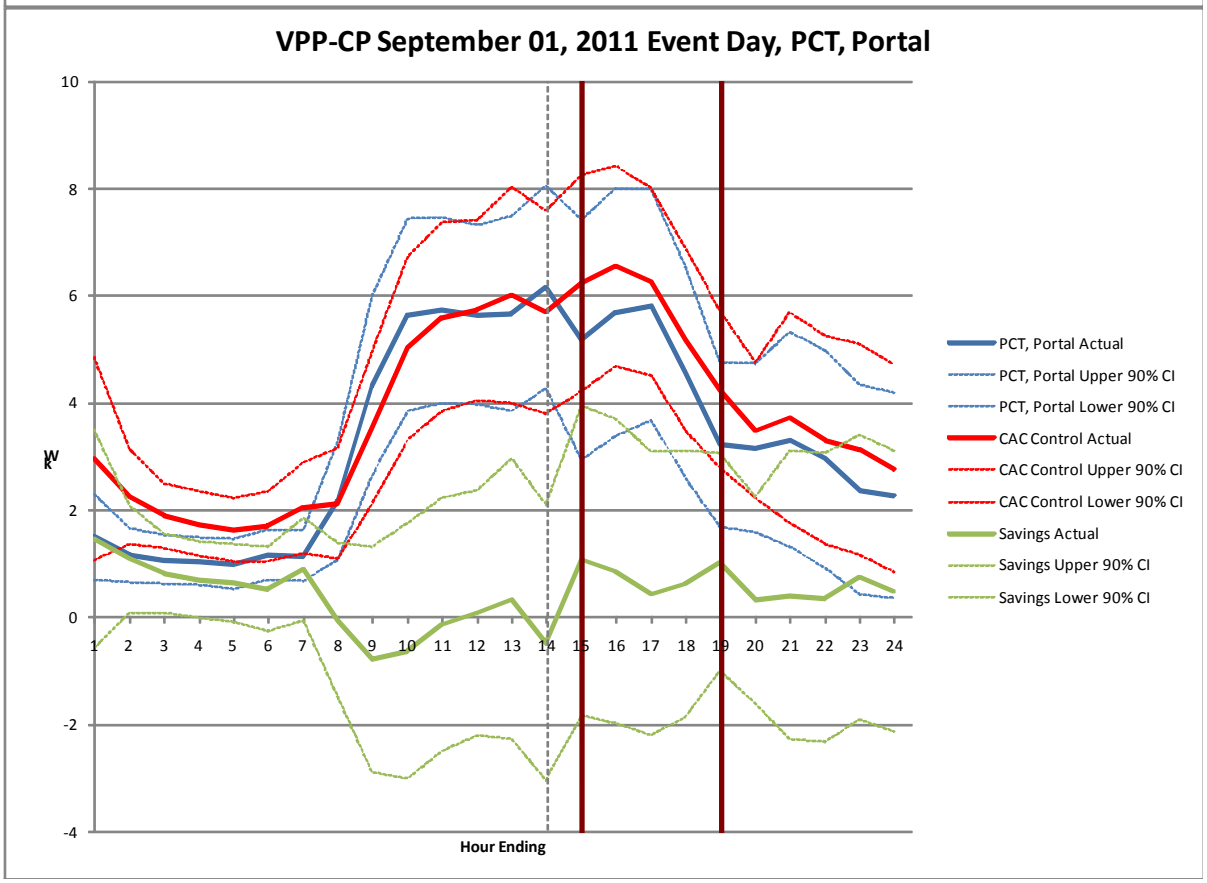

VPP-CP August 24, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

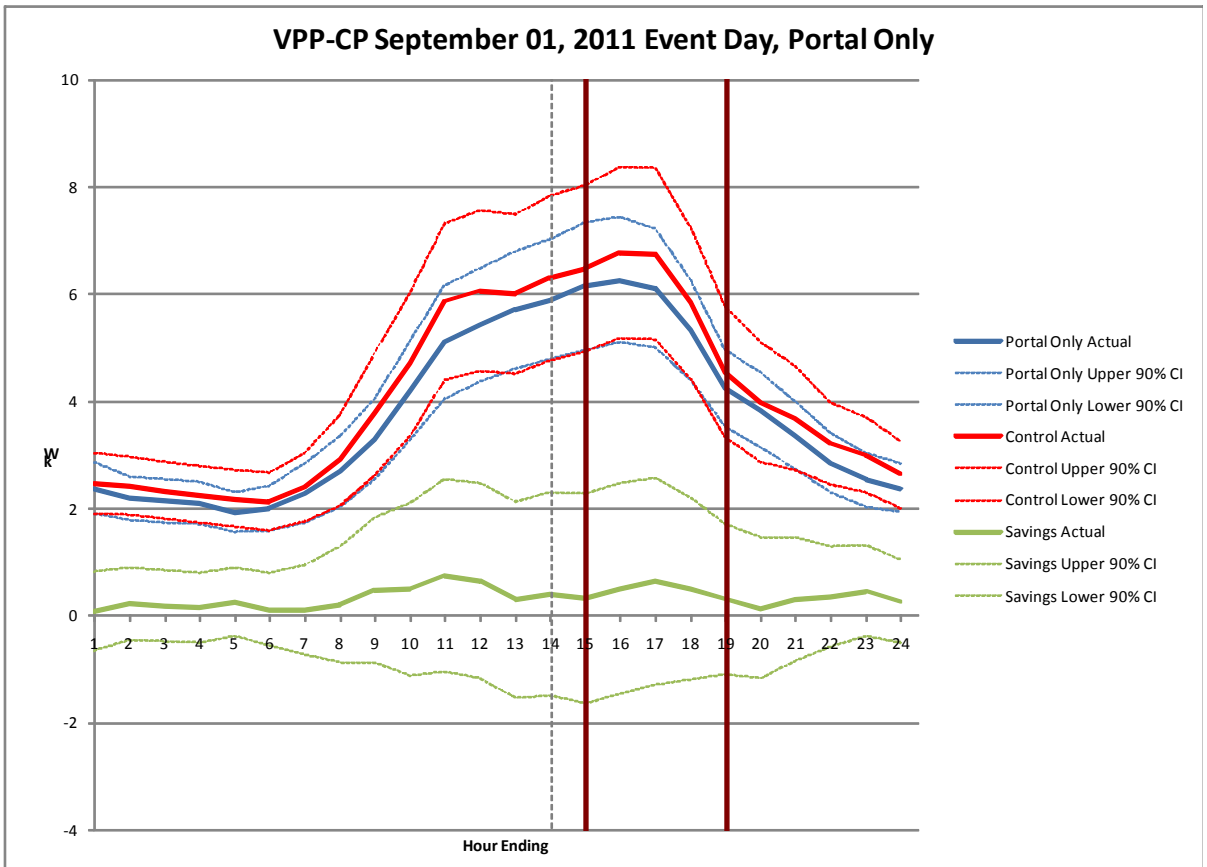

VPP-CP August 24, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

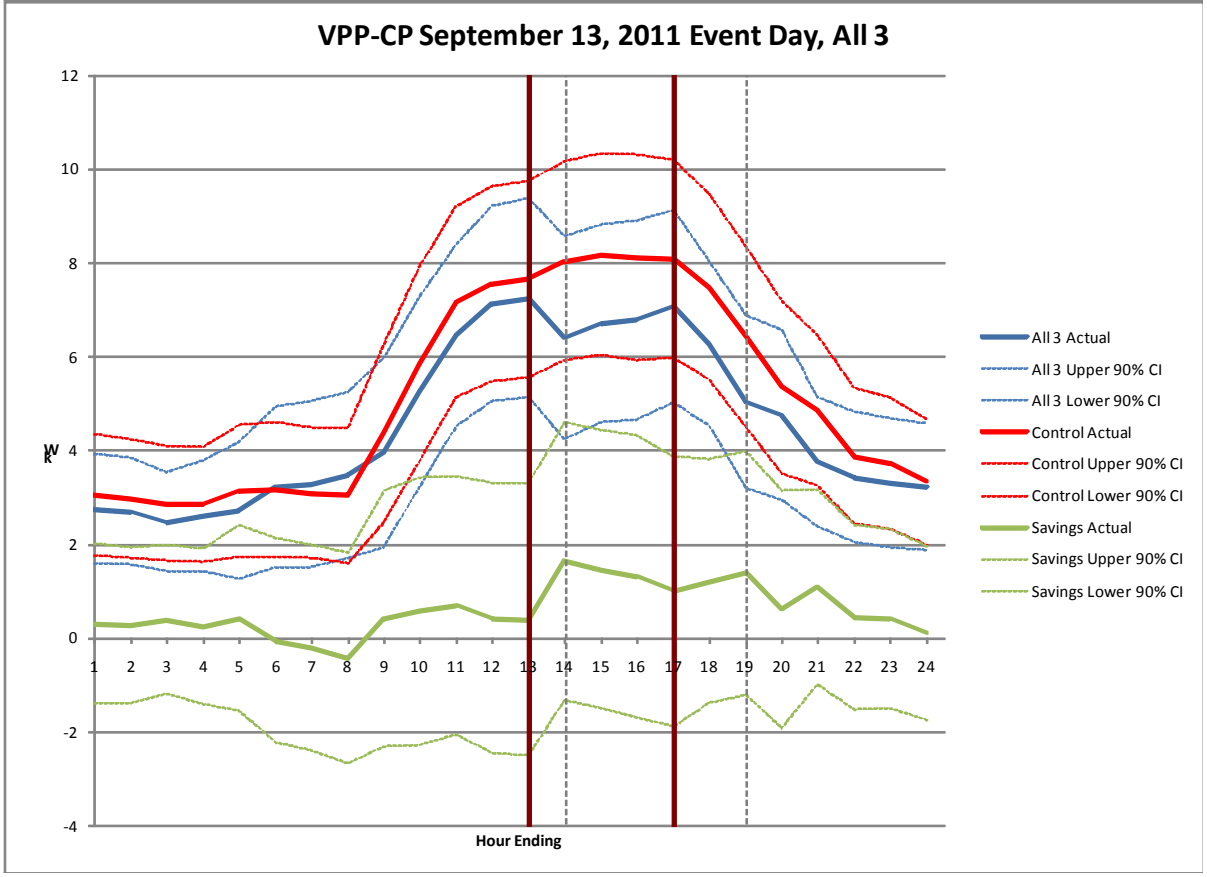

VPP-CP August 24, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP August 24, 2011 Event Day, Portal Only
kW
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
VPP-CP September 01, 2011 Event Day, All 3
kW
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 01, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 01, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 01, 2011 Event Day, Portal Only
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 13, 2011 Event Day, All 3
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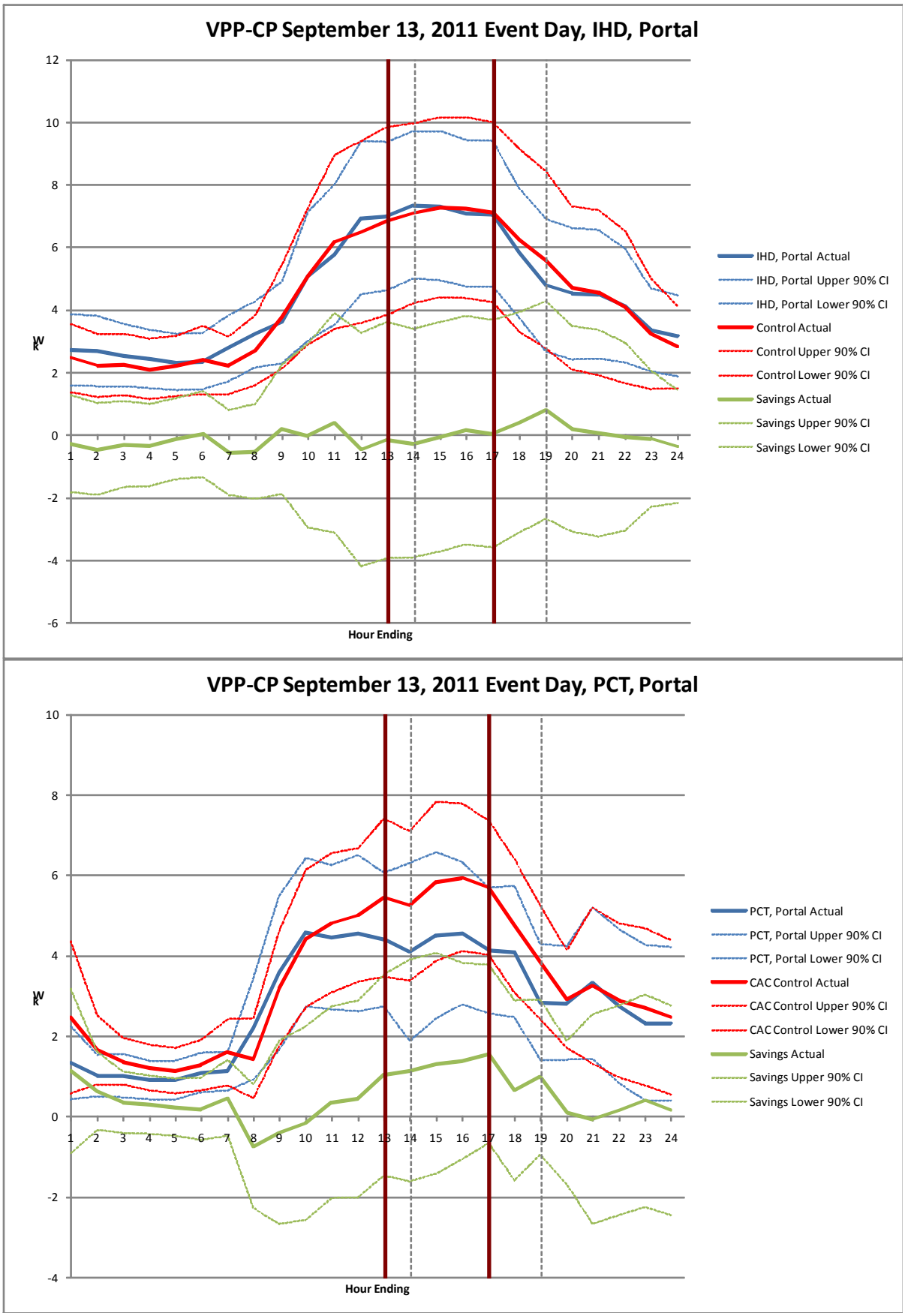
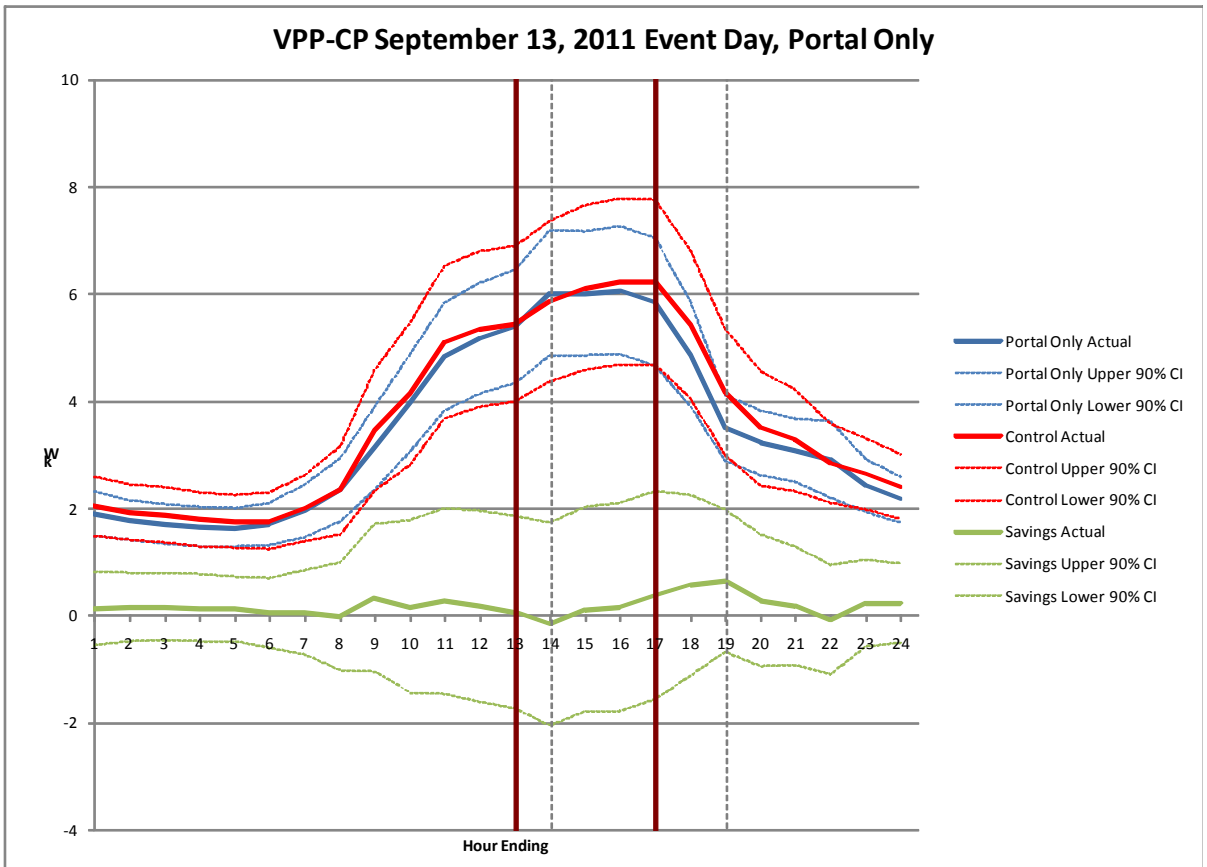
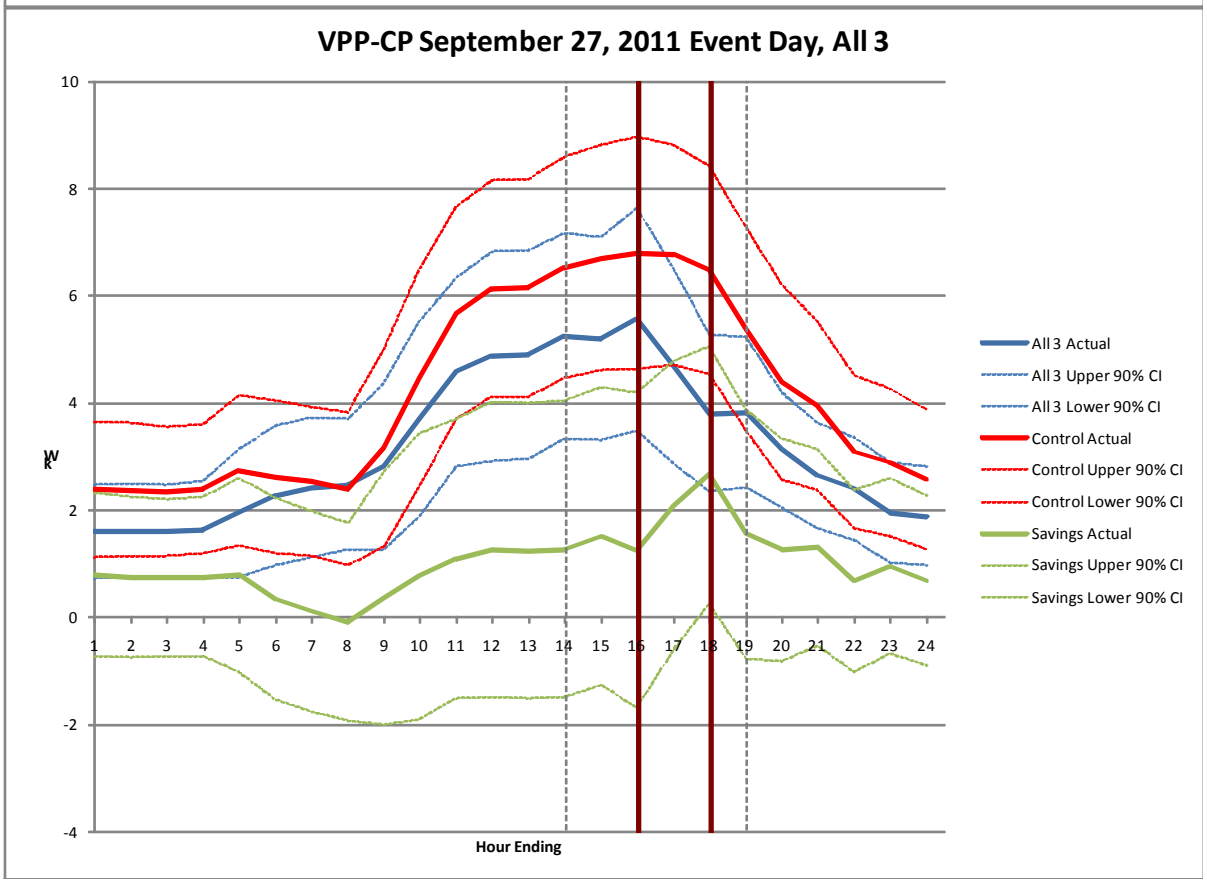
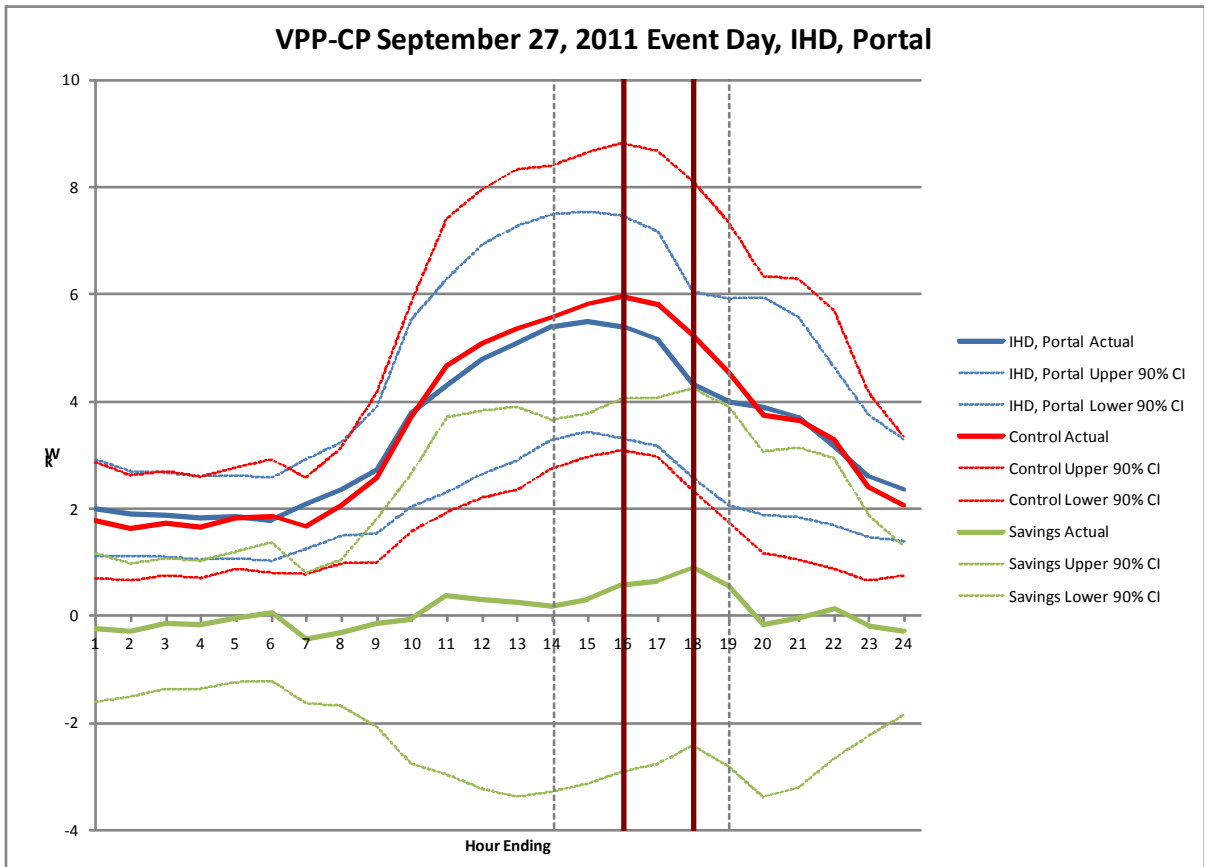
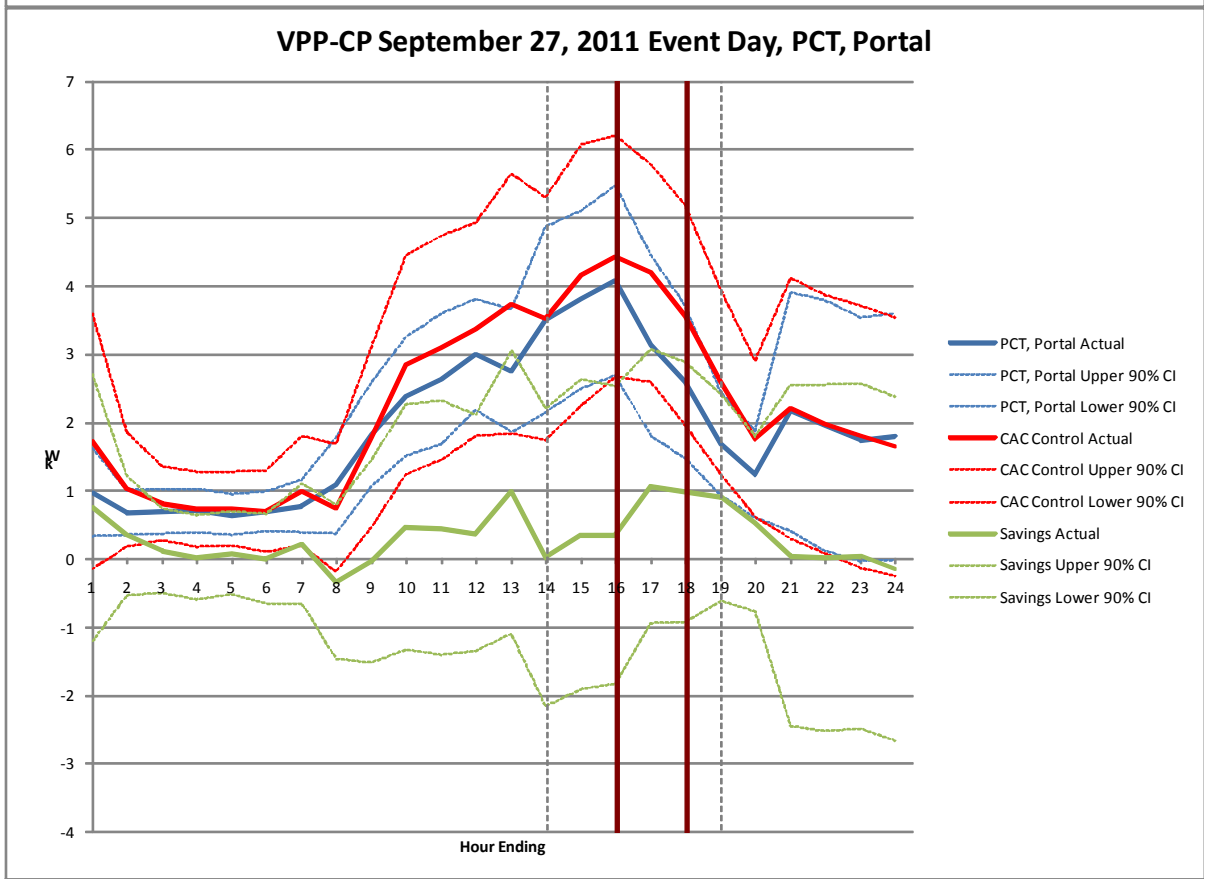
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

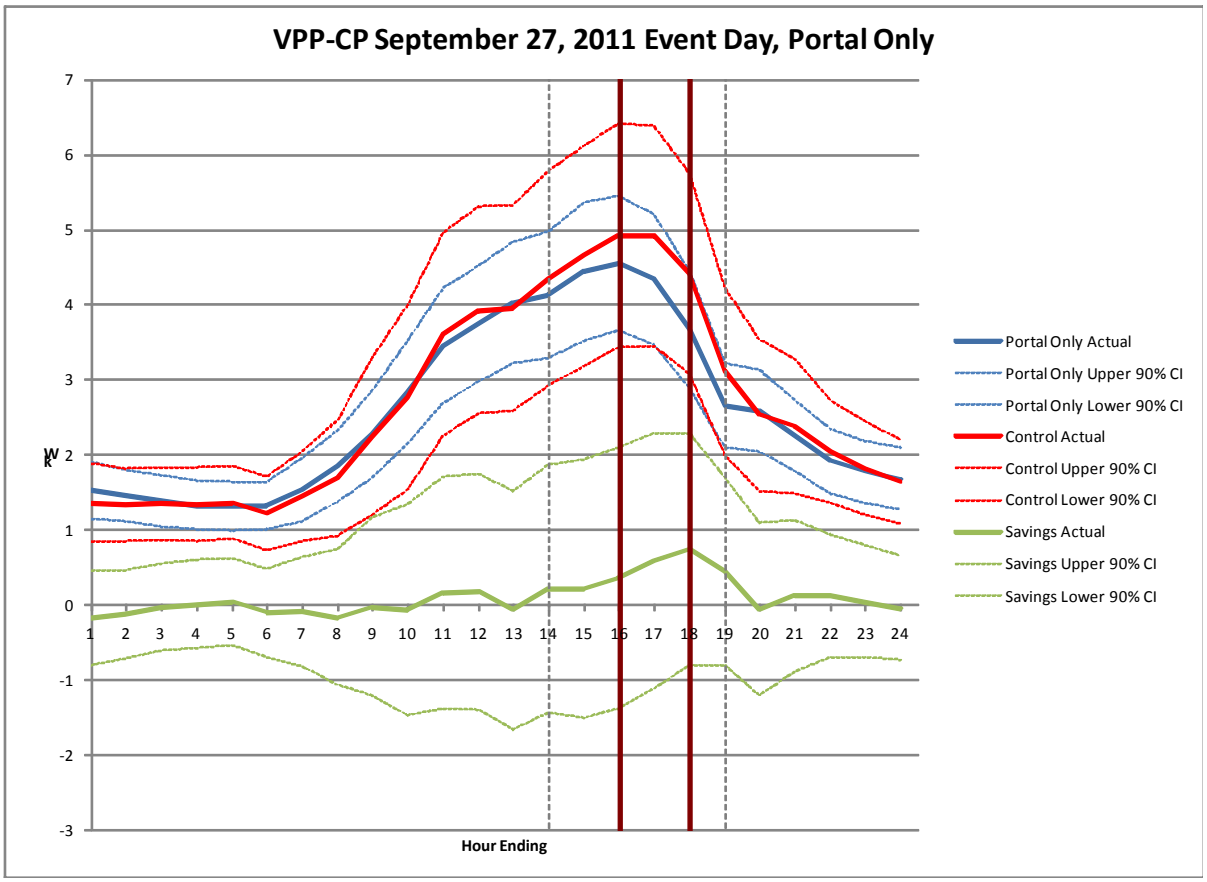

VPP-CP September 13, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI
VPP-CP September 13, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 13, 2011 Event Day, Portal Only
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 27, 2011 Event Day, All 3
10
8
6
4
2
0
-2
-4
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
All 3 Actual
All 3 Upper 90% CI
All 3 Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI


VPP-CP September 27, 2011 Event Day, IHD, Portal
kW
Hour Ending
IHD, Portal Actual
IHD, Portal Upper 90% CI
IHD, Portal Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

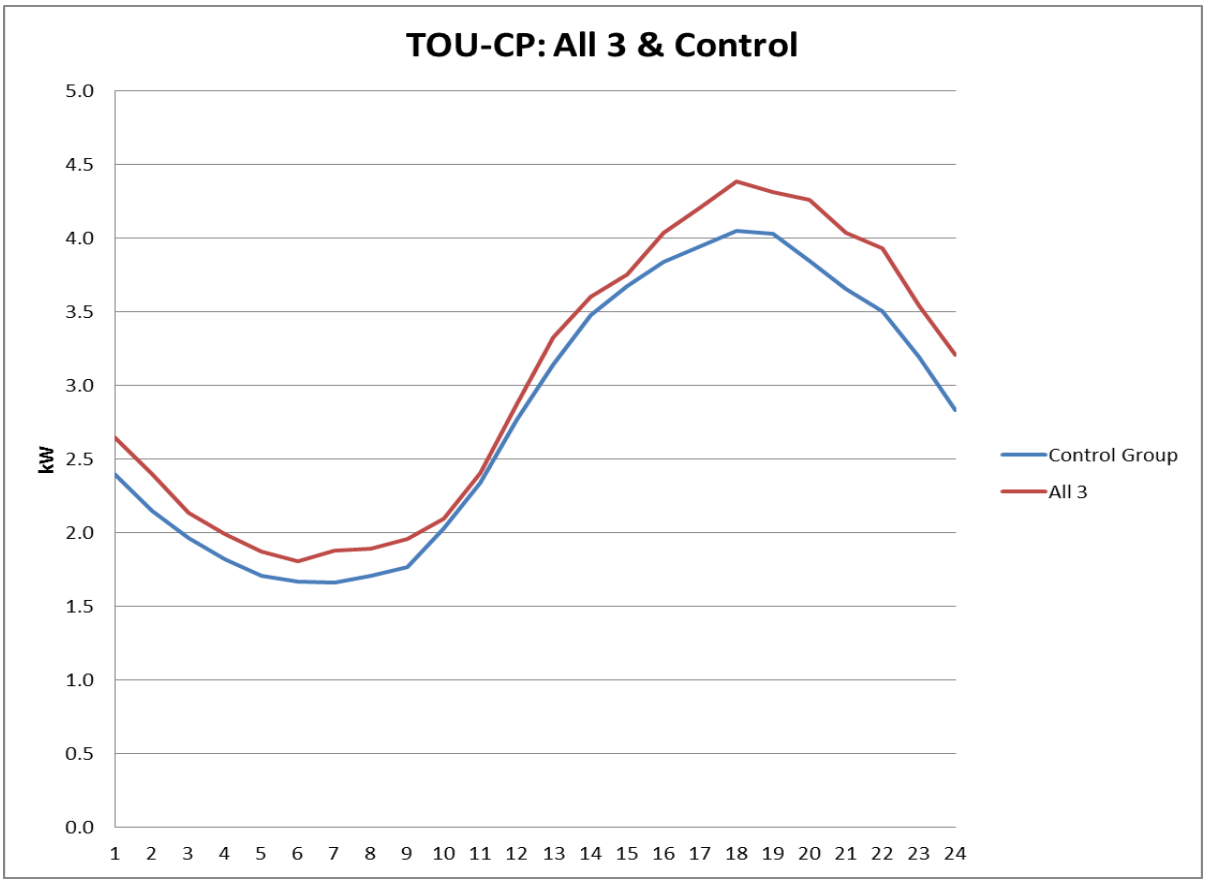

VPP-CP September 27, 2011 Event Day, PCT, Portal
kW
Hour Ending
PCT, Portal Actual
PCT, Portal Upper 90% CI
PCT, Portal Lower 90% CI
CAC Control Actual
CAC Control Upper 90% CI
CAC Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

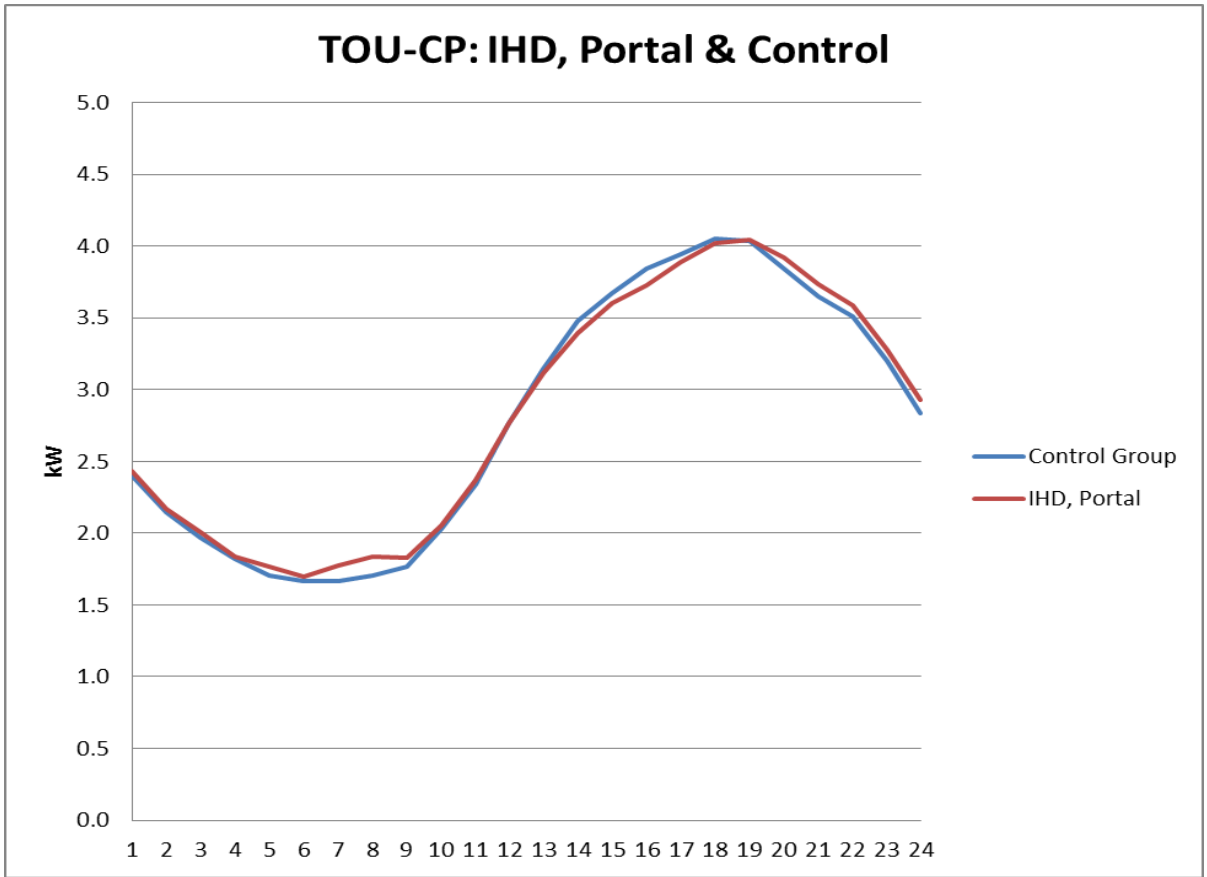

VPP-CP September 27, 2011 Event Day, Portal Only
7
6
5
4
3
2
1
0
-1
-2
-3
kW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Hour Ending
Portal Only Actual
Portal Only Upper 90% CI
Portal Only Lower 90% CI
Control Actual
Control Upper 90% CI
Control Lower 90% CI
Savings Actual
Savings Upper 90% CI
Savings Lower 90% CI

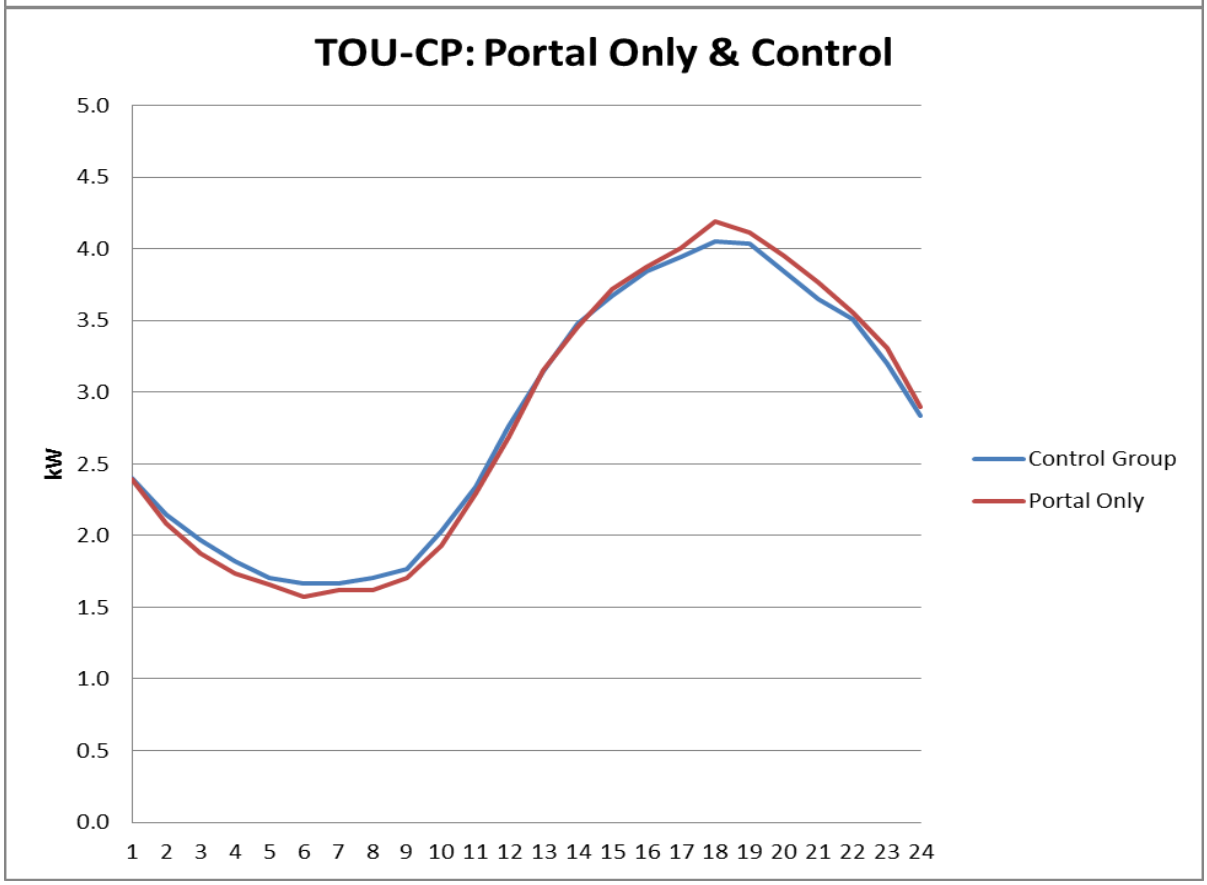
APPENDIX F- INDIVIDUAL LOAD SHAPES: SECOND YEAR RECRUITS – PRETREATMENT LOAD SHAPES

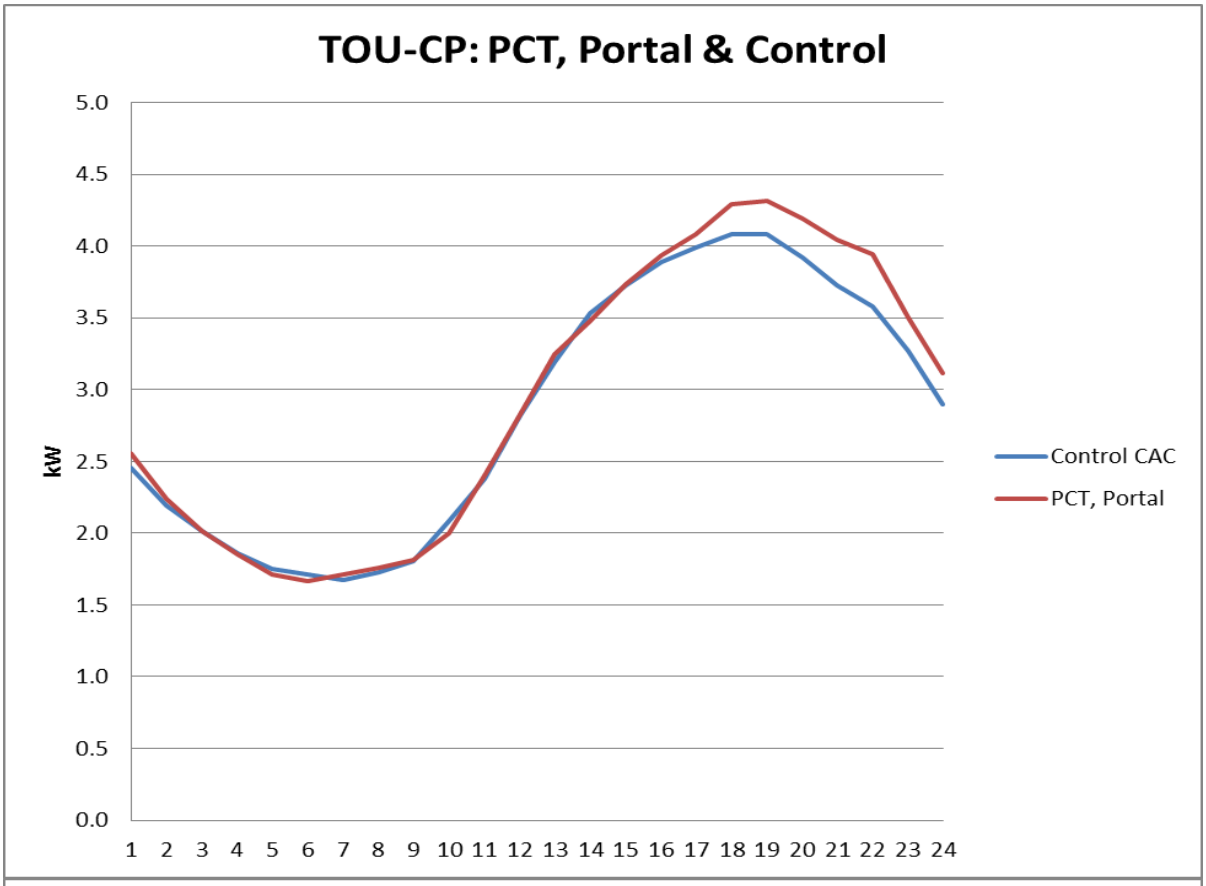
The following Appendix F graphs describe the pretreatment load shapes for the highest five system load days for the second year recruits for each of the four enabling technology options: Portal Only; IHD, Portal; PCT, Portal; and All 3. Based on OG&E's system load, the highest five days were 8/4/2010, 8/11/2010, 8/12/2010, 8/13/2010, and 8/23/2010.

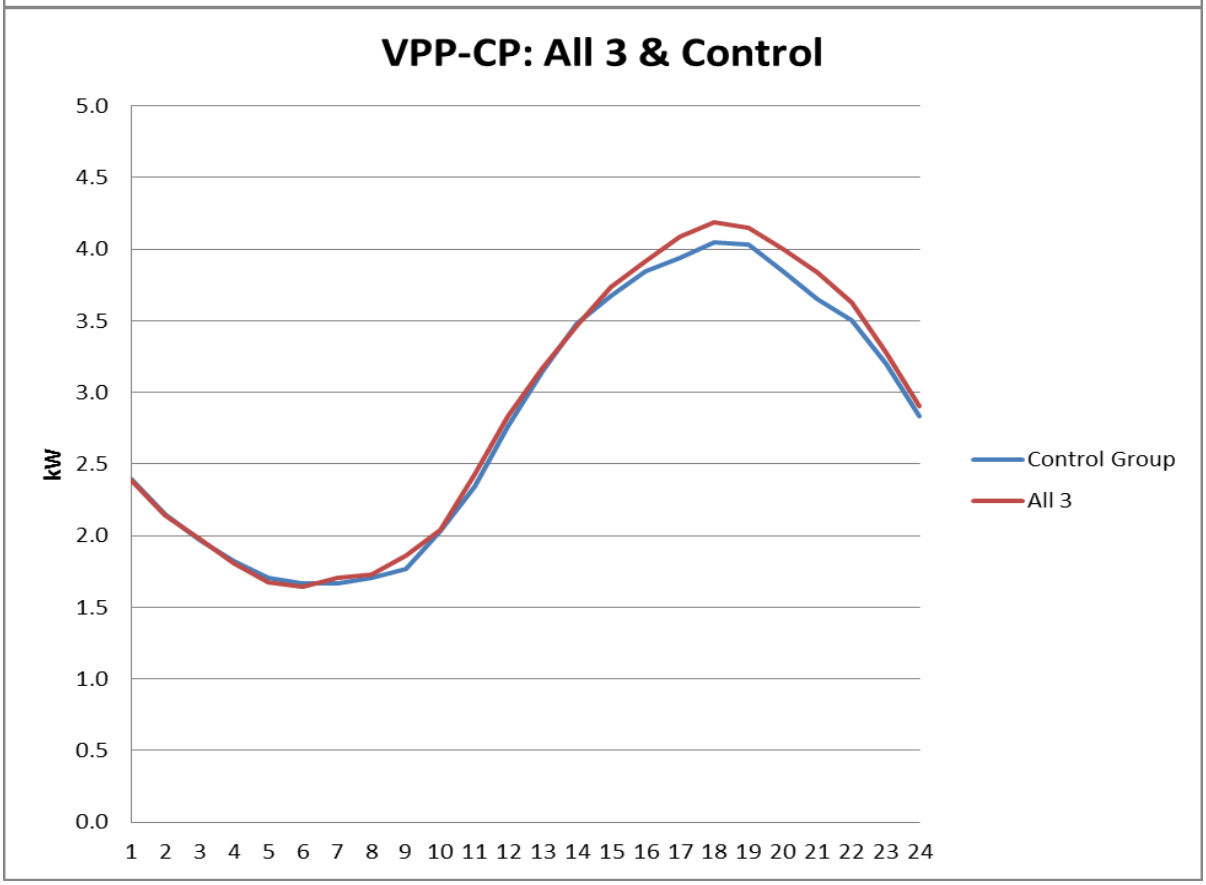
Each graph contains two lines, where the blue line represents the control group and the red line represents the treatment group. This appendix contains 8 graphs.

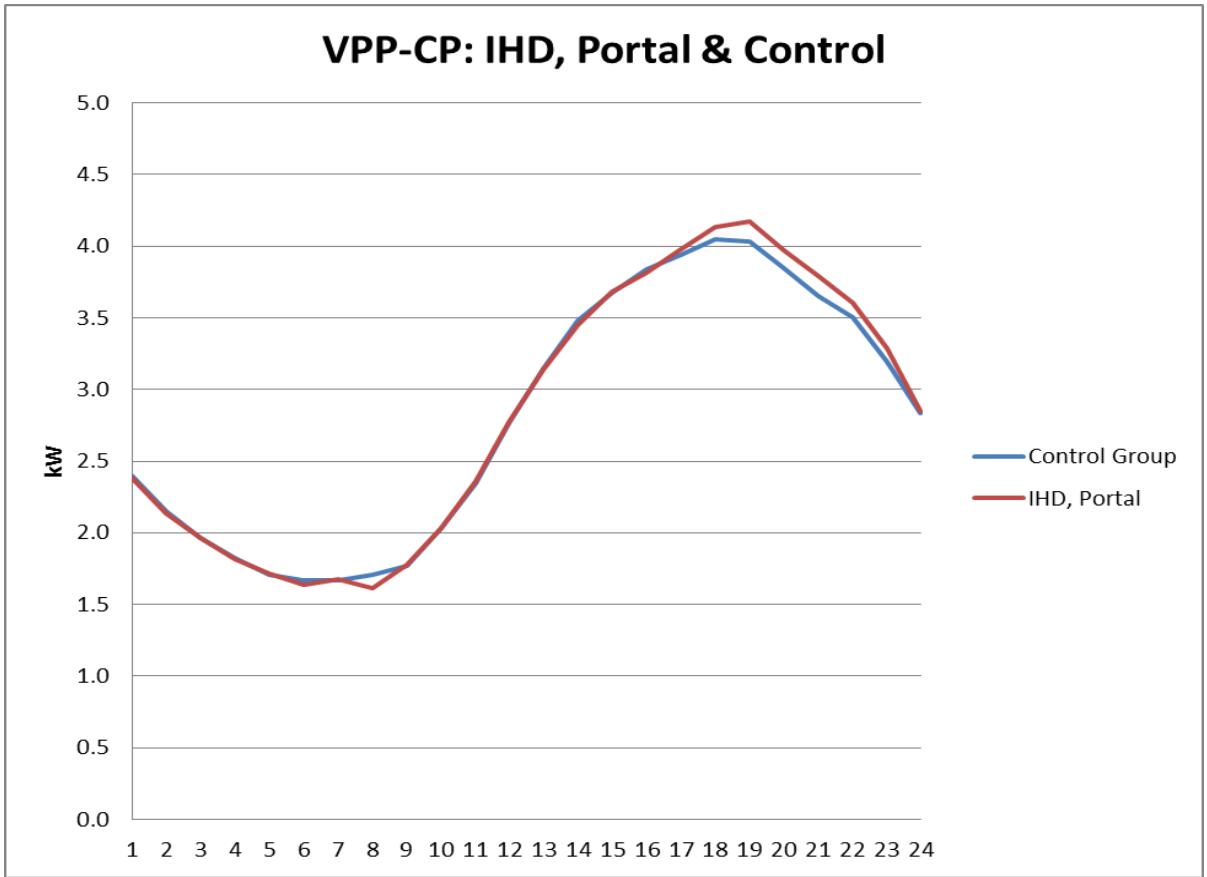


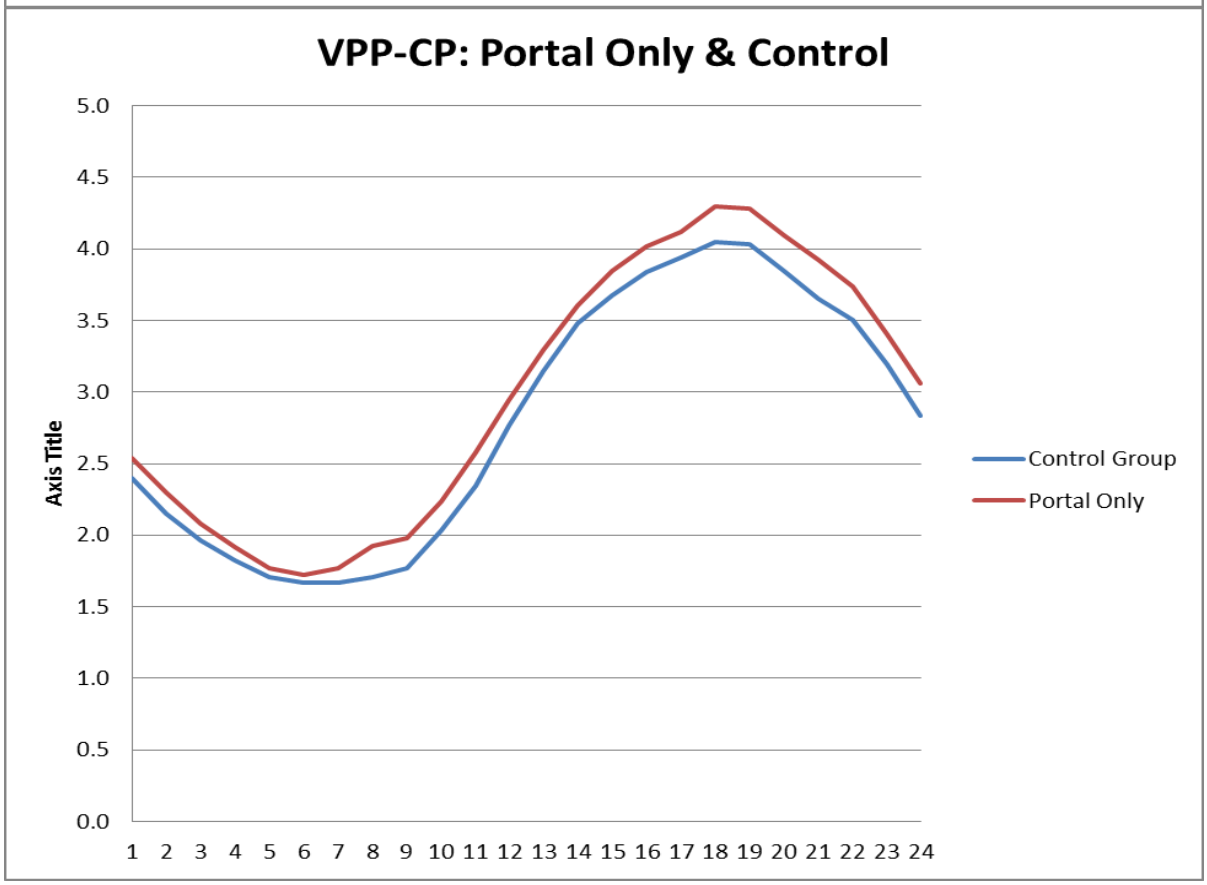

TOU-CP: IHD, Portal & Control
kW
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Control Group
IHD, Portal

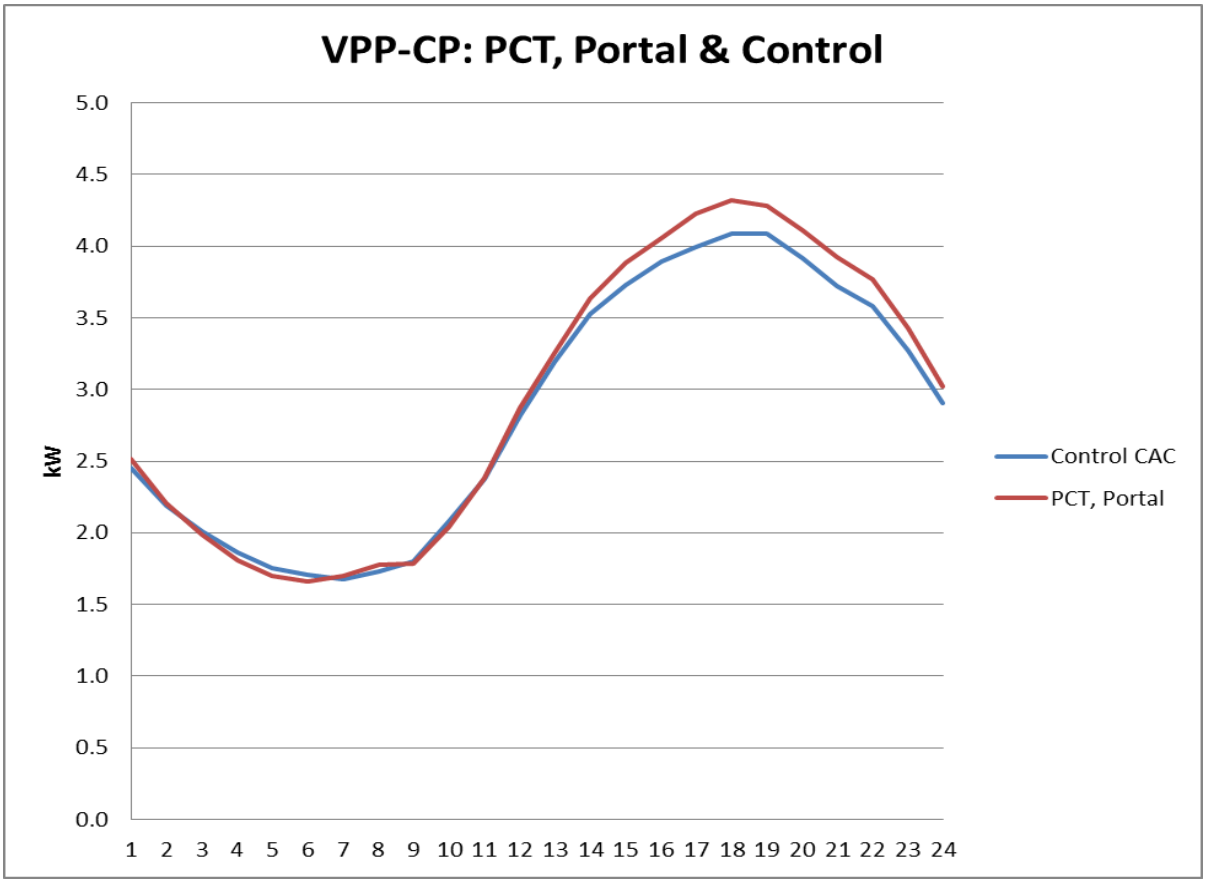

TOU-CP: Portal Only & Control
kW
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Control Group
Portal Only


TOU-CP: PCT, Portal & Control
kW
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Control CAC
PCT, Portal


VPP-CP: All 3 & Control
kW
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Control Group
All 3


VPP-CP: IHD, Portal & Control
kW
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Control Group
IHD, Portal


VPP-CP: Portal Only & Control
Axis Title
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Control Group
Portal Only


VPP-CP: PCT, Portal & Control
kW
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Control CAC
PCT, Portal

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